# Ordinary Council Meeting

# Amended Agenda[2]

25 August 2026

City of Belmont

[1] The Agenda was amended on 17 August 2026 to include the response to Cr Harris' question taken on notice at Item 8.1.1.

[2] The Agenda was amended on 25 August 2026 to update the Amended Officer Recommendation for Item 6.2 at page 15.

# Notice of Meeting

An **Ordinary Council Meeting** will be held in the Council Chamber of the **City of Belmont Civic Centre,** 215 Wright Street, Cloverdale, on **Tuesday 25 August 2026,** commencing at 6:30pm.

**John Christie**
**Chief Executive Officer**

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CITY OF BELMONT

# Ordinary Council Meeting

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**Elected Members are reminded to retain any confidential papers for discussion with the minutes.**

# 1 Official Opening

The Presiding Member will read aloud the Acknowledgement of Country.

| **Acknowledgement of Country** |
| --- |
| Before I begin, I would like to acknowledge the Whadjuk Noongar people as the Traditional Owners of this land and pay my respects to Elders past, present and emerging.<br><br>I further acknowledge their cultural heritage, beliefs, connection and relationship with this land which continues today. |

The Presiding Member will cause the Affirmation of Civic Duty and Responsibility to be read aloud by a Councillor.

| **Affirmation of Civic Duty and Responsibility** |
| --- |
| I make this affirmation in good faith and declare that I will duly, faithfully, honestly, and with integrity fulfil the duties of my office for all the people in the City of Belmont according to the best of my judgement and ability.<br><br>I will observe the City's Code of Conduct and Standing Orders to ensure efficient, effective and orderly decision making within this forum. |

# 2 Apologies and leave of absence

# 3 Declarations of interest that might cause a conflict

Elected Members/Staff are reminded of the requirements of *s5.65* of the *Local Government Act 1995 (WA)*, to disclose any interest during the meeting when the matter is discussed, and also of the requirement to disclose an interest affecting impartiality under the City's Code of Conduct for Council Members, Committee Members and Candidates and the Code of Conduct for Employees.

## 3.1 Financial Interests

A declaration under this section requires that the nature of the interest must be disclosed. Consequently, a member who has made a declaration must not preside, participate in, or be present during any discussion or decision-making procedure relating to the matter the subject of the declaration.

Other members may allow participation of the declarant if the member further discloses the extent of the interest and the other members decide that the interest is trivial or insignificant or is common to a significant number of electors or ratepayers.

| Name | Item No and Title | Nature of Interest (and extent, where appropriate) |
|---|---|---|
| | | |

## 3.2 Disclosure of interest that may affect impartiality

Elected Members and staff are required in addition to declaring any financial interest, to declare any interest that might cause a conflict (under the Code of Conduct). The member/employee is also encouraged to disclose the nature of the interest. The member/employee must consider the nature and extent of the interest and whether it will affect their impartiality. If the member/employee declares that their impartiality will not be affected then they may participate in the decision-making process.

| Name | Item No and Title | Nature of Interest (and extent, where appropriate) |
|---|---|---|
| | | |

# 4 Announcements by the Presiding Member (without discussion) and declarations by Members

## 4.1 Announcements

## 4.2 Disclaimer

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## 4.3 Declarations by Members who have not given due consideration to all matters contained in the business papers presently before the meeting

# 5 Public question time

## 5.1 Responses to questions taken on notice

### 5.1.1 Ms L Harding, Rivervale

The following question was taken on notice at the 28 July 2026 Ordinary Council Meeting. Ms Harding was provided with a response on 14 August 2026. The response from the City is recorded accordingly:

1. Is the document identifying the outcome of the internal review the Minutes of the Information Forum?

**Response**

**All matters and information provided to Elected Members at an Information Forum are confidential.**

**The City is currently undertaking an updated review to inform the development of the Sustainable Transport Strategy's Implementation Plan.**

### 5.1.2 Ms L Hollands on behalf of Belmont Resident and Ratepayers Action Group

The following questions were taken on notice at the 28 July 2026 Ordinary Council Meeting. Ms Hollands was provided with a response on 14 August 2026. The response from the City is recorded accordingly:

1. In regard to the Belvidere Streetscape Revitalisation Project:
   a) What is the total cost?
   b) Can I have a breakdown of what was originally put out for public submission?
   c) Can I be provided with the details of stages one, two and three?

**Response**

**a) The estimated total cost of the project is $8,315,378. The City has received $4,475,000 in external grant funding resulting in net cost to the City of $3,840,378.**

**b) The Belvidere Streetscape Revitalisation Plan that was advertised for community engagement is available on the project website (https://connect.belmont.wa.gov.au/belvidere-street).**

**c) Stage 1 Leake St to Gardiner St**
**Stage 2 Gardiner St to Keymer St**
**Stage 3 Keymer St to Somers St**

**There is no cost breakdown of each stage as they were tendered as one package. Each stage involves upgrades to the public realm including; soft and hard landscaping, electrical, CCTV and lighting upgrades, road realignment, paving, shade and seating and planting.**

2. In regard to the Belvidere Streetscape Revitalisation Project:

   a) When did Council approve stage three of the project?

   b) Who will be responsible for the cost of removing the rubbish left by occupants of State Housing?

**Response**

**a) Stage 3 was included in the project scope as part of the design development phase. This resulted from Grant Group informing the City of their intentions to re-develop the new shopping precinct between Somers Street and Keymer St at the same time as the streetscape works would occur and an opportunity to collaborate on the streetscape interface between the two projects.**

**Council awarded the design services tender at the February 2024 Ordinary Council Meeting which included specific requirements to produce a resolved design for all areas between Somers St to Leake Street.**

**Council were kept informed of the design progress through regular Council reporting methods, budget updates and Information Forum presentations. Council formally awarded the Tender for the works, which included all stages, to BOS Civil at the December 2025 Ordinary Council Meeting.**

**b) Unresolved instances of illegal dumping after investigation results in collection by City officers. The City is currently in discussion with officers from the Department of Housing to establish a Memorandum of Understanding (MOU) to agree to a process for handling excessive waste and bulk items from their properties.**

### 5.1.3 Ms K Neill, Kewdale

The following questions were taken on notice at the 28 July Ordinary Council Meeting. Ms Neill was provided with a response on 14 August 2026. The response from the City is recorded accordingly:

1. Does the City therefore confirm that each of the three references to the Belmont on the Move Plan in the June 2026 Agenda Briefing Forum Matrix referred to Belmont on the Move: Integrated Movement Network Strategy and that no separate implementation plan for Belmont on the Move was prepared by the City or formally approved by Council whether by adoption, endorsement or otherwise?

**Response**

**No separate implementation plan for 'Belmont on the Move' was prepared or formally approved by Council.**

2. At the August 2024 Ordinary Council Meeting, the Chief Executive Officer referred to the forthcoming project as the new Sustainable Transport Plan and the October 2024 consultation was conducted through the Belmont Connect project page with the web address ending in Sustainable Transport Plan. By June 2025, Council was considering the draft Sustainable Transport Strategy. On what date was the Belmont Connect project page changed from a web address ending in 'Sustainable Transport Plan' to one ending in 'Sustainable Transport Strategy'?

**Response**

**The Belmont Connect project name was changed from 'Sustainable Transport Plan' to 'Sustainable Transport Strategy' on 18 June 2025.**

### 5.1.4 Mr E Harding, Rivervale

The following questions were taken on notice at the 28 July 2026 Ordinary Council Meeting. Mr Harding was provided with a response on 14 August 2026. The response from the City is recorded accordingly:

1. Does the Belmont City of Belmont administer the ordering of projects displayed on the Belmont Connect project page?

**Response**

**Yes.**

2. What ‘sort projects by’ setting is currently applied to the Belmont Connect projects page tonight 6:30pm, 28 July 2026?

**Response**

**Projects on the Belmont Connect Homepage are assigned to one of three categories based on where they are in the project lifecycle. Open is for projects open for engagement, active for projects being developed, and closed for recently completed projects.**

**Within each of these categories, projects are sorted by last updated (descending), meaning the most recently updated projects appear first. There is a sub-page on Belmont Connect that lists all projects and this page is sorted by publish date.**

3. Does the City of Belmont hold or have access to any configuration history, activity log, or audit trail for the Belmont Connect projects page showing changes to the sorting of projects by settings between 1 July to 28 of July 2026?

**Response**

**The Belmont Connect platform has audit functionality in its Content Management System. No changes were made to project sorting configurations in this timeframe.**

4. Please identify any records documenting the engagement or communications plan for the Sustainable Transport Strategy 2026 consultation period, including any launch checklist, webpage instructions, or promotional schedule which planned how the Sustainable Transport Strategy was made to be readily visible on the Belmont Connect project page during the 2026 public comment period. If no such records exist, please state that no engagement or communications plan for the 2026 consultation has been identified.

**Response**

**A Communications Plan was developed for the Sustainable Transport Strategy 2026 consultation.**

## 5.2 Questions from members of the public

# 6 Confirmation of Minutes/receipt of Matrix

## 6.1 Matrix for the Agenda Briefing Forum held 18 August 2026

| Officer Recommendation |
| --- |
| That the Matrix of the Agenda Briefing Forum held on 18 August 2026, as printed and circulated to all Elected Members, be received and noted. |

## 6.2 Ordinary Council Meeting held 28 July 2026

| Amended Officer Recommendation |
| --- |
| Notes that the unconfirmed minutes have been amended to include the following response:<br><br>*The Director Infrastructure Services stated that the Activity Centre Planning Strategy references a considerable number of the place base actions with revised timeframes, but could not say that every single place-based project was reviewed in the ACPS*.<br><br>That the Minutes of the Ordinary Council Meeting held on 28 July 2026 as circulated to all Elected Members, be confirmed as a true and accurate record. |

# 7 Questions by Members on which due notice has been given (without discussion)

# 8 Questions by members without notice

## 8.1 Responses to questions taken on notice

### 8.1.1 Cr Harris, Central Ward

1. How many notices of motion have been excluded from the agenda over the last two years under 5.3(4)(a)(iv) of the standing orders?

**Response**

**Since July 2024, 15 notices of motion were received. Of these, 10 were excluded under section 5.3 of the Standing Orders Local Law 2017 and presented to a briefing.**

## 8.2 Questions by members without notice

# 9 Business adjourned from a previous meeting

# 10 New business of an urgent nature approved by the person presiding or by decision

# 11 Reports of committees

## 11.1 Audit, Risk and Improvement Committee held 27July 2026 (circulated under separate cover)

| Officer Recommendation |
| --- |
| That the Minutes of the Audit, Risk and Improvement Committee held on 27 July 2026 as previously circulated to all Elected Members, be received and noted. |

# 12 Reports of administration

## 12.1 Amendment No. 24 to Local Planning Scheme No. 15

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | LPS15/024 |
| Location/Property Index | : | Various |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | 15 April 2025, Item 12.1 –Ascot Racecourse Precinct Structure Plan<br>25 November 2025, Item 12.2 – Amendment No. 24 to Local Planning Scheme No. 15 |
| Applicant | : | Rowe Group |
| Owner | : | The Western Australian Turf Club<br>Western Australian Planning Commission |
| Responsible Division | : | Development and Communities |

### Council role

| | |
|---|---|
| **Legislative** | The making and adopting of local laws, local town planning schemes and Council policies. |

### Purpose of report

To consider Scheme Amendment No. 24 to the City of Belmont Local Planning Scheme No. 15 (LPS 15) following public advertising.

### Summary and key issues

- Rowe Group on behalf of Perth Racing (the applicant) has prepared the draft Ascot Racecourse Precinct Structure Plan (PSP) to guide the future use and development of land in and around Ascot Racecourse.
- At the 15 April 2025 Ordinary Council Meeting (OCM), Council resolved to recommend that the draft PSP be approved by the Western Australian Planning Commission (WAPC) subject to modifications.
- Prior to the WAPC determining the draft PSP, a Local Planning Scheme Amendment is required to be progressed to ensure that the City's Local Planning Scheme aligns with the PSP.

- Accordingly, Rowe Group lodged an amendment request on behalf of Perth Racing (Attachment 12.1.1) for Precincts B, C, D and E of the draft PSP. The applicant has advised that a request to rezone Precinct A will be prepared and submitted to the City of Belmont for consideration in due course as a preceding amendment to the Metropolitan Region Scheme (MRS) is required.
- Council resolved at the 25 November 2025 OCM to adopt a modified version of the amendment for advertising (Attachment 12.1.2).
- Before granting consent to advertise the amendment, the Minister for Planning directed the City to make several modifications prior to advertising. The modifications relate to minor updates to mapping and text references along with consideration of a broader range of land uses as detailed within the Amendment Report (Attachment 12.1.3 ).
- The Amendment was advertised from 21 May 2026 to 20 July 2026. At the close of the advertising period, 25 submissions were received. A schedule of submissions is included as Attachment 12.1.4 and Confidential Attachment 12.1.5.
- It is recommended that Council support Amendment No. 24 to LPS 15, subject to modifications to address matters raised in submissions.

**Officer Recommendation**

That Council:

1. Pursuant to Regulation 41(3)(b) of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA),* support Amendment No. 24 to the City of Belmont Local Planning Scheme No. 15, subject to the following modifications, and recommend that the amendment, as modified, be approved by the Minister for Planning:
   - Delete 'Showroom' from Restricted Use Area 3.
   - Apply the following conditions to Restricted Use Area 2:

     "Retail floorspace is restricted to 1,200m² increasing up to 3,000m² where a Net Benefit Test is provided to the satisfaction of the Local Government."

     "'Fast Food Outlet/Lunch Bar' shall only be permitted where it forms part of and is integrated with the built form of the precinct, and where no drive-through facilities are proposed."
   - Apply a 'D' permissibility to the following land uses subject to Additional Use 18:
     - 'Hotel'

- ‘Office’
- ‘Reception Centre’
- ‘Restaurant’.

2. Advise those who made a submission of Council’s resolution.

## Location

Amendment No. 24 relates to 61.3 hectares of land bound by the Swan River, Ascot Waters Estate, Grandstand Road, Resolution Drive, the ‘Residential and Stables’ zone, Hardey Road, Carbine Street and Matheson Road in Ascot (refer to Figure 1 below).

The amendment area comprises nine lots, eight of which are owned by Perth Racing. The remaining lot shaded yellow on Figure 1 adjacent to Grandstand Road is owned by the WAPC.




Figure 1: Amendment Area (outlined red)

The draft PSP divides the broader Ascot Racecourse area into five precincts, as shown in Figure 2. Amendment No. 24 applies to Precincts B, C, D and E.

Precinct A does not form part of the Amendment and will be the subject of a separate amendment request.

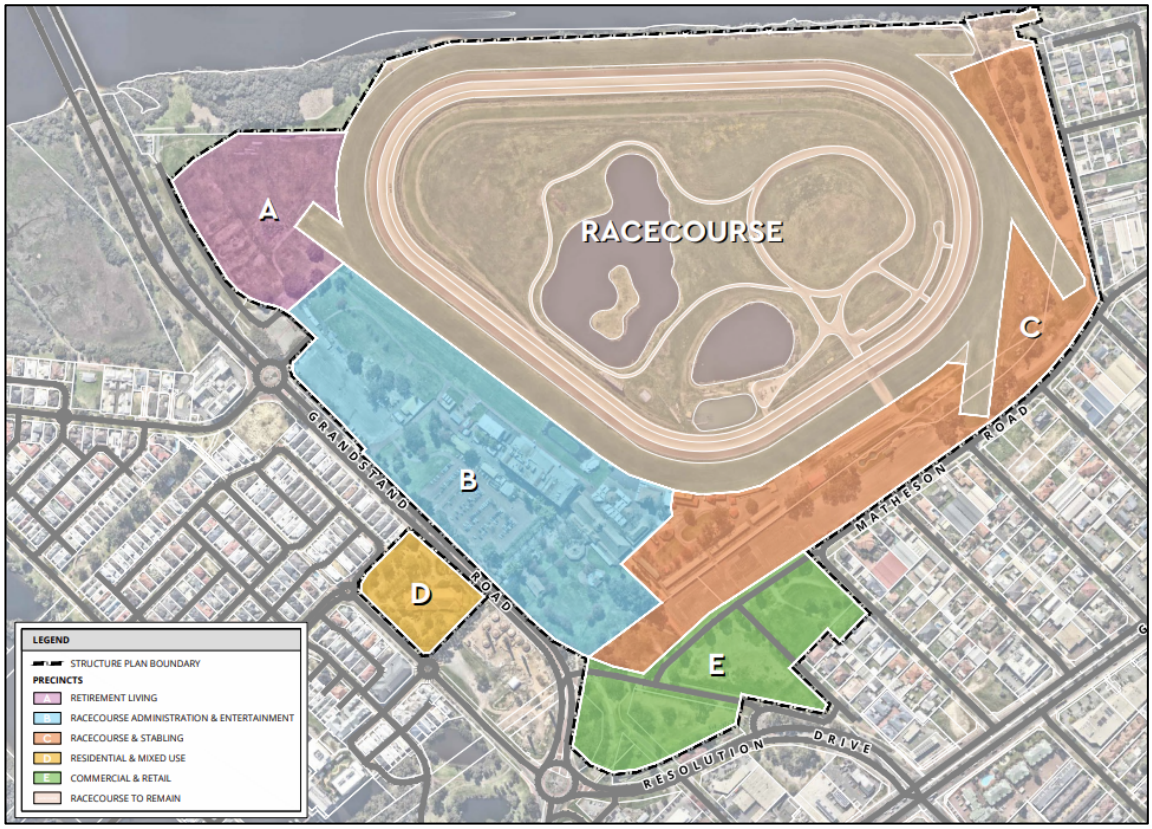



Figure 2: Ascot Racecourse PSP Precinct Map

## Consultation

Amendment No. 24 was advertised from 21 May 2026 to 20 July 2026 by way of:

- A public notice being placed in the PerthNow newspaper on 21 May 2026.
- A public notice being placed on the City's website and at the Civic Centre.
- Information published on the City's website and Belmont Connect.
- Letters being sent to relevant State agencies, those who lodged a submission on the PSP, and all landowners and occupiers of properties outlined in Figure 3.




Figure 3: Amendment No. 24 Referral Area

The City received 25 submissions during the advertising period. Submissions raised the following key themes as detailed within the Schedule of Submissions included as Attachment 12.1.4 and Confidential Attachment 12.1.5:

- Concerns were raised regarding the introduction or intensification of commercial and retail activity within a predominantly residential and stables context and the impact this may have on the character and amenity of the area.
- Submissions questioned the scale and viability of the proposed retail floorspace. One submitter also requested that 'Showroom' be removed as a land use capable of being considered within the amendment area and that restrictions be imposed on the amount of retail floorspace.
- Concerns were raised regarding existing traffic congestion and the impact that further development within the precinct will have on the functionality and safety of the road network.
- State agency submissions generally raised technical matters that are more appropriately addressed through the structure planning process or future subdivision and/or development processes.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Place**
**Outcome:** 6. Sustainable population growth with responsible urban planning.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

### Local Planning Scheme Amendments

Section 75 of the *Planning and Development Act 2005 (WA)* provides for an amendment to be made to a local planning scheme. The procedure for amending a local planning scheme, including public consultation requirements are set out within Part 5 of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)* (Regulations).

The Regulations specify three different types of scheme amendments being 'basic', 'standard', and 'complex'. Clause 35(2) of the Regulations requires a resolution of the local government which specifies the amendment type and the reasons for the classification.

When a local government resolves to amend a scheme, the proposed scheme amendment is required to be referred to the Department of Planning, Lands and Heritage (DPLH) to obtain consent to advertise. Where an amendment is deemed to have an environmental impact, it is also required to be referred to the Environmental Protection Authority.

Following consent to advertise, the responsible authority shall advertise the amendment in accordance with the Regulations by:

- Displaying the amendment and associated public notice on the local government's website.
- Publishing the notice in a local newspaper and displaying this on the local government's public notice boards.
- Giving a copy of the notice to each public authority that the local government considers is likely to be affected by the amendment.

After the conclusion of the advertising period, Council is required to consider the submissions and pass a resolution to either support the amendment, with or without modification, or not support the amendment. After passing a resolution, the amendment is to be forwarded to the WAPC to review and provide a recommendation to the Minister for Planning.

## Metropolitan Region Scheme

The subject land area is primarily zoned 'Private Recreation' under the MRS, with the balance zoned 'Urban' and land abutting the Swan River reserved 'Parks and Recreation' (refer to Figure 4). The proposed Scheme Amendment aligns with the current MRS zoning.




Figure 4: MRS Zones and Reserves (Amendment Area outlined Red)

## Local Planning Scheme No. 15

The subject land is predominantly zoned 'Place of Public Assembly – Racecourse' under LPS 15. The southern portion of the subject land abutting Resolution Drive is zoned 'Mixed Use', Lot 23 (No. 2) Carbine Street is zoned 'Residential and Stables', and a separate portion of land adjacent to Grandstand Road is not currently assigned a zone or reserve (refer to Figure 5).

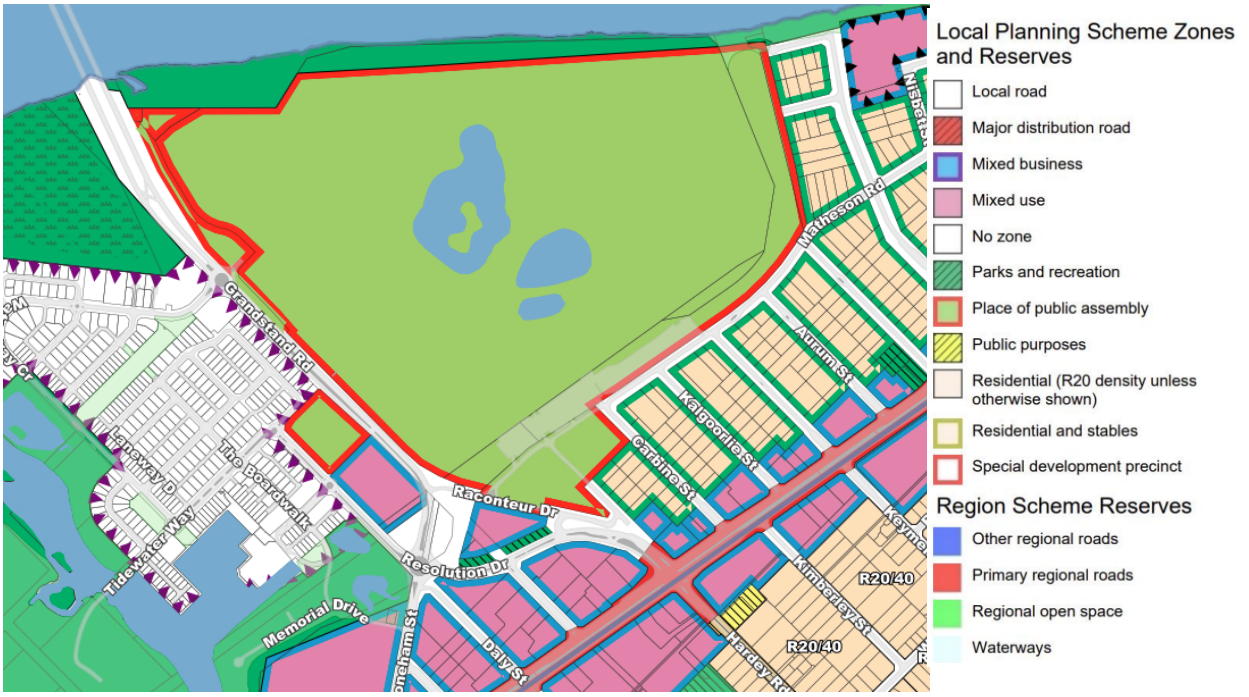



Figure 5: LPS 15 Zones and Reserves

The objectives of the 'Place of Public Assembly', 'Mixed Use' and 'Residential and Stables' zones are as follows:

> "The 'Places of Public Assembly' zone is intended to allow for special places of assembly, such as halls, private schools, grounds for athletics, sports grounds with provision for spectators, racecourses, trotting track, stadia and/or showgrounds."
>
> "The Mixed Use Zone is intended to allow for the development of a mix of varied but compatible land uses such as housing, offices, showrooms, amusement centres, eating establishments and appropriate industrial activities which do not generate nuisances detrimental to the amenity of the district or to the health, welfare and safety of its residents. Buildings should be of a high standard of architectural design set in pleasant garden surrounds with limited vehicular access from properties to primary roads.
>
> To provide for a wide variety of active uses on street level which are compatible with residential and other non-active uses on upper levels."
>
> "The Residential and Stables Zone is intended to provide for compatible and environmentally responsible use of land in proximity to the Ascot Racecourse and the Swan River by residential accommodation and stables and ancillary functions of the horse racing industry."

Table 1 (Zoning Table) of LPS 15 sets out the permissibility of uses using the symbols of 'P', 'D', 'A', and 'X'. The meaning of the symbols is listed below:

'P' means the use is permitted by the Scheme providing the use complies with the relevant development standards and the requirements of the Scheme;

'D' means that the use is not permitted unless the local government has exercised its discretion by granting Development Approval;

'A' means the use is not permitted unless the local government has exercised its discretion by granting Development Approval after giving special notice in accordance with the provisions contained in Clause 64 of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)* Schedule 2;

'X' means a use that is not permitted by the Scheme.

Clause 3.5 addresses Additional Uses and outlines that, regardless of the use class designation in the zoning table, land uses for areas specified in Schedule No. 2 can receive approval, subject to the specific conditions being met.

Schedule No. 3 of LPS 15 and Clause 3.6 relate to Restricted Uses. Clause 3.6 sets out the purpose of Restricted Uses as follows:

> "Despite anything contained in the Zoning Table, the land specified in Schedule 3 may only be used for the specific use or uses that are listed and subject to the conditions set out in Schedule 3 with respect to that land."

There are currently no restricted uses under LPS 15.

**Residential Design Codes**

The Residential Design Codes (R-Codes) establish built form controls for all residential development within Western Australia and are used in the assessment of residential development and subdivision proposals. Volume 1 of the R-Codes establishes standards for single houses, grouped dwellings, and multiple dwellings up to R60. Volume 2 of the R-Codes specifically relates to multiple dwelling developments at the R80 code and above. Any future residential development will be assessed against the PSP and the R-Codes.

**Strategic Planning Framework**

Perth and Peel @ 3.5 Million

Perth and Peel @ 3.5 Million provides a strategic framework to guide development across the Perth and Peel regions, in response to a projected population of 3.5 million by 2050. The document divides the Perth metropolitan area into four sub-regions: Central, North-West, North-East, and South. The subject land is located within the Central Sub-region.

The strategy also outlines Urban Consolidation Principles and identifies corresponding precincts. Of particular relevance to this amendment are the 'Green Network', 'Urban Corridor' and 'Activity Centres' principles and precincts.

The racecourse is identified as part of the 'Green Network' that extends along the Swan River. The document highlights the importance of supporting population growth and higher-density living with a connected network of public and private open spaces.

Great Eastern Highway, located south of the subject land, is identified as an 'Urban Corridor', intended to accommodate higher-density residential development that leverages proximity to public transport while minimising impacts on surrounding areas and maintaining the efficiency of the regional transport network. Great Eastern Highway, Grandstand Road, and Resolution Drive are also identified as high-frequency public transit routes.

The document references State Planning Policy 4.2 (SPP 4.2) and the hierarchy of centres based on the future importance of each centre from a network perspective. Additionally, the document identifies the important role that activity centres have in being a focal point for commercial and social activity and the importance of these areas being designed to be walkable and near public transport to support these means of access.

State Planning Policy 4.2

State Planning Policy 4.2 guides the planning and development of activity centres within the Perth and Peel region and emphasises the importance of compact urban form and pedestrian-focused streetscapes. The City's Activity Centre Planning Strategy identifies a future local centre within the broader Golden Gateway precinct, including part of the land subject to the draft PSP.

State Planning Policy 4.2 identifies neighbourhood centres as local focal points providing for daily to weekly household shopping needs, community facilities and convenience services. Local centres operate at a smaller scale and primarily provide for the convenience and incidental needs of local communities.

State Planning Policy 4.2 emphasises that development in activity centres should generally align with the floorspace requirements set out in local planning strategies or structure plans. Where a proposal exceeds that floorspace need, the proposal is to demonstrate a net benefit to the community. A Net Benefit Test is to be prepared in accordance with Section 7.8 of SPP 4.2 and address matters included in Section 5.3 of the Implementation Guidelines.

The applicant's amendment request and advertised version includes 'Showrooms' as a use capable of approval within Precinct E of the draft PSP. State Planning Policy 4.2 states that these should be in an Activity Centre Frame but notes that smaller centres may not have a frame. It also identifies bulky goods showrooms as a desired use within the frame of district centres but not for the frame of local or neighbourhood centres.

City of Belmont Local Planning Strategy

The City of Belmont Local Planning Strategy is the strategic planning document that broadly sets out the long-term planning direction for the City. The Strategy also informed the preparation of LPS 15. The key objectives of the Local Planning Strategy and relevant sub strategies for this precinct are as follows:

- To enhance the north-west entrance to the City.
- To encourage landmark development.
- Acknowledge that Ascot Racecourse and the Swan River are 'strategic tourism sites' of State significance to benefit future tourism development.

The proposed Scheme Amendment is not specifically contemplated by the Local Planning Strategy. This does not mean it is inconsistent with the Strategy, but rather that the proposed zoning, density coding and land use permissibility are matters not addressed by it. For this reason, the amendment has been classified and progressed as a complex amendment.

Activity Centre Planning Strategy

The Activity Centre Planning Strategy (ACPS) was prepared to guide the future planning and coordination of activity centres within the City of Belmont and was adopted by Council at the February 2024 OCM. The ACPS identifies a future local centre within the broader Golden Gateway precinct, which includes a portion of Perth Racing's land and outlines that it is to be 1,200m$^2$ in the first instance. The ACPS states that following further residential development within the Golden Gateway precinct, it may be appropriate for this figure to be reviewed through a Needs Assessment or Net Benefit Test.

Draft Ascot Racecourse Precinct Structure Plan

The draft PSP (refer to Figure 6) has been prepared to guide the future use and development of land in and around Ascot Racecourse. At the 15 April 2025 OCM, Council resolved to recommend that the WAPC approve the draft PSP and supporting technical appendices subject to modifications.

The amendment request lodged by the applicant seeks to apply zones, density codes and land use permissibility consistent with the draft PSP for Precincts B, C, D and E. The applicant has advised that a request to rezone Precinct A under LPS 15 will be prepared and submitted for consideration in due course.

The draft PSP is currently under consideration by officers at the DPLH. The WAPC will not make a decision on the draft PSP until the associated amendment is approved by the Minister.

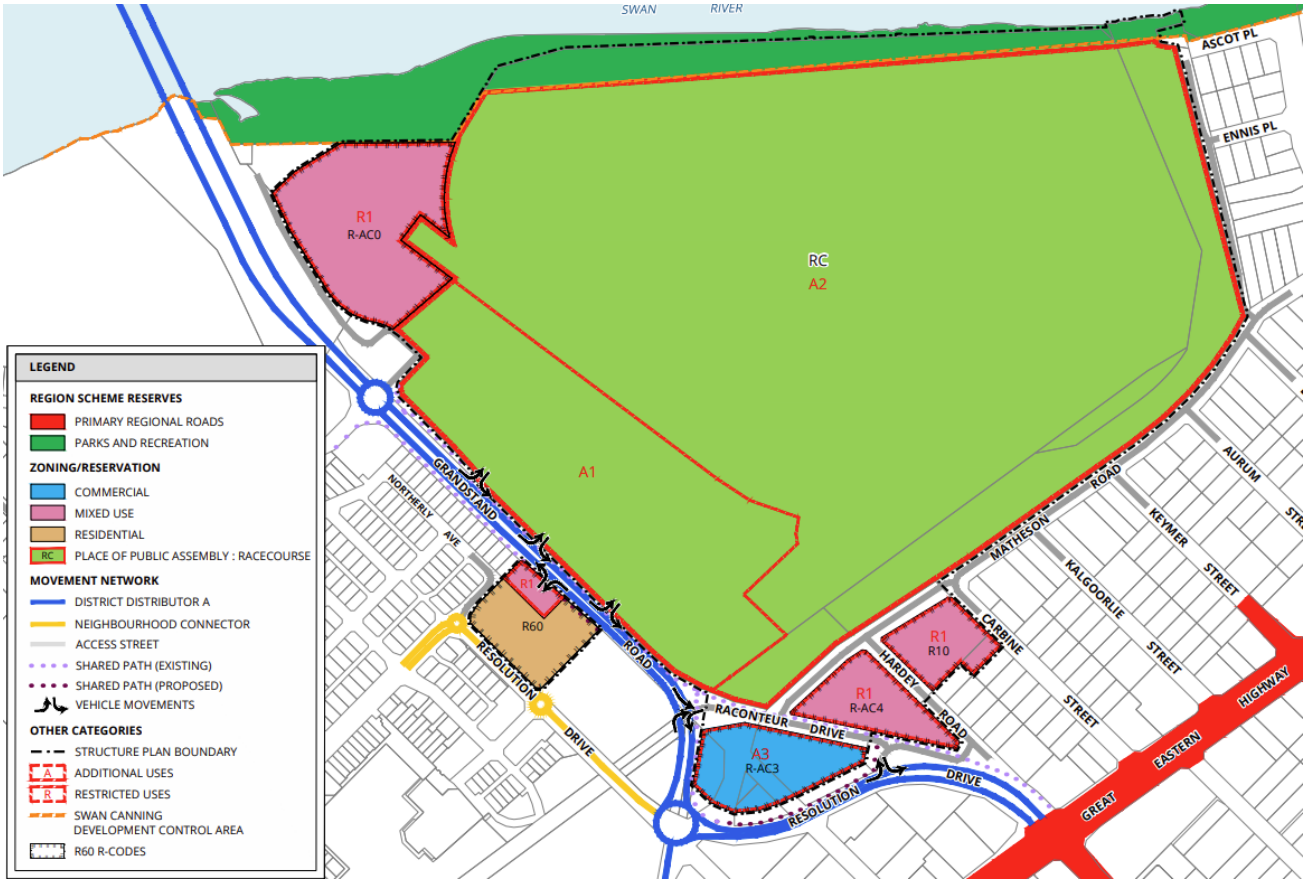



Figure 6: Draft Ascot Racecourse Precinct Structure Plan

## Background

At the 15 April 2025 OCM, Council resolved to recommend that the draft PSP be approved by the WAPC subject to modifications.

At the 25 November 2025 OCM, Council initiated Amendment No. 24 to align zones and land use controls with Council's resolution at the 15 April 2025 OCM. A copy of the Amendment Report is included as Attachment 12.1.2.

Pursuant to Regulation 37 of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)*, Amendment No. 24 was referred to the WAPC for consent to advertise. The Minister for Planning and Lands (or as delegated) directed the City to modify the Amendment pursuant to Section 83A(2)(b) of the *Planning and Development Act 2005 (WA)*. The modified Amendment Report is included as Attachment 12.1.3. The key changes from Council's resolution relate to Restricted and Additional Uses as detailed below.

**Restricted Uses**

The Minister's directed updates to Amendment No. 24 have resulted in the following changes to Restricted Uses from Council's 25 November 2025 resolution:

- Land use permissibility abbreviations have been added.
- Three Restricted Use areas are proposed instead of two (70 Grandstand Road is now subject to its own restricted use area with the uses being consistent with the version of the amendment initiated by Council).
- 'Convenience Store' has been added as a 'Restricted Use' for land proposed to be zoned 'Commercial'. The condition limiting retail floor space to 1,200m$^2$ initially and increasing to 3,000m$^2$ where a Net Benefit Test has been provided has been deleted along with the condition requiring 'Fast Food Outlet/Lunch Bar' to only be permitted where they form part and are integrated with the built form of the precinct and where there are no drive through facilities. These conditions have been replaced with the following:

  "The following land uses are not to be located on the ground floor:

  - Aged or Dependent Persons Dwelling;
  - Caretaker's Dwelling;
  - Multiple Dwelling."
- 'Showroom' and 'Vet Hospital' have been added as 'Restricted Uses' for Lot 100 (No. 1) Raconteur Drive and Lot 23 (No. 2) Carbine Street, Ascot.

**Additional Uses**

The Minister's directed updates to Amendment No. 24 have resulted in the following changes to 'Additional Uses' from Council's 25 November 2025 resolution:

- The proposed Additional Use 18 area has been divided into two (A18 and A21) as shown on the Amendment Map.
- A18 contains the same Additional Uses but now applies a permissibility abbreviation of 'P' to all uses.
- 'Animal Establishment' has been added to the uses that can be considered within the A21 area.

The modified Amendment No. 24 was advertised from 21 May 2026 to 20 July 2026. The key matters raised in submissions and the modifications directed by the Minister are addressed in the Report section.

## Report

### Restricted Uses

Officers have considered the Minister's directed modifications relating to Restricted Uses and recommend support the following aspects:

- providing for 'Vet Hospital' at 1 Raconteur Drive and 2 Carbine Street;
- providing for 'Convenience Store' on the land proposed to be zoned 'Commercial';
- applying a condition that does not permit residential development on ground floors within the area proposed to be zoned 'Commercial'; and
- adding appropriate land use permissibility abbreviations to the relevant uses.

However, in light of submissions received and Council's previous resolutions, officers recommend that a number of the changes should be reconsidered as discussed below.

Fast Food Outlet

The version of Amendment No. 24 originally supported by Council included a condition limiting the establishment of a 'Fast Food Outlet/Lunch Bar' to premises that do not incorporate a drive-through facility. This condition was removed through the Minister's directed modifications.

In considering this change, it should be noted that while fast food outlets and lunch bars can support the day-to-day needs of residents, drive-through facilities typically prioritise vehicle access and circulation, often provide limited integration with the built form and function of the broader centre, and can detract from the creation of an active and cohesive streetscape.

It should also be noted that submitters raised the importance of ensuring streets are active and contribute to a well-integrated centre. Noting this, officers recommend a modification to the amendment to reinstate Council's previous position that 'Fast Food Outlet/Lunch Bar' uses should only be permitted where they do not incorporate a drive-through facility. This will ensure future development supports the intended role and function of the local centre as a compact, pedestrian-oriented destination.

Activity Centre Retail Floorspace

The original version of Amendment No. 24 endorsed by Council included a condition limiting retail floorspace to 1,200m², with the potential to increase to a maximum of 3,000m² where a satisfactory Net Benefit Test had been prepared. This approach was supported for the following reasons:

- The Retail Assessment prepared in support of the PSP concludes that the proposed 3,400m² of retail floorspace aligns with the City's strategic framework. However, this is not considered to reflect the intent of the City's ACPS, which anticipates the incremental expansion of activity centres in response to demonstrated demand.
- The Retail Assessment concludes that the centre would be sustainable by 2026 without broader precinct development and with minimal impact on adjacent centres. This assumption relies on sufficient demand being generated from the immediate trade area; however, as the draft Golden Gateway Structure Plan has not yet been finalised, development within the precinct is unlikely to progress in the short term.
- Population growth projections indicate that significant growth may not occur until 2031–2041. Accordingly, there is uncertainty as to whether sufficient demand exists in 2026 to support 3,400m² of retail floorspace without unreasonably and detrimentally affecting the existing or planned functions of nearby activity centres. Based on the information presented, the proposed scale and timing of retail development is not justified.
- While the Retail Assessment identifies the key considerations outlined in the Implementation Guidelines for SPP 4.2, it does not provide clear responses addressing these matters. As such, the Retail Assessment is not satisfactory in its current form.

Pursuant to modifications directed by the Minister to remove the retail floorspace limitation, it should be noted that officers have not been provided with an updated Retail Assessment that addresses concerns or demonstrates why an increase in retail floorspace is appropriate. Submitters also raised concerns regarding the viability of additional retail floorspace, particularly given the timing and nature of projected population growth within the area. One submitter specifically supported retaining the 1,200m² limitation, reiterating Council's previous position and noting that this approach is consistent with the intent of SPP 4.2.

Having regard to the above, a modification is recommended to reinstate the provision limiting retail floorspace to 1,200m² in the first instance, with any future increase to be supported by appropriate retail justification.

'Showroom'

Several submitters raised concerns regarding potential commercial encroachment into the 'Residential and Stables' zone.

While the Amendment does not propose any broad rezoning, with only one lot currently zoned 'Residential and Stables' proposed to be rezoned to 'Mixed Use', officers note submitters are concerned with the level of retail floorspace proposed. This is predominantly proposed to be delivered through 9,600m$^2$ of showroom development (as detailed within the PSP). One submitter has specifically requested that 'Showroom' be removed as a discretionary land use on Lot 100 Raconteur Drive and Lot 23 Carbine Street. Officers support the submission for the following reasons:

- The introduction of 9,600m² of additional retail floorspace represents a substantial departure from the City's strategic planning framework. It would materially alter the role and function of the centre and has the potential to elevate its significance beyond that intended for a local centre.
- There is a distinction between locating showrooms along major highways, such as Great Eastern Highway, and locating them immediately adjacent to a future local centre. The latter is intended to evolve into a walkable, mixed-use environment that supports active transport and community interaction. The proposed showroom development would be inconsistent with, and potentially undermine, the achievement of that intended function.
- The land identified for showroom development is directly adjacent to the future local centre. State Planning Policy 4.2 promotes local centres as compact, pedestrian-oriented environments where activity is concentrated along key public streets and public spaces. Showrooms are typically reliant on vehicle access and are considered inconsistent with these objectives.
- While SPP 4.2 identifies showrooms as an appropriate use adjacent to district centres, it does not provide the same strategic support for local or neighbourhood centres. Although showrooms may be appropriate within activity centre frame areas, smaller centres do not necessarily require a frame. In this instance, a frame is not considered appropriate, particularly where the retail floorspace proposed within the frame would substantially exceed that of the centre itself.
- As part of the preparation of higher-level planning frameworks, it is sometimes suggested that the suitability of particular land uses can instead be considered at the development application stage. However, where a land use is considered strategically inappropriate for a particular location, it is preferable for this to be addressed through the applicable land use permissibility controls. Deferring the issue to development assessment creates uncertainty and may weaken the intended role of the planning framework in guiding appropriate land uses.
- It is acknowledged that 'Showroom' is identified as a discretionary ('D') use within the 'Mixed Use' zone under LPS 15. However, its discretionary classification does not establish that the use is appropriate in every location where the zone applies. The suitability of the use must be considered having regard to the strategic intent, intended character, role and function in the context of the particular locality.

This principle is reflected in the approach taken to showroom development elsewhere within the broader area. Through Amendment No. 25, showroom development is proposed to be permitted within some areas zoned 'Mixed Use' but excluded from others. Similarly, modifications have not been directed to Amendment No. 24 to provide for showroom development within Restricted Use Area 1, notwithstanding that the land will be zoned 'Mixed Use'.

These distinctions demonstrate that showroom development is not automatically appropriate across all land zoned 'Mixed Use' merely because it is identified as a discretionary use within the zoning table. Rather, the suitability of the use depends on the particular strategic and locational context. Officers have considered the context of Lot 100 Raconteur Drive and Lot 23 Carbine Street and do not consider showroom development appropriate in this location.

**Additional Uses**

The Minister's requested changes to the 'Additional Use' provisions have been reviewed; there are no concerns with splitting A18 into two separate Additional Use areas or including 'Animal Establishment' within the A21 area. This is subject to DPLH supporting the use of the Additional Use mechanism for this purpose.

Officers also support applying a 'P' permissibility to 'Animal Establishment', 'Stables' and 'Veterinary Centre' within the A21 area.

However, there are concerns with applying a 'P' permissibility to 'Hotel', 'Office', 'Reception Centre' and 'Restaurant' within the A18 area. A 'P' use is permitted as right and the land use cannot be refused where the applicable development requirements are satisfied. Given the nature and potential scale of these uses on the subject land, it is considered that their suitability should remain subject to assessment having regard to matters such as traffic, parking, noise, operating hours, compatibility with surrounding development and the intended function of the site. It is therefore recommended that these uses be assigned a 'D' permissibility so that their suitability and potential impacts can be considered through the development application process.

**Zoning and Interface with the Residential and Stables Area**

Several submitters raised concerns regarding the appropriateness of the proposed zones and the interface with the 'Residential and Stables' area. In considering these comments, officers have revisited the proposed zones and density codes and remain satisfied that they will provide an appropriate transition to surrounding land uses for the following reasons:

- The proposed development controls under the draft Precinct Structure Plan and the R10 density code proposed through Amendment No. 24 will result in development adjacent to the 'Residential and Stables' zone that is consistent with the prevailing pattern of development.
- Amendment No. 24 proposes to apply an R-AC4 density code to the area bounded by Raconteur Drive, Matheson Road and Hardey Road, providing for a maximum building height of three storeys. This scale of development is considered appropriate having regard to the separation from the 'Residential and Stables' zone.
- Within the 'Commercial' zone, Amendment No. 24 proposes an R-AC3 density code, providing for a maximum building height of up to six storeys. This scale of development is also considered appropriate having regard to its separation from the 'Residential and Stables' zone.

Having regard to the above, it is not considered necessary to introduce additional controls through Amendment No. 24. The interface with the 'Residential and Stables' zone will be further considered by DPLH as part of its determination of the PSP, with the detailed design and interface of future development to be assessed through subsequent development application processes.

**Movement**

In considering the traffic and parking matters raised during advertising, it is important to recognise the relationship between Amendment No. 24 and the PSP. The Amendment is intended to align LPS 15 with Council's resolution on the PSP, while the PSP and supporting Traffic Impact Assessment (TIA) provide the principal mechanisms for assessing the cumulative and precinct-wide transport implications of the proposed planning framework.

Submitters raised concerns regarding the capacity of the existing road network, traffic safety, and potential parking impacts on surrounding residential streets. Main Roads Western Australia also reiterated comments previously provided on the PSP in relation to pedestrian connectivity and the Signalised Intersection Design and Research Analysis (SIDRA) assessment used to inform the TIA. These matters are relevant to the future development of the precinct and were previously considered by Council during its earlier assessment of the PSP. In response, Council resolved to recommend amendments to the supporting TIA to further consider the traffic and parking implications associated with the proposed development.

Council's recommendation has been provided to DPLH and will be considered by the WAPC as part of its determination of the PSP. Officers consider that this provides the appropriate means of addressing the precinct-wide matters and, accordingly, no further modification to Amendment No. 24 is recommended in relation to traffic or parking.

Following determination of the PSP, the detailed traffic, access and parking implications of individual development proposals will also be assessed through the development application process.

**Conclusion**

Amendment No. 24 is broadly supported as it will align LPS 15 with the planning framework contemplated by the draft PSP. However, modifications are recommended in response to submissions and the City's assessment to ensure that future development is consistent with the intended scale, character and function of the precinct.

It is therefore recommended that Council support Amendment No. 24 subject to the modifications outlined in the Officer Recommendation and forward the Amendment to the WAPC for consideration.

## Financial implications

There are no financial implications evident at this time.

## Environmental implications

There are no environmental implications associated with this report. The Amendment was referred to the Environmental Protection Authority who resolved not to assess the amendment.

## Social implications

The Amendment will facilitate additional housing, commercial activity and services within the precinct.

## Attachment details

| Attachment No and title |
|---|
| 1. Applicant's Amendment Request [**12.1.1** - 992 pages]<br>2. Amendment No. 24 Initiated by Council [**12.1.2** - 28 pages]<br>3. Modified Amendment No. 24 [**12.1.3** - 38 pages]<br>4. Schedule of Submissions [**12.1.4** - 60 pages]<br>5. CONFIDENTIAL REDACTED - Schedule of Submissions (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(b)) [**12.1.5** - 60 pages] |

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Job Ref: 9481
28 July 2025

City of Belmont
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**Attention: Alex Bott – Manager Planning Services**

Dear Alex,

**Proposed Amendment to the Local Planning Scheme No 15.**
**Precincts B, C, D and E of Ascot Racecourse**

Rowe Group acts on behalf of Perth Racing in relation to their landholdings at Lots 3, 13, 452 and 9002 Grandstand Road, Lot 7005 Matheson Road, and Lots 51 and 100 Raconteur Drive, Ascot.

Following the submission of the Ascot Racecourse Precinct Structure Plan ('draft PSP') to the City of Belmont and recent engagement with officers of the Department of Planning, Lands and Heritage, on behalf of our Client we are pleased to submit the enclosed Proposed Amendment to the City of Belmont Local Planning Scheme No. 15 ('LPS15') for initiation by the City for Precincts 'B', 'C', 'D' and 'E' of the draft PSP.

The draft PSP identifies future zoning, density, and land use controls that will facilitate future development of the site. Accordingly, the Proposed Amendment seeks to give statutory effect to these elements and provide consistency with the draft PSP.

An Amendment to the Metropolitan Region Scheme ('MRS') for Precinct 'A' was lodged with DPLH on 28 November 2024. A request to rezone Precinct 'A' under LPS15 will be prepared and submitted to the City of Belmont for consideration in due course.

Please refer to Attachment One *Scheme Amendment Report* providing further information in this regard. We trust the provided information is sufficient to enable the City to give support to the initiation of the Scheme Amendment.

Should you require any further information or clarification in relation to this matter, please contact Lena Jaetschmann on 9221 1991.

Yours faithfully,



**Lena Jaetschmann**
Rowe Group

*Encl.* *Scheme Amendment Report*

# Attachment One

Scheme Amendment Report

# Proposed Amendment to the City of Belmont LPS No. 15

## Precincts B, C, D and E / Ascot Racecourse Precinct
## Ascot

ROWE GROUP

OUR REF: 9481 28/07/2025

# Document Control

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| | | | | |
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This report has been authorised by;



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1. Certificate of Title
2. Draft Ascot Racecourse Precinct Structure Plan Map

3. Local Water Management Strategy
4. Retail Assessment (Net Benefit Test)
5. Transportation Noise Assessment
6. Environmental Assessment Report
7. Engineering Servicing Report
8. Traffic Impact Assessment

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1. Cadastral Information
2. Certificate of Title Encumbrances
3. Summary of Proposed Amendment

# 1. Introduction

Rowe Group acts on behalf Perth Racing in relation to their landholdings at Lots 3, 13, 452 and 9002 Grandstand Road, Lot 7005 Matheson Road, and Lots 51 and 100 Raconteur Drive, Ascot ('site'). A draft Precinct Structure Plan known as the Ascot Racecourse Precinct Structure Plan ('draft PSP') has been prepared in relation to the site and was submitted to the City of Belmont for consideration on 21 August 2024. The draft PSP identifies future zoning, density, and land use controls that will facilitate future development of the site.

To give statutory effect to these elements and provide consistency with the PSP, it is necessary to amend the Metropolitan Region Scheme ('MRS') and the City of Belmont Local Planning Scheme No. 15 ('LPS15'). An MRS Amendment request has been prepared in relation to a portion of Lot 9002 Grandstand Road (Precinct 'A') and was submitted to the Western Australian Planning Commission ('WAPC') on 28 November 2024. A request to rezone Precinct 'A' under LPS15 will be prepared and submitted to the City of Belmont for consideration in due course.

The enclosed documentation requests support from the City of Belmont to initiate an amendment to LPS15 in relation to Precincts 'B', 'C', 'D' and 'E' of the draft PSP ('Amendment Area'). The proposed amendment comprises both textual modifications to LPS15 and modifications to the LPS15 scheme maps.

This report contains all of the necessary information required to support the initiation of the amendment to LPS15. It provides a detailed explanation of the proposed amendment, identifies and describes the Amendment Area and its surroundings, contains an overview of the relevant zoning and reservations, and includes an analysis of relevant planning and environmental considerations.

This report has been prepared following initial engagement with the Department of Planning Lands and Heritage (DPLH) and the City of Belmont in the context of the draft PSP.

# 2. Description of Site

## 2.1 Location

Located within the municipal district of the City of Belmont, the Amendment Area forms part of the locality of Ascot and is situated approximately 7.7 km east of the Perth Central Business District.

Refer **Figure 1 – Regional Context**

The Amendment Area is bound by the Swan River to the north, the Ascot Residential and Stables area and Matheson Road to the east and south-east, Resolution Drive to the south and south-west, and Grandstand Road to the west.

Grandstand Road provides access to the regional road network including Tonkin Highway and Graham Farmer Freeway via Garrat Road and Guildford Road to the north, and Great Eastern Highway to the south via Resolution Drive and Stoneham Street. The southern portion of the Amendment Area is bound by Resolution Drive and Matheson Road providing access to local residential streets.

Refer **Figure 2 – Local Context**

## 2.2 Cadastral Information

The Amendment Area comprises the following land parcels which collectively measure 61.42 ha:

| Lot | Street Address | Plan | Volume | Folio | Area | Landowner |
|---|---|---|---|---|---|---|
| 1 | 88 Grandstand Road | 55346 | 1724 | 276 | 2,452m$^2$ | State Planning Commission |
| 3 | 96 Grandstand Road | 55346 | 1742 | 278 | 350m$^2$ | The Chairman of the Committee of the WA Turf Club |
| 13 | 71 Grandstand Road | 26760 | 1883 | 670 | 7,312m$^2$ | The Chairman of the Committee of the WA Turf Club |
| 23 | 2 Carbine Street | 2198 | 321 | 107 | 926m$^2$ | The Chairman of the Committee of the WA Turf Club |
| 50 | 71 Grandstand Road | 5729 | 1041 | 934 | 3,516m$^2$ | The Chairman of the Committee of the WA Turf Club |
| 51 | 2 Raconteur Drive | 15104 | 1883 | 668 | 6,939m$^2$ | The Chairman of the Committee of the WA Turf Club |
| 100 | 1 Raconteur Drive | 60341 | 2723 | 304 | 25,725m$^2$ | The Chairman of the Committee of the WA Turf Club |
| 452 | 70 Grandstand Road | 60339 | 2723 | 355 | 11,441m$^2$ | The Chairman of the Committee of the WA Turf Club |
| 7705 | 71 Matheson Road | 209359 | 1789 | 567 | 43,318m$^2$ | The Chairman of the Committee of the WA Turf Club |
| 9002 | 71 Grandstand Road | 60352 | 2723 | 303 | 512,241m$^2$ | The Chairman of the Committee of the WA Turf Club |

**Table 1: Cadastral Information**

The proposed Amendment relates to all of the above landholdings with the exception of the portion of Lot 9002 which comprises the 'Racecourse' Precinct and Precinct 'A', as depicted within the draft PSP.

Refer **Figure 3 – Site Plan**

Copies of the Certificates of Title for the above land parcels are enclosed at **Attachment 1**. A review of the Certificates of Title reveal that the Amendment Area is affected by a number of encumbrances, details of which are set out in the table below.

| Document Number | Type | Details | Affected Lots |
|---|---|---|---|
| D367664 | Caveat | Diamond Syndicate Pty Ltd | 1 |
| K930699 | Easement | Water Corporation | 7705 |
| H712859 | Lease – telecommunications infrastructure | Vodaphone network Pty Ltd | 9002 |
| I041460 | Lease – telecommunications infrastructure | Optus Mobile Pty Ltd | 9002 |
| K929948 | Lease – telecommunications infrastructure | Crown Castle Australia Pty Ltd | 9002 |
| K944992 | Caveat - telecommunications infrastructure | Crown Castle Australia Pty Ltd | 9002 |
| N/A | Easement burden | Electricity | 9002 |
| L399948 | Memorial | Contaminated Sites Act 2003 | 9002 |
| M813804 | Lease – telecommunications infrastructure | Optus Mobile Pty Ltd | 9002 |
| L014550 | Easement | WA Gas Networks Pty Ltd | 100 |
| M230259 | Easement | Electricity | 100 |
| M230260 | Easement | Electricity | 100 |
| N/A | Easement | Drainage | 452 |
| L014556 | Easement | City of Belmont | 452 |

**Table 2: Certificate of Title Encumbrances**

None of the above encumbrances affect the advancement of the proposed amendment however further consideration will be required at the development stage, particularly in relation to the protection of easements.

Refer **Attachment 1 – Certificates of Title**

## 2.3 Existing Improvements and Surrounding Land Uses

The Amendment Area abuts the Swan River foreshore to the north, the Ascot Residential and Stables area to the south and east, light/commercial development to the south, and the Ascot Waters residential estate and Bristile Kilns (also known as the 'Ascot Kilns') to the west. The Ascot Residential and Stables area is inherently linked to the horse racing industry and the operation of Ascot Racecourse. The existing zoning applicable to the area permits the keeping of horses within private stable complexes, enabling horse trainers to operate in the area and utilise the Racecourse for training purposes.

Land to the west and south-west of the Amendment Area includes a historical landmark being the Bristile Kilns located on the border of the Ascot Waters residential estate. The light industrial/commercial development to the south comprises of a range of land uses including corporate offices, fast food outlets, and service stations.

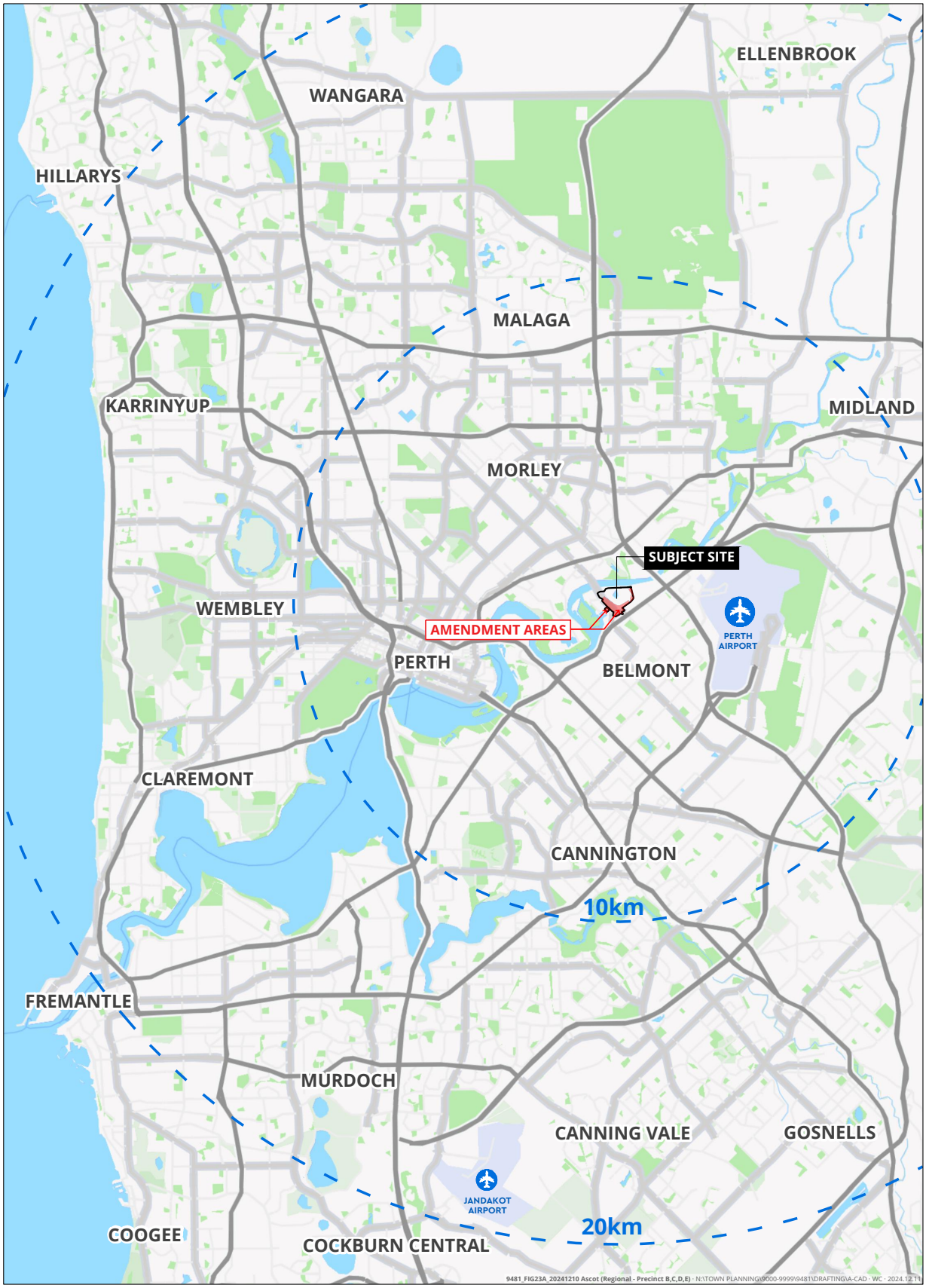
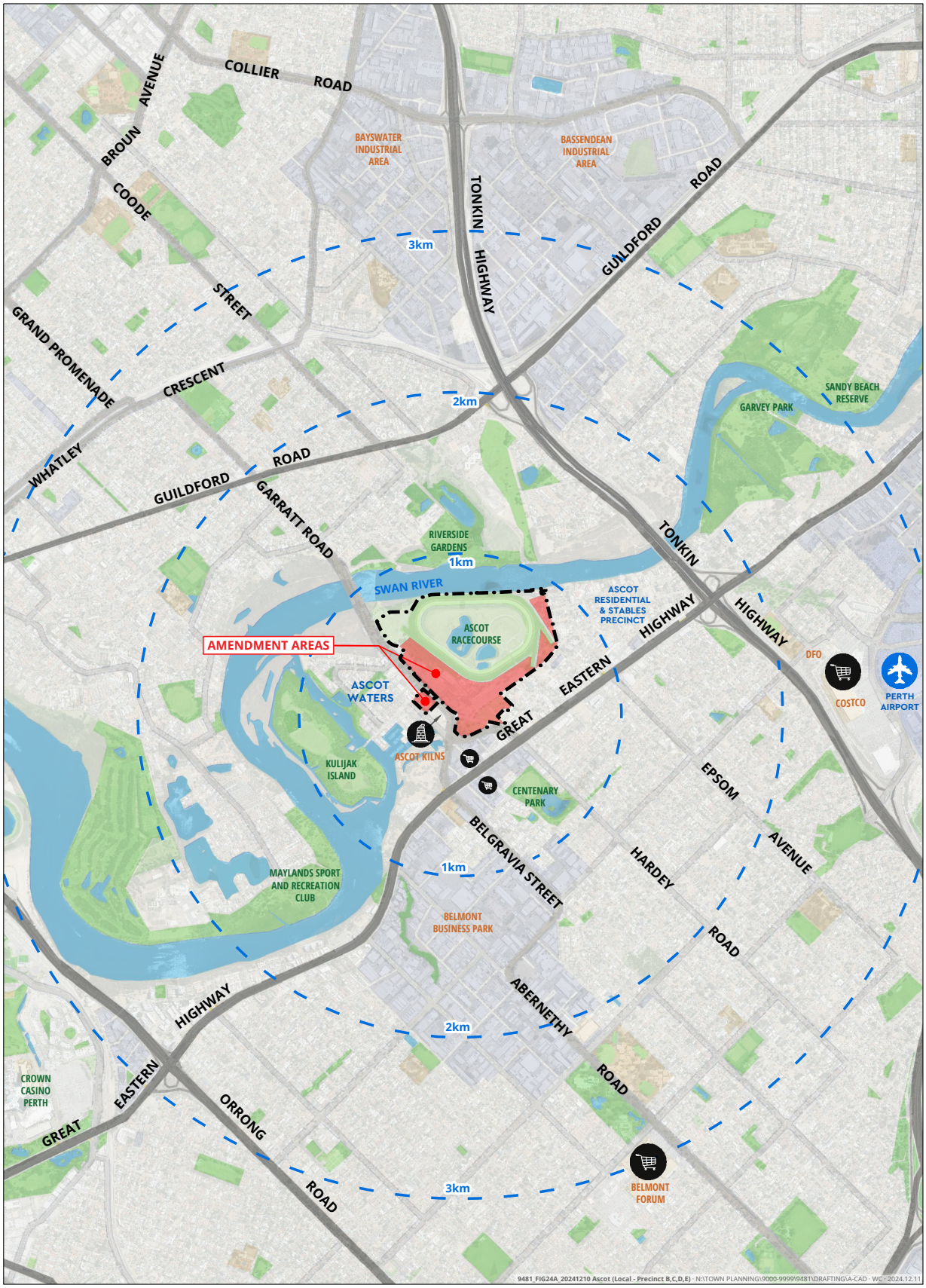



FIGURE 1
REGIONAL LOCATION




0 1000 m

SCALE @ A4: 1:30,000

FIGURE 2
LOCAL CONTEXT

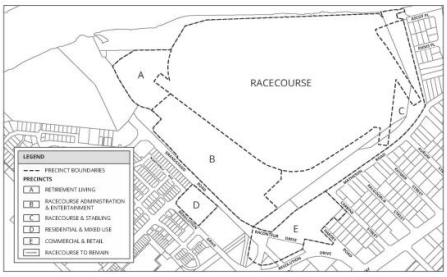



FIGURE 3
SITE PLAN

# 3. Proposed Amendment

It is requested that the City of Belmont, pursuant to Section 75 of the *Planning and Development Act 2005*, resolves to initiate an amendment to LPS15 by:

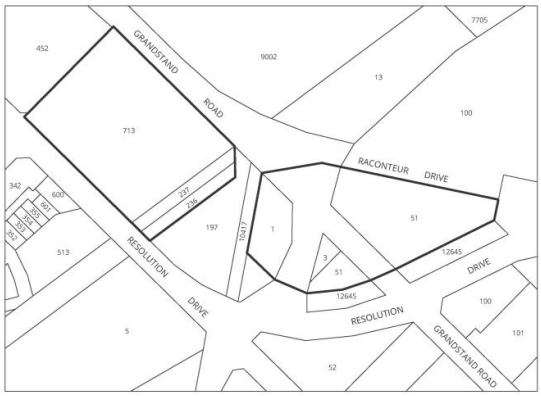
1. Rezoning a portion of Precinct 'D' (comprising Lot 452 (No. 70) Grandstand Road, Ascot) from the 'Place of Public Assembly: Racecourse' Zone to the 'Residential' R60 Zone as shown on the Scheme Amendment Plan.
2. Rezoning a portion of Precinct 'D' (comprising Lot 452 (No. 70) Grandstand Road, Ascot) from the 'Place of Public Assembly: Racecourse' Zone to the 'Mixed Use' Zone and including a Restricted Use (R1) designation as shown on the Scheme Amendment Plan.
3. Rezoning a portion of Precinct 'E' (comprising Lot 100 (No. 1) Raconteur Drive, Ascot) from the 'Place of Public Assembly: Racecourse' Zone and a portion of Precinct 'E' (comprising Lot 23 (No. 2) Carbine Street) from the 'Residential and Stables' Zone to the 'Mixed Use' Zone, deleting the Additional Use (A18) designation, inserting a Restricted Use (R1) designation and inserting a residential density coding of R10 and R-AC4 as shown on the Scheme Amendment Plan.
4. Rezoning portion of Precinct 'E' (comprising Lot 1 (No. 80) and Lot 3 (No. 96) Grandstand Road and Lot 51 (No. 2) Raconteur Drive, Ascot) from the 'Mixed Use' Zone and 'No Zone' to the 'Commercial' Zone, inserting a residential density coding of R-AC3 and inserting an Additional Use (A3) designation as shown on the Scheme Amendment Plan.
5. Including the following new provision in Schedule No. 2 – Additional Uses:

| No. | Location and Additional Uses |
|---|---|
| 18 | Within Precinct 'B', the local government may consider the following additional uses:<br>• Office<br>• Hotel<br>• Reception Centre<br>• Restaurant<br>• Tavern<br>Within Precinct 'C', the local government may consider the following additional uses:<br>• Animal Establishment<br>• Stables<br>• Veterinary Centre<br>Within Precinct 'E', the local government may consider the following additional uses:<br>• Health Centre<br> |

6. Inserting the following table into Schedule No. 3 of LPS15 - Restricted Uses:

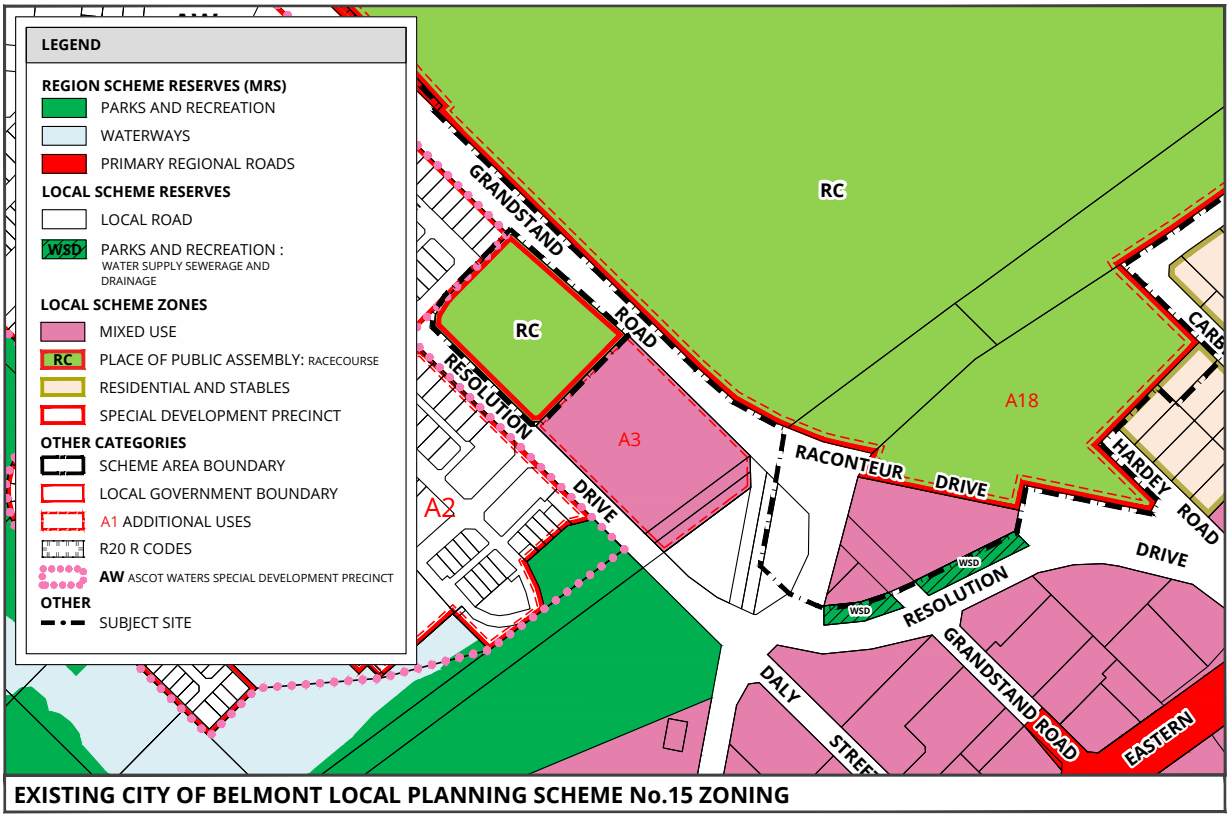
| No. | Description of Land | Restricted Use | Conditions |
|---|---|---|---|
| 1 | All land contained within Precinct D and Precinct E of the Ascot Racecourse Precinct Structure Plan area subject of the 'Mixed Use' zone | Uses permissible in the 'Mixed Use' Zone, but excluding the following uses:<br>Amusement Facility<br>Amusement Parlour<br>Auction Mart<br>Garden Centre<br>Industry – Light<br>Industry – Service<br>Motor Vehicle Repair<br>Warehouse | Nil. |

7. Modifying Schedule No. 2 – Additional Uses (A3) by inserting the following replacement plan:

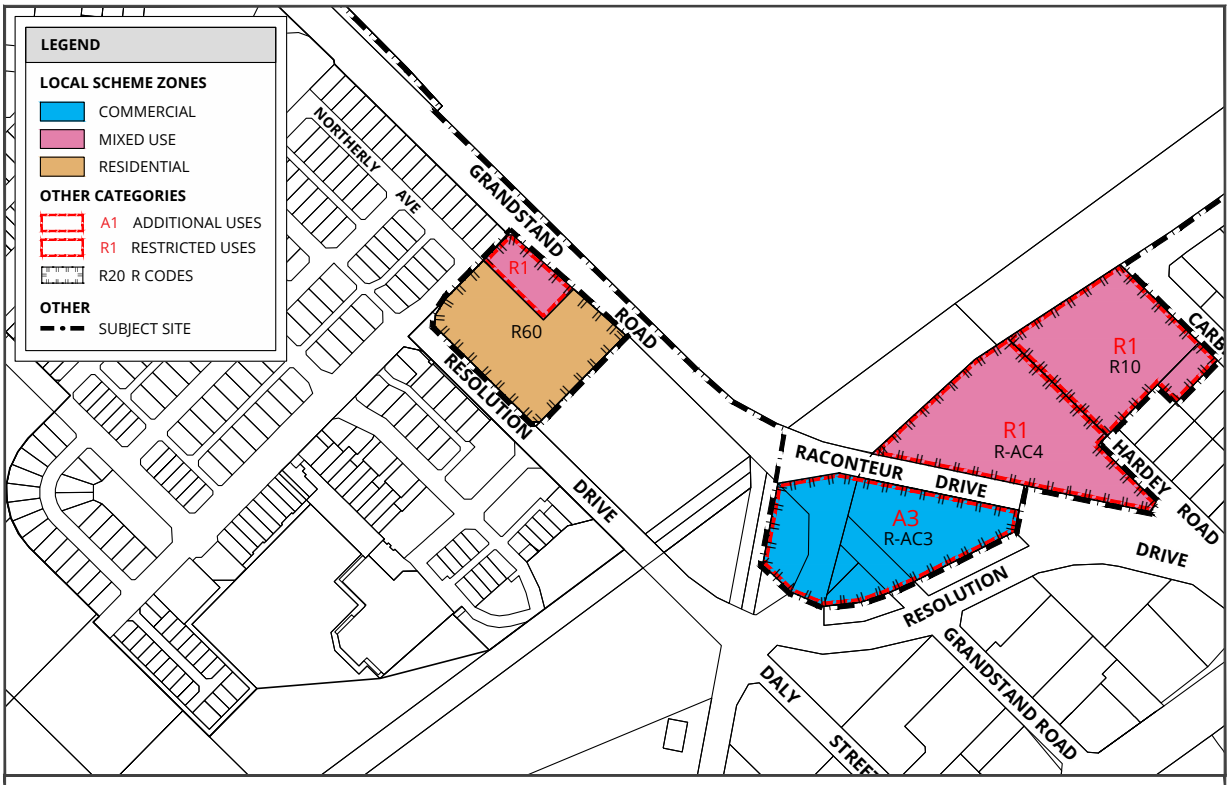
| No. | Location and Additional Uses |
|---|---|
| 3 |  |

8. Amending the Scheme Map accordingly.

The proposed Amendment is considered to fall within the category of a 'Complex' Amendment pursuant to Part 5 Regulation 34 of the *Planning and Development (Local Planning Schemes) Regulations 2015*.




EXISTING CITY OF BELMONT LOCAL PLANNING SCHEME No.15 ZONING




PROPOSED CITY OF BELMONT LOCAL PLANNING SCHEME No.15 ZONING

9481_FIG26A_20241210 Ascot (LPS rezoning - Precinct B,C,D,E) · N:\TOWN PLANNING\9000-9999\9481\DRAFTING\A-CAD · WC · 2024.12.12

0 300 m

SCALE @ A4: 1:10,000

FIGURE 4
SCHEME AMENDMENT PLAN

# 4. Town Planning Considerations

## 4.1 Zones and Reservations

### 4.1.1 Metropolitan Region Scheme

The Amendment Area is primarily zoned 'Private Recreation' under the provisions of the MRS. The balance of the Amendment Area is zoned 'Urban'.

Refer **Figure 5 – MRS Zoning**

### 4.1.2 City of Belmont Local Planning Scheme No. 15

The Amendment Area is predominately zoned 'Place of Public Assembly – Racecourse' under the provisions of LPS15 and is assigned an 'Additional Use' ('A18') designation on the Scheme Map. The balance of the Amendment Area is zoned 'Mixed Use'.

The A18 designation enables a portion of the Amendment Area to be considered for the additional uses of 'Horse Sales' and 'Stables' which are not otherwise permissible under the 'Place of Public Assembly' Zone. The proposed Amendment seeks to modify the scope of additional uses applicable to the 'Place of Public Assembly' Zone but retain the general intent and nature of the uses provided.

Refer **Figure 6 – LPS15 Zoning**

## 4.2 Regional Planning Strategies

### 4.2.1 Central Sub-Regional Planning Framework

The Perth and Peel @ 3.5 Million suite of documents provides a framework for the development of the Perth and Peel regions as the population reaches an estimated 3.5 million people by 2050. The suite of documents includes four (4) planning frameworks for the Central, North-West, North-East and South Metropolitan sub-regions. These documents provide the detailed commentary and analysis accompanying the overall 'Spatial Plan for Perth and Peel @ 3.5 million'.

The Amendment Area is located within the parameters of the 'Central' Sub-Regional Planning Framework ('Framework'). The Framework identifies the racecourse as forming part of a 'Green Network' that extends along the Swan River. Great Eastern Highway is identified as an 'Urban Corridor' where focus should be given to investigating increased residential densities, with potential for mixed land uses where appropriate. Both Great Eastern Highway, Grandstand Road and Resolution Drive immediately abutting Perth Racing's landholdings are identified under the Framework as 'high-frequency public transit' routes.

The proposed amendment is broadly consistent with the Framework in that it seeks to provide mixed uses and higher residential densities in and around high frequency public transit routes whilst retaining a network of green space along the river foreshore.

Refer **Figure 7 – Central Sub-Regional Planning Framework Map**

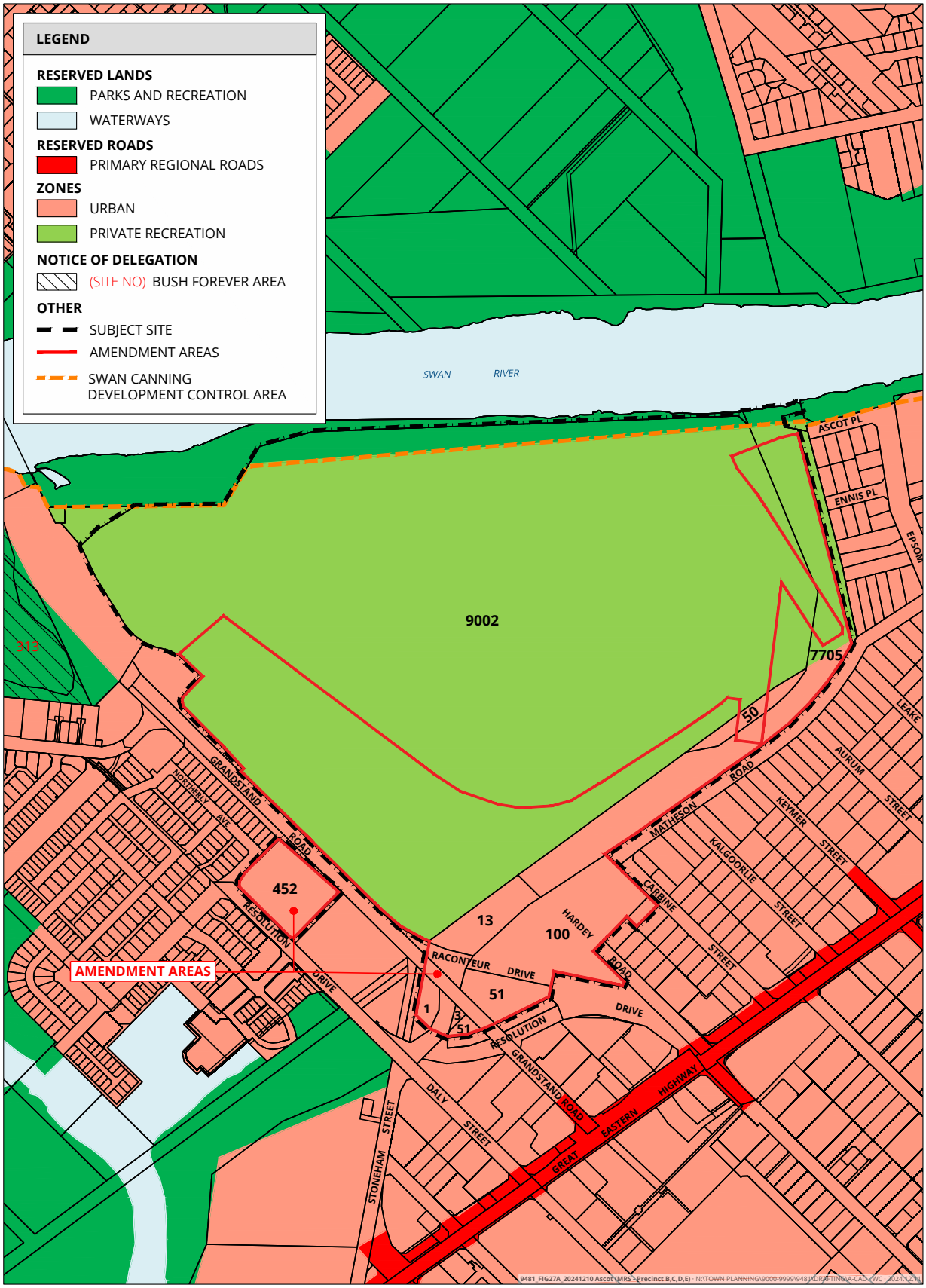
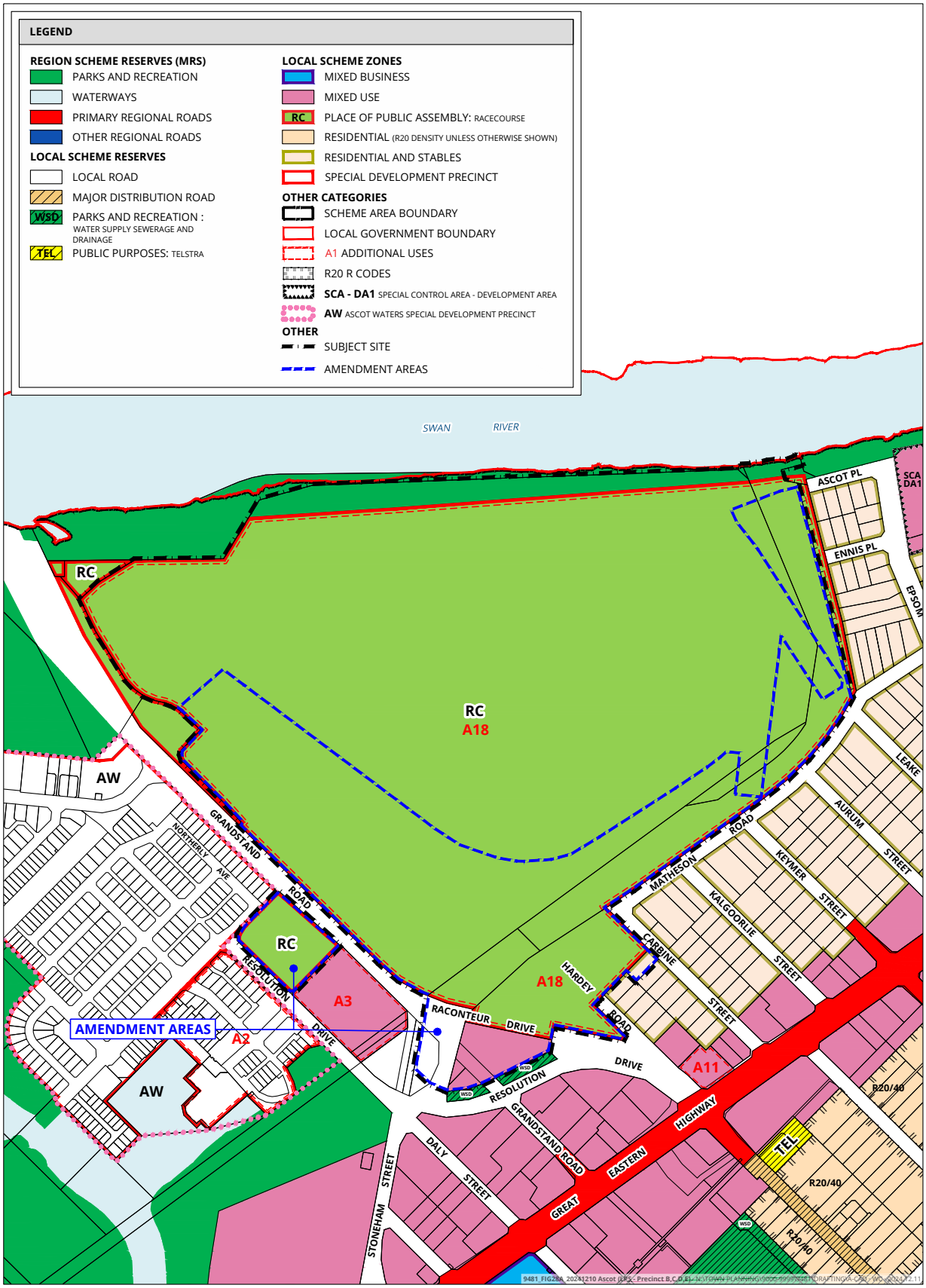



FIGURE 5
METROPOLITAN REGION SCHEME ZONING




0 200 m

SCALE @ A4: 1:7000

FIGURE 6
CITY OF BELMONT LOCAL PLANNING SCHEME No. 15 ZONING

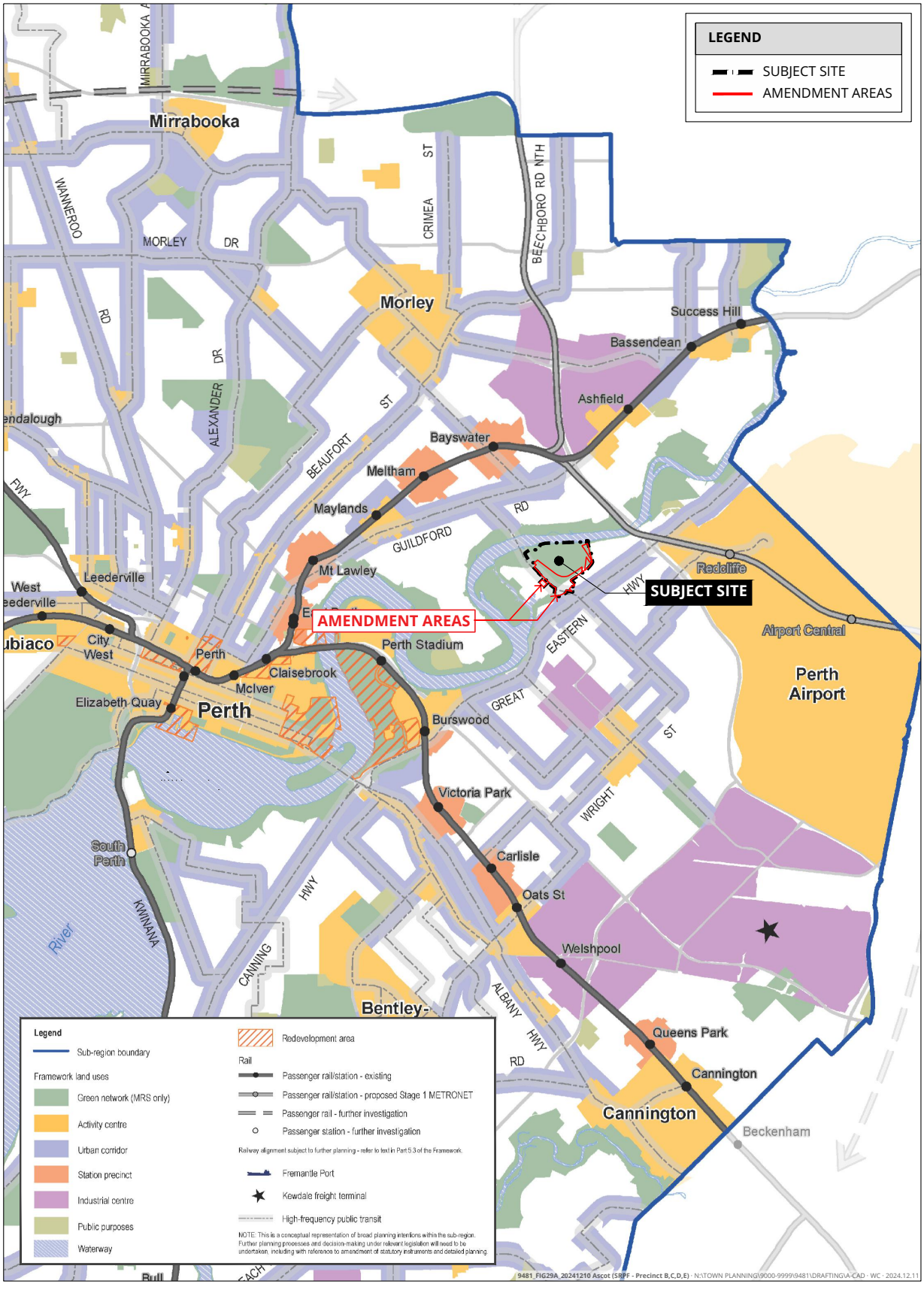



FIGURE 7
CENTRAL SUB-REGIONAL PLANNING FRAMEWORK

## 4.3 Local Planning Strategies

### 4.3.1 City of Belmont Local Planning Strategy

The City of Belmont is not currently guided by an adopted Local Planning Strategy however is in the process of preparing a Local Planning Strategy which will be used to inform the preparation of a new Local Planning Scheme to replace LPS15. No indication of timeframes for the preparation and advertising of the draft Local Planning Strategy and draft Local Planning Scheme are currently available.

### 4.3.2 City of Belmont Activity Centres Planning Strategy

The City of Belmont Activity Centres Planning Strategy ('ACPS') provides a holistic guide for future planning of activity centres within the City, based on the current strategic planning framework, future economic trends and analysis of best practice activity centre planning, as outlined by *State Planning Policy 4.2 – Activity Centres* ('SPP 4.2'). The ACPS identifies a future 'Local Centre' within the Ascot Waters residential estate (500m$^2$ NLA) to the west of the Amendment Area and the Golden Gateway Activity Centre (1,200m$^2$ NLA) which includes Precinct 'E'.

Precinct 'E' is identified in the draft PSP for future commercial development, reflective of its position within the Golden Gateway Activity Centre. Accordingly, the proposed Amendment seeks to rezone Precinct 'E' to the 'Commercial' and 'Mixed Use' Zones in order to facilitate a range of commercial uses. Land immediately adjacent to Resolution Drive and Grandstand Road, which is proposed for a 'Commercial' zoning under the proposed Amendment, would be suitable for active land uses such as a supermarket and speciality retail uses, and could form the 'core' of the activity centre, positioned centrally within the activity centre and having suitable access and exposure to passing trade.

To provide an appropriate transition to the adjacent 'Residential and Stables' precinct, transitional commercial and/or equine focussed development, such as bulky goods showroom, offices, a gym, and/or vet consulting rooms, to the north-east of Raconteur Drive is proposed via a 'Mixed Use' zoning. Like Precincts 'A' and 'D', 'Restricted Uses' are proposed to be applied to the 'Mixed Use' zone to ensure compatibility with surrounding development.

## 4.4 Structure Plans

### 4.4.1 Draft Ascot Racecourse Precinct Structure Plan

The Amendment Area forms part of the draft Ascot PSP which was lodged with the City of Belmont on 21 August 2024. The purpose of the PSP is to guide future land use, subdivision and development of the racecourse and surrounds. The draft PSP designates five (5) precinct areas ('A', 'B', 'C', 'D' and 'E') subject to different objectives and planning requirements. The proposed Amendment relates to Precincts 'B', 'C', 'D' and 'E' only. The following provides a description of each.

**Precinct B (Racecourse Administration & Entertainment)**

a) Support the continuation of the Racecourse spectator and entertainment area.

b) Integrate Perth Racing's administration functions within the Ascot Racecourse site.

c) Enhance public and spectator amenity through attractive built form, expansive open spaces, and landscaping.

d) Respect existing heritage values of the site.

**Precinct C (Racecourse & Stabling)**

a) Facilitate land use and development that supports, and is complementary to, the horse racing industry.

b) Provide for the planned development of on-course horse stabling and ancillary functions to support the ongoing viability of Ascot Racecourse.

c) Mitigate potential land use conflict through appropriate design and management practices.

**Precinct D (Residential & Mixed Use)**

d) Provide for medium density residential development of a scale that is consistent and/or compatible with surrounding residential area.

e) Support the development of small-scale non-residential uses fronting Grandstand Road, including but not limited to a 'Child Care Premises'.

**Precinct E (Commercial)**

f) Facilitate the development of an activity centre at the intersection of Grandstand Road and Resolution Drive.

g) Support retail, commercial, and other land uses that are consistent and complementary with the role and function of an activity centre.

h) Support land use and development that is complementary to Racecourse operations.

i) Satisfy existing and future demand for convenience retail and amenities in the local area.

Refer **Attachment 2 - Draft Ascot Precinct Structure Plan Map**

## 4.5 State Planning Policies

### 4.5.1 State Planning Policy 2.10 – Swan-Canning River System

The WAPC's *State Planning Policy 2.10 - Swan-Canning River Systems* ('SPP 2.10') provides an overarching framework that sets out guiding principles for decision-making in relation to planning proposals over the Swan and Canning River and its foreshore. SPP 2.10 contains four (4) guiding principles of social benefit, environmental values, cultural and natural heritage, and design and development, and nine (9) precinct areas.

The Amendment Area is located within the 'Lower Swan' precinct under SPP 2.10 which promotes planning decisions that:

- *Establish protection measures for riparian vegetation on foreshores;*
- *Promote an aesthetic environment for new riverside development appropriate to its surrounding, and establish a sense of place by the river;*
- *Recognise the importance of the river for transport, commerce, tourism and leisure as well as its conservation value;*
- *Enhance the appearance and function of existing recreation, tourism and commercial nodes and of proposed nodes identified in an adopted Swan-Canning precinct plan;*
- *Protect places of cultural significance, in particular places on the Register of Heritage Places and the Department of Indigenous Affairs register of significant places; and*
- *Ensure that subdivisions incorporate adequate foreshore reserves and building setbacks.*

The proposed Amendment does not directly affect the Swan-Canning River System on the basis that it does not involve any modifications to the zoning or statutory town planning provisions relating to land immediately adjoining the river foreshore. On this basis, the proposed Amendment is consistent with the objectives of SPP 2.10 and specific provisions in relation to the Lower Swan precinct.

### 4.5.2 State Planning Policy No. 2.9 – Water Resources

The WAPC's *State Planning Policy 2.9 – Water Resources* ('SPP 2.9') provides guidance for the planning, protection, conservation and management of surface and groundwater catchments. It also includes consideration of the availability of water and waterways management, wetlands, waterways, and estuaries and their buffers, and implementation of total water cycle management principles in the land use planning system.

The proposed Amendment will facilitate implementation of the draft PSP by providing the prerequisite local zoning and statutory town planning controls to support future development. The draft PSP is supported by a Local Water Management Strategy ('LWMS') prepared in accordance with the WAPC's Better Urban Water Management Guidelines and addressing the provisions and objectives set out in SPP 2.9.

Any future development within the Amendment Area will require demonstration by way of an Urban Water Management Plan ('UWMP') or Stormwater Management Plan (as appropriate) that the water management measures contained within the LWMS are suitability implemented.

Refer **Attachment 3 – Local Water Management Strategy**

### 4.5.3 Draft State Planning Policy 2.9 – Planning for Water

The WAPC has prepared a *draft State Planning Policy 2.9 – Water Resources* ('Draft SPP 2.9') and supporting draft Guidelines which, once gazetted, will consolidate and replace a number of existing State Planning Policies including SPP 2.9 – Water Resources and SPP 2.10 – Swan-Canning River System. Its purpose to is deliver greater clarity and simply the current framework around how water-related provisions are implemented across WA.

Whilst draft SPP 2.9 is yet to be finalised and adopted, its objectives and provisions have been taken into consideration as part of the draft PSP preparation process and are suitably addressed in the LWMS.

### 4.5.4 State Planning Policy 3.0 – Urban Growth and Settlement

The WAPC's *State Planning Policy 3.0 – Urban Growth and Settlement* ('SPP 3.0') is a broad sector policy that sets out the principles and considerations to facilitate sustainable patterns of urban growth and settlement in Western Australia. The proposed Amendment is consistent with (and promotes) a number of key principles contained within SPP 3.0 including the following:

- Sufficient and suitably serviced land in the right locations for housing, employment, commercial, recreational and other purposes, coordinated with the efficient and economic provision of transport, essential infrastructure and human services.
- Variety and choice in the size, type and affordability of housing to support a range of household sizes, ages and incomes and which is responsive to housing demand and preferences.
- Making the most efficient use of land in existing urban areas through the use of vacant and under-utilised land and buildings, and higher densities where these can be achieved without detriment to neighbourhood character and heritage values; the cost-effective use of urban land and buildings, schools and community services, infrastructure systems and established neighbourhoods; and promoting and encouraging urban development that is consistent with the efficient use of energy.
- Supporting higher residential densities in the most accessible locations, such as, in and around town and neighbourhood centres, high frequency public transport nodes and interchanges, major tertiary institutions and hospitals, and adjacent to high amenity areas such as foreshores and parks.
- Giving priority to infill development in established urban areas, particularly through urban regeneration and intensification of development of under-utilised urban land, whilst respecting neighbourhood character.
- Locating higher residential densities in locations accessible to transport and services, such as in and around the CBD, regional and district centres, activity corridors and higher education campuses, and in selected areas of high amenity on the coast and river foreshores.

The proposed Amendment is consistent with the objectives and principles for future urban growth and will provide for the implementation of a well-planned pattern of development within the existing urban area of the Ascot Racecourse and surrounding area.

### 4.5.5 State Planning Policy 4.2 – Activity Centres

The WAPC's *State Planning Policy No. 4.2 – Activity Centres* ('SPP 4.2') provides for a hierarchy and network of activity centres to meet the needs of the community, provide economic and environmental benefits, enable the distribution of goods and services, and facilitate retail, commercial and mixed used developments. As the proposed Amendment seeks to rezone land within Precinct 'E' to facilitate commercial development as part of the wider Golden Gateway Activity Centre, the objectives and provisions of SPP 4.2 are applicable.

The size and scale of the Golden Gateway Activity Centre (which includes Precinct 'E') would be akin to a 'Local Centre' or a 'Neighbourhood Centre' under SPP 4.2. The role and characteristics of a 'Local Centre' and 'Neighbourhood Centre' are described under SPP 4.2 as follows:

> ***Local centres*** *provide for the convenience and incidental needs of local communities. These centres provide an important role in providing walkable access to services and facilities for local communities.*
>
> ***Neighbourhood centres*** *are important focal points that provide for daily to weekly household shopping needs, community facilities and a small range of other convenience services. They are also a focus for medium density housing. These centres play an important role in providing walkable access to services and facilities for local communities.*

There are unique considerations in the planning of the Golden Gateway Activity Centre including, but not limited to, the extent of land fragmentation, the type and nature of existing land uses/development, and access constraints. The centre's proximity to Great Eastern Highway makes it attractive for uses reliant upon passing trade, such as bulky goods showrooms. Similarly, its proximity to the Perth Central Business District and Belmont Business Park, coupled with high levels of accessibility afforded by the road network and public transport services, makes it attractive for service industries and offices to locate.

The vision for Precinct 'E' under the draft PSP is to develop active commercial/retail land uses adjacent to Resolution Drive and Grandstand Road and transitioning to less intensive retail (i.e. bulky goods showrooms), commercial, and/or equine focussed development to the north-east of Raconteur Drive, adjacent to the Residential and Stables area. These land uses would be consistent with the intent of an activity centre in this location, whilst also responding to the existing 'equine-focus' of the area.

In accordance with SPP 4.2, a Net Benefit Test was prepared by Taktics4 in support of the draft PSP to assess the economic demand and implications for potential retail development in this area. The Net Benefit Test assesses the potential for 3,400m² net lettable area ('NLA') of 'Shop/Retail' floorspace and 9,600m² NLA of 'Other Retail', representing a 'worst-case' maximum retail floorspace scenario for Precinct 'E'. The findings of the Net Benefit Test indicate the following:

- The proposed development of 'Shop/Retail' and 'Other Retail' within the activity centre will have low/insignificant impacts on the existing and future activity centre network, with any impacts likely offset by potential sales growth generated by additional population and spending over the next 15 years.
- The creation of an activity centre in the area will reduce the number of vehicle kilometres required to be travelled by residents in the immediate trade area, and overall will save up to 700,000 vehicle trips per annum outside of the trade area.
- The development could create up to 205 full-time equivalent jobs.

- The 'Shop/Retail' floorspace will be sustainable from 2026 and satisfy an existing resident trade area, filling an existing demand in the market.
- Any development of 'Other Retail' will complement existing offerings in the vicinity.

Given the investigations undertaken as part of the precinct structure planning process, the proposed Amendment is considered to satisfy the objectives and provisions of SPP 4.2.

Refer **Attachment 4 – Retail Assessment (Net Benefit Test)**

### 4.5.6 State Planning Policy No. 5.4 – Road and Rail Noise

The WAPC's *State Planning Policy 5.4 – Road and Rail Noise* ('SPP 5.4') applies where a noise sensitive land use is proposed within proximity to major transport and freight corridors. Under SPP 5.4, the proposed 'Mixed Use' zone in Precinct 'E' is partially located within the noise buffer zone of Great Eastern Highway, being a strategic freight and major traffic route.

A Transportation Noise Assessment was prepared by Lloyd George Acoustics in support of the draft PSP and concluded that:

- Due to the screening effect of existing buildings, any ground floor noise sensitive uses would be compliant with the outdoor noise target; and
- Noise sensitive uses above ground floor and within 200m of Great Eastern Highway would be subject to Package A, including a notification on title. Alternatives to the Deemed to Comply Package A can be accepted if supported by a report from a suitably qualified acoustical consultant (member firm of the Association of Australasian Acoustical Consultants (AAAC)) once the specific plans are available.

Implementation of the abovementioned requirements will be applied as a condition of subdivision or development approval (as applicable).

Refer **Attachment 5 – Transportation Noise Assessment**

# 5. Environmental Considerations

The following provides a summary of the environmental site conditions and constraints relating to the Amendment Area and is sourced from the LWMS and Environmental Assessment Report ('EAR') prepared by Emerge Associates for the broader Ascot Racecourse Complex in support of the draft PSP. Copies of the LWMS and EAR are provided at **Attachments 3 and 6** respectively.

## 5.1 Landform and Soils

The Amendment Area is generally flat, with a slight increase in elevation in its eastern extent. The northern portion, adjacent to the Swan River, is the lowest at 0m Australian Height Datum ('AHD'). The remainder of the Amendment Area is elevated at 2m AHD to the north-west and 7.5m AHD to the east.

The Amendment Area falls within the Swan River Terrace system and contains Guildford formation of Alluvial and leached yellow sands. The soil types present at the subject site include:

- **Ms2** – Sandy Silt: Strong brown to mid grey, mottled, blocky, disseminated fine sand, hard when dry, variable clay content of alluvial origin.
- **Ms4** – Sandy Silt: light yellow brown, blocky, mottled with some fine to medium sand, soft when moist, variable clay content.
- **S8** – Sand: very light grey at surface, yellow at depth, fine to medium-grained, sub rounded quartz, moderately well sorted of eolian origin.

Geotechnical investigations were undertaken specifically for Precinct 'A' (Douglas Partners, 2014), Precinct 'C' (Douglas Partners, 2023) and Precinct 'D' (Galt, 2024). Each investigation confirms the regional geological mapping generally consisting of shallow layers of sand overlying sandy clay of the Guildford formation, which is generally unsuitable for on-site stormwater disposal.

From a site classification perspective, Precinct 'A' would be 'Class P', Precinct 'C' is also 'Class P' but can be re-classified to 'Class S' with appropriate site preparation, and Precinct 'D' is 'Class S'. It is assumed that Precinct 'B' will have ground conditions similar to Precincts 'A' and 'C', however further geotechnical investigations will be required to ensure adequate treatment of ground conditions before future development. For Precinct 'E', it is anticipated that ground conditions would be consistent with the natural material from the geotechnical investigations and geological mapping.

Refer **Attachment 7 - Engineering Servicing Report**

## 5.2 Acid Sulphate Soils

The Department of Water and Environmental Regulation's ('DWER') Acid Sulphate Soils ('ASS') risk mapping indicates that the majority of the Amendment Area is considered to have a 'high to moderate' risk of ASS occurrence within 3m of the natural surface. A portion of the Amendment Area, including parts of Precinct 'B' and Precinct 'C' are mapped as having 'moderate to low' risk of ASS occurring within 3m of the natural surface.

The existence of ASS within the Amendment Area does not affect the advancement of the proposed Amendment however it is acknowledged that a detailed ASS investigation and management plan will be required prior to any intrusive works being undertaken in the future.

## 5.3 Site Contamination

A review of the Department of Water and Environmental Regulation's ('DWER') Contaminated Sites Database reveals that the Amendment Area is not located within a registered 'Contaminated Site' under the *Contaminated Sites Act 2003*.

A Basic Summary of Records for Lot 9002 was requested from DWER as part of the draft PSP process which indicated that Precincts 'B' and 'C' are classified as 'possibly contaminated – investigation required'. The possible contamination is associated with the area's historic use for horse-racing and runoff from animal storage and agistment in the surrounding areas.

The contamination classification does not affect the advancement of the proposed Amendment however it is noted that Perth Racing are currently undertaking monitoring and investigation into the potential contamination which will be reviewed by DWER in due course. Any treatment or management requirements arising from these investigations will be implemented at the development stage.

## 5.4 Groundwater and Surface Water

The Perth Groundwater Map (DWER, 2023) indicates that the regional groundwater level sits at 0.5m AHD across the Amendment Area. The groundwater clearance from south-east to north-west of the Amendment Area therefore ranges from 6.5m to 0.5m.

In terms of future development, it is anticipated that additional fill will be required within the Amendment Area to satisfy a minimum groundwater clearance of 1.2m above maximum groundwater levels. This would be subject to further investigations on final development requirements and land uses. Further detail is outlined within the draft PSP.

## 5.5 Wetlands

The Geomorphic Wetlands of the Swan Coastal Plain dataset does not indicate the presence of any wetlands within the Amendment Area.

## 5.6 Biodiversity and Natural Area Assets

A flora and fauna survey of the broader Ascot Racecourse Complex was undertaken as part of the draft PSP process in March 2023 by Emerge Associates. The survey found the majority of the Racecourse Complex is heavily disturbed with limited intact native vegetation and that most of the vegetation was in a 'degraded' and 'completely degraded' state.

The survey found no threatened or priority flora species or suitable habitat for threatened or priority species within the Amendment Area. Whilst a desktop search indicated potential for two (2) threatened and priority flora species within the broader Racecourse Complex, these were not considered likely to occur due to lack of suitable habitat.

The northern portion of the broader Ascot Racecourse Complex (along the Swan River) is identified as an environmentally sensitive area which are prescribed protection under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*. Any future development within this area will need to ensure clearing permits are obtained prior to clearing works occurring.

## 5.7 Fauna

A basic fauna and targeted black cockatoo survey of the broader Ascot Racecourse Complex was undertaken by Emerge Associates to inform the draft PSP. The survey found that fauna habitat values within the Amendment Area are limited due to historical disturbance and are primarily suited to widespread fauna species with non-specific habitat requirements.

Although the Amendment Area has historically been predominantly cleared of vegetation to facilitate racecourse activities, several existing trees have been identified. These trees were identified through the fauna survey as potential nesting habitat for Black Cockatoos. Future development within the Amendment Area will need to observe any retention measures deemed appropriate.

## 5.8 Heritage

### 5.8.1 Aboriginal Heritage

A search of the Aboriginal Cultural Heritage Inquiry System identified one (1) Aboriginal heritage place located within the Amendment Area, as follows:

- Site ID 3753 – Registered site, Name: Perth, Type: Historical, Mythological, Hunting Place, Named Place, Natural Feature.

Site ID 3753 partially intersects with the western edge of the site and the boundary is a broader area, with the exact area not being defined.

### 5.8.2 European Heritage

A search of the 'Inherit' database of the Western Australian Heritage Council ('WAHC') and the City of Belmont Local Heritage Survey and Heritage List identifies that the Amendment Area forms part of two (2) heritage sites, being the 'Ascot Racecourse Complex' (Place Number 6123) and 'Lee-Steere House' (Place Number 27274). These heritage sites are identified under the City of Belmont's Local Heritage Survey with a Management Category of '1' and '4', respectively.

# 6. Infrastructure and Servicing

An Engineering Servicing Report of the broader Ascot Racecourse Complex was prepared by TABEC Civil Engineering Consultants to support the draft PSP. A copy of the Engineering Servicing Report is enclosed at **Attachment 7** and the key findings and recommendations relevant to the Amendment Area are summarised below.

## 6.1 Water

Investigations indicate that the existing water reticulation network within the area can service the Amendment Area depending on final water usage requirements, specifically:

- Precinct 'B' is currently serviced by an existing 100mm water main, however if additional water is required, this water main may require upgrading.
- Precinct 'C' has access to an existing 100mm water main located along the southern verge of Matheson Road which can service the Precinct area. If greater supply is required above the capacity of the pipework, there may be a need to upgrade the size of the water main to Precinct 'C'.
- Precinct 'D' has access to an existing 150mm water main on the western verge of Resolution Drive and a 100mm water main on Grandstand Road which provide adequate opportunity for connection and water supply.
- Precinct 'E' can be serviced by an existing DN100mm water main located within the existing redundant road reserves dissecting this Precinct area.

## 6.2 Sewer

Precinct 'B' is currently serviced by an existing sewer connection located at Raconteur Drive, however Water Corporation do not have any record of this connection and therefore wastewater flows from this Precinct have not been included in their planning assumptions. As such, if there is a substantial increase in wastewater flows to this connection, further discussions will be required with Water Corporation.

In the case of Precinct 'C', which will include development of on-course stabling complexes along the outer edge of the Racecourse, multiple sewer connections will be required to service the site. The western portion of the Precinct (between Kalgoorlie Street and Raconteur Drive) is expected to be conveyed to the west to the existing internal sewer.

The central area of the Precinct, along Matheson Road, is proposed to be serviced via an existing connection from Kalgoorlie Street. The eastern portion of the Precinct will require two (2) new connections along the eastern boundary to the existing sewer network.

## 6.3 Power

Preliminary power investigations have been undertaken as part of the draft PSP process to determine anticipated high voltage infrastructure requirements within the Amendment Area. These investigations indicate that there is sufficient capacity within the network to accommodate future urban development within the Amendment Area.

## 6.4 Stormwater Drainage

There are two (2) significant drainage systems that convey stormwater from the Amendment Area to the Swan River. The first is the Central Belmont Main Drain which is managed by Water Corporation, and the second is the local drainage network located near Matheson Road which conveys water from the surrounding road reserves into the lake system at the centre of the Racecourse.

In terms of precinct-specific stormwater drainage management, the following is noted:

- Precinct 'B' currently captures and infiltrates water at source, with overland flow being graded towards the existing track.
- Precinct 'C' will require a combination of infiltration at source where levels and soil conditions allow, and discharge to the lake system.
- Precinct 'D' will include stormwater storage and infiltration at the site, with the 1% AEP event discharging into the local drainage network on Resolution Drive.
- Precinct 'E' is anticipated to be treated via bio-retention swale before overflow from the basin discharging into the Water Corporation's drainage system.

Further detail is outlined within the draft PSP with specific requirements for each Precinct to be subject to detailed design at the development stage.

## 6.5 Traffic and Access

A Traffic Impact Assessment ('TIA') of the broader Ascot Racecourse Complex was undertaken to support the draft PSP. A copy of the TIA is enclosed at **Attachment 8** and the key findings and recommendations relevant to the Amendment Area are summarised below.

### 6.5.1 Existing Road Network

Vehicular access to and from the Amendment Area will be provided from several locations along Grandstand Road, Resolution Drive, and Matheson Road. Grandstand Road provides access to the regional road network including Tonkin Highway and Graham Farmer Freeway via Garrat Road and Guildford Road to the north, and Great Eastern Highway to the south via Resolution Drive and Stoneham Street. Grandstand Road is classified as a 'Distributor A' road under the Main Roads WA Functional Road Hierarchy and forms a dual carriageway carrying volumes of approximately 16,700 vehicles per day (2018). Intersection arrangements to Grandstand Road will remain the same for the Ascot Racecourse complex.

There is an opportunity for a left-in/left-out access from Precinct 'D' (opposite the racecourse) to Grandstand Road to serve a future commercial/community use. This will need to ensure the access is integrated safely with the operations of the crossover on the opposite side of the road to the racecourse. Detailed assessment of the anticipated impacts associated with a commercial development on this site will occur in later planning stages. Precinct 'D' also accommodates future residential uses, however access to residential lots in this location will be provided from Resolution Drive.

In terms of Precinct 'E', the draft PSP proposes modifications to the existing access arrangement at Grandstand Road/Raconteur Drive to facilitate left-in, left-out and right-in movements only. Access from the existing Resolution Drive intersection is proposed to be restricted to left-in/left out movements only.

Detailed assessment of the anticipated impacts associated with modifications to access arrangements will occur in later planning stages.

### 6.5.2 Public Transport

The Amendment Area is serviced by existing bus stops along Grandstand Road, which is served by the 998/999 circle route, providing connectivity to the central Perth and Bayswater Train Stations. Additionally, frequent bus services are available along Great Eastern Highway, providing access to the Redcliffe Station, Central Perth and Perth Airport.

Development of the Amendment Area will utilise the existing public transport network, with opportunities to upgrade the infrastructure at the stops along Grandstand Road.

### 6.5.3 Pedestrian and Cycling Access

There are no on-road cycle lane facilities on Grandstand Road however a single continuous shared use path exists along the north-eastern side of Grandstand Road, with intermittent provision on the south-western side. A high-quality shared path extends from the Grandstand Road/Garratt Road bridge to Ascot Place, adjacent to the Swan River and along the northern boundary of the Racecourse. Additionally, Great Eastern Highway includes on-road cycle laneways with no physical separation and are combined with bus lanes.

The draft PSP proposes the continuation of pedestrian access within the precinct, including along Grandstand Road, adjacent to Precinct 'D' and the extension of the shared path along Resolution Drive, adjacent to Precinct 'E', connecting to the existing shared path network.

### 6.5.4 Trip Generation

The TIA prepared in support of the draft PSP considered trip generation and road capacity impacts for the broader Racecourse Complex but also examined each Precinct individually. Specific to the Amendment Area, the draft PSP will not impact trip generation for Precinct 'B' as the use of the racecourse will remain as it is currently used, where the morning and afternoon peaks is negligible. Use of this Precinct is at its highest on weekends and big race days where traffic management may be utilised on Grandstand Road.

Future development of Precinct 'C' will result in the development of stables, with the use of stables typically occurring well before the morning peak when horses are trained early in the morning. After this, traffic movements will occur again after the typical morning peak period.

Precinct 'D' is intended to be developed for residential and child care purposes, with trip generation in the order of 32 vehicles per hour (in and out) in both the morning and afternoon peak, with negligible impact on the local road network.

The draft PSP assesses the retail development of Precinct 'E' on the assumption that the Precinct would accommodate bulky goods and supermarket land uses. This development alone is not expected to generate notable trips independently, but traffic would be reciprocal between each use of this Precinct.

A more detailed TIA will be undertaken at the development stage to ensure the safe and efficient movement of vehicles in and around the Amendment Area.

# 7. Justification for Scheme Amendment

This report requests support from the City of Belmont to initiate an amendment to LPS15 in relation to Precincts 'B', 'C', 'D' and 'E' of the draft PSP. The proposed Amendment comprises both textual modifications to LPS15 and modifications to the LPS15 scheme maps which are broadly summarised as follows:

| Precinct Area | Proposed LPS15 Zoning/Text Changes |
|---|---|
| B | Retain the existing 'Place of Public Assembly: Racecourse' Zone under LPS15, but with modifications to 'Additional Uses' (A18) |
| C | Retain the existing 'Place of Public Assembly: Racecourse' Zone under LPS15, but with modifications to 'Additional Uses' (A18) |
| D | Rezone from the 'Place of Public Assembly: Racecourse' Zone to the 'Residential' and 'Mixed Use' under LPS15, with an 'R60' coding and 'Restricted Uses' (R1) to the 'Mixed Use' Zone |
| E | Rezone from the 'Place of Public Assembly: Racecourse', 'Residential and Stables' Zone and 'Mixed Use' Zones to the 'Commercial' and 'Mixed Use' Zones under LPS15, with 'R-AC3', 'R-AC4', and 'R10' coding and 'Additional Use' (A3) and 'Restricted Uses' (R1) |

**Table 3: Summary of Proposed Amendment**

The proposed Amendment is considered appropriate and justified on the basis that it:

- will facilitate future subdivision and development in accordance with the PSP;
- is consistent with its 'Urban' zoning under the MRS;
- is supported by a LWMS prepared in relation to the PSP which addresses the provisions and objectives of SPP 2.9 and draft SPP 2.9;
- is supported by a TIA prepared in relation to the PSP which demonstrates that the proposed zoning changes can be accommodated within the existing road network;
- has been identified as being suitable for zoning changes through the draft PSP process and satisfies the objectives and provisions of SPP 3.0;
- provides an opportunity for urban expansion to integrate with the surrounding 'Central Corridors' in accordance with the WAPC's *Perth and Peel @ 3.5 Million Central Sub-Regional Planning Framework*;
- is capable of being serviced by all essential utility infrastructure including water, sewer, stormwater, power and telecommunications infrastructure.
- is supported by a Net Benefit Test prepared in relation to the PSP which demonstrates that the proposed development of 'Shop/Retail' and 'Other Retail' within the Golden Gateway activity centre is economically viable having regard to the broader hierarchy of activity centres, consistent with the objectives and provisions of SPP 4.2;
- is supported by a noise assessment which demonstrates that the proposed zoning changes in Precinct 'E' will be capable of satisfying the noise targets under SPP 5.4; and
- does not contain any environmental or heritage constraints that would prohibit future development in the manner proposed.

# 8. Conclusion

This report has been prepared in support of a request to the City of Belmont to initiate an amendment to LPS15, pursuant to Part 5 Regulation 35 of the *Planning and Development (Local Planning Schemes) Regulations 2015*, in relation to Precincts 'B', 'C', 'D' and 'E' of the Ascot Racecourse PSP.

The PSP is currently under consideration by the City of Belmont and once certified and adopted by the WAPC will guide the future subdivision, use and development within the Amendment Area. The proposed Amendment seeks to give statutory effect to the future zonings, densities and land use controls contained within the PSP and in doing so, facilitate redevelopment of Ascot Racecourse and its surrounds.

The proposed Amendment is considered appropriate and justified on the basis of key town planning, environmental, servicing and traffic considerations and accordingly, support from the City and the WAPC to initiate the Amendment is requested.

# ATTACHMENT 1

Certificate of Titles

WESTERN AUSTRALIA

| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **321** | **107** |

# RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

**LAND DESCRIPTION:**

LOT 23 ON PLAN 2198

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

THE CHAIRMAN OF THE COMMITTEE OF THE WESTERN AUSTRALIAN TURF CLUB OF 70 GRANDSTAND ROAD ASCOT WA 6104

(AN N508676 ) REGISTERED 13/12/2016

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

| | |
|---|---|
| SKETCH OF LAND: | 321-107 (23/P2198) |
| PREVIOUS TITLE: | 283-14 |
| PROPERTY STREET ADDRESS: | 2 CARBINE ST, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |

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WESTERN AUSTRALIA

| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **1041** | **934** |

# RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

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BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

**LAND DESCRIPTION:**

LOT 50 ON PLAN 5729

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

THE CHAIRMAN OF THE COMMITTEE OF THE WESTERN AUSTRALIAN TURF CLUB OF 70 GRANDSTAND ROAD ASCOT WA 6104

(AN N508676 ) REGISTERED 13/12/2016

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

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----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

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| | |
|---|---|
| SKETCH OF LAND: | P5729 |
| PREVIOUS TITLE: | 1041-164 |
| PROPERTY STREET ADDRESS: | 71 GRANDSTAND RD, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |

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WESTERN AUSTRALIA

| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **1742** | **276** |

# RECORD OF CERTIFICATE OF TITLE

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BGRoberts
REGISTRAR OF TITLES

**LAND DESCRIPTION:**

LOT 1 ON DIAGRAM 55346

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

STATE PLANNING COMMISSION OF 22 ST. GEORGE'S TERRACE, PERTH

(T D398174 ) REGISTERED 15/1/1987

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

1. D367664 CAVEAT BY DIAMOND SYNDICATE PTY LTD LODGED 24/11/1986.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

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| | |
|---|---|
| SKETCH OF LAND: | 1742-276 (1/D55346) |
| PREVIOUS TITLE: | 1742-275 |
| PROPERTY STREET ADDRESS: | 88 GRANDSTAND RD, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |
| RESPONSIBLE AGENCY: | WESTERN AUSTRALIAN PLANNING COMMISSION |

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WESTERN AUSTRALIA

| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **1742** | **278** |

# RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

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BGRoberts
REGISTRAR OF TITLES

**LAND DESCRIPTION:**

LOT 3 ON DIAGRAM 55346

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

THE CHAIRMAN OF THE COMMITTEE OF THE WESTERN AUSTRALIAN TURF CLUB OF 70 GRANDSTAND ROAD ASCOT WA 6104

(AN N508676 ) REGISTERED 13/12/2016

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

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| | |
|---|---|
| SKETCH OF LAND: | 1742-278 (3/D55346) |
| PREVIOUS TITLE: | 1742-275 |
| PROPERTY STREET ADDRESS: | 96 GRANDSTAND RD, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |

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WESTERN AUSTRALIA

| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **1789** | **567** |

# RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

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BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

**LAND DESCRIPTION:**

LOT 7705 ON DEPOSITED PLAN 209359

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

THE CHAIRMAN OF THE COMMITTEE OF THE WESTERN AUSTRALIAN TURF CLUB OF 70 GRANDSTAND ROAD ASCOT WA 6104

(AN N508676 ) REGISTERED 13/12/2016

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

1. THE LAND THE SUBJECT OF THIS CERTIFICATE OF TITLE EXCLUDES ALL PORTIONS OF THE LOT DESCRIBED ABOVE EXCEPT THAT PORTION SHOWN IN THE SKETCH OF THE SUPERSEDED PAPER VERSION OF THIS TITLE.
2. CROWN GRANT IN TRUST. SEE CROWN GRANT FOR CONDITIONS.
3. K930699 EASEMENT TO WATER CORPORATION FOR TANK AND PIPELINE PURPOSES - SEE DEPOSITED PLAN 58026 REGISTERED 5/5/2009.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

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| | |
|---|---|
| SKETCH OF LAND: | 1789-567 (7705/DP209359) |
| PREVIOUS TITLE: | 1259-989 |
| PROPERTY STREET ADDRESS: | 71 MATHESON RD, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |

NOTE 1: K364458 DEPOSITED PLAN (INTEREST ONLY) 58026 LODGED

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WESTERN AUSTRALIA

| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **1883** | **668** |

# RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

**LAND DESCRIPTION:**

LOT 51 ON PLAN 15104

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

THE CHAIRMAN OF THE COMMITTEE OF THE WESTERN AUSTRALIAN TURF CLUB OF 70 GRANDSTAND ROAD ASCOT WA 6104

(AN N508676 ) REGISTERED 13/12/2016

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

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----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

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| | |
|---|---|
| SKETCH OF LAND: | 1883-668 (51/P15104) |
| PREVIOUS TITLE: | 1883-666 |
| PROPERTY STREET ADDRESS: | 2 RACONTEUR DR, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |

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WESTERN AUSTRALIA

| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **1883** | **670** |

# RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

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BGRoberts
REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

**LAND DESCRIPTION:**

LOT 13 ON DIAGRAM 26760

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

THE CHAIRMAN OF THE COMMITTEE OF THE WESTERN AUSTRALIAN TURF CLUB OF 70 GRANDSTAND ROAD ASCOT WA 6104

(AN N508676 ) REGISTERED 13/12/2016

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

1. THE LAND THE SUBJECT OF THIS CERTIFICATE OF TITLE EXCLUDES ALL PORTIONS OF THE LOT DESCRIBED ABOVE EXCEPT THAT PORTION SHOWN IN THE SKETCH OF THE SUPERSEDED PAPER VERSION OF THIS TITLE. VOL 1883 FOL 670.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

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| | |
|---|---|
| SKETCH OF LAND: | 1883-670 (13/D26760) |
| PREVIOUS TITLE: | 202-100A |
| PROPERTY STREET ADDRESS: | 71 GRANDSTAND RD, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |

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WESTERN AUSTRALIA

| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **2723** | **303** |

# RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

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BGRoberts
REGISTRAR OF TITLES

**LAND DESCRIPTION:**

LOT 9002 ON DEPOSITED PLAN 60342

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

THE CHAIRMAN OF THE COMMITTEE OF THE WESTERN AUSTRALIAN TURF CLUB OF 70 GRANDSTAND ROAD ASCOT WA 6104

(AN N508676 ) REGISTERED 13/12/2016

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

1. CROWN GRANT IN TRUST. SEE CROWN GRANT FOR CONDITIONS. AS TO THE PORTION OF SWAN LOCATION 823 FORMERLY COMPRISED IN VOLUME 1771 FOLIO 332 ONLY.
2. H712859 LEASE TO VODAFONE NETWORK PTY LTD OF 799 PACIFIC HIGHWAY, CHATSWOOD, NEW SOUTH WALES EXPIRES: SEE LEASE. AS TO PORTION ONLY. REGISTERED 4/4/2001.
   - H970091 TRANSFER OF LEASE H712859, LESSEE NOW CROWN CASTLE AUSTRALIA PTY LTD OF CARE OF LEVEL 1, 754 PACIFIC HIGHWAY, CHATSWOOD, NEW SOUTH WALES REGISTERED 24/12/2001.
   - K929949 EXTENSION OF LEASE H712859. REGISTERED 5/5/2009.
3. I041460 LEASE TO OPTUS MOBILE PTY LTD OF OPTUS CENTRE, 101 MILLER STREET, NORTH SYDNEY, NEW SOUTH WALES AS TO PORTION ONLY. EXPIRES: SEE LEASE. REGISTERED 13/3/2002.
4. K929948 LEASE TO CROWN CASTLE AUSTRALIA PTY LTD OF LEVEL 1, 754 PACIFIC HIGHWAY, CHATSWOOD, NEW SOUTH WALES EXPIRES: SEE LEASE. AS TO PORTION ONLY. REGISTERED 5/5/2009.
5. K944992 CAVEAT BY CROWN CASTLE AUSTRALIA PTY LTD AS TO PORTION ONLY. LODGED 19/5/2009.
6. EASEMENT BURDEN CREATED UNDER SECTION 167 P & D ACT FOR ELECTRICITY PURPOSES TO ELECTRICITY NETWORKS CORPORATION - SEE DEPOSITED PLAN 60342.
7. L399948 MEMORIAL. CONTAMINATED SITES ACT 2003 REGISTERED 13/8/2010.
8. M813804 LEASE TO OPTUS MOBILE PTY LTD OF 1 LYONPARK ROAD, MACQUARIE PARK, NEW SOUTH WALES EXPIRES: SEE LEASE. AS TO PORTION ONLY REGISTERED 31/10/2014.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

END OF PAGE 1 - CONTINUED OVER

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RECORD OF CERTIFICATE OF TITLE

REGISTER NUMBER: 9002/DP60342 VOLUME/FOLIO: 2723-303 PAGE 2

----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

| | |
|---|---|
| SKETCH OF LAND: | DP60342 |
| PREVIOUS TITLE: | 2216-686 |
| PROPERTY STREET ADDRESS: | 71 GRANDSTAND RD, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |

Subject to dealing

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WESTERN AUSTRALIA

| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **2723** | **304** |

# RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

**LAND DESCRIPTION:**

LOT 100 ON DEPOSITED PLAN 60341

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

THE CHAIRMAN OF THE COMMITTEE OF THE WESTERN AUSTRALIAN TURF CLUB OF 70 GRANDSTAND ROAD ASCOT WA 6104

(AN N508676 ) REGISTERED 13/12/2016

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

1. EASEMENT BURDEN CREATED UNDER SECTION 27A T.P. & D. ACT FOR GAS PURPOSES TO S.E.C. - SEE SKETCH ON DEPOSITED PLAN 60341 AS CREATED ON PLAN 15104.
2. L014550 EASEMENT TO WA GAS NETWORKS PTY LTD FOR GAS PIPELINE PURPOSES - SEE DEPOSITED PLAN 60341 REGISTERED 21/7/2009.
3. M230259 EASEMENT TO ELECTRICITY NETWORKS CORPORATION FOR TRANSMISSION OF ELECTRICITY PURPOSES - SEE SKETCH ON DEPOSITED PLAN 76199 REGISTERED 4/4/2013.
4. M230260 EASEMENT TO ELECTRICITY NETWORKS CORPORATION FOR TRANSMISSION OF ELECTRICITY PURPOSES - SEE SKETCH ON DEPOSITED PLAN 76199 REGISTERED 4/4/2013.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

| | |
|---|---|
| SKETCH OF LAND: | DP60341 |
| PREVIOUS TITLE: | 1883-667 |
| PROPERTY STREET ADDRESS: | 1 RACONTEUR DR, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |

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| TITLE NUMBER | |
|---|---|
| Volume | Folio |
| **2723** | **355** |

# RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

**LAND DESCRIPTION:**

LOT 452 ON DEPOSITED PLAN 60339

**REGISTERED PROPRIETOR:**
(FIRST SCHEDULE)

THE CHAIRMAN OF THE COMMITTEE OF THE WESTERN AUSTRALIAN TURF CLUB OF 70 GRANDSTAND ROAD ASCOT WA 6104

(AN N508676 ) REGISTERED 13/12/2016

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**
(SECOND SCHEDULE)

1. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR DRAINAGE PURPOSES TO CITY OF BELMONT - SEE DEPOSITED PLAN 60339.
2. L014556 EASEMENT TO CITY OF BELMONT FOR RIGHT OF FOOTWAY PURPOSES - SEE SKETCH ON DEPOSITED PLAN 60339. REGISTERED 30/7/2009.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

**STATEMENTS:**

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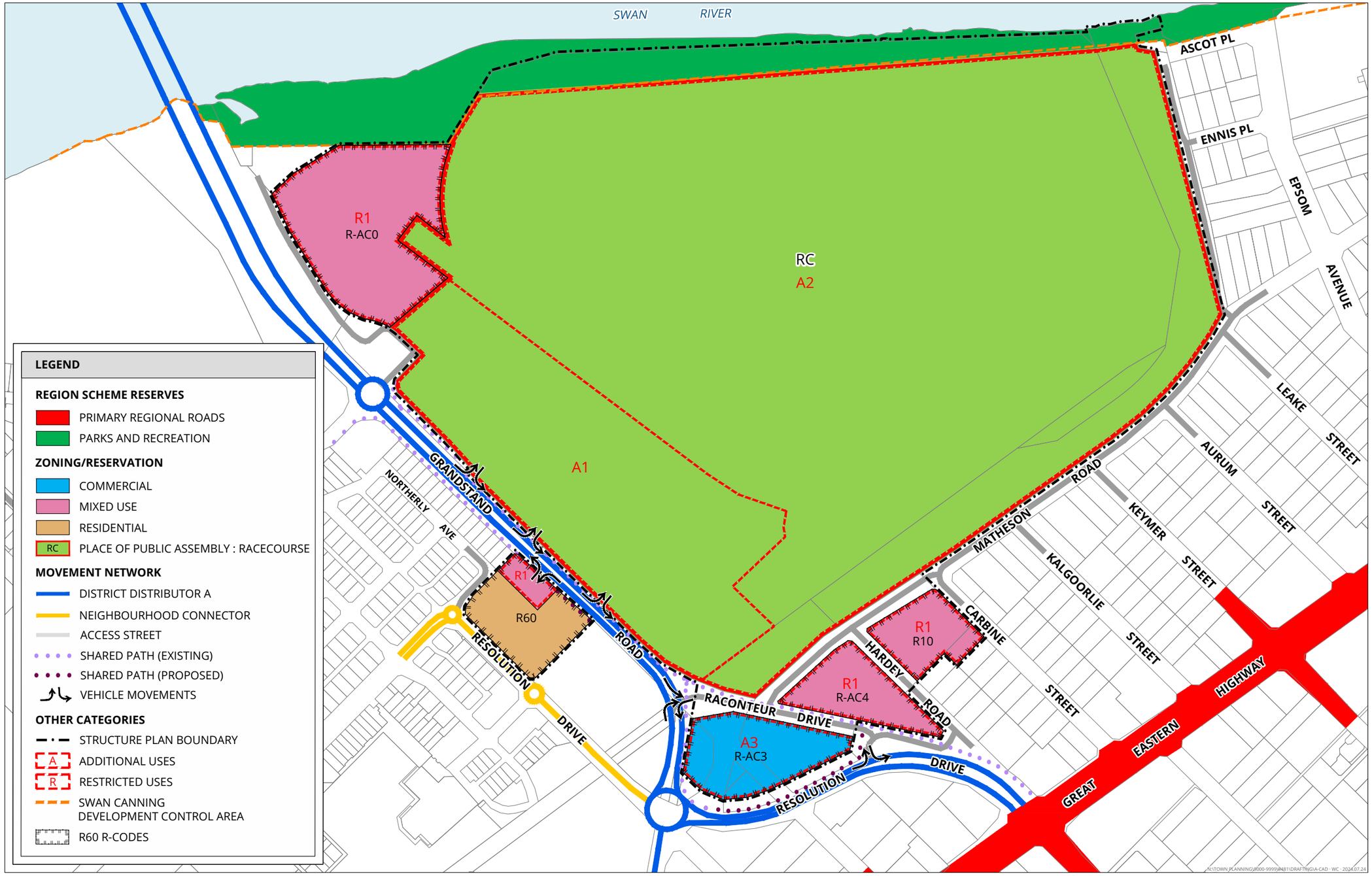
| | |
|---|---|
| SKETCH OF LAND: | DP60339 |
| PREVIOUS TITLE: | 1776-799 |
| PROPERTY STREET ADDRESS: | 70 GRANDSTAND RD, ASCOT. |
| LOCAL GOVERNMENT AUTHORITY: | CITY OF BELMONT |

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# ATTACHMENT 2

Draft Ascot Racecourse Precinct  Structure Plan Map




**PLAN 1 - STRUCTURE PLAN**
VARIOUS LOTS - ASCOT RACECOURSE
ASCOT

N
0 100 m
SCALE @ A3: 1:4000
**9481-STR-01-G**

DRAWN: WC
DATE CREATED: 2024.07.24
PROJECTION: MGA50 GDA94
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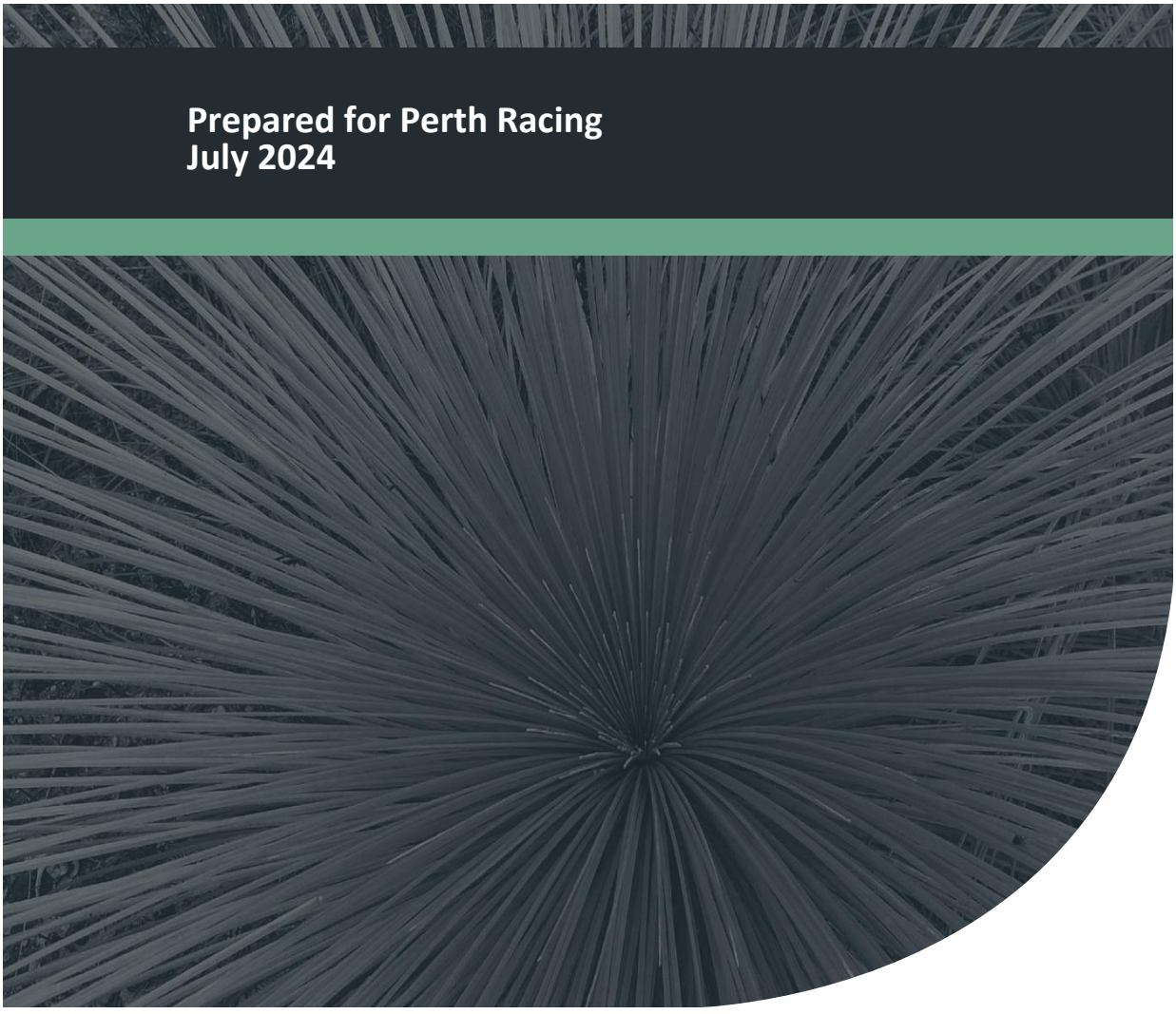
# ATTACHMENT 3

Local Water Management Strategy

# Local Water Management Strategy

## Ascot Racecourse Local Structure Plan

Project No: EP23-109(03)



# Document Control

| Doc name: | Local Water Management Strategy<br>Ascot Racecourse Local Structure Plan | | | | |
|---|---|---|---|---|---|
| Doc no.: | EP23-109(03)--001B JM | | | | |
| Version | Date | Author | | Reviewer | |
| 1 | May 2024 | Joyti Mabruk | JM | David Coremans | DPC |
| | For project team review | | | | |
| A | May 2024 | Joyti Mabruk | JM | David Coremans | DPC |
| | For submission to Agencies | | | | |
| B | July 2024 | Joyti Mabruk | JM | David Coremans | DPC |
| | For submission to Agencies | | | | |

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# Executive Summary

Perth Racing (the 'proponent') proposes to progress a local structure plan (LSP) over its landholdings in Ascot. The area is bounded by the Swan River to the North, Grandstand Road to the west and south, Matheson Road and Resolution Drive to the south and residential areas to the east, referred to herein as 'the site'. The structure plan area also includes the existing Ascot Racecourse. The site is located approximately 8.5 km east of Perth central business district (CBD) and is approximately 62 ha in size, within City of Belmont (CoB). The LSP consists of six precincts: Precinct A, Precinct B (largely unchanged form existing), Precinct C, Precinct D, Precinct E, and the racecourse. The layout of LSP and precinct plan is shown on **Figure 1** and provided in **Appendix A**. The site is currently zoned "Urban", "Parks and Recreation", and "Private Recreation" under the Metropolitan Regional Scheme (MRS) (WAPC 2023b). Under the Local Planning Scheme (LPS) No. 15 (WAPC 2023a), the site is zoned as "RC – Place of Public Assembly: Racecourse", Mixed Use", "Parks and Recreation" and "Parks and Recreation: Water Supply Sewerage and Drainage".

This Local Water Management Strategy (LWMS) outlines the water management approach as required for the site by *Better Urban Water Management* (WAPC 2008b) and supports the Ascot Racecourse Structure Plan. It is intended to satisfy the expectations of the Department of Water and Environmental Regulation (DWER) and City of Belmont (CoB). The LWMS also aids in achieving the goals and objectives outlined in the *Kep Katitjin – Gabi Kaadadjan – Waterwise Perth Action Plan 2* (DWER 2023d).

The first step in applying integrated water cycle management in urban catchments is to establish agreed environmental values for receiving environments. In summary, the environmental investigations conducted to date indicate that:

- The site is being used for horse racing, mixed uses (i.e. car park, stables and entertainment/hospitality venues, and commercial). Some portions of the site are only used infrequently (e.g. for parking or events).
- The site is located in an area of moderate to high rainfall, receiving 756.3 mm on average annually with the majority of rainfall received between June and August.
- The majority of the site has a relatively flat topography of 1 mAHD at the northwest (along the Swan River) and 2 mAHD to the south and rising to 7 mAHD to the east of the site.
- The site is within the Swan River Terraces system and displays Guildford formation soils of alluvial and leached yellow sand described as:
    - **Ms2 –** Sandy Silt: Strong brown to mid grey, mottled, blocky, fine sand, hard when dry, variable clay content of alluvial origin
    - **Ms4 –** Sandy Silt: light yellow brown, blocky, mottled some fine to medium sand, soft when moist, variable clay content
    - **S8 –** Sand: very light grey at surface, yellow at depth, fine to medium-grained, sub rounded quartz, moderately well sorted of eolian origin
- The groundwater depth below the surface of Precinct A varies from 1.09 m mBGL to 2.37 mBGL (Douglas Partners 2024).
- The highest groundwater level beneath the site is reported 3.03 mBGL during February 2024 (Galt 2024), located beneath Precinct D.

- Most of the site is considered to have a high to moderate risk of ASS occurring, however some portions of Precinct B, Precinct C and the Racecourse are considered to have a moderate to low risk of ASS occurring within the 3 m of the natural surface.
- The northern portion of the site along the Swan River is identified as an ESA.
- The entirety of the site is classified as a SSA and classified as:
  - a) Estuary catchments on the Swan and Scott Coastal Plains.
  - f) The area is <1 km up-groundwater-gradient and 250 m down-gradient of a significant wetland; or where the groundwater gradient is unknown within 1 km of the significant wetland.
- The following wetlands are located within the site and these are classified as:
  - Multiple Use category wetland (MUW) area (UFI 8424, UFI 8425, UFI 8426).
  - Resource Enhancement wetland (REW) area (UFI 8423).
- The dominant hydrological feature of the site is the Swan River estuary. The northern boundary of the site falls within the Swan Canning Development Control Area (DCA) (CoB 2018) and Swan Canning River Park.
- The floodway of the Swan River is immediately adjacent to but not within the site. The 1% AEP flood elevation of the Swan River adjacent to the site is 2.8 mAHD.
- There are two existing major drainage network systems within or adjacent to the site include:
  - The Central Belmont Main Drain (CBMD), managed by the Water Corporation. This currently receives runoff from Precinct C (via the CoB drainage network) and Precinct E.
  - The CoB local piped drainage network, which exists along Matheson Road, Grandstand Road and the northern portion of Resolution Drive.
- There are three lakes (Irrigation Lake, Lined Lake and Wetland Lake) located within the centre of the racecourse. These are understood to receive runoff from the Grandstand buildings in Precinct B and stables/buildings in Precinct C.
- The groundwater beneath the site is a multi-layered system consisting of the Superficial, Kings Park Formation, Leederville and Yarragadee aquifers.
- Regional groundwater mapping indicates that the groundwater levels across the site are at approximately 0.5 m AHD.
- Local groundwater level monitoring indicates that annual maximum groundwater levels (recorded in August 2022) were measured at 1.26 m AHD and 1.70 m AHD at Bore 1 and Bore 2 respectively. Groundwater levels in adjacent areas included Precinct A levels at 1.09 mBGL to 2.37 mBGL and Precinct D levels of approximately 3.03 mBGL.
- Water quality monitoring indicates that EC, TDS and pH values do not exceed guideline trigger values. However, TN and TP concentrations continually exceed the ANZECC guideline trigger value of 1.2 mg/L and 0.065 mg/L respectively.

The design criteria and the manner in which they are proposed to be achieved are presented in **Table E1**.

*Table E1: Water management criteria and compliance summary*

| Management Aspect | Criteria Number | Criteria Description | Manner in which compliance will be achieved | Responsibility for implementation | Timing of implementation |
|---|---|---|---|---|---|
| Water Conservation | WC1 | For residential dwellings consumption target of 60 kL/person/year scheme water. | Provide advice to Precinct A and Precinct D residents on water conservation measures | Proponent | Point of sale |
| | | | RWTs can be utilised for non-potable uses | Lot owner | Post-house construction |
| | | | Promotion and use of WWG in lots within Precinct D and other open spaces across all precincts | Proponent/Lot owner | Point of sale/Post-house construction |
| | | | Promotion and use of water efficient appliances within Precinct A and Precinct D | Proponent/Lot owner | Point of sale/Post-house construction |
| | | | Mandate water efficient fittings within Precinct A and Precinct D | CoB | Building approval |
| | WC2 | Ensure the efficient use of all water resources. | Use of waterwise landscaping principles in all open spaces and verges | Proponent | Landscape design |
| | | | Open spaces designed to use no more than allocated groundwater | | |
| | | | Minimise water requirements for open spaces and verge maintenance | | |
| | | | Use of water efficient appliances within Precinct A and Precinct D | Lot owner | Post-house construction |
| | | | Use of WWG principles within Precinct A and Precinct D | | |
| | WC3 | Non-potable irrigation water to be sourced from existing groundwater licences held over the area. | The proponent holds a groundwater Licence with an allocation of 347,000 kL per annum which will meet the irrigation requirements of the racecourse. | Proponent | Landscape design |

*Table E1: Water management criteria and compliance summary (Continued)*

| Management Aspect | Criteria Number | Criteria Description | Manner in which compliance will be achieved | Responsibility for implementation | Timing of implementation |
|---|---|---|---|---|---|
| Stormwater Management | SW1 | Retain and treat the first 15 mm of rainfall as close to source as possible | Lots within Precinct D and Precinct E to retain the first 15 mm of rainfall on lot in soakwells/soakage. Lot storage will be the responsibility of the lot owners. | Lot owner/developer | Construction |
| | SW2 | Retain up to 1% AEP rainfall event on-site. | Runoff up to the 1% AEP to be detained within the FSA in Precinct A. Precinct A and a portion of Precinct C will ultimately discharge to the centre of the track. | Proponent | Construction |
| | | | Runoff up to 1% AEP to be managed with the sub-surface storage in Precinct D. | Proponent | Construction |
| | SW3 | Post-development critical 1% AEP peak flows leaving the site to mimic pre-development peak flows. | Runoff up to 1% AEP event to be detained in the detention basin and subsurface storage which will maintain the pre-development peak flow of 0.95 $m^3/s$ from Precinct E and 0.463 $m^3/s$ from Precinct D respectively. | Proponent | Construction |
| | SW4 | Finished floor levels must have a minimum of 300 mm clearance above the 1% AEP TWL in the FSA. | It is anticipated that the FSA and detention basin invert will be set so that the Finished floor levels must have a minimum of 300 mm clearance above the 1% AEP TWL in the basins. | Proponent | Detailed drainage design |
| | SW5 | All lots must have a minimum of 500 mm clearance above the 1% AEP flood level in the Swan River. | The 1% AEP flood level in the Swan River is 2.8 mAHD. The preliminary bulk earthworks concept provided in shows that finished floor level will be at 4.0 mAHD. | Proponent | Detailed drainage design |
| | SW6 | Nutrient concentrations within surface water discharging from the site to the Swan River are to meet regional water quality targets. | BRA will be designed so that after treatment the nutrient concentrations within surface water meet the regional water quality target. | Proponent | Detailed drainage design |
| | SW7 | Reduce nutrient loads by applying appropriate non-structural measures | • Minimise use of fertilisers within POS and road verges.<br>• Street sweeping at regular intervals.<br>• Use of drought tolerant turf species.<br>• Education of residents regarding fertiliser use | Landscape/Maintenance Contactor/Proponent | Landscape Implementation/ Point of Sale |
| | SW8 | Design infiltration areas to avoid creating mosquito habitat | Stormwater infrastructure will be designed to ensure all runoff is infiltrated within 96 hours. | Proponent | Detailed drainage design |

*Table E1: Water management criteria and compliance summary (Continued)*

| Management Aspect | Criteria Number | Criteria Description | Manner in which compliance will be achieved | Responsibility for implementation | Timing of implementation |
|---|---|---|---|---|---|
| Groundwater Management | GW1 | Surface based infiltration should have 300 mm clearance above MGL. | Basin inverts will be set at 300 mm above the MGL, and subsoil drainage will be provided in the POS. | Proponent | Detailed drainage design |
| | GW2 | Finished floor levels should have a clearance to the MGL of at least 1.2 m. | Lots will be set at least 1.2 m above the MGL. | Proponent | Detailed drainage design |

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Concept plan

**Appendix B**

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**Appendix D**

Modelling Assumption Report

**Appendix E**

Central Belmont Main Drain Water Corporation

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# Abbreviation Tables

*Table A1: Abbreviations – Organisations*

| Organisations | |
|---|---|
| ANZECC | Australian and New Zealand Environment and Conservation Council |
| BoM | Bureau of Meteorology |
| DBCA | Department of Biodiversity, Conservation and Attractions |
| DWER | Department of Water and Environmental Regulation |
| EPA | Environmental Protection Authority |
| CoB | City of Belmont |
| WC | Water Corporation of Western Australia (Water Corp) |

*Table A2: Abbreviations – General terms*

| General terms | |
|---|---|
| AEP | Annual exceedance probability |
| ASS | Acid sulfate soils |
| CCW | Conservation category wetland |
| CEMP | Construction Environmental Management Plan |
| DCA | Development Control Area |
| DMP | Drainage management plan |
| EC | Electrical conductivity |
| FMP | Foreshore management plan |
| LWMS | Local Water Management Strategy |
| MGL | Maximum groundwater level |
| MRS | Metropolitan Region Scheme |
| NWQMS | National Water Quality Management Strategy |
| POS | Public open space |
| SCWQIP | Swan and Canning Water Quality Improvement Plan |
| SRA | Swan River Alluvium |
| TDS | Total dissolved solids |
| TEC | Threatened ecological community |
| TKN | Total Kjeldahl nitrogen |
| TN | Total nitrogen |
| TP | Total phosphorus |
| TSS | Total suspended solids |

| General terms | |
|---|---|
| TWL | Top water level |
| UFI | Unique feature identifier |
| UWMP | Urban Water Management Plan |
| WSUD | Water sensitive urban design |
| WWG | Water wise gardening |

*Table A3: Abbreviations – units of measurement*

| Units of measurement | |
|---|---|
| cm | centimetre |
| ha | hectare |
| m | metre |
| $m^2$ | square metre |
| $m^3$ | cubic metre |
| $m^3$ / s | cubic metres per second |
| mAHD | metres in relation to the Australian height datum |
| mBGL | metres below ground level |
| mm | millimetre |
| mS / cm | millisiemens per centimetre |
| µg/L | micrograms per litre |
| mg / L | milligrams per litre |

*Table A4: Terminology – design rainfall*

| Rainfall event | Annual exceedance probability (AEP) | Approximate equivalent average recurrence interval (ARI) |
|---|---|---|
| Small | 1 exceedance year (EY) event (frequent) | 1 in 1 year ARI event |
| Minor (residential purposes) | 20% AEP event | 1 in 5 year ARI event |
| Minor (commercial purposes) | 10% AEP event | 1 in 10 year ARI event |
| Major | 1% AEP event | 1 in 100 year ARI event |

# 1 Introduction

## 1.1 Background

Perth Racing (the 'proponent') proposes to progress a local structure plan (LSP) over its landholdings in Ascot. The area is bounded by the Swan River to the North, Grandstand Road to the west and south, Matheson Road and Resolution Drive to the south and residential areas to the east, referred to herein as 'the site'. The structure plan area also includes the existing Ascot Racecourse and Perth Racing Administration lot/building on Grandstand Road. The site is located approximately 8.5 km east of Perth central business district (CBD) and is approximately 62 ha in size, within City of Belmont (CoB). The LSP consists of six precincts: Precinct A, Precinct B, Precinct C, Precinct D, Precinct E, and the racecourse. The layout of LSP and precinct plan is shown on **Figure 1** and provided in **Appendix A**.

## 1.2 Town planning context

The site is currently zoned "Urban", "Parks and Recreation", and "Private Recreation" under the Metropolitan Regional Scheme (MRS) (WAPC 2023b). Under the Local Planning Scheme (LPS) No. 15 (WAPC 2023a), the site is zoned as "RC – Place of Public Assembly: Racecourse", Mixed Use", "Parks and Recreation" and "Parks and Recreation: Water Supply Sewerage and Drainage".

## 1.3 Purpose of this report

This Local Water Management Strategy (LWMS) outlines the water management approach as required for the site by *Better Urban Water Management* (WAPC 2008b) and supports the Ascot Racecourse Structure Plan. It is intended to satisfy the expectations of the Department of Water and Environmental Regulation (DWER) and CoB. The LWMS also aids in achieving the goals and objectives outlined in the *Kep Katitjin – Gabi Kaadadjan – Waterwise Perth Action Plan 2* (DWER 2023d).

## 1.4 Policy Framework

There are a number of State Government legislation and policies of relevance to the site. These policies include:

- *Kep Katitjin – Gabi Kaadadjan – Waterwise Perth Action Plan 2* (DWER 2023d)
- *Swan and Canning Rivers Management Act 2006* (Government of WA 2006)
- *Policy 49 – Planning for stormwater management affecting the Swan Canning Development Control Area* (DPaW 2016)
- *Local Planning Scheme No. 15 (City of Belmont)* (WAPC 2023a)
- *State Water Plan* (Government of WA 2007)
- *Draft State Planning Policy 2.9: Planning for Water Guidelines* (DPLH 2021)
- *State Planning Policy 2.10 Swan Canning River System* (WAPC 2006b)
- *Guidance Statement No. 33: Environmental Guidance for Planning and Development* (EPA 2008)
- *Liveable Neighbourhoods* (WAPC 2009a)
- *Planning Bulletin No. 64: Acid Sulfate Soils* (WAPC 2009b)

In addition to the above policies, there are a number of published guidelines and standards available that provide direction regarding the water management characteristics that urban developments should aim to achieve. These are key inputs that relate either directly or indirectly to the site and include:

- *Better Urban Water Management* (WAPC 2008b)
- *Urban Water Management Plans: Guidelines for Preparing Plans and for Complying with Subdivision Conditions* (DoW 2008)
- *National Water Quality Management Strategy (NWQMS)* (ANZECC 2000)
- *Australian Runoff Quality* (Wong et al. 2006)
- *National Water Quality Management Strategy* (ANZECC 2000)
- *Stormwater Management Manual for Western Australia* (DoW 2007)
- *Decision Process for Stormwater Management in Western Australia* (DWER 2017)
- *Australian Rainfall and Runoff* (Ball J et al. 2019)
- *Swan and Canning Water Quality Improvement Plan* (SCWQIP) (SWT 2009)
- *Swan and Canning Rivers Foreshore Assessment and Management Strategy* (SRT 2008)
- *Golden Gateway Structure Plan* (CoB 2019).

## 1.5 Previous Studies

### 1.5.1 Golden Gateway Local Water Management Strategy

The draft Golden Gateway LWMS (Essential Environmental 2018b) was prepared to support the Golden Gateway Structure Plan (CoB 2019) by Essential Environmental. The LWMS was prepared in consideration of *Better Urban Water Management* (WAPC 2008b) and *State Planning Policy 2.9: Water Resources* (WAPC 2006a). The key objectives and design criteria of the draft LWMS (Essential Environmental 2018b) included:

**Water Conservation:**

- Ensure the efficient use of all water resources in the redeveloped urban form and aim to achieve highest value use of fit-for-purpose water.
- Maintain opportunities for future generations by using water more efficiently.

**Stormwater management:**

- The first 15 mm of rainfall is to be retained within all lots through a combination of raingardens, water tanks and soakwell systems.
- Raingardens and tree-pits are to be installed in all new or upgraded streets to provide infiltration of the first 15 mm of rainfall.
- Minor event runoff from events larger than 15mm total depth are to be managed in accordance with serviceability requirements of the City of Belmont.
- Roads and public open spaces are to be designed to cater for the surface overflow for more severe storm events with habitable floors at least 0.3 m above the 1% AEP flood or storage level at any location.
- Habitable floors are to be constructed at least 0.5m above the 1% AEP flood level in the Swan River adjacent to the development area.

- Water quality treatment systems and stormwater management structures should be designed in accordance with the *Stormwater Management Manual for Western Australia* (DoW 2007) and *Australian Runoff Quality: A guide to water sensitive urban design* (Wong et al. 2006).

**Groundwater management:**

- Groundwater management systems are to be designed as free discharging under normal operating conditions.
- Flows from groundwater management systems are to be treated prior to discharge.

## 1.6 LWMS objectives

Whilst the criteria proposed in the Golden Gateway LWMS are relevant to some parts of the Ascot Racecourse structure plan area, it is not representative of all areas and site characteristics and therefore only partially applicable. This LWMS supports the Ascot Racecourse Structure Plan, which proposes an alternate layout (to the Golden Gateway Structure Plan) to some of the land uses surrounding the Ascot Racecourse. The design criteria and objectives proposed in this LWMS are generally based on those proposed in the Golden Gateway LWMS, though with additional consideration for site and Precinct- specific characteristics. This LWMS adopts the following major objectives:

- Protect water quality in the Swan River by providing appropriate water quality treatment at source.
- Mitigate potential flooding within the Structure Plan area and immediate surrounds.
- Take account of existing drainage infrastructure capacity and ensure that sufficient land is set aside to manage stormwater.
- Provide a broad level stormwater management framework to support future urban development.
- Incorporate appropriate best management practices (BMPs) into the drainage systems that address the environmental and stormwater management issues identified.
- Minimise development construction costs, which will result in reduced land costs for future home owners.
- Minimise transport of nutrients/pollutants to groundwater.
- Develop a non-potable water conservation strategy that will accommodate existing groundwater allocation constraints for the area.
- Gain support from DWER, DBCA, CoB and Water Corporation for the proposed method to manage stormwater within the site.

Detailed objectives for water management within the site are further discussed in **Section 4**.

# 2 Proposed Development

A total of approximately 62.0 ha is proposed to be developed as shown on **Figure 1**. The Ascot Racecourse Structure Plan proposes six precincts with different objectives and character, and these include:

- **Precinct A –** Approximately 3.0 ha for retirement living/village and mixed use purposes
- **Precinct B –** Approximately 9.3 ha for the use of public assembly (i.e. entertainment/office purposes)
- **Precinct C –** Approximately 8.0 ha for the use of public assembly (i.e. racecourse/stabling purposes)
- **Precinct D –** Approximately 1.5 ha for residential/childcare purposes
- **Precinct E –** Approximately 4.2 ha for mixed use (i.e. commercial/retail purposes)
- **The Racecourse –** Approximately 36.0 ha of retained 'Place of Public Assembly: Racecourse' uses.

The proposed land uses surrounding Ascot Racecourse will be integrated into the Racecourse Precinct. Management of surface and groundwater will take a water sensitive urban design (WSUD) approach that will integrate the management of water within the Precincts with the Racecourse and immediately surrounding infrastructure.

The WSUD measures that will be adopted within the Structure Plan area will include:

- Bio-retention areas (BRAs) to meet water quality treatment requirements
- Subsurface infiltration cells that will facilitate at-source infiltration
- Flood storage integrated into existing surface water bodies located centrally within the Racecourse
- Flood storage areas (FSAs) to provide flood detention, retention and infiltration as close to source as possible.

The WSUD approaches are further discussed in **Section 6**.The detailed concept plan and preliminary civil drawings are provided in **Appendix A** and **Appendix C**.

# 3 Pre-development Environment

## 3.1 Sources of information

The following sources of information were used to provide a broad regional environmental context for the site:

- *Geological Survey of Western Australia* (Gozzard 2007)
- *Map Viewer Plus* (Landgate 2023)
- *Water Register* (DWER 2024c)
- *Perth Groundwater Map* (DWER 2024a)
- *Weather and Climate Statistics Data* (BoM 2024)
- *Acid Sulfate Soil Mapping* (DWER 2023a)
- *Water Information Reporting* (DWER 2024b).

In addition to the above information, site-specific investigations have been conducted. These have aimed at providing more detail to the existing regional information. These site-specific investigations and information have been available from the following sources:

- *Draft Golden Gateway Structure Plan* (CoB 2019)
- *Draft Golden Gateway LWMS* (Essential Environmental 2018b)
- *Draft Golden Gateway Environmental Report* (Essential Environmental 2018a)
- *Draft Infrastructure Assessment Report : Golden Gateway Precinct* (Cardno 2017)
- *Swan and Canning Water Quality Improvement Plan* (SCWQIP) (SWT 2009)
- *Swan and Canning Rivers Foreshore Assessment and Management Strategy* (SRT 2008).

## 3.2 Land use context

The site has been used as the Ascot Racecourse since 1892 (Landgate 2023). The northeast portion of the site is being used for horse racing and training purposes and the surrounding area is being used for stabling, training and entertainment venues which support the above purposes. Some portions of the site are predominantly cleared (e.g. Precinct A, Precinct E) and are occasionally used for parking or other temporary uses. The Precinct D area is used for commercial purposes, being the current Perth Racing administration building.

## 3.3 Climate

The site experiences a dry Mediterranean climate of hot dry summers and cool wet winters and is located in an area of moderate to high rainfall, receiving 756.3 mm on average annually with the majority of rainfall received between June and August (BoM 2024). The region experiences rainfall for 84.8 days annually (on average).

## 3.4 Topography

The site is mostly flat with a slight downward slope from east to north and northwest, with a few low points. The variance in topography of the Precincts is described further as:

- The Racecourse slopes from Precinct C towards the Swan River with topography approximately 7 m Australian Height Datum (mAHD) to 1m AHD and from 7 mAHD (east) to 3 mAHD (west). There are a few local depressions (i.e., lakes and swale) observed within the centre of the racecourse.
- Precinct A has a generally flat topography of 2 mAHD with a high point of 3 mAHD to the west adjacent to Grandstand Road.
- Precinct B slopes from south to north (4 mAHD to 2 mAHD) and from west to east (3 mAHD to 2 mAHD). Precinct D and E are generally flat with a topography of 3 mAHD and 2 mAHD respectively.
- Parts of Precinct C (existing stables and buildings) drain towards the Racecourse, however most of Precinct C is currently carpark that drains towards Precinct E and the Southern Main Drain.
- Precinct D is generally flat with a topographic level 3 mAHD.
- Precinct E has a gentle slope from east to west. The topography of the precinct ranges from 4 mAHD to the east to 2 mAHD to the west.

The topographic contours of the site are shown on **Figure 2**.

## 3.5 Geotechnical conditions

### 3.5.1 Geology and soils

*The Perth Metropolitan Region 1:50,000 Environmental Geology Series* (Gozzard 1986) *and Sea to scarp - geology, landscape, and land use planning in the southern Swan Coastal Plain* (Gozzard 2011) describes that the site lies in the Swan River Terraces system, being underlain by the Guildford formation of alluvial and leached yellow sand. The regional geological mapping indicates that the site soils include:

- **Ms2 –** Sandy Silt: Strong brown to mid grey, mottled, blocky, fine sand, hard when dry, variable clay content of alluvial origin
- **Ms4 –** Sandy Silt: light yellow brown, blocky, mottled some fine to medium sand, soft when moist, variable clay content
- **S8 –** Sand: very light grey at surface, yellow at depth, fine to medium-grained, sub rounded quartz, moderately well sorted of eolian origin

The regional geological mapping is shown on **Figure 3**.

### 3.5.2 Precinct A geotechnical investigation

A detailed geological investigation has been carried out in January 2024 (Douglas Partners 2024) for Precinct A (see **Appendix B**). This investigation generally confirms the regional geological mapping, and the ground conditions of Precinct A are described as:

- Uncontrolled Fill
  - Granular FILL - SAND, Organic SAND, Gravelly SAND, Silty SAND and Sandy GRAVEL
  - Cohesive FILL - Clayey SAND, Sandy CLAY, CLAY
- Overlying natural soils includes
  - Clayey soils including Clayey SAND and CLAY
  - Sandy soils including SAND and Silty SAND

Douglas Partners (2024) concluded that if unmodified, Precinct A is considered unsuitable for on-site stormwater disposal due to the low permeability soils and shallow groundwater depth. To meet geotechnical requirements, stormwater should be managed by connecting to a suitable outflow (Douglas Partners 2024).

### 3.5.3 Precinct D geotechnical investigation

Galt has undertaken a geotechnical study in March 2024 (Galt 2024) for Precinct D (provided in **Appendix B**) and has described the Precinct D ground conditions as:

- **Surficial Topsoil** (in landscaped areas) up to 0.3 m thick and **Hardstand Fill Layers** (in carparks and access ways); overlying
- **FILL: SAND / SAND (SP)**, fine to medium grained, sub-rounded to sub-angular, yellow / brown / grey layers, includes trace gravel / Sandy GRAVEL layers, trace / with fines, some typically medium dense to dense, extending to depths of about 0.4 m to 0.9 m; overlying
- **In BH03 and BH04 only: Silty SAND / Clayey SAND (SM/SC)** fine to medium grained, sub-rounded to sub-angular, brown / grey, low to medium plasticity fines, some typically medium dense to dense, extending to depths of about 0.7 m to 1.2 m; overlying
- **Sandy CLAY / CLAY (CI)**, medium plasticity, brown / orange / grey, trace sand to sandy, trace gravel in some zones, desiccated, CPT traces indicate presence of occasional sand layers, typically very stiff to hard, extending to the maximum depth investigated of 10 m.

Whilst detailed geotechnical investigations have not been undertaken in each Precinct, it is expected that the soils encountered will be generally consistent with regional geological mapping and the investigations undertaken for Precincts A and D and will consist of generally shallow layers of sand overlying sandy clay of the Guildford formation. Such soils are unlikely to be suitable for onsite infiltration of all stormwater and onsite detention unless modified and stormwater management will need to be supplied with an outlet so that flood storage areas have a way to drain between storm events.

### 3.5.4 Acid sulfate soils

The acid sulfate soil (ASS) risk mapping (DWER 2023b) indicates that most of the site is considered to have a high to moderate risk of ASS occurring within the 3 m of the natural surface. Some portions of Precinct B, Precinct C and the Racecourse are mapped to have a moderate to low risk of ASS occurring within the 3 m of the natural surface.

The ASS risk mapping is shown on **Figure 4**.

## 3.6 Environmental assets

### 3.6.1 Environmentally sensitive area

The northern portion of the site (along the Swan River) is identified as an environmentally sensitive area (ESA). ESAs are shown on **Figure 5**.

### 3.6.2 Sewerage sensitive area

The entirety of the site is classified as a sewage sensitive area (SSA) by the *Government Sewerage Policy* (DPLH 2019). The two classifications of relevance to the site define a SSA as:

- a) Estuary catchments on the Swan and Scott Coastal Plains.
- f) The area is <1 km up-groundwater-gradient and 250 m down-gradient of a significant wetland; or where the groundwater gradient is unknown within 1 km of the significant wetland.

### 3.6.3 Geomorphic wetlands

The *Geomorphic Wetlands of the Swan Coastal Plain* dataset indicates the following wetlands within the site:

- Multiple Use Category Wetland (MUW) area (UFI 8424, UFI 8425, UFI 8426).
- Resource Enhancement Wetland (REW) area (UFI 8423)

The Swan River, situated immediately adjacent to the northern boundary of the site, is recognised as a "Conservation Category Wetland" (CCW) (UFI 1316 - Estuary waterbody) within the *Geomorphic Wetlands of the Swan Coastal Plain* dataset and has additional significant ecological, cultural and heritage values (DEC 2011).

The location of the geomorphic wetlands is shown on **Figure 5.**

## 3.7 Hydrology

### 3.7.1 Surface water

#### 3.7.1.1 Water Resources

The dominant hydrological feature of the site is the Swan River estuary. The estuary is subject to marked seasonality, which controls the salinity of the site, and particularly the foreshore area. This seasonality is a result of the short winter rainfall patterns, a small tidal range and the landform of the estuary (Hodgkin and John 1986).

The northern boundary of the site falls within the Swan Canning Development Control Area (DCA) (CoB 2018) and Swan Canning River Park (shown on **Figure 6**). Any proposed development on land adjacent river within the DCA and/or partly within DCA are subject to assessed and approved by the Department of Biodiversity, Conservation and Attraction (DBCA) under Part 5 of the *Swan and Canning Rivers Management Act 2006* and the *Swan and Canning River Management Regulations 2007* (CoB 2018).

Water management strategies will be needed to ensure protection (i.e. water quality improvement) of the Swan River. The catchments of the Swan Canning River system are the subject of the Swan Canning Water Quality Improvement Plan (SRT 2009) which contains catchment management measures and control actions.

The major event flood levels in the Swan River have been documented in recent studies undertaken on behalf of DWER (DWER 2023c).These flood levels, along with the extent of floodway/floodplain

are shown in the DWER online floodplain mapping tool. This tool indicates that the anticipated 1% AEP flood level adjacent to the site is 2.8 mAHD – noting that this level includes consideration for future climate change. The extent of floodway/floodplain from the Swan River adjacent to the site is shown on **Figure 6**.

#### 3.7.1.2 Lakes

There are three lakes within the racecourse including:

- **Irrigation lake** – located adjacent to the Production Bore 1 (PB01) and has a volume of 6,000 $m^3$ to 7,000 $m^3$. Water is pumped out from PB01 into the lake, and irrigation water is drawn from the Irrigation Lake. During winter the Irrigation Lake overflows into the adjacent Lined Lake. The current irrigation demand for the Racecourse is approximately 3,000 $m^3$/day, there is no shortage of irrigation water supply as the lake has sufficient storage capacity. The top water level (TWL) of the Irrigation Lake is approximately 3.1 mAHD.
- **Lined Lake** – this Lake is sealed with a natural clay liner and fed via a 225 mm overflow pipe from the Irrigation Lake. The Lined Lake overflows into the Wetland Lake. The elevation of the Lined Lake is approximately 2.1 mAHD.
- **Wetland lake** – is the largest of the three lakes and has approximately 2.6 ha of surface area. The Wetland Lake has a TWL of approximately 0.4 mAHD. Two overflow pipes at the northern end of the Wetland Lake allow excess water within the Lake to flow to the Swan River.

Peak water levels within the Lined Lake and Wetland Lake were predicted for a 10% AEP storm event (Evangelisti & Associates 1997). The peak water level for was 2.68 mAHD in the Lined Lake which then discharged to the Wetland Lake. The Wetland Lake discharged to the Swan River after reaching the peak water level of 0.53 mAHD. The lakes are connected by 450 mm RCP pipes. The outfall into the Swan River is directed via two pipes (450 mm RCP and 375 mm RCP). The pipes are fitted with headwall and tidal control gate to mitigate inundation from the Swan River (Evangelisti & Associates 1997).

The location of the lakes and overflow pipes are shown on **Figure 6**.

#### 3.7.1.3 Drainage network systems

The Central Belmont Main Drain (CBMD) is managed by the Water Corporation and is the regional drainage system and has a catchment area of 189 ha and which discharges into the Swan River. Catchment plans for the CBMD indicate that inflow from the site occurs in the southwestern corner of Precinct E, where an open drain connects to the CBMD at node CAN008 as shown in **Appendix E** and **Figure 6**.

The CoB has a local drainage piped network located beneath Hardey Road adjacent to Precinct C and which discharges to the CBMD within Precinct E. A larger local CoB network extends along Matheson Road to the East. This is currently connected to the 900 mm pipe that discharges northwards to the lined lake within the centre of the racecourse.

CoB local drainage pipes also exist beneath Grandstand Road adjacent to Precinct A however there is no current connection between Precinct A and the local drainage network. The same network also extends past/adjacent to Precinct D along the northern end of Resolution Drive, however there is no

current connection from Precinct D to the local pipe network. The pipe network along Resolution Drive includes a 450 mm and 525 mm pipe which are understood to discharges into the CBMD. Whilst the CoB catchment has not been modelled to determine peak flows under differing storm durations, an estimate can be made based on the capacity of the pipes which discharge to the CBMD. The combined capacity of the two existing pipes is estimated to be 0.62 $m^3/s$, and therefore the allowable discharge from Precinct C and Precinct E is estimated to be 0.33 $m^3/s$.

Within the Racecourse an existing swale is being used around the racecourse to convey water from the track into the central Wetland Lake.

The location of the swales within the Racetrack Precinct and outlet to Swan River from the Wetland Lake is shown on **Figure 6**.

### 3.7.2 Groundwater

#### 3.7.2.1 Groundwater Resource

The groundwater beneath the site is a multi-layered system comprised of the following:

**City of Bayswater – Perth Superficial Swan unconfined aquifer**. The Superficial Aquifer is approximately 20 m thick under the Ascot Racecourse, with the base of the aquifer under the racecourse at approximately - 20 mAHD (Davidson, 1995). The aquifer is recharged directly by rainfall and from the Swan River.

**King Park Aquifer**. The Kings Park Aquifer is 155 m thick starting from - 20 mAHD and is recharged laterally from the adjacent northern Mirrabooka Aquifer and Superficial Aquifer. The Kings Park Aquifer comprises 2 members: the Mullaloo Sandstone and Como Sandstone. Only the Mullaloo Sandstone member is present at the Ascot site (Davidson, 1995). The Mullaloo Sandstone member is underlain by the Kardinya Shale confining bed of the Osborne Formation.

The groundwater salinity in the aquifer in 1995 was mapped as 500 mg/L to 1,000 mg/L TDS (Davidson, 1995). However, data in recent years indicates the aquifer salinity levels are increasing due to saltwater intrusion.

**Perth South – Perth Leederville** confined aquifer is below -160 mAHD and is approximately 370 m thick. In the Ascot area the Leederville Aquifer is confined but further to the south and north of Perth it is hydraulically connected to the Superficial Aquifer. The Leederville Aquifer comprises of four formations under the Ascot Racecourse, namely Henley Sandstone, Pinjar Member, Wanneroo Member and the Mariginiup Member.

Groundwater flow is generally westwards through the Leederville Aquifer. Lateral discharge can occur to the Kings Park Aquifer but depends on levels of abstraction in the Leederville Aquifer adjacent to the discharge area.

Generally, groundwater salinity in the Leederville Aquifer can be divided into an upper and a lower zone. The upper zone is generally fresh with salinity ranging from 250 to 1,000 mg/L. Salinity in the lower zone (below -400 mAHD) ranges from 1,000 mg/L to greater than 3,000 mg/L.

Groundwater is abstracted from an artesian production bore (PB1) assigned to the Leederville Aquifer to meet the irrigation demand of the Racecourse and surrounds. The bore is located adjacent the Irrigation Lake at the south corner of the Ascot Racecourse track. The bore is screen in the upper Leederville Formation which extends between -160 mAHD and -400 mAHD.

The allocation status of aquifers is further discussed in **Section 5.1.2**.

### 3.7.2.2 Groundwater levels

Perth Groundwater Map indicates (DWER 2023e) that the regional groundwater level sits at 0.5 m AHD across the site. Therefore, the groundwater clearance from southeast to northwest of the site ranges from 6.5 m to 0.5 m.

There are two groundwater level and quality monitoring bores (Bore1 and Bore2) and one production bore (PB1) within the Racecourse (see **Figure 2**) which are monitored by Perth Racing. Groundwater levels in these are monitored monthly.

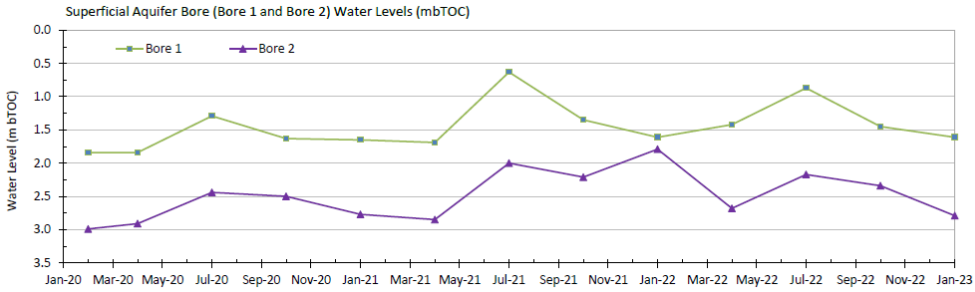



*Plate 1: Groundwater levels within the Superficial Aquifer at Bore1 and Bore2 (JDA 2023)*

**Plate 1** depicts the groundwater levels observed within the Racecourse which clearly indicates the rise and fall of groundwater levels seasonally. The peak groundwater level at Bore 1 and Bore 2 were recorded 1.26 m AHD and 1.70 m AHD respectively, during August 2022.

Monitoring has recently been undertaken within Precinct A. Six monitoring wells were installed for the Precinct A geotechnical investigation. The groundwater depth below the surface of the Precinct A (during January 2024) varied from 1.09 m below ground level (mBGL) to 2.37 mBGL (Douglas Partners 2024).

Monitoring has also recently been undertaken within Precinct D by Galt Geotechnics during the geotechnical investigation. The highest groundwater level beneath Precinct D is reported as 3.03 mBGL during February 2024 (Galt 2024).The various monitoring data/sources have been collated to prepare estimated maximum groundwater contours beneath the site. These have also considered the surface elevation of swales adjacent to the racetrack and the reported TWL of the Wetland Lake. The regional groundwater levels are shown in **Figure 2,** with spot heights recorded at the various locations also provided. It is noted that these do not necessarily represent the annual maximum groundwater levels at all parts of the site given the various timing of measurement of groundwater. Notwithstanding the variability of timing, it is likely that the management of stormwater (and in

particular infiltration) will more likely be influenced by localised soil conditions than seasonal peak groundwater levels in the superficial aquifer.

### 3.7.2.3 Groundwater quality

Water quality monitoring was conducted monthly at PB1 and quarterly at Bore1 (JDA 2023). Water quality parameters those were analysed during the monitoring period include:

**Monitoring Bore (Bore1)**

- EC
- pH
- TDS
- Total phosphorus (TP)
- Filterable Reactive Phosphorus or Phosphorus in Orthophosphate ($PO_4$-P)
- Total Nitrogen (TN)
- Nitrogen in Total Oxidised Nitrogen ($NO_x$-N)
- Nitrogen in Ammonia ($NH_3$-N)
- Total Kjeldahl Nitrogen (TKN)

**Production Bore (PB1)**

- Electrical conductivity (EC)
- pH
- Total Dissolved Solids (TDS)

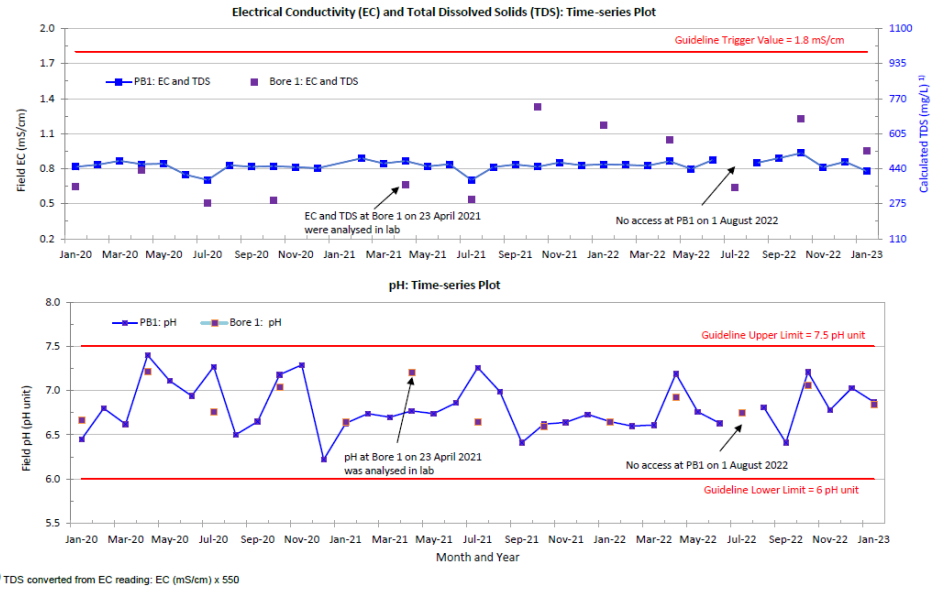



*Plate 2: Water Quality (EC, TDS and pH) Monitoring results* (JDA 2023)

**Plate 2** and **Plate 3** illustrate the water quality of the groundwater within the site is generally consistent over the monitoring periods with typically low variance in parameters tested. EC, TDS and

pH values did not display any exceedances of the trigger values. However, TN and TP regularly exceeded the ANZECC guideline trigger value of 1.2 mg/L and 0.065 mg/L (respectively). It is also noted a large exceedance in TN occurred in August 2022 however this does not appear to be representative of long-term values.




*Plate 3: Water Quality (TN and TP) Monitoring results (JDS 2023)*

## 3.8 Summary of existing environment

In summary, the environmental investigations conducted to date indicate that:

- The site is being used for horse racing, mixed uses (i.e. car park, stables and entertainment/hospitality venues, and commercial). Some portions of the site are only used infrequently (e.g. for parking or events).
- The site is located in an area of moderate to high rainfall, receiving 756.3 mm on average annually with the majority of rainfall received between June and August.
- The majority of the site has a relatively flat topography of 1 mAHD at the northwest (along the Swan River) and 2 mAHD to the south and rising to 7 mAHD to the east of the site.
- The site is within the Swan River Terraces system and displays Guildford formation soils of alluvial and leached yellow sand described as:
  - **Ms2 –** Sandy Silt: Strong brown to mid grey, mottled, blocky, fine sand, hard when dry, variable clay content of alluvial origin
  - **Ms4 –** Sandy Silt: light yellow brown, blocky, mottled some fine to medium sand, soft when moist, variable clay content
  - **S8 –** Sand: very light grey at surface, yellow at depth, fine to medium-grained, sub rounded quartz, moderately well sorted of eolian origin
- The groundwater depth below the surface of Precinct A varies from 1.09 m mBGL to 2.37 mBGL (Douglas Partners 2024).

- The highest groundwater level beneath Precinct D is reported 3.03 mBGL during February 2024 (Galt 2024).
- Most of the site is considered to have a high to moderate risk of ASS occurring, however some portions of Precinct B, Precinct C and the Racecourse are considered to have a moderate to low risk of ASS occurring within the 3 m of the natural surface.
- The northern portion of the site along the Swan River is identified as an ESA.
- The entirety of the site is classified as a SSA and classified as:
  - a) Estuary catchments on the Swan and Scott Coastal Plains.
  - f) The area is <1 km up-groundwater-gradient and 250 m down-gradient of a significant wetland; or where the groundwater gradient is unknown within 1 km of the significant wetland.
- The following wetlands are located within the site and these are classified as:
  - Multiple Use category wetland (MUW) area (UFI 8424, UFI 8425, UFI 8426).
  - Resource Enhancement wetland (REW) area (UFI 8423).
- The dominant hydrological feature of the site is the Swan River estuary. The northern boundary of the site falls within the Swan Canning Development Control Area (DCA) (CoB 2018) and Swan Canning River Park.
- The floodway of the Swan River is immediately adjacent to but not within the site. The 1% AEP flood elevation of the Swan River adjacent to the site is 2.8 mAHD.
- There are two existing major drainage network systems within or adjacent to the site include:
  - The CBMD, managed by the Water Corporation. This currently receives runoff from Precinct C (via the CoB drainage network) and Precinct E.
  - The CoB local piped drainage network, which exists along Mathieson Road, Grandstand Road and the northern portion of Resolution Drive.
- There are three lakes (Irrigation Lake, Lined Lake and Wetland Lake) located within the centre of the Racecourse. These are understood to receive runoff from the grandstand buildings in Precinct B and stables/buildings in Precinct C.
- Allowable discharge to the CBMD from the local drainage network is 0.95 $m^3/s$ based on Water Corporation modelling.
- The groundwater beneath the site is a multi-layered system consisting of the Superficial, Kings Park Formation, Leederville and Yarragadee aquifers.
- Regional groundwater mapping indicates that the groundwater levels across the site are at approximately 0.5 m AHD.
- Local groundwater level monitoring indicates that annual maximum groundwater levels (recorded in August 2022) were measured at 1.26 m AHD and 1.70 m AHD at Bore 1 and Bore 2 respectively. Groundwater levels in adjacent areas included Precinct A levels at 1.09 mBGL to 2.37 mBGL and Precinct D levels of approximately 3.03 mBGL.
- Water quality monitoring indicates that EC, TDS and pH values do not exceed guideline trigger values. However, TN and TP concentrations continually exceed the ANZECC guideline trigger value of 1.2 mg/L and 0.065 mg/L respectively.

# 4 Design Criteria and Objectives

This section outlines the objectives and design criteria that this LWMS and future management plans must achieve. The water management strategy includes water conservation, groundwater management and stormwater management.

## 4.1 Integrated water cycle management

*Better Urban Water Management* (WAPC 2008a) endorses the promotion of integrated water cycle management and application of WSUD principles to provide improvements in the management of stormwater, and to increase the efficient use of other existing water supplies.

The key principles of integrated water cycle management include:

- Considering all water sources, including wastewater, stormwater and groundwater
- Integrating water and land use planning
- Allocating and using water sustainably and equitably
- Integrating water use with natural water processes
- Adopting a whole catchment integration of natural resource use and management.

Integrated water cycle management addresses not only physical and environmental aspects of water resource use and planning, but also integrates other social and economic concerns. Water management design objectives should therefore seek to deliver better outcomes in terms of:

- Potable water consumption
- Stormwater quality management
- Groundwater management.

The first step in applying integrated water cycle management in urban catchments is to establish agreed environmental values for receiving environments. The existing environmental context of the site has been discussed in **Section 3** of this document. Guidance regarding environmental values and criteria is provided by a number of national and state policies/guidelines and site-specific studies undertaken in and around the site. These were detailed in **Section 1.4** and **Section 1.5** respectively.

## 4.2 Water conservation

This LWMS proposes the following water conservation criteria:

**Criteria WC1** For residential dwellings, consumption target of 60 kL/person/year.

**Criteria WC2** Ensure the efficient use of all water resources

**Criteria WC3** Non-potable irrigation water to be sourced from existing groundwater licences held over the area.

The manner in which this objective will be achieved is further detailed in **Section 5**.

## 4.3 Stormwater management

The principle behind stormwater management at the site is to mimic the pre-development hydrological conditions and utilise existing infrastructure where sensible to do so, as described in **Section 3.7**. This principle and the guidance documents discussed in **Section 1.4** and **Section 1.5** and have guided the stormwater management criteria.

**Criteria SW1** Retain and treat the first 15 mm of rainfall as close to source as possible and within site.

**Criteria SW2** Detain up to 1% AEP rainfall event on-site.

**Criteria SW3** Post-development critical 1% AEP peak flows leaving the site to mimic pre-development peak flows.

**Criteria SW4** Finished floor levels must have a minimum of 300 mm clearance above the 1 % AEP TWL in the FSA.

**Criteria SW5** All lots must have a minimum of 500 mm clearance above the 1 % AEP flood level in the Swan River.

**Criteria SW6** Nutrient concentrations within surface water discharging from the site to the Swan River are to meet regional water quality targets.

**Criteria SW7** Reduce nutrient loads by applying appropriate non-structural measures.

**Criteria SW8** Design infiltration areas to avoid creating mosquito habitat.

The manner in which these objectives will be achieved is further detailed in **Section 6**.

## 4.4 Groundwater management

The principle behind the groundwater management strategy is to maintain the existing groundwater hydrology. The groundwater management criteria for the site include:

**Criteria GW1** Surface based infiltration structures should have 300 mm clearance above the MGL.

**Criteria GW2** Habitable floor levels should have a clearance to the MGL of at least 1.2 m.

The manner in which the groundwater management objectives will be achieved is further detailed in **Section 7**.

# 5 Water Conservation Strategy

## 5.1 Fit for purpose water use

Conservation of water through fit-for-purpose use and best management practices is encouraged so that scheme water is not wasted. Fit-for-purpose describes the use of water that is of a quality suitable for the required use of the water. Fit-for-purpose principles have been utilised in the water conservation strategy for the site and will achieve **Criteria WC1**.

### 5.1.1 Scheme water supply

Scheme water will be supplied by the Water Corporation Integrated Water Supply System. Scheme water is proposed to be used for all potable uses. Scheme water will also service some external uses, where fit-for-purpose alternatives are not available.

### 5.1.2 Groundwater

As discussed in **Section 3.7.2.1**, the site is located beneath a multi-layered system comprising of the Superficial Swan, Kings Park Formation, Leederville and Yarragadee aquifers.

The proponent holds a groundwater allocation from the Perth South Leederville confined aquifer for the following:

- GWL 178519 - 347,000 kL

This licence will be used to meet the irrigation requirements for the Racecourse Precinct, Precinct A, Precinct B and part of Precincts C and E.

The above-mentioned measure will achieve **Criteria WC3**.

### 5.1.3 Rainwater tanks

Rainwater tanks (RWTs) can be used within private lots to harvest roof runoff. This water is considered non-potable but can be used to supplement non-potable water uses.

## 5.2 Lot scale water conservation measures

This LWMS proposes that the water conservation measures to be adopted would include RWTs, waterwise principles for lot scale gardens and within estate landscaping (WWG) and water efficient fixtures and appliances (WEFA) to ensure that the residential portion of the development minimises the use of water. These are summarised in the following sections.

### 5.2.1 Rainwater tanks

The use of RWTs will not be mandated, and the stormwater quantity management strategy does not rely on their use. They are therefore only considered to be a water conservation measure. Given that rainwater tanks will not be mandated or supplied by the proponent, it has been assumed that these would be implemented by 7.5% of households within Precinct D. Whilst they may be considered for

Precinct A they are not proposed to be taken up in other Precincts. The assumed uptake rate has been based on data obtained from the Australian Bureau of Statistics (ABS 2013). It is assumed (for the purposes of the water balance analysis) that all rainwater tanks have a capacity of 3 kL.

### 5.2.2 Water efficient fixtures and appliances

Water conservation strategy for the site proposes the use of WEFA. Water efficient fittings will be mandated through the building licence, while uptake of water efficient appliances can be encouraged by State and Local Government rebates in addition to education from the proponent at point of sale. WEFA are relevant to Precinct A and Precinct D. It is assumed that water efficient appliances will be implemented by 40% of households within Precinct A and Precinct D, which has been based on data obtained from the Australian Bureau of Statistics (ABS 2013, 2014).

### 5.2.3 Waterwise gardens

Landscape packages will not be provided as a part of the land sale contract. Lot scale waterwise gardening principles (WWG) are only relevant for Precinct D. These will be achieved by promoting Waterwise gardening principles (WWG) (WC 2003) at the time of sale of land within Precinct D. It is assumed that 75% of households in Precinct D will implement WWG principles within lot gardens (ABS 2013). WWG principles include:

- Soil to be improved with soil conditioner certified to Australian Standard (AS) 4454 to a minimum depth of 150 mm where turf is to be planted and a minimum depth of 300 mm for garden beds.
- The irrigation system shall be designed and installed according to best water efficient practices:
  - The controller must be 'hydrozoned'.
  - Emitters must disperse coarse droplets or be subterranean.
- Garden beds to be mulched to 75mm with a product certified to AS4454.
- Increasing community awareness of water conservation by promoting Waterwise practices, fixtures and fittings at the point of sale.

WWG principles will also be considered for Precinct A and Precinct E, however it is anticipated that these areas will have minimal irrigated landscaping to which this would apply. The current approach to irrigation within the Racecourse Precinct, Precinct B and Precinct C adopts a range of water conservation measures (including non-irrigated area and retention of existing trees/vegetation) to ensure that Perth Racing operates within the available groundwater allocation. This approach is not proposed to be significantly modified.

The above measures will assist in achieving **Criteria WC1** and **WC2**.

## 5.3 Water use analysis

### 5.3.1 Lot scale water use analysis

A water use analysis has been undertaken for Precinct D to estimate the expected individual residential lot water use to demonstrate the effectiveness of the water conservation strategy. The water use analysis has been based on the rates and calculation methodology presented in the Water

Corporation (2011) spreadsheet *AltWaterSupply_Water_Use_Model.xls*. This spreadsheet has been adapted to model the effects of using the water conservation measures proposed, and key assumptions include:

- Lot area has been based on a conceptual lot layout (see **Appendix A**).
- Average residency of 2.6 people per single lot dwelling. This value has been calculated from data provided by ABS for new housing developments in Perth (ABS 2022).
- Assumed up-take rates include:
  - 100% uptake of water efficient fittings
  - 40% uptake of water efficient appliances
  - 7.5% uptake of RWTs
  - 55% uptake of WWG principles.

The results of the water balance indicate that if households in Precinct A and Precinct D adopt the proposed water conservation measures (e.g. efficient fittings, RWT, WWG principals) at typical uptake rates they will use an average of 33.0 kL/year/person. This achieves the water target of no more than 60 kL/year/person of scheme water and satisfies **Criteria WC1**.

## 5.4 Wastewater management

The wastewater generated from the site will be managed by connecting the development to the Water Corporation deep sewer network.

## 5.5 Water conservation management criteria compliance

A summary of the proposed water conservation management criteria and how these are addressed is provided within **Table 1.**

*Table 1: Water conservation management criteria compliance*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| WC1 | Residential consumption target of 60 kL/person/year scheme water. | Provide advice to residents in Precinct A and Precinct D on water conservation measures |
| | | RWTs can be utilised for non-potable uses within Precinct D |
| | | Promotion and use of WWG in lots within Precinct D |
| | | Promotion and use of water efficient appliances to Precinct A and Precinct D |
| | | Mandate water efficient fittings within Precinct A and Precinct D |
| WC2 | Ensure the efficient use of all water resources. | Use of waterwise landscaping principles in open spaces |
| | | Open spaces designed to use no more than allocated groundwater |
| | | Minimise water requirements for open space and verge maintenance |
| | | Use of water efficient appliances within Precinct A and Precinct D |
| | | Use of WWG principles in lots in Precinct D |

*Table 2: Water conservation management criteria compliance (Continued)*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| WC3 | Non-potable irrigation water to be sourced from existing groundwater licences held over the area. | The proponent holds a groundwater Licence with an allocation of 347,000 kL per annum which will meet the irrigation requirements of the Racecourse and surrounding Precincts. |

# 6 Stormwater Management

The principle behind the stormwater management strategy for the site is to maintain the existing hydrology by detaining, retaining and treating runoff from the small rainfall event (i.e. first 15 mm) as close to source as possible and detaining/retaining the major event (1% AEP) on site prior to discharge to either the centre of the Racecourse (i.e. self-retained) or to the CBMD the pre-development outflow rates. Due to the existing soil conditions (See **Section 3.5**), the site is not well suited for structural controls utilising infiltration of stormwater unless modified. However, given that fill will be utilised to ensure that habitable floor levels are above the 1% AEP flood elevation of the Swan River, final elevations will be approximately 4 mAHD. Where fill is used to achieve this there will be sufficient clearance to MGL and permeability of soils to adopt WSUD measures which utilise infiltration.

WSUD measures proposed will vary across the Precincts and will include:

- BRAs to achieve water quality treatment (Precincts A, C, D and E)
- FSAs to detain runoff prior to discharge to the adjacent road network system
- Subsurface infiltration cells that will facilitate at-source infiltration (Precinct D)
- Flood storage integrated into existing surface water bodies located centrally within the Racecourse (for Precinct A and C)
- FSAs to provide flood detention and infiltration as close to source as possible (Precinct E).

The overall approach to precinct drainage is shown on **Figure 7**.

The WSUD measures that will be implemented as a part of the development are described in the following sections. Precinct B has been assumed to be self-retained and a portion of Precinct C (already connected to the Lakes in the centre of the track) has been assumed to be the same as it is now. Surface runoff modelling undertaken using XPSWMM has been used to inform the design of stormwater infrastructure as detailed in the following sections. Assumptions used to represent the post-development environment are provided in the modelling assumptions report in **Appendix D**.

## 6.1 Lot scale drainage measures

Lots within Precinct D and Precinct E will retain the first 15 mm rainfall event runoff within soakwells/soakage which will need a capacity of 150 $m^3$/ha. Lot storage is the responsibility of the lot owner and will be assessed as part of the building approval process prior to construction.

The use of soakwells/soakage areas will assist in achieving **Criteria SW1**.

## 6.2 Development drainage measures

### 6.2.1 Bio-retention areas

Runoff from the first 15 mm of rainfall will be captured and retained within a vegetated BRA located in open spaces. The BRA is assumed to have a depth of 500 mm with 1:3 side slopes. Treatment of

runoff will be provided through interaction with vegetation and adsorption to sand particles through infiltration prior to reaching groundwater.

The BRA will be underlain by material with an appropriate PRI (nominally a PRI of 20 at 150 mm or equivalent). It is acceptable for this to be achieved with a thicker layer of lower PRI soil (e.g. 300 mm of PRI 10). This will be finalised prior to detailed design. The location of the BRA will either be in a drainage reserve, an open space or they may be within the centre of the Racecourse as a separate treatment area (separate from the existing Lakes). The sizing and spatial requirements of BRAs will be confirmed in the detailed designs.

The use of BRA will assist in achieving **Criteria SW1, SW6,** and **SW8**.

### 6.2.2 Flood detention/storage

An FSA will be utilised to detain runoff above the first 15 mm and up to the 1% AEP rainfall event. To achieve this, the invert of the FSA will have sufficient clearance above groundwater 300 mm. FSAs are assumed to be 1.2 m depth with 1:6 side slope and will be integrated into POS or drainage reserve, and will overflow to the Water Corporation drainage network. The sizes and spatial requirements for the FSA will be confirmed in the detailed designs and development stages.

The use of an FSA will assist in achieving **Criteria SW1, SW2, SW4,** and **SW6.**

### 6.2.3 Subsurface storage

Surface runoff generated by lots, stables and hardstand/carpark areas will be directed into sub-surface storage. Precinct D will have an independent drainage pipe network within individual precincts which convey flows to downstream sub-surface retention structures.

These structures have been sized to accommodate up to the 1% AEP rainfall event and have been designed as a 1 m deep structure. The detailed configurations could be modified to suit site constraints. These will either be location beneath road reserve/verge or beneath an open space and will require an overflow connection to the local (CoB) drainage network to ensure that they can dry out. The sizes and spatial requirements for the subsurface storages are provided in **Table 2** and illustrated in **Figure 7A**: Precinct A Stormwater Management Plan

*Figure 7B: Precinct C Stormwater Management Plan*

Figure .

The use of the sub-surface storage will assist in achieving **Criteria SW1, SW2,** and **SW6.**

### 6.2.4 Lake storage

Precinct A and Precinct C (stables) will first direct runoff to a bio-retention areas, however overflow from these will be catered for in the Wetland Lake. In a 1% AEP storm event an additional 78 mm of depth will occur within the Wetland Lake from both Precincts.

As indicated in **Section 3.7.1.2**, the Wetland Lake is connected/discharges to the Swan River via a 375 mm and 450 mm culvert. These are not proposed to be modified. The combined nominal flow capacity of the 375 mm and 450 mm pipes is approximately 0.4 $m^3/s$. The inlet, length, grade, etc of

these pipes is not proposed to be modified and therefore the current overflow regime from the site to the Swan River will remain unchanged.

The use of the Wetland Lake storage will assist in achieving **Criteria SW1, SW2, SW3,** and **SW6.**

## 6.3 Precinct based drainage approach

### 6.3.1 Precinct A

There is no current connection point for drainage to be exported from site to the local CoB network. Runoff will therefore need to be managed within Precinct A and the Racecourse. Precinct A will require a single BRA that will address treatment of water quality; this will be located within Precinct A as close to source as possible. The BRA should have the following characteristics:

- Base will be vegetated with reeds/rushes as per a biofilter
- 1:3 side slopes
- Depth of 300 – 500 mm pending final design
- Volume of the BRA will need to achieve 194 $m^3$
- Nominal surface area of 450 $m^2$.

In addition to the volume achieved by the BRA, in a major (1% AEP) storm event a further 1,345$m^3$ of flood retention storage will be required. The proposed earthwork level of Precinct A (4.0 mAHD) means that it is possible to direct runoff exceeding BRA capacity to the Wetland Lake in the centre of the Racecourse. This approach will add approximately 52 mm to the central 2.6 ha Wetland Lake.

The volumes of storage required and locations of storage across the Precincts is summarised in **Table 2**. The approach to water management in Precinct A is shown in **Figure 7A**.

### 6.3.2 Precinct B and Racecourse

As indicate previously, there are no substantial changes proposed to Precinct B. Precinct B currently manages surface runoff within the precinct and adjacent Racecourse, largely via at source infiltration, swales around the perimeter of the track surface and the existing lake system Precinct B and the Racecourse are proposed to be retained largely as is.

As indicated in **Section 3**, the Wetland Lake currently has a piped overflow connection to the Swan River. This overflow pipe(s) reportedly rarely overflow and can be controlled via a structure at the outlet (which also prevents tidal influence on the Wetland Lake). The Wetland Lake has a 2.6 ha surface area, and therefore can provide significant volume of stormwater retention in the event of a major storm event. There are no new connections proposed to the Swan River and there are no changes proposed to the management approach currently taken for the Wetland Lake and the current piped outlets.

### 6.3.3 Precinct C

Precinct C is the existing stables area, adjacent carparks and future stables areas along the south and east of the Structure Plan area. The existing buildings currently either infiltrate runoff at source or

discharge to the Lined Lake in the centre of the Racecourse. This approach is proposed to be retained.

Surface runoff generated by hardstand/carpark areas of Precinct C will be directed and discharged towards Precinct E via the existing connections to the CoB drainage network along Matheson Road or via the existing pipe connection in the southwest of the Structure Planning area to the existing connection to the CBMD (Water Corporation drainage system) within Precinct E.

The drainage requirements for the southern (carpark) portion of Precinct C are therefore detailed with those proposed for Precinct E.

For the two currently undeveloped portions of Precinct C (future stables along the south and east of the Structure Plan area), the post-development drainage system will collect the runoff from these areas and direct them to the centre of the Racecourse. Initial treatment will be provided by a BRA which accommodates 418 $m^3$, with a nominal surface area of 924 $m^2$.

Runoff exceeding the capacity of the BRA (which will be 684 $m^3$) will be directed to the Wetland Lake. The direction of major event stormwater runoff to the Wetland Lake will add 26 mm to the top water level of the Wetland Lake.

The volumes required to be treated and for flood mitigation for Precinct C are summarised in **Table 2**. The approach to water management in Precinct A is shown in **Figure 7B**.

### 6.3.4 Precinct D

As indicated in **Section 6.1**, private lots and the childcare building within Precinct D are assumed to retain the first 15 mm within the lot boundary, most likely within soakwells, which should be appropriate given that some measure of imported fill will be required to meet clearance above regional flood levels. Based on the density of lots proposed in Precinct and lack of open space, this precinct will need 42 $m^3$ of subsurface storage to accommodate and detain the 1% AEP storm event to ensure that the post development peak flow rates will mimic the pre -development conditions. This is assumed to be located adjacent to Resolution Drive as shown in **Figure 7C**. The outflow from this Precinct will likely be predominantly overland flow once the first 15 mm of storage has reached capacity, however a low flow to ensure that these can adequately drain between storm events is recommended.

The volumes required to be treated and for flood mitigation for Precinct D are summarised in **Table 2**.

### 6.3.5 Precinct E

Surface runoff from across Precinct E (inclusive of Precinct C hardstand/carpark) will be conveyed via the drainage network firstly to a BRA for water quality treatment and then this will overflow to an FSA (detention drainage structure) at the south western corner of Precinct E for detention of the 1% AEP storm event. Overflow from Precinct E basin will discharge into the CBMD (Water Corporation drainage system) at existing flow rates. The Water Corporation surface runoff modelling of the CBMD indicates that the local drainage network contributes 0.95 $m^3/s$ at node CNA008. This is understood to be contributed to by existing 450 mm and 525 mm pipes beneath Resolution Drive and therefore it is assumed that 0.62 $m^3/s$ is taken up by the existing pipe network, and approximately 0.33 $m^3/s$ of

capacity is available to convey runoff from Precinct C, Precinct E and upstream contributing catchments.

The volumes required to be treated and for flood mitigation for Precinct E are summarised in **Table 2**. The approach to water management in Precinct E is shown in **Figure 7D**.

### 6.3.6 Precinct drainage summary

The requirements for water quality treatment within the Precincts is summarised in **Table 2**.

*Table 2: Precinct drainage summary*

| Precinct | First 15 mm requirement ($m^3$) | Location of first 15 mm | 1% AEP flood mitigation requirement ($m^3$) | Location of 1% AEP flood mitigation requirement | 1% AEP outflow from site |
|---|---|---|---|---|---|
| Precinct A | 194 | BRA located within Precinct A | 1,345 | Wetland Lake, centre of Racecourse | 0 |
| Precinct B | No change to existing | Precinct B | No change to existing | Precinct B | Self-retained |
| Precinct C (Stables) | 418 | BRA located in the centre of the Racecourse | 684 | Wetland Lake in centre of Racecourse | 0 |
| Precinct C (carpark) | Combined with Precinct E volumes | BRA in Precinct E | Combined with Precinct E volumes | FSA in Precinct E | |
| Precinct D | 28 | Subsurface storage cells beneath road reserve/drainage reserve | 42 | Subsurface storage cells beneath road reserve/drainage reserve | 0.402 $m^3/s$ to local drainage network/road pavement |
| Precinct E | 365 | Southwest corner of Precinct E, adjacent to FSA | 930 | South west corner of Precinct E | 0.32 $m^3/s$ to CBMD |

There will be no new connections to the Swan River or to the CBMD, and the existing flow regimes at these outlet points will be maintained. Specifically with regard to overflow from the Wetland Lake which occurs via gravity, the peak flow rates that the existing 375 mm and 450 mm pipes are capable of achieving (approximately 0.4 $m^3/s$) will not change given that the inlet, length, grade and outlet of these pipes is not proposed to be modified.

Precinct D will require a connection to the local drainage network, however the outflow rate will be nominal, and has not been accounted for when sizing the subsurface storage cells within Precinct D. The direction of runoff from Precinct A and a portion of Precinct C to the centre of the Racecourse will require a BRA with a surface area of 1,105 $m^2$ (for Precinct C) and will add a total of 78 mm depth to the top water levels within the Wetland Lake.

The precinct areas and a summary of the approach to surface water management are shown on **Figure 7**.

### 6.3.7 Non-structural measures

A number of non-structural measures will be implemented to help reduce nutrient loads within stormwater runoff. These measures include:

- Minimising fertiliser use to establish and maintain vegetation within POS and road verges.
- Street sweeping at regular intervals.
- Ongoing management of nutrient application to Precinct B and the Racecourse.
- Precinct A to adopt a similar nutrient application management regime as that currently applied to Precinct B.
- Minimising the use of turf within open spaces.
- Active management of equine waste within Precinct C and the Racecourse. This includes manual collection and remove of manure from site.
- Education of residents regarding fertiliser use and nutrient absorbing vegetation species within lots.

The above measures will assist in achieving **Criteria SW7**.

### 6.3.8 Earthwork levels

Finished floor levels of the entire development will be set at minimum of 4.0 mAHD (See **Appendix C**) which will assist in achieving **Criteria SW5**.

## 6.4 Stormwater criteria compliance

A summary of the proposed stormwater design criteria and how these are addressed is provided in **Table 3**.

*Table 3: Stormwater management criteria compliance*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| SW1 | Retain and treat the first 15 mm of rainfall as close to source as possible | Lots within Precinct D and Precinct E to retain the first 15 mm of rainfall on lot in soakwells/soakage. Lot storage will be the responsibility of the lot owners. |
| SW2 | Retain up to 1% AEP rainfall event on-site. | Runoff up to the 1% AEP to be detained within the FSA in Precinct A. Precinct A and a portion of Precinct C will ultimately discharge to the centre of the track. |
| | | Runoff up to 1% AEP to be managed with the sub-surface storage in Precinct D. |
| SW3 | Post-development critical 1% AEP peak flows leaving the site to mimic pre-development peak flows. | Runoff up to 1% AEP event to be detained in the detention basin and subsurface storage which will maintain the pre-development peak flow of 0.32 $m^3/s$ from Precinct E and 0.463 $m^3/s$ from Precinct D respectively. |
| SW4 | Finished floor levels must have a minimum of 300 mm clearance above the 1% AEP TWL in the FSA. | It is anticipated that the FSA and detention basin invert will be set so that the habitable floor levels must have a |

| | | |
|---|---|---|
| | | minimum of 300 mm clearance above the 1% AEP TWL in the basins. |
| SW5 | All lots must have a minimum of 500 mm clearance above the 1% AEP flood level in the Swan River. | The 1% AEP flood level in the Swan River is 2.8 mAHD. The preliminary bulk earthworks concept provided in shows that finished floor level will be at 4.0 mAHD. |
| SW6 | Nutrient concentrations within surface water discharging from the site to the Swan River are to meet regional water quality targets. | BRA will be designed so that after treatment the long term nutrient concentrations within surface water meet the regional water quality targets. |

*Table 4: Stormwater management criteria compliance (Continued)*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| SW7 | Reduce nutrient loads by applying appropriate non-structural measures | • Minimise use of fertilisers within open space and road verges.<br>• Street sweeping at regular intervals.<br>• Use of drought tolerant turf species.<br>• Education of residents regarding fertiliser use |
| SW8 | Design infiltration areas to avoid creating mosquito habitat | Stormwater infrastructure will be designed to ensure all runoff is infiltrated within 96 hours. |

# 7 Groundwater Management

## 7.1 Groundwater management approach

The principle behind groundwater management is to maintain the existing hydrology across the site, provide appropriate protection from groundwater inundation, and maintain or improve existing groundwater quality.

## 7.2 Groundwater level management

The regional groundwater map (DWER 2023e), localised measurement of groundwater and the surface contours of the site (see **Section 3.4** and **Figure 2**) indicate that there is sufficient clearance to groundwater beneath the site to facilitate infiltration of stormwater runoff, on the basis that fill is being imported to raise finished levels to 4.0 mAHD.

Whilst the underlying parent soils have demonstrated generally low permeability, the earthworks approach will require import of fill to 4.0 mAHD to achieve clearance above the 1% AEP flood level in the Swan River for Precinct A, Precinct D and Precinct E. Therefore, stormwater will be encouraged to infiltrate at source wherever possible to minimise stormwater runoff and to adopt an at-source approach to management of runoff where possible. This will occur within soakwells, permeable portions of lots and BRAs which will have at least 300 mm of clearance above the MGL. The above-mentioned measure will assist in achieving **Criteria GW1**.

For Precinct C (stables) runoff will be directed to the centre of the racetrack. The stables facilities do not require a specific separation from groundwater, and in order to accommodate equine uses the land between buildings/facilities should be as flat as possible. The most appropriate response is therefore to accommodate stormwater quality treatment and flood retention within the centre of the racetrack. Given the low permeability of soils in the centre of the racetrack, the BRA is unlikely to achieve separation from groundwater or the low permeability soil layer. This is however considered acceptable as it is consistent with the presence of the three Lakes currently within the centre of the racetrack.

The control of groundwater by subsoil drainage is not proposed due to requirements to provide adequate clearance above the 1% AEP flood levels and the proximity of the Swan River. Rather, groundwater separation requirements will be achieved by the use of imported fill as described above. The earthworks strategy provided in **Appendix C** shows that all habitable floor levels will be greater than 1.2 m above the MGL. The above-mentioned measure will assist in achieving **Criteria GW2**.

As previously discussed, there are no changes proposed to the form of development within Precinct B or to the Racecourse. These areas are currently managed by the swales aligned with the existing racetrack which control soil moisture conditions in these areas, and which discharge to the Wetland Lake. This approach will be retained in the post-development environment.

## 7.3 Groundwater quality management

Whilst not specified in a design criterion, the main objective for groundwater quality management is to maintain or improve the existing groundwater quality. This can be achieved by reducing the total nutrient load into the groundwater that originates from the site. Groundwater that originates from the site is surface runoff that has infiltrated into the soil profile. Therefore, improving groundwater quality can be achieved by treatment of the surface runoff prior to infiltrating to groundwater.

The reduction of nutrient load to the groundwater will be achieved by:

- Retention of existing trees within open spaces wherever possible.
- Directing stormwater to a vegetated (with native wetland species) BRA.
- The BRA will be underlain by material with an appropriate PRI (nominally a PRI of 20 at 150 mm or equivalent). It is acceptable for this to be achieved with a thicker layer of lower PRI soil (e.g. 300 mm of PRI 10).
- Minimise fertiliser use to establish and maintain vegetation within open space areas and road verges.
- Ongoing management of nutrient application to Precinct B and the Racecourse.
- Precinct A to adopt a similar nutrient application management regime as that currently applied to Precinct B.
- The use of turf will be minimised, however where adopted a drought tolerant turf species that require minimal water, and nutrients will be used.
- Roll-on turf will be used within the open space areas and road verges, to prevent the high nutrient input requirement during establishment of the turf.
- Garden beds should not be immediately adjacent to BRAs to reduce nutrient transportation into these infiltration areas.
- Active management of equine waste within Precinct C and the Racecourse. This includes manual collection and remove of manure from site.

The above measures will improve the quality of water prior to it infiltrating into the underlying groundwater.

## 7.4 Groundwater criteria compliance summary

A summary of the proposed groundwater quantity design criteria and how these are addressed within the site is provided in **Table 4**.

*Table 4: Groundwater criteria compliance summary*

| Criteria number | Criteria description | Manner in which compliances will be achieved |
|---|---|---|
| GW1 | Surface based infiltration should have 300 mm clearance above MGL. | Basin inverts will be set at 300 mm above the MGL, the exception being the BRA in the centre of the racetrack. |
| GW2 | Finished floor levels should have a clearance to the MGL of at least 1.2 m. | Lots will be set at least 1.2 m above the MGL. |

# 8 Subdivision and Urban Water Management Plans

The requirements to undertake preparation of more detailed water management plans to support subdivision is generally imposed as a condition of subdivision. This will be most relevant to Precinct D. Other precincts may be developed under a Development Approval and therefore water management will likely be documented within a Stormwater Management Plan (SMP). The development of future UWMP/SMPs should follow *Urban Water Management Plans: Guidelines for preparing plans and for Complying with Subdivision Conditions* (DoW 2008).

While strategies have been provided within this LWMS that address planning for water management within the site, it is a logical progression that future subdivision designs and the supportive UWMP/SMP will clarify details not provided within the LWMS. The main areas that will require further clarification within future UWMP/SMPs may include (pending which precinct is being addressed):

- Extent of land uses within Precincts
- Connection to local and Main Drainage networks
- Surface runoff modelling
- Implementation of water conservation strategies
- Non-structural water quality improvement measures
- Management and maintenance requirements
- Construction period management strategy.

These are further detailed in the following sections. As stated above, ongoing (post-development) monitoring of groundwater will be detailed in the UWMP/SPM, however in this LWMS is outlined broadly in **Section 9**.

## 8.1 Extent of land uses within Precincts

It is expected that the layout and extent of land uses within Precincts may evolve over time. Future water planning documents will need to be updated to align with the most up to date spatial plans for each Precinct. Changes to the spatial plans will likely have an implication on the size of stormwater infrastructure and possibly their location, and should be revised and clarified in future UWMP/SMPs.

## 8.2 Connection to local and Main Drainage networks

This LWMS has made assumptions regarding connectivity to the CoB local drainage network and to the Water Corporation's CBMD. These are assumptions are made based on the information available at the time of preparing this LWMS and may need to be revised pending feedback from these agencies. This could result in updates to surface runoff modelling (see **Section 8.3**).

## 8.3 Surface runoff modelling

It is acknowledged that the water management strategies documented in this LWMS are based upon broad-scale assumptions and to some extent regional data. These assumptions are considered

adequate for development of this LWMS and are of an appropriate level of detail. However, verification of proposed subdivision drainage designs will be undertaken once the specific basin designs and extent of inclusion of finer scale WSUD elements are confirmed.

It is expected that future UWMP/SMPs will update surface runoff modelling as appropriate, and this may result in evolution of the spatial layout of the structure plan/future subdivisions or detailed civil design approach.

## 8.4 Implementation of water conservation strategies

The non-potable water needs from the Precincts are to be accommodated from the existing groundwater allocation and therefore, track water usage is a significant consideration. Notwithstanding licensed volumes available, there is minimal new open space areas proposed within the Precincts that would demand significant additional groundwater allocation, and it is therefore anticipated that non-potable water needs can be met by the existing licence held by Perth Racing.

A number of potential measures to conserve water have been presented within this LWMS. These water conservation strategies will be incorporated into design and the on-going maintenance of the Precinct A, B and C open spaces and where relevant. Landscape concept design measures that will be incorporated into the water conservation strategy will be further detailed within the future UWMP/SMPs produced for the development.

The manner in which the developer intends to promote water conservation measures discussed in this LWMS to future lot owners will also be discussed within the future UWMP/SMPs.

## 8.5 Non-structural water quality improvement measures

Guidance for the development and implementation of non-structural water quality improvement measures is provided within the *Stormwater Management Manual for Western Australia* (DWER 2022). Some measures will be more appropriately implemented by CoB for local roads, such as street sweeping, however many can be implemented relatively easily within the design and maintenance of the subdivision and the open space areas. It is expected that any privately managed development areas (e.g. Precinct A, Precinct B and Precinct C) will be managed by Perth Racing or another appropriate management body, and that the management of areas exposed to equine uses (Precinct C and the Racecourse) will continue to adopt contemporary best practice nutrient management.

Future UWMP/SMPs will provide an implementation plan/timing/responsibility for measures such as street sweeping, public education (through measures such as signage that may be implemented to raise awareness), etc.

## 8.6 Management and maintenance requirements

The management measures to be implemented to address surface water quality (such as the use of vegetation within WSUD assets) will require ongoing maintenance. It is therefore expected that the future UWMP/SMPs will detail management and maintenance procedures that will set out required maintenance actions (e.g. gross pollutant removal), timing (e.g. how often it will occur), locations (e.g. exactly where it will occur) and responsibilities (e.g. who will be responsible for carrying out the

actions). Given that approval from the CoB will be sought for the proposed measures, it is anticipated that consultation will be undertaken and referral to guiding policies and documents will be made.

## 8.7 Construction period management strategy

It is anticipated that the construction stage will require some management of various aspects (e.g. soil erosion, sedimentation of downstream water bodies, dust, surface runoff, noise, traffic etc.). The management measures undertaken for construction management will be addressed either in the future UWMP/SMPs or a separate Construction Management Plan (CMP).

# 9 Monitoring

## 9.1 Post-development monitoring

The post-development monitoring of water quality should be undertaken within groundwater immediately upstream and downstream of BRAs within Precinct A, Precinct C and Precinct E. It should also be undertaken at the outlet to or adjacent to the subsurface detention system in Precinct D. This should be undertaken via shallow groundwater bores installed immediately upstream and immediately downstream based on local groundwater flow direction, based on information available at the time (or in the case of Precinct D it could be at the outlet from the subsurface storage cells).

The monitoring should also consider and be generally consistent in the approach with the monitoring undertaken to comply with conditions of Groundwater Licence GWL 178519.

The WSUD measures (BRAs) should also be monitored to ensure their continued effectiveness. This should occur at the outlets from BRAs prior to their discharge to the Wetland Lake. It is noted that this may be difficult to achieve as it will require a rainfall event > 15 mm and to be timed to occur when overflow is occurring or alternatively auto samplers could be employed.

Monitoring of the outlet to the Swan River from the Wetland Lake is not proposed to be undertaken given the infrequent nature of overflow from the Lake to the River. Further, the Lake intersects shallow groundwater and any discharge from the pipes to the River is likely to be influenced by local groundwater quality.

### 9.1.1 Trigger values

The water quality targets from the *National Water Quality Management Strategy* (ANZECC and ARMCANZ 2000) and the trigger criteria are acknowledged as long term targets for the site, being 1.2 mg/L for TN and 0.065 mg/L for TP. However, it is also recognised that recent site monitoring undertaken (and reported in **Section 3**) shows repeated exceedances of the NWQMS default trigger criteria. Therefore, short term trigger values are proposed based on the approximate average nutrient concentrations measured in groundwater, and these are shown in **Table 5**.

*Table 5: Post-development trigger values*

| Analyte | pH | EC (uS/cm) | TN (mg/L) | TP (mg/L) |
|---|---|---|---|---|
| Value | 6-7.5 | 1800 | 3.0 | 0.15 |

Monitoring should be undertaken on a quarterly basis and should include:

- pH
- Conductivity
- Dissolved oxygen
- Temperature
- Nutrients (TN, TP)
- Nutrient Species (Ammonium, $NH_4$, Oxides of nitrogen, $NO_x$ ortho-phosphorous (ORP))

### 9.1.2 Condition monitoring

It is proposed that the overall condition of the Precincts will be monitored on a bi-annual basis. This monitoring will be implemented after the completion of the civil and landscaping works and will continue for a period of two years.

A visual assessment will be undertaken to monitor the overall condition of the Precincts, with the aim to ascertain that the maintenance activities are achieving the overall management objectives for the development. The parameters that will be monitored include:

- Gross pollutants
- Terrestrial weeds
- Irrigation
- Vegetation density
- Paths, benches, walkways and other infrastructure.

The management and maintenance objectives will be detailed within future UWMPs along with details of the corresponding monitoring program.

### 9.1.3 Contingency Action Plan

If the results from the initial monitoring occasion indicate that nutrient concentrations exceed the nominated (short term) trigger values, a number of contingency measures may be employed.

The first action that should be undertaken if groundwater trigger criteria are exceeded is to repeat the monitoring to remove the potential for sampling error. If the repeat monitoring still shows results which breach the trigger value, the next action will be to compare the upstream (incoming) nutrient concentrations with the outgoing (downstream) nutrient concentrations. If the downstream nutrient concentrations are >50% higher than the upstream nutrient concentrations, the following actions should be undertaken:

- Review open space nutrient application practices to identify source if possible.
- Conduct surveillance of Precincts and drainage infrastructure to determine any other potential and obvious nutrient inputs.
- Remove source if possible (i.e. fertiliser input, etc.).
- Remove sediment–bound nutrients by removing basin sediments.
- Manual removal of plant material from BRAs to facilitate further nutrient uptake.

If the downstream nutrient concentrations are found to be generally consistent with the upstream concentrations the next action will be to conduct a site – specific comparison of long-term background data presented in this LWMS. There is some amount of variability (temporally) in nutrient concentrations experienced across the site, and this is the reason for the proposed short and long term trigger values. The comparison of measured values to trigger values and historical monitoring data should then be used as a management tool to determine if the trigger values should be revised.

Following the implementation of the above contingency measures the groundwater quality will be re – sampled. If the results of the analysis still show water quality characteristics which breach the trigger values an additional set of upstream/downstream monitoring bores may be installed. The

additional bores would be sampled as per the ongoing sampling regime already being undertaken for the first two bores. If the additional locations demonstrate results consistent with the initial monitoring, an assessment will be undertaken as to whether the results are representative of a broader site management concern, and whether any additional contingency actions need to be implemented onsite.

## 9.2 Reporting

A post-development monitoring report will be prepared on conclusion of the two-year monitoring period and will be provided to CoB on request. This will be undertaken per Precinct once development within the Precinct has occurred. Interim results (spreadsheet) can be provided to either CoB, DWER or DBCA on request during the monitoring program.

# 10 Implementation

## 10.1 Roles and responsibility

The LWMS provides a framework that the proponent can utilise to assist in establishing stormwater management methods that have been based upon site-specific investigations, are consistent with relevant State and Local Government policies and have been endorsed by DWER, DBCA and CoB. The responsibility for working within the framework established within the LWMS rests initially with the proponent, although it is anticipated that a future UWMP/SMP will be developed in consideration of other relevant policies and documents. A summary of roles and responsibilities relevant to the current and future planning stages and ongoing management of the site is summarised in **Table 6**.

*Table 6: Roles and responsibilities for various planning stages*

| Stakeholder | Perth Racing | City of Belmont | Water Corporation | DWER | DBCA | WAPC |
|---|---|---|---|---|---|---|
| LWMS preparation | √ | | | | | |
| LWMS review and advice | | √ | √ | √ | √ | |
| LWMS approval | | | | √ | | √ |
| UWMP/SMP & civil design preparation | √ | | | | | |
| UWMP/SMP review and approval | | √ | | | | |
| Precinct implementation | √ | | | | | |
| Post development Precinct management | √ | | | | | |
| Public roads/open space ongoing management | √ | √ | | | | |

## 10.2 Funding

The proponent will fund all subdivision, civil and landscape works within the public realm (roads and open spaces) and within Precincts that are being privately managed (Precinct A, Precinct B and Precinct C). Development of individual lots will be the responsibility of the lot owner at the lot-scale development application stage.

## 10.3 Review

It is not anticipated that this LWMS will be reviewed unless the Ascot Racecourse Structure plan undergoes significant change post-lodgement of the LWMS. If the proposed layout of the

development is substantially modified, the surface runoff modelling undertaken for this LWMS may need to be reviewed and the criteria revised to ensure that all are still appropriate.

The next stage of water management for most of the Precincts is UWMP preparation to support subdivision (relevant to Precinct D) or SMP preparation to support Development Approval (relevant to all other precincts). The UWMP/SMP is largely an extension of the LWMS, as it should provide detail to the designs proposed within this LWMS and will demonstrate compliance with the criteria proposed in **Section 4**. Regardless of whether a UWMP or SMP is prepared, these should be prepared as per *Better Urban Water Management*.

The next stage of development following the UWMP is single lot development. It is recognised that certain elements of the LWMS and the UWMP will not be implemented until this late stage, and that there is little or no statutory control that can be applied to ensure the implementation of any remaining measures. While the remaining measures are unlikely to be enforced at this stage their implementation could be encouraged by the CoB through policy (or modification of these where necessary), building licence or awareness programs (such as the Water Corporation Waterwise program).

# 11 References

## 11.1 General references

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## 11.2 Online references

The online resources that have been utilised in the preparation of this report are referenced in **Section 11.1**, with access date information provided in **Table R1**.

*Table R1 Access dates for online references*

| Reference | Date accessed | Website or dataset name |
|---|---|---|
| (ABS 2013) | 19/4/2024 | ABS: Water Use and Conservation Data |
| (ABS 2014) | 19/4/2024 | ABS: Energy Use and Conservation Data |
| (DWER 2023a) | 12/04/2024 | Acid Sulfate Soil Risk Map |
| (BoM 2024) | 12/04/2024 | Climate Data |
| (Landgate 2023) | 31/01/2024 | Landgate Map Viewer Plus |
| (WAPC 2023a) | 11/12/2023 | Local Planning Scheme No. 15 Map |
| (DWER 2024a) | 12/04/2024 | Perth Groundwater Map |
| (DWER 2024b) | 12/04/2024 | Water Information Reporting |
| (DWER 2024c) | 12/04/2024 | Water Register |
| (DWER 2023c) | 26/04/2024 | FPM Floodplain Area (DWER-020) |

# Figures

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*Figure 2: Topographic and Groundwater Contours*

*Figure 3: Geological Mapping*

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*Figure 5: Environmental Assets*

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*Figure 7D: Precinct E Stormwater Management Plan*




**Figure 1: Site Location**

| | |
|---|---|
| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(03)--F23**

| | |
|---|---|
| Drawn: | WJC |
| Date: | 26/04/2024 |
| Checked: | JM |
| Approved: | DPC |
| Date: | 17/05/2024 |

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Scale: 1:8,000@A4
GDA2020 MGA Zone 50

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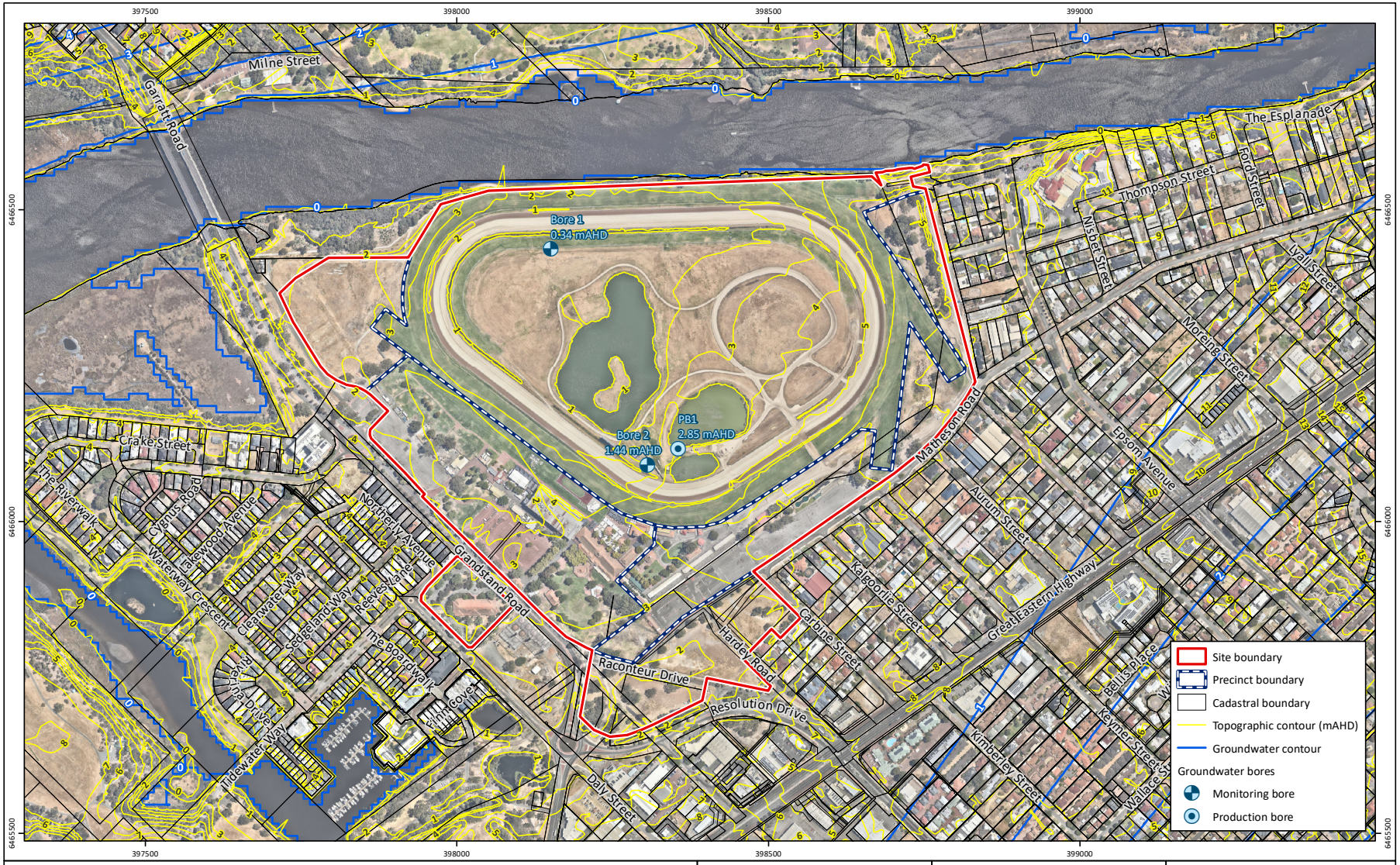



**Figure 2:** **Topographic and Groundwater Contours**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan

**Client:** Perth Racing

**Plan Number:**
**EP23-109(03)--F24**
Drawn: WJC
Date: 26/04/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

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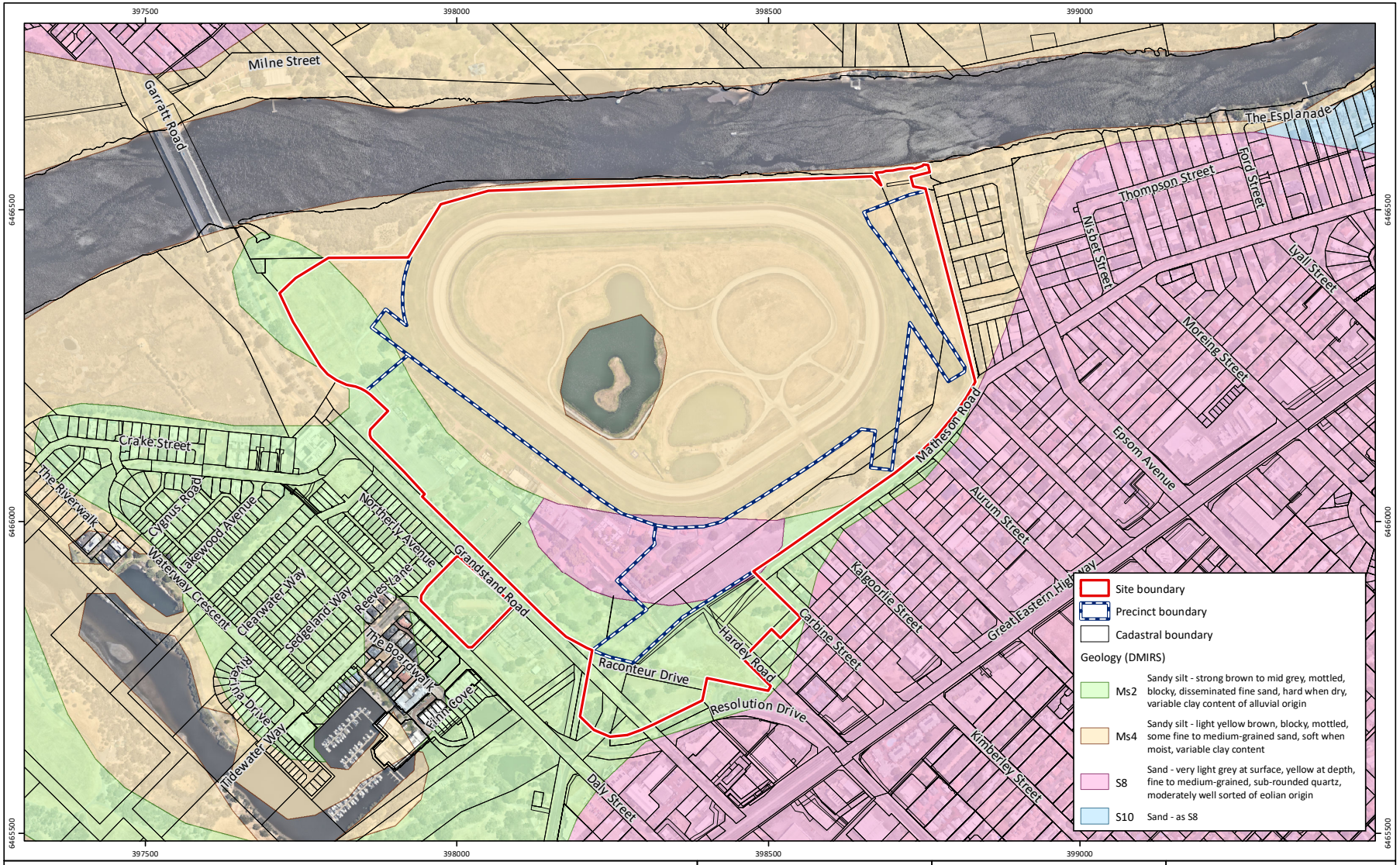



**Figure 3: Geological Mapping**

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|---|---|
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| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(03)--F25**

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| Checked: | JM |
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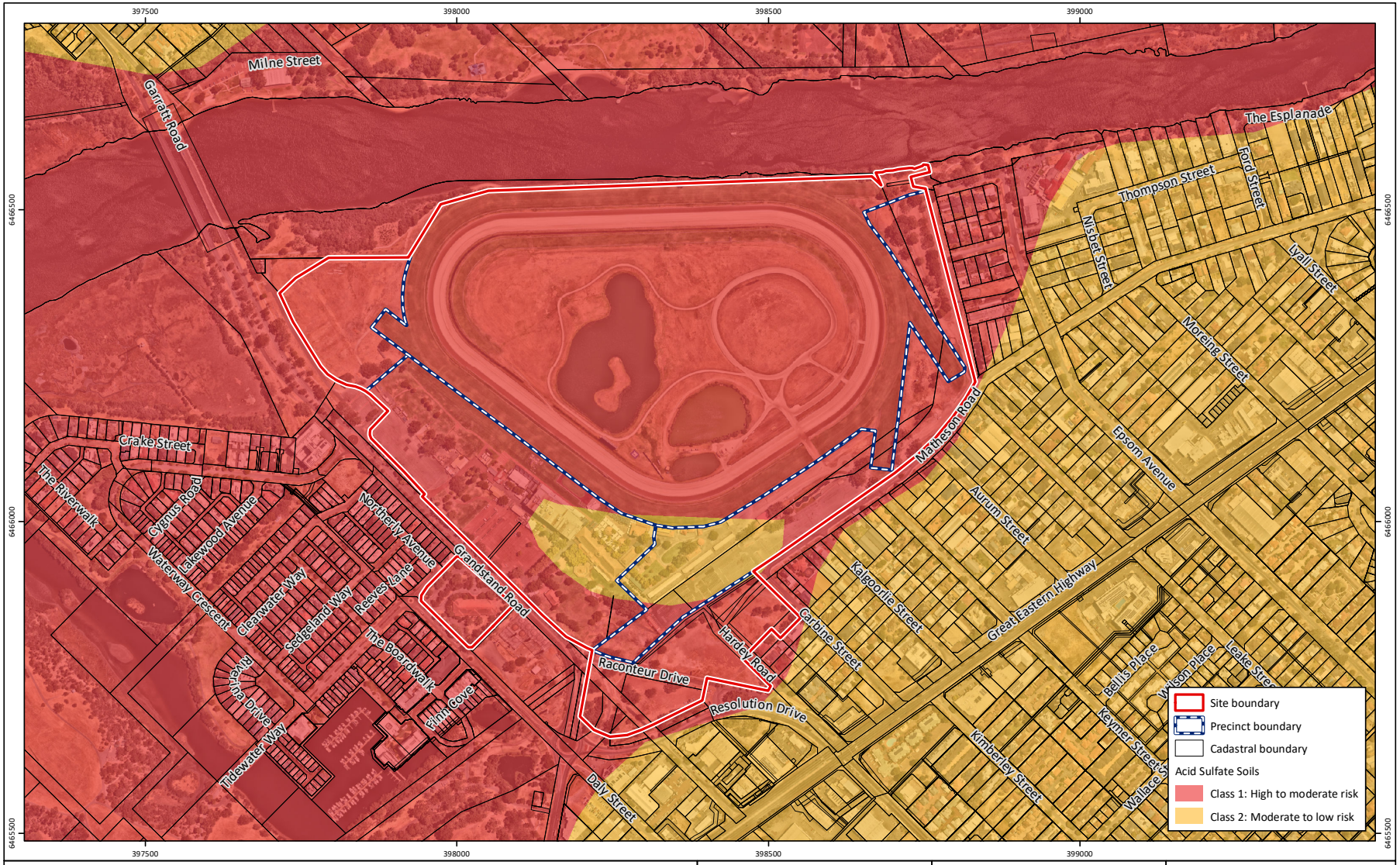



**Figure 4: Acid Sulfate Soil Mapping**

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| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

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| **Plan Number:** | **EP23-109(03)--F26** |
| Drawn: | WJC |
| Date: | 26/04/2024 |
| Checked: | JM |
| Approved: | DPC |
| Date: | 17/05/2024 |

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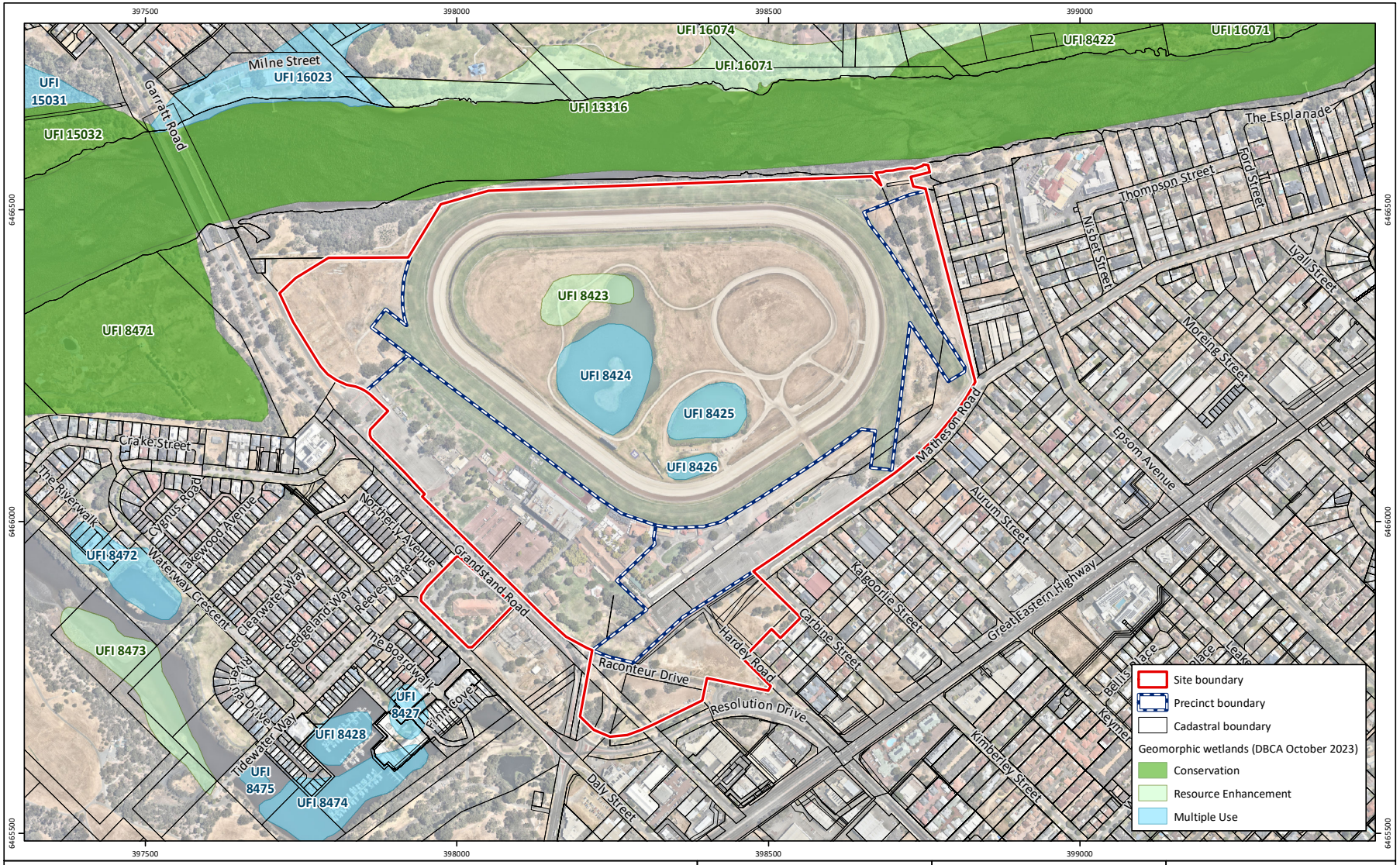



**Figure 5: Environmental Assets**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan
**Client:** Perth Racing

**Plan Number:** EP23-109(03)--F27
Drawn: WJC
Date: 26/04/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

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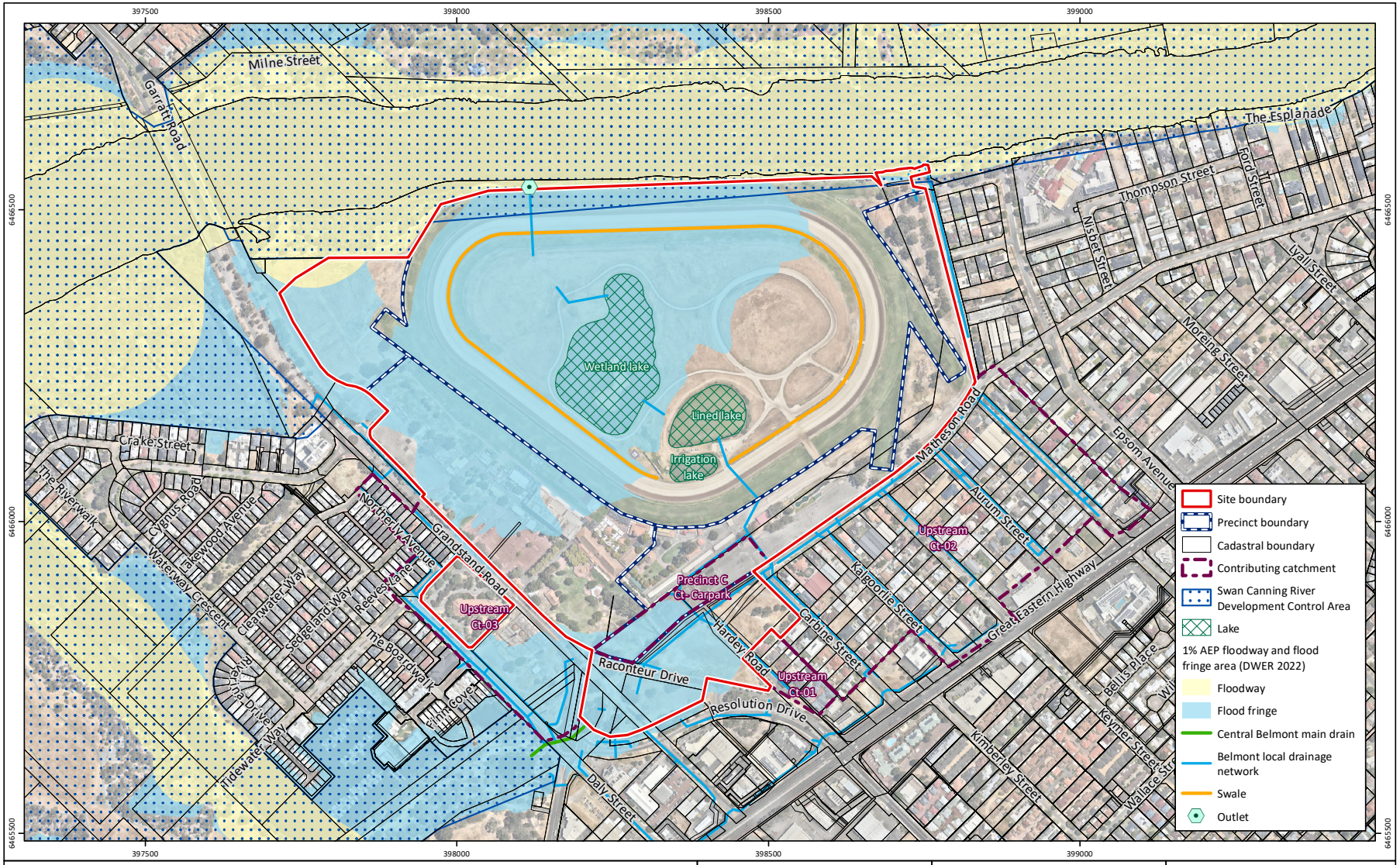



**Figure 6: Hydrological Features**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan
**Client:** Perth Racing

**Plan Number:** EP23-109(03)--F28
Drawn: WJC
Date: 26/04/2024
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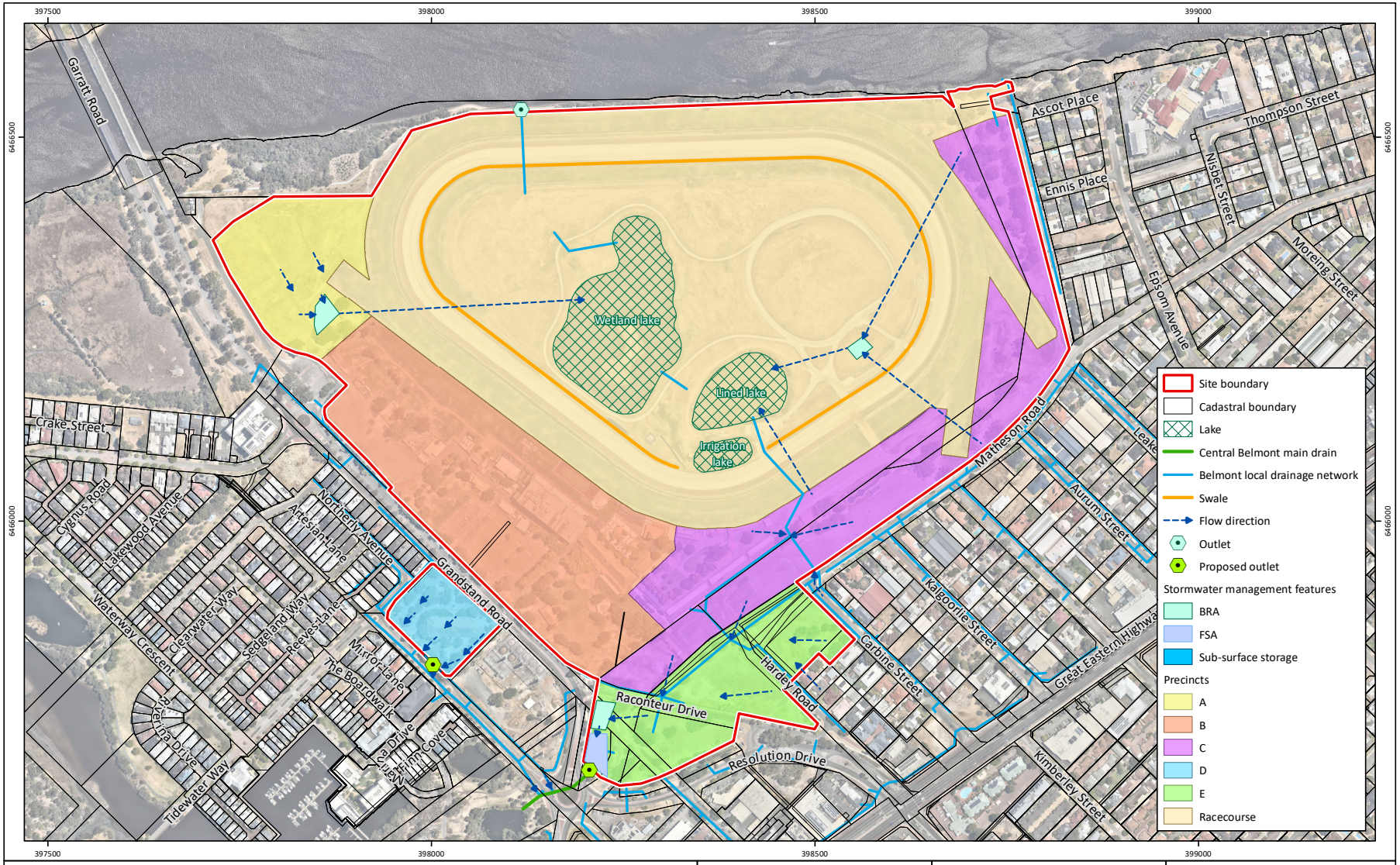



**Figure 7: Ascot LSP Precinct Plan**

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|---|---|
| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:** EP23-109(03)--F29

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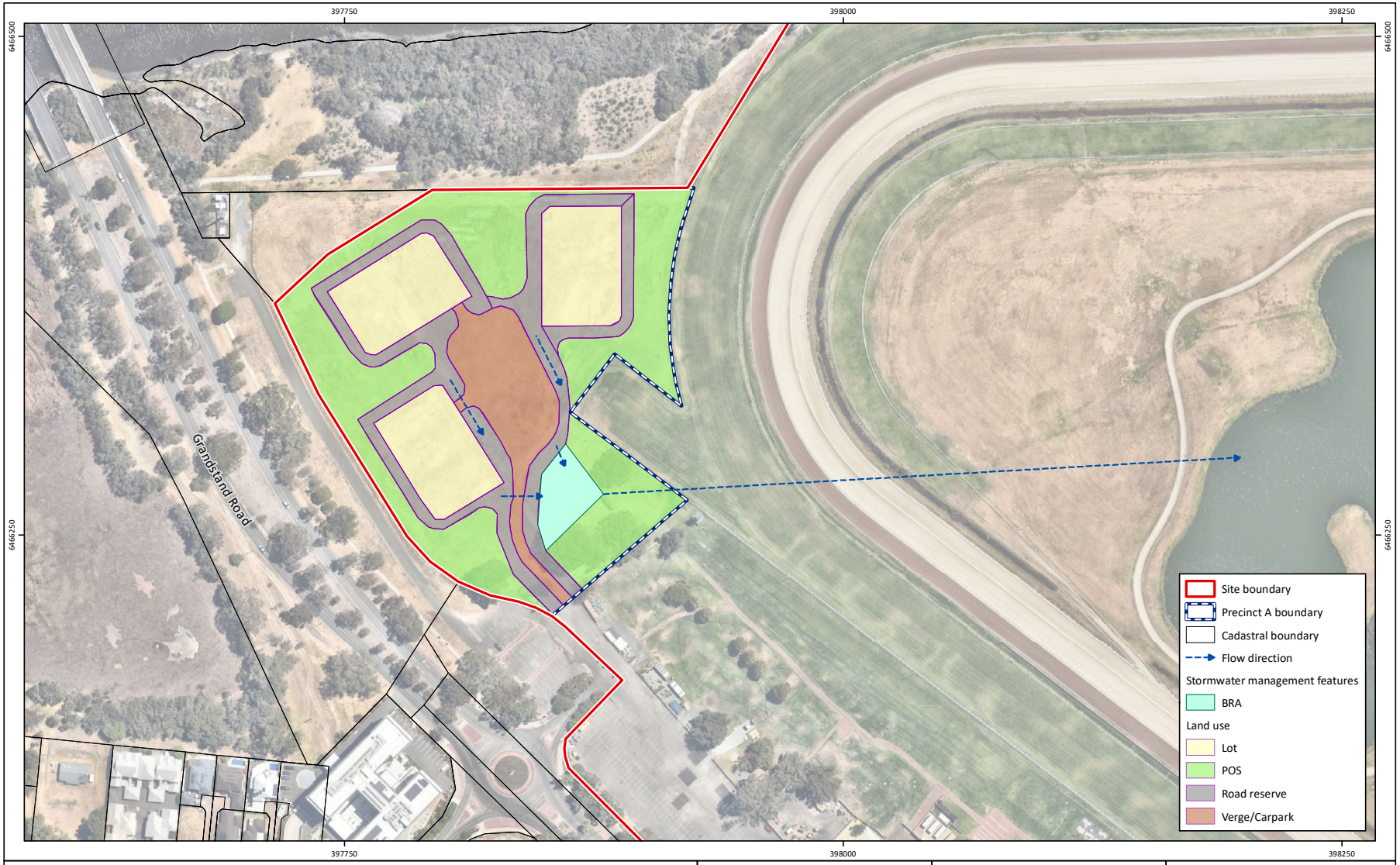



**Figure 7A: Precinct A Stormwater Management Plan**

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|---|---|
| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(03)--F32**

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| Date: | 01/05/2024 |
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| Approved: | DPC |
| Date: | 17/05/2024 |

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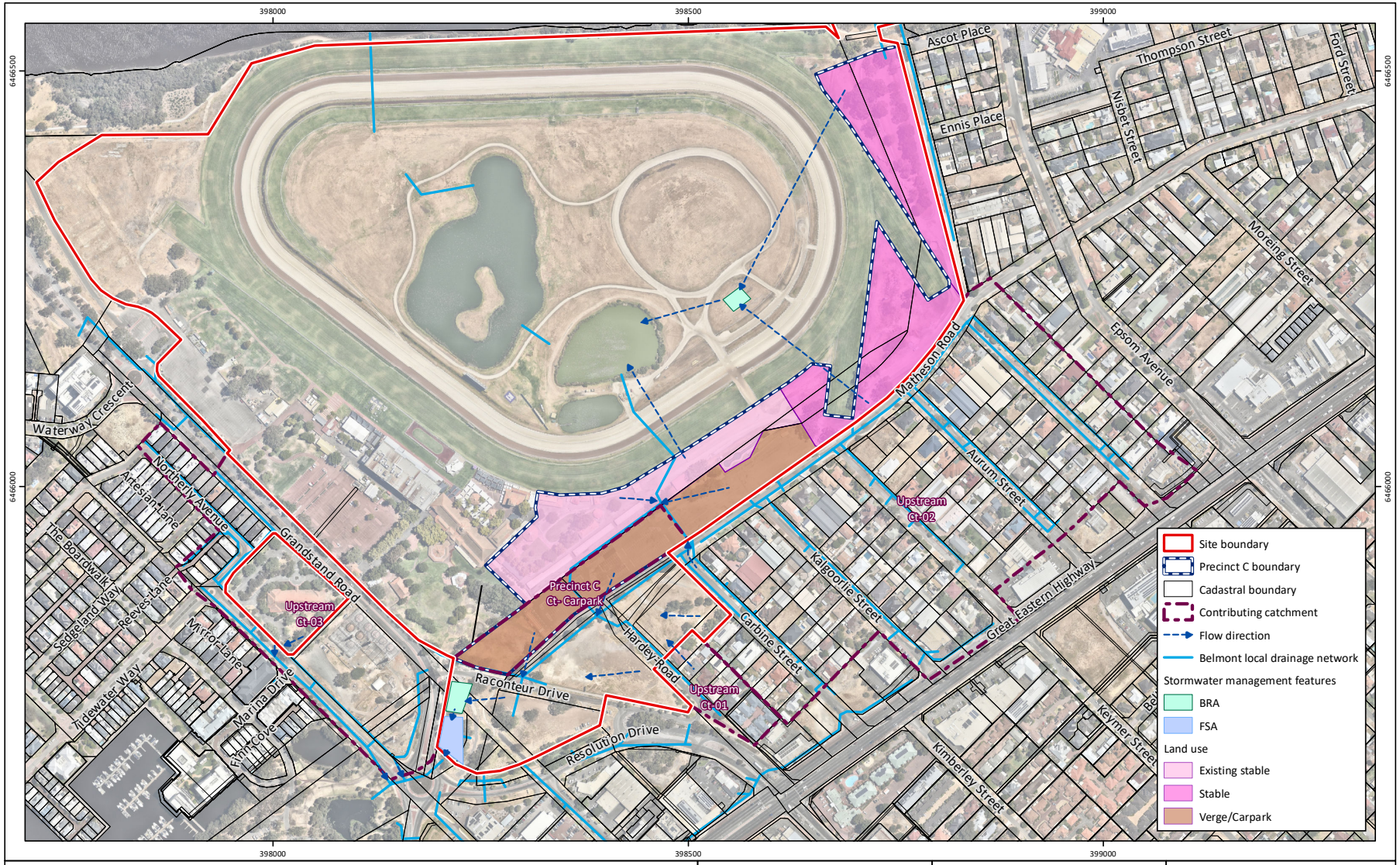



**Figure 7B: Precinct C Stormwater Management Plan**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan
**Client:** Perth Racing

**Plan Number:** EP23-109(03)--F33
Drawn: WJC
Date: 01/05/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

N

0 100 200
Metres
Scale: 1:6,000@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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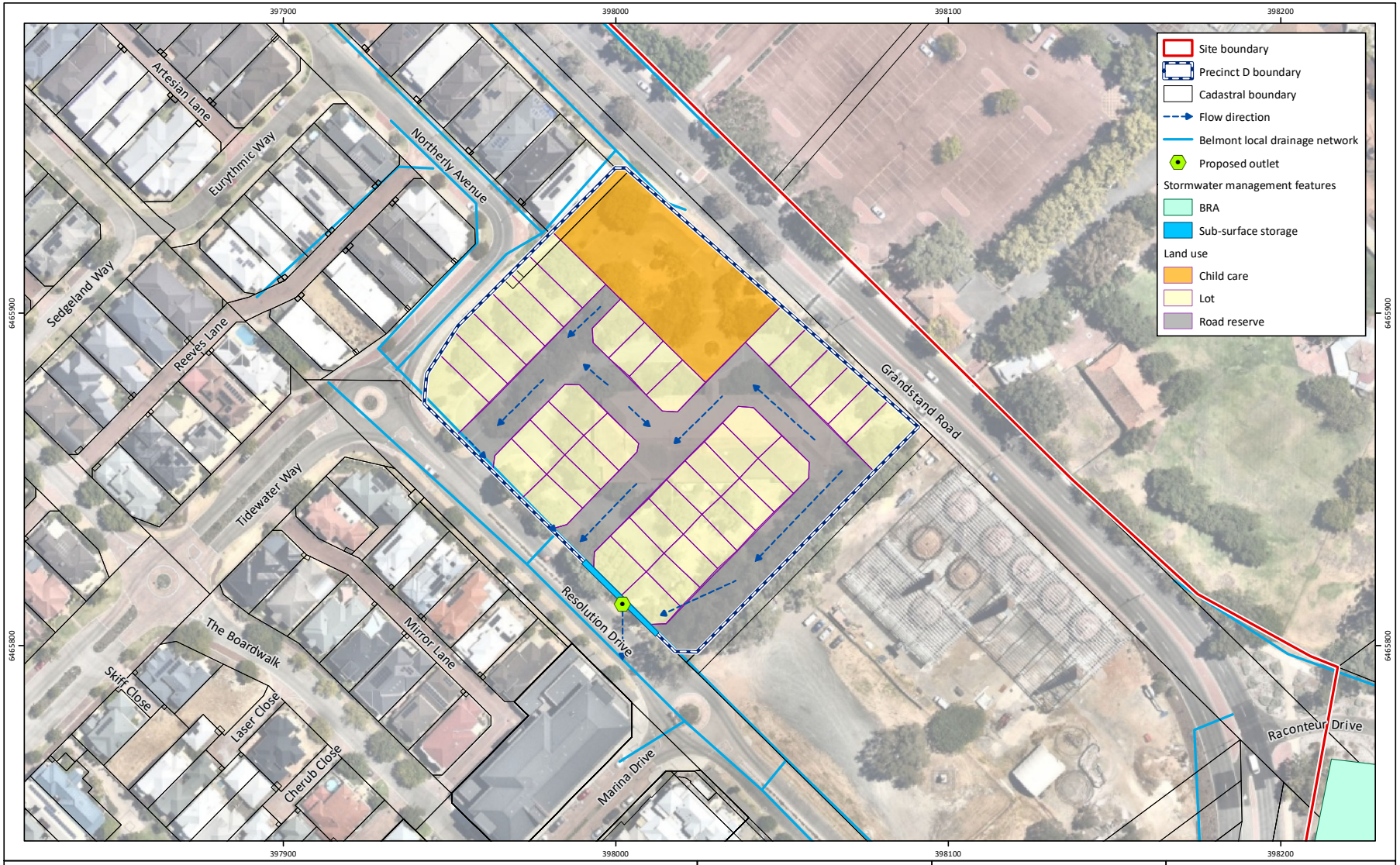



**Figure 7C: Precinct D Stormwater Management Plan**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan
**Client:** Perth Racing

**Plan Number:** EP23-109(03)--F34
Drawn: WJC
Date: 01/05/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

N

0 25 50
Metres
Scale: 1:1,500@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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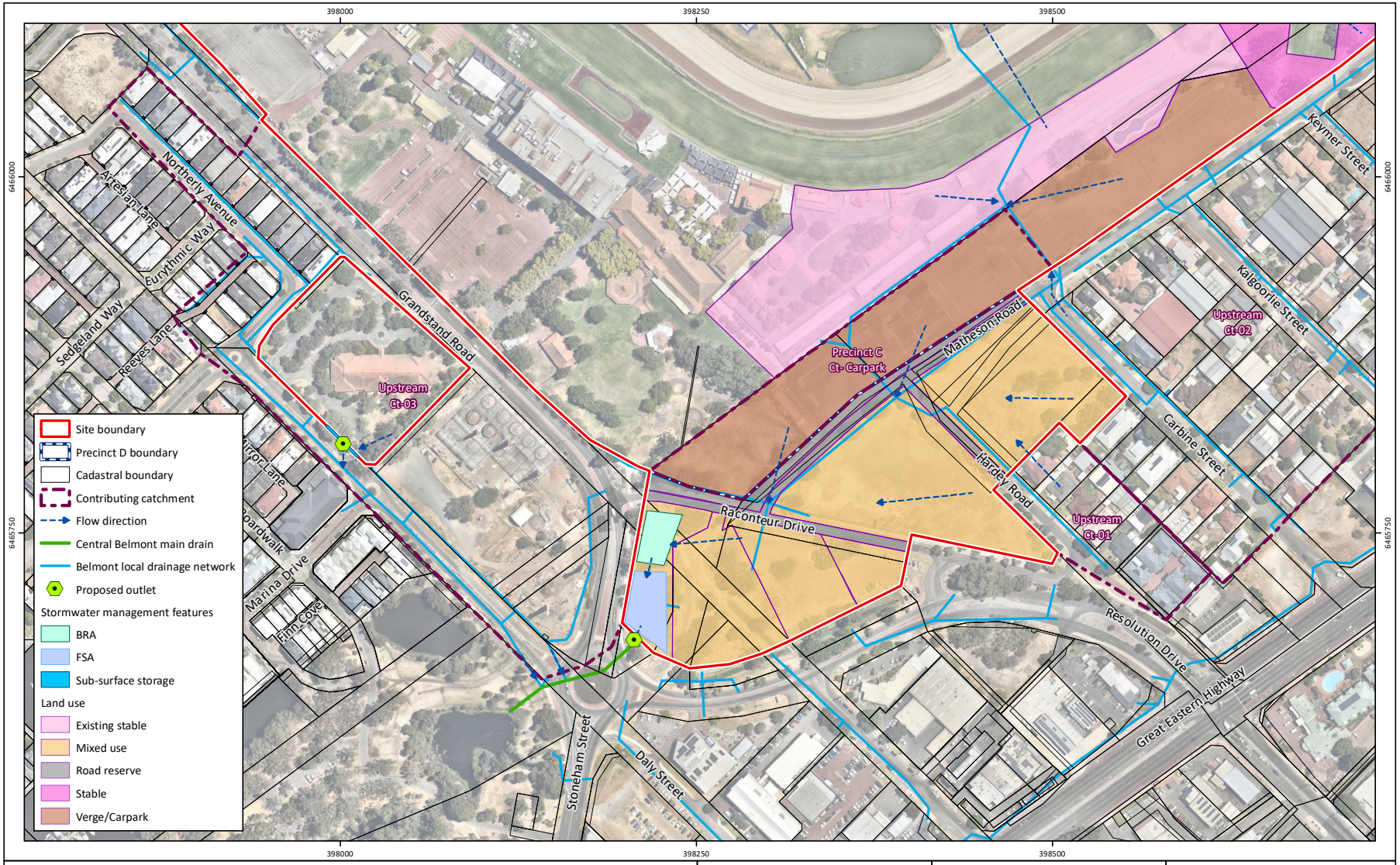



**Figure 7D: Precinct E Stormwater Management Plan**

| | |
|---|---|
| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(03)--F35**

| | |
|---|---|
| Drawn: | WJC |
| Date: | 01/05/2024 |
| Checked: | JM |
| Approved: | DPC |
| Date: | 17/05/2024 |

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Metres
Scale: 1:3,500@A4
GDA2020 MGA Zone 50

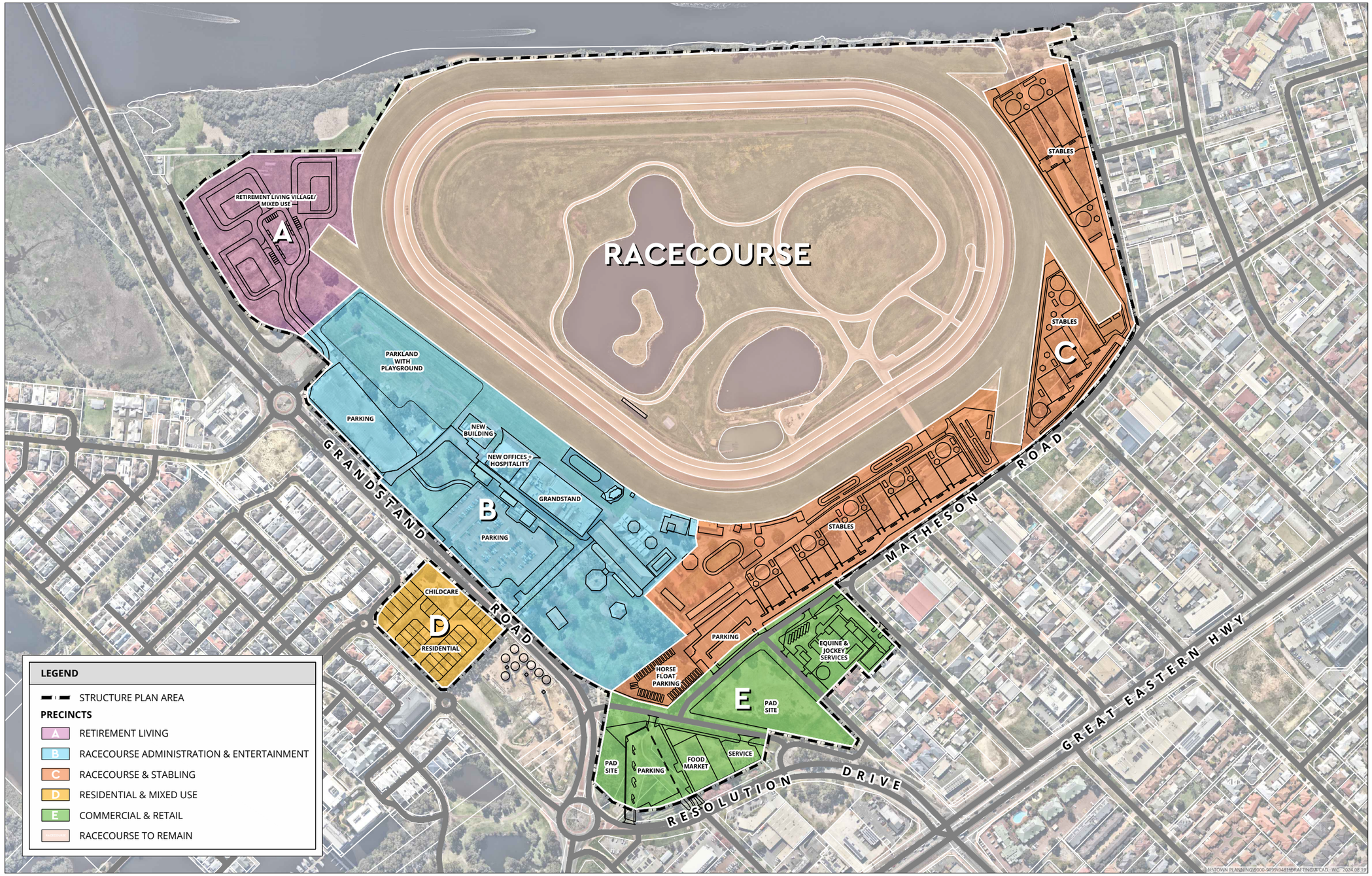
emerge ASSOCIATES

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# Appendix A

Concept plan

*ROWE Group Design (2023)*



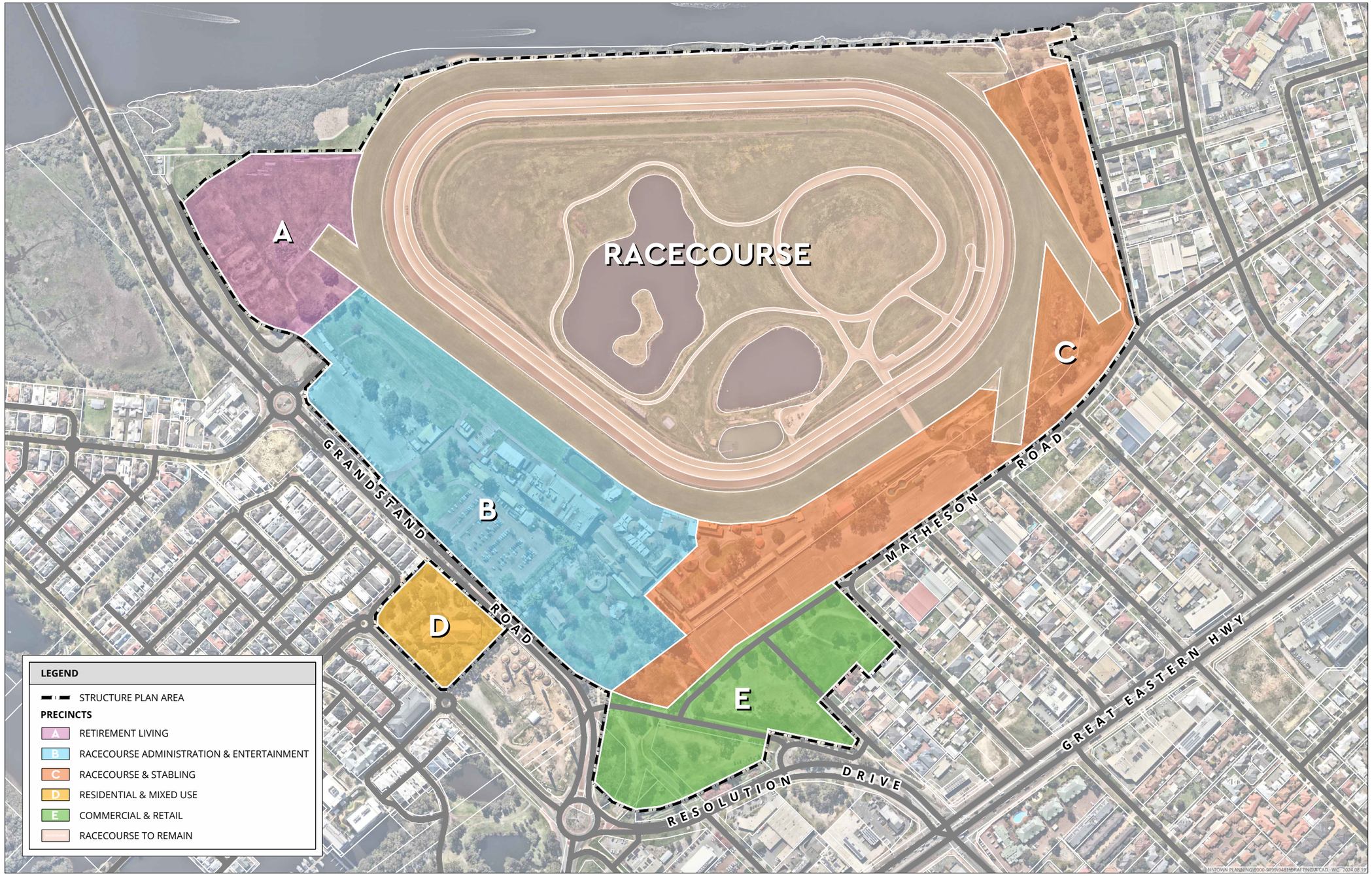

**DRAFT MASTER PLAN CONCEPT**
VARIOUS LOTS - ASCOT RACECOURSE
ASCOT

N
0 100 m
SCALE @ A3: 1:4000
**9481-CON-01-D**

DRAWN: WC
DATE CREATED: 2024.08.19
PROJECTION: MGA50 GDA94
CADASTRE: LANDGATE
AERIAL: NEARMAP 20230831

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ROWE GROUP DESIGN




**STRUCTURE PLAN PRECINCTS**
VARIOUS LOTS - ASCOT RACECOURSE
ASCOT

N
0 100 m
SCALE @ A3: 1:4000
**9481-FIG-02-C**

DRAWN: WC
DATE CREATED: 2024.08.19
PROJECTION: MGA50 GDA94
CADASTRE: LANDGATE
AERIAL: NEARMAP 20230831

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ROWE GROUP DESIGN

# Appendix B

Geotechnical Reports

*Precinct A – Douglas Partners 2024*

*Precinct D – Galt 2024*

Douglas PARTNERS

GROUNDED EXPERTISE

# Report on Preliminary Geotechnical Investigation

## Proposed Residential Development

## Part of Lot 9002 Grandstand Road, Ascot WA

## Prepared for Perth Racing

**Project 219164.03**

**25 January 2024**

Douglas Partners Pty Ltd
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**36 O'Malley Street, Osborne Park,** WA 6017
**(08) 9204 3511**

## Document History
## Details

| | |
|---|---|
| **Project No.** | 219164.03 |
| **Document Title** | Report on Preliminary Geotechnical Investigation |
| **Site Address** | Part of Lot 9002 Grandstand Road, Ascot WA |
| **Report Prepared For** | Perth Racing |
| **Filename** | 219164.03.R.001.Rev0 |

## Status and Review

| Status | Prepared by | Reviewed by | Date issued |
|---|---|---|---|
| Revision 0 | Venkat Vallurapalli/Brendan Divilly | Frederic Verheyde | 25 January 2024 |

## Distribution of Copies

| Status | Issued to |
|---|---|
| Revision 0 | Perth Racing |

The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

| Signature | Date |
|---|---|
| **Author** | 25 January 2024 |
| **Reviewer** | 25 January 2024 |

FS604853

Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

Douglas PARTNERS | GROUNDED EXPERTISE

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**Appendix B:** Test Location Plan

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# Report on Preliminary Geotechnical Investigation
# Proposed Residential Development
# Part of Lot 9002 Grandstand Road, Ascot WA

## 1. Introduction

This report presents the results of a preliminary geotechnical investigation undertaken for a proposed residential development across Part of Lot 9002 Grandstand Road, Ascot WA. The investigation was commissioned by Mr. James Oldring of Perth Racing in a signed order to proceed dated 8 August 2023 and was undertaken in accordance with Douglas' proposal dated 8 May 2023.

It is understood that Perth Racing is evaluating the feasibility of developing the northwest portion of Lot 9002 for possible residential use (the 'site').

The objective of the investigation is to assess the subsurface soil and groundwater conditions at across the site to provide preliminary comments on:

- The geotechnical suitability of the site for the proposed development.
- Geotechnical opportunities and constraints relevant to the proposed development.
- Areas of foundation risk including the presence of aggressive soils and strategies to address identified risks.
- Site preparation, including the possible reuse of existing soil as controlled fill.
- Excavation conditions.
- The likely site classification in accordance with the requirements of AS 2870-2011.
- Appropriate earthquake design factor for the site, in accordance with AS 1170.4-2007.
- Suitable foundation systems, including preliminary design parameters.
- Preliminary design parameters for the design of retaining structures and batter slopes.
- Depth to groundwater at the time of the investigation.
- Recommendations on additional geotechnical investigation at detailed design phase or to address specific ground conditions encountered.

The investigation included eight cone penetration tests, 16 test pits and one borehole excavated and drilled as a part of detailed site investigation (for contamination), and laboratory testing of selected samples. The details of the field work are presented in this report, together with comments and recommendations on the items listed above.

The investigation was conducted concurrently with a detailed site investigation (for contamination), which has been reported under separate cover (219164.01.R.001.Rev0). The detailed site investigation (for contamination) report should be read in conjunction with this report.

## 2. Site Description

The site comprises an irregular shaped area, approximately 36.2 ha in size, that covers a part of Lot 9002 Grandstand Road, within the Ascot Racecourse.

At the time of the field work, the majority of the site was vacant and vegetated with short grass. A few mature trees, about 5 m to 10 m in height, occupied the southern part of the site. A parking lot and small loading area were located at the south-western corner of the site. Some fly-tipped rubbish, including fences and posts, were observed at several locations across the site.

According to publicly available LiDAR data (DEM derived to 5 m), the topography across Lot 9002 is relatively flat with existing surface levels ranging from approximately RL 2 m relative to the Australian Height Datum (AHD) in the western part of the site to RL 3.5 in the north-eastern corner of the site.

The Perth 1: 50 000 Environmental Geology sheet indicates that shallow sub surface conditions beneath the western two thirds of the site comprise sandy silt of the Guildford Formation, and beneath the north-eastern corner and eastern corner of the site comprise alluvium.

The Perth Groundwater Atlas (2004) indicates that in May 2003, the groundwater level beneath the site was less than RL 1 m, or between approximately 1.0 m and 2.5 m below the existing surface level. The Atlas also indicates that the groundwater flow direction beneath the site in May 2003 was approximately northwest towards the Swan River.

The published acid sulfate soil risk mapping indicates that the site is located within an area which is mapped as "*high to moderate risk of acid sulfate soils occurring within 3 m of natural soil surface*".

## 3. Field Work Methods

Field work for the investigation was carried out between 11 October and 9 November 2023 and comprised:

- The excavation of 16 test pits.
- The drilling of one borehole.
- Perth sand penetrometer (PSP) or Dynamic cone penetrometer (DCP) testing adjacent to each test pit or borehole location.
- The performance of cone penetration tests at 8 locations (CPT24 to CPT31A). A total of 14 CPTs were undertaken after repeating CPTs at some locations in attempt to achieve greater testing depth following shallow refusal in uncontrolled fill.

The test pits (locations 7 to 22) were excavated using a 5-tonne excavator, equipped with 450 mm toothed bucket, and the borehole (location 23) was drilled using a 250 mm diameter power auger attached to the same excavator. The ground conditions at each test pit and borehole were logged in accordance with Australian Standard (AS 1726, 2017) by a geo-environmental engineer from Douglas. Soil samples were recovered from selected locations for subsequent laboratory testing.

Dynamic cone penetrometer (DCP) and Perth sand penetrometer (PSP) tests were undertaken adjacent to the test pit and borehole locations in accordance with Australian Standards (AS 1289.6.3.3, 1997; AS 1289.6.3.2, 1997) to assess the in-situ density of the shallow soils.

The CPTs use a 36 mm diameter instrumented cone with a following 130 mm long friction sleeve attached to rods of the same diameter, pushed continuously at a rate of 20 mm/sec into the soil by hydraulic thrust from a truck rig. Strain gauges in the cone and sleeve measure resistance to penetration and friction along the sleeve during penetration. This data is recorded on a computer and analysed to assess the type, properties and condition of the materials penetrated. The CPT's were pushed to termination depths of up to 20.2 m. Upon withdrawing the CPT probe, each test hole was dipped in an attempt to measure groundwater levels. CPTs were repeated at several test locations to attempt achieving greater testing depth following shallow CPT refusal on inferred hard foreign inclusions in the uncontrolled fill.

Test locations were determined using a handheld GPS and site features and are marked on Drawing 1, Appendix B. Surface elevations were recorded using a differential GPS with a reported accuracy of 0.1 m.

## 4. Field Work Results

### 4.1 Ground Conditions

The logs of the ground conditions and results of the field testing are presented in Appendix B, together with notes defining descriptive terms and classification methods, in Appendix A.

- **Uncontrolled FILL**
    - **Granular FILL - SAND, Organic SAND, Gravelly SAND, Silty SAND and Sandy GRAVEL (SP, SP-SM, SM and GP-GM)** – generally sandy fill (or gravelly material associated with pavement layers at location 23), uncontrolled (apart from the pavement layers), from surface to depths of between 0.6 m and 3.6 m depth, encountered at all locations. A layer of organic sandy fill layer was observed between 1.4 m and 1.8 m depth at location TP8. The sandy fill was generally loose to medium.
    - **Cohesive FILL - Clayey SAND, Sandy CLAY, CLAY (SM, SC, CI and CL-CI)** – generally stiff to very stiff, either underlying the aforementioned sandy fill material or interbedded within layers of sandy fill, encountered at test pit locations 9, 20, 21, 23, and CPT locations 24, 24A, 29 and 29A.

  A considerable amount of foreign inclusions such as fragments of brick, glass, timber, geo-fabric, concrete, plastic, rubber, scrap metal, terracotta pipes, redundant cables and PACMs were observed at all test pit locations, except location 22. A layer of asphalt was encountered at 0.95 m depth at TP9. The fill materials across the site are uncontrolled.

  It is noted that the fill extended below groundwater level at many locations.

Overlying natural soils including:

- **Clayey soils including Clayey SAND and CLAY** – ranging between very soft to soft and stiff to very stiff, encountered under the fill materials at CPTs 25, 30 and 31A to depths between 4.2 m and 14.9 m.
- **Sandy soils including SAND and Silty SAND** – underlying and interbedded within the above clayey soils at CPTs 25, 30 and 31A. The sand was generally very loose and loose to medium dense to depths between 10.5 m and 14.9 m, becoming medium dense and dense below.

### 4.2 Groundwater

Groundwater level observations between 18 September and 9 November 2023 are summarised in Table 1 and are shown on the logs in Appendix B.

The test holes were immediately backfilled following sampling, which precluded longer-term monitoring of groundwater levels. Six monitoring wells (MW01 to MW06) were installed as part of the preliminary environmental investigation (reported separately) and groundwater observations available from these wells at the time of report writing have been included in Table 1.

**Table 1: Summary of Groundwater Levels**

| Location | Date of Measurement | Ground Surface Level [1] (m AHD) | Groundwater Depth (m) | Groundwater Level [2] (RL m AHD) |
|---|---|---|---|---|
| MW01 | 18 September 2023 | 1.9 | 1.30 | 0.6 |
| MW02 | | 2.0 | 1.46 | 0.5 |
| MW03 | | 3.2 | 2.37 | 0.8 |
| MW04 | | 2.4 | 1.59 | 0.8 |
| MW05 | | 2.5 | 1.21 | 1.3 |
| MW06 | | 2.2 | 1.09 | 1.1 |
| TP7 | 9 November 2023 | 2.9 | 2.30 | 0.6 |
| TP9 | | 2.1 | 2.10 | 0.0 |
| TP12 | | 2.1 | 2.10 | 0.0 |
| TP13 | | 2.8 | 2.50 | 0.3 |
| TP15 | | 2.2 | 2.40 | -0.2 |
| TP16 | | 2.6 | 2.50 | -0.1 |
| TP17 | | 2.2 | 2.10 | 0.1 |
| TP19 | | 2.2 | 1.80 | 0..4 |
| TP20 | | 2.0 | 2.10 | -0.1 |
| TP21 | | 2.1 | 1.80 | 0.3 |
| TP22 | | 2.3 | 1.80 | 0.5 |
| BH23 | | 2.4 | 1.70 | 0.7 |
| CPT25 | 11 October 2023 | 3.4 | 3.00 | 0.4 |
| CPT28 | | 1.9 | 1.30 | 0.6 |
| CPT29A | | 2.3 | 2.20 | 0.1 |
| CPT30 | | 3.2 | 2.80 | 0.4 |
| CPT31A | | 2.1 | 2.00 | 0.1 |

Notes for Table 1: [1]: Surface level measured using a differential GPS.
[2]: Groundwater Level = Surface Level – Groundwater Depth.

It should be noted that groundwater levels are affected by climatic conditions and land usage and will therefore vary with time. In addition, owing to the proximity of the Swan River, the groundwater levels are expected to be impacted by the tidal river conditions and river flood levels.

## 5. Laboratory Testing

A geotechnical laboratory testing programme was carried out by a NATA accredited laboratory and comprised:

- the particle size distributions on seven samples;
- the Atterberg Limits and linear shrinkage on three samples; and
- the organic content on four samples.

Results of the laboratory testing are summarised in Tables 2. The test certificates are presented in Appendix C.

**Table 2: Results of Laboratory Testing for Soil Identification**

| Location | Depth (m) | Fines (%) | Sand (%) | Gravel (%) | LL (%) | PL (%) | PI (%) | LS (%) | OC (%) | Material |
|---|---|---|---|---|---|---|---|---|---|---|
| TP8 | 1.5 | 9 | 61 | 30 | - | - | - | - | 6.8 | FILL / Organic SAND SP-SM, with gravel and silt |
| TP13 | 1.5 | 4 | 95 | 1 | - | - | - | - | 1.6 | FILL / SAND SP, trace gravel and silt |
| TP19 | 2.5 | 5 | 83 | 12 | - | - | - | - | 1.5 | FILL / SAND SP, trace gravel and silt |
| TP21 | 2.0 | 40 | 51 | 9 | 37 | 24 | 13 | 8.5 | - | Sandy CLAY CI, medium plasticity, trace gravel |
| TP22 | 2.0 | 7 | 93 | 0 | NO | NP | NP | - | - | SAND SP-SM, with silt |
| TP23 | 2.0 | 45 | 48 | 7 | 44 | 22 | 22 | 9.5 | - | FILL / Sandy CLAY CI, medium plasticity, trace gravel |
| TP23 | 2.5 | 12 | 87 | 1 | - | - | - | - | 1.2 | FILL / SAND SP-SM, with silt, trace gravel |

Notes: Fines = Finer than 75 µm.
Sand = Between 2.36 mm and 75 µm.
Gravel = Larger than 2.36 mm.
LL – liquid limit PL – plastic limit PI – plasticity index LS – linear shrinkage
OC – organic content NO – not obtainable NP – non plastic

## 6. Proposed Development

At the time of preparing this report, the details for the proposed development were not yet available. Notwithstanding, it is understood that the proposed development is likely to be residential and, given the location, is presumed would likely be multistorey and possibly include a basement level.

## 7. Comments

### 7.1 Site Suitability

The investigation indicates that the site is generally underlain by uncontrolled fill overlying very soft to stiff clayey materials and very loose sandy soils becoming medium dense and dense with depth as described in Section 4.1 above.

From a geotechnical standpoint, there are several significant geotechnical constraints that will adversely impact on any development of the site including;

- Deep uncontrolled fill, unsuitable to support shallow foundations, and will impact on construction activities associated with deep piled foundations.
- Deep very soft and very loose natural soils under the uncontrolled fill, unsuitable to support shallow foundations.
- Shallow groundwater which will make earthworks across the site any possible remediation works of the above difficult. It should be noted that the abovementioned uncontrolled fill and soft soils both extend below groundwater.

Owing to the significant geotechnical constraints, any possible development will likely require a piled foundation solution into the medium dense and dense sandy soils, encountered below depths of approximately 10 m to 15 m. Additional geotechnical investigation will be required to confirm the foundation design and suitable pile design parameters. Also, noting that any proposed additional loading of the ground (for instance from the placement of fill to raise site levels, if proposed) would generate further consolidation of the soft soils underlying the site and cold result in some possible significant ground settlement. Therefore, surcharging areas (by placing temporary fill prior to construction of any structure) outside the proposed building envelopes might also be required during the site preparation to manage the risk of differential settlements between proposed buildings and adjacent ground, following their construction.

### 7.2 Site Classification

The shallow ground conditions beneath the site comprise uncontrolled fill materials and deep loose and soft soil deposits. Based on the results of the investigation and in accordance with Australian Standard (AS 2870, 2011), a site classification of 'Class P' applies to the site, owing to the presence of the uncontrolled fill and deep loose and soft soil.

### 7.3 Site Seismic Classification

Owing to the uncontrolled fill and deep very loose and very soft soil deposits across the site, an earthquake design soil sub-class of Ee is considered appropriate for this site in accordance with Australian Standard (AS 1170.4, 2007). The Hazard Factor (Z) for the site is 0.09, according to Australian Standard (AS 1170.4, 2007). Due to the deep loose soil below the water table, the site also has a significant potential for liquefaction. An assessment on the liquefaction potential of the site should be considered during any detailed investigation, when more details can be collected on the extent of deep loose soils.

### 7.4 Excavation Conditions

The encountered ground conditions generally comprise uncontrolled fill, with some large foreign inclusions within the fill, extending below groundwater. Conventional earthmoving equipment (such as large excavators, say at least 20 t) should be generally suitable for shallow excavations in the surficial uncontrolled fill. Shallow groundwater is likely to impact excavations across the site.

The majority of the uncontrolled fill encountered during this preliminary investigation is considered to be geotechnically unsuitable for re-use as structural fill in its current condition. Any further consideration to reuse the uncontrolled fill would require some specific geotechnical provisions, such as screening and disposing its unsuitable components. Separating the re-useable granular components (e.g. the sandy fill) from its cohesive components (e.g. clayey fill) might also prove to be practically difficult. Owing to the significant variability of uncontrolled fill materials across the site, any re-use potential from a geotechnical standpoint should be confirmed on-site by a geotechnical engineer. Some environmental considerations (i.e. contamination) are also anticipated to be required. Overall, at this stage of the study, the reuse of the encountered uncontrolled fill should be considered to be associated with some significant constraints that might preclude such reuse.

### 7.5 Slope Stability

During construction, it is recommended that temporary batter slopes across the site are maintained flatter than 2:1 (H:V) if not retained. This batter angle is valid provided no surcharge loads (including live loads such as vehicles and machinery) apply at the top of the slope. In uncontrolled fill materials, a safe batter angler not steeper than 3:1 (H:V) is recommended for design for slopes not greater than 3 m in height, however, owing to variability of the uncontrolled fill materials, this value should be adjusted during construction based on the encountered conditions.

The design of unpropped flexible or rigid walls should be undertaken using a triangular pressure distribution and the earth pressure parameters given in Table 4. In addition to the soil pressure, wall design should also allow for external loads such as buildings, live loads and hydrostatic pressure. Owing to the likely significant settlements associated with the uncontrolled fill and deep soft soils, the requirement to adopt a piles foundation system to support proposed retaining walls is anticipated.

**Table 4: Preliminary Soil Parameters for Earth Retaining Design**

| Soil Type and Density | Soil Unit Weight Above Water<br>$\gamma$<br>(kN/m$^3$) | Submerged Soil Unit Weight<br>$\gamma'$<br>(kN/m$^3$) | Drained Angle of Friction<br>$\Phi'$<br>(°) | Undrained Shear Strength<br>Cu<br>(kPa) | Coefficient of Earth Pressure – Active<br>$K_a$ | Coefficient of Earth Pressure – Passive<br>$K_p$ | Coefficient of Earth Pressure – at Rest<br>$K_o$ |
|---|---|---|---|---|---|---|---|
| Uncontrolled Fill Materials | 16 | 6 | 28 | - | 0.36 | 2.7 | 0.5 |

It should be noted that the passive earth pressure coefficient (second last column of Table 4) is an ultimate value and does not incorporate a factor of safety. Because the stress-strain relationship curve for lateral loading is not linear, relatively large strains are required to mobilise full passive pressure, but only relatively small strains are required to mobilise half the passive pressure, therefore it would be prudent to incorporate a factor of safety of at least 2 for uncontrolled fill materials, to derive design values from the ultimate values.

## 7.6 Foundation Options

Shallow footings are not considered suitable across this site, owing to the significant thickness of uncontrolled fill and deep loose and soft soils.

### 7.6.1 Piles

It is anticipated that a piled foundation system, with deep bored piles that penetrate the deep loose and soft soils into the medium dense and dense sandy soils at depth, would likely be required for any foundations on-site.

Bored piles will require temporary or permanent casing throughout the uncontrolled fill materials, noting that possible obstructions within the uncontrolled might cause some difficulties when driving the casing or drilling the pile hole. This pile type will involve soil excavation to target founding level and hence would produce spoil that needs to be handled and disposed of in a suitable manner, which will need to also be considered from an environmental standpoint.

Installation through the uncontrolled fill materials could be affected by the possible presence of large, hard inclusions and the design of the pile installation methodology should take this possibility into consideration.

The settlement of the uncontrolled fill will exert negative skin friction on the piles, which the piles will need to be designed to accommodate or be constructed in sleeves.

Additional deep geotechnical boreholes will be required across the site to inform on the pile design.

### 7.6.1 Controlled Modulus Columns

Controlled modulus columns could be installed as an alternative to conventional pile foundations, allowing shallow footings to be used whilst controlling settlements to acceptable limits.

Installation of controlled modulus columns involves displacing a column of material using a reverse flight auger, densifying the soil around the auger, and backfilling the resulting hole with cement ground under moderate pressure to create a 'hard' inclusion in the ground. The columns are typically 250 mm to 500 mm in diameter. Column spacings of columns typically 1.8 m to 2.5 m but would need input from a specialist ground improvement contractor. Columns can be installed to depths of up to 50 m, so could penetrate to the base of the uncontrolled fill and deep loose and soft soils. However, if large hard inclusions such as concrete slabs or beams, are encountered then the auger may experience refusal, as the CPTs did at several locations during the preliminary geotechnical investigation.

A load transfer platform, such as a granular, well compacted fill layer, possibly reinforced with geogrid or geotextile, would be needed to transfer loads from shallow foundations to the columns.

One main benefit of this ground improvement option (compared to piling) would be to minimise differential settlement across the site and notably between buildings and surrounding grounds. However, it would likely be limited to low level development (say 2 to 3 level buildings), and this option is anticipated to likely be prohibitively expensive, with likely significant mobilisation and installation costs. The advice of a specialist ground improvement contractor, such as Menard Oceania, is suggested to be sought to further assess the suitability of this ground improvement to the proposed development.

### 7.7 Pavement Construction

The uncontrolled fill across the site does not form a suitable subgrade material for pavement in its current condition. Depending on the expected loading of proposed pavement, the requirement for some over-excavation of uncontrolled fill is likely. Construction should involve the use of a geo-composite layer (such as Global Synthetics' Combigrid) across the base of the over-excavation, overlain by a 500 mm thick layer of compacted crushed limestone, placement of a layer of geogrid (such as Global Synthetics' Secugrid), and a further 500 mm of compacted sand fill. The base of the constructed floating pavement footprint should be at least 2 m wider on each side than the total pavement width (4 m wider in total) to account for a suitable batter and transfer of load. Standard flexible pavements could then be constructed on the 1 m thick raft of stiffened subgrade. Placement of the initial base layer of composite geogrid may be difficult across areas of exposed uncontrolled fill. As such, depending on the site conditions, a 300 mm thick capping layer of clean fill may be required.

Regardless of the above site preparation, some settlement of the pavement should be expected over its service life and should be considered in the selection of the pavement surfacing. The use of pavers should be considered as such surfacing treatment would deform without cracking. Alternatively, a bituminous seal should be preferred over say an asphalt, owing to greater flexibility and to decrease maintenance and repair requirements, noting however that seals are less resistant than asphalt to shearing forces from tyres of turning heavy vehicles. The use a specialised asphalt, such as a stone mastic asphalt, could also be considered, noting it would be less resistant to the risk of cracking than a seal. Some allowance for regular maintenance and repairs should be allowed during the serviceability of the pavement.

### 7.8 Stormwater Drainage

Owing to the occurrence of low permeability soils and groundwater at shallow depth, the site is considered unsuitable for on-site stormwater disposal. It is suggested that stormwater is controlled using positive drainage or a subsoil drainage network, connected to a suitable outflow.

### 7.9 Additional Geotechnical Investigation

Additional geotechnical investigation across the site, by way of deep geotechnical boreholes (as a minimum), further CPT and additional laboratory testing, should be undertaken to help refine the ground model, provide pile design parameters, confirm suitable bearing strata for piles, and assess the soil aggressivity and exposure classification for piles. It is recommended that the detailed investigation programme be developed once some details of the proposed development

are known, if possible, in order to target specific geotechnical issues associated with the development.

The investigation covered in this report should be considered preliminary and as noted in selected sections of the report, additional detailed geotechnical testing at a greater testing frequency is anticipated once the project design has progressed.

## 8. References

AS 1170.4. (2007). *Structural Design Actions, Part 4: Earthquake Actions in Australia.* Reconfirmed 2018. Incorporating Amendments 1 & 2: Standards Australia.

AS 1289.6.3.2. (1997). *Methods for testing soils for engineering purposes - Soil strength and consolidation tests - Determination of the penetration resistance of a soil - 9kg dynamic cone penetrometer test.* Reconfirmed 2013: Standards Australia.

AS 1289.6.3.3. (1997). *Methods for testing soils for engineering purposes - Soil strength and consolidation tests - Determination of the penetration resistance of a soil - Perth sand penetrometer test.* Reconfimed 2013: Standards Australia.

AS 1726. (2017). *Geotechnical Site Investigations.* Standards Australia.

AS 2159. (2009). *Piling - Design and Installation.* Standards Australia.

AS 2870. (2011). *Residential Slabs and Footings.* Standards Australia.

## 9. Limitations

Douglas Partners (DP) has prepared this report for this project at Part of Lot 9002 Grandstand Road, Ascot WA in accordance with DP's proposal dated 8 May 2023 and acceptance received from Mr James Oldring in a signed services order dated 8 August 2023. The work was carried out under DP's Engagement Terms. This report is provided for the exclusive use of Perth Racing for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the geotechnical components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

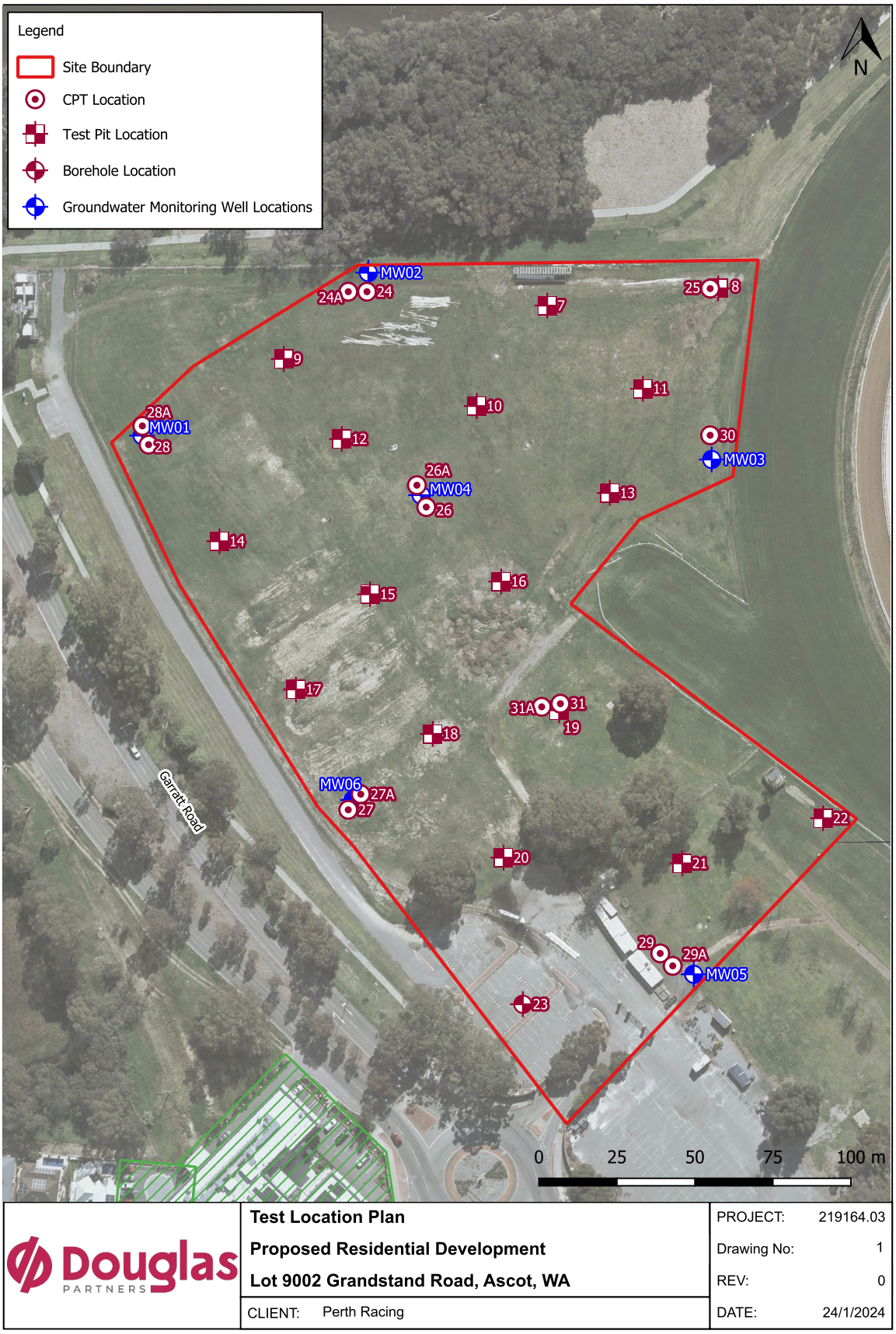
The scope of work for this investigation/report did not include the assessment of surface or sub-surface materials or groundwater for contaminants, within or adjacent to the site. Should evidence of fill of unknown origin be noted in the report, and in particular the presence of building demolition materials, it should be recognised that there may be some risk that such fill may contain contaminants and hazardous building materials.

**Appendix B**

Test Location Plan

Test Pit and Borehole Logs

CPT Results

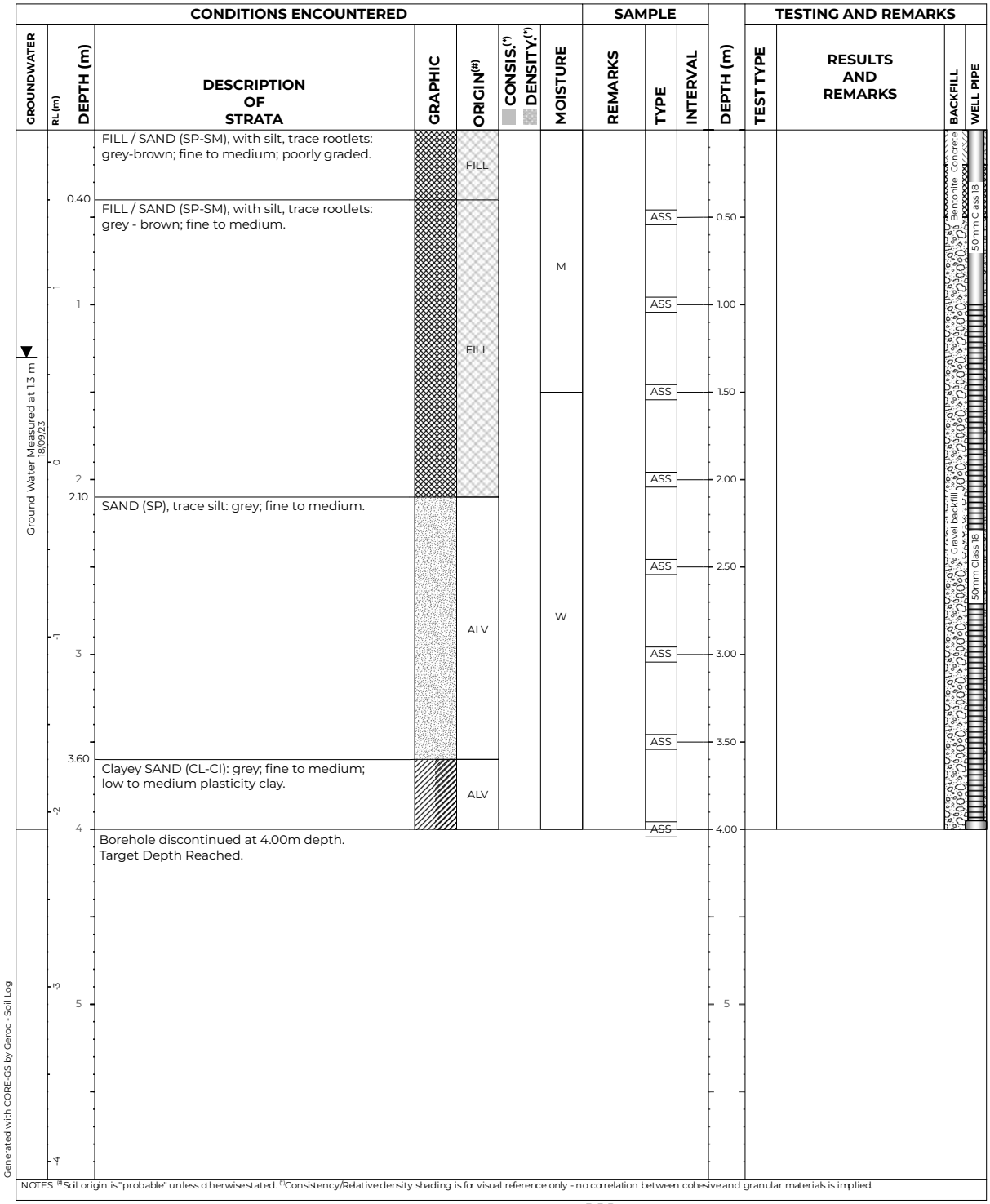

Legend
Site Boundary
CPT Location
Test Pit Location
Borehole Location
Groundwater Monitoring Well Locations
N
MW02
24A
24
25
8
7
9
11
10
28A
MW01
28
12
30
MW03
26A
MW04
26
13
14
16
15
17
31A
31
19
18
Garratt Road
MW06
27A
27
22
20
21
29
29A
MW05
23
0
25
50
75
100 m
Douglas
PARTNERS
Test Location Plan
Proposed Residential Development
Lot 9002 Grandstand Road, Ascot, WA
CLIENT: Perth Racing
PROJECT: 219164.03
Drawing No: 1
REV: 0
DATE: 24/1/2024

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 1.9 AHD
**COORDINATE:** E:397722.0, N:6466365.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 01
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1




**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

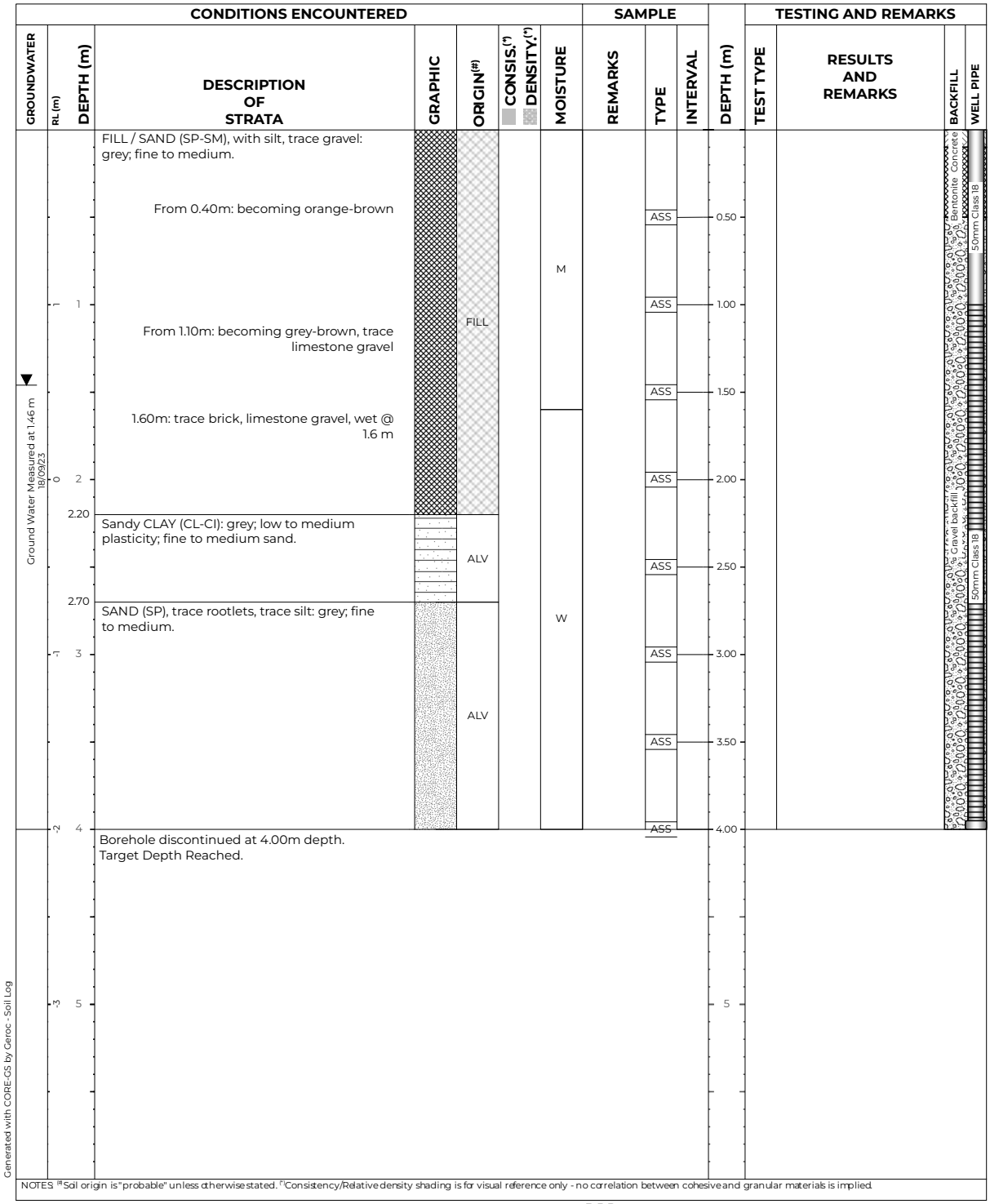
Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.0 AHD
**COORDINATE:** E:397795.0, N:6466418.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 02
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1




**PLANT:** Geoprobe 7822DT
**METHOD:** Direct Push Probing
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

**OPERATOR:** DPP

**LOGGED:** VV
**CASING:** Nil

Refer to explanatory notes for symbol and abbreviation definitions

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 3.2 AHD
**COORDINATE:** E:397905.0, N:6466358.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 03
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS | BACKFILL | WELL PIPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | | FILL / SAND (SP), trace silt: orange; fine to medium. From 0.30m: becoming grey, trace clay, limestone gravel | | FILL | | | | | | 1 | | | 0.5m Bentonite Concrete; Gravel backfill; 50mm Class 18 | 50mm Class 18 |
| | 1.60 | 2 | FILL / Clayey SAND (SC), trace gravel: grey; fine to medium; low to medium plasticity clay. | | FILL | | | | | | 2 | | | | |
| Ground Water Measured at 2.37 m 18/09/23 | 2.20 | | FILL / SAND (SP), trace silt: orange - grey; fine to medium. 2.80m: trace brick | | FILL | | | | | | | | | | |
| | 3.00 | 3 | FILL / Clayey SAND (SC): grey; fine to medium; low to medium plasticity clay. 3.30m-3.50m: with bitumen layer | | FILL | | | | | | 3 | | | | |
| | 3.60 | | FILL / CLAY (CL-CI), trace sand: grey - green; low to medium plasticity. | | FILL | | | | | | | | | | |
| | | 4 | Borehole discontinued at 4.00m depth. Target Depth Reached. | | | | | | | | 4 | | | | |
| | | 5 | | | | | | | | | 5 | | | | |

NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log

**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

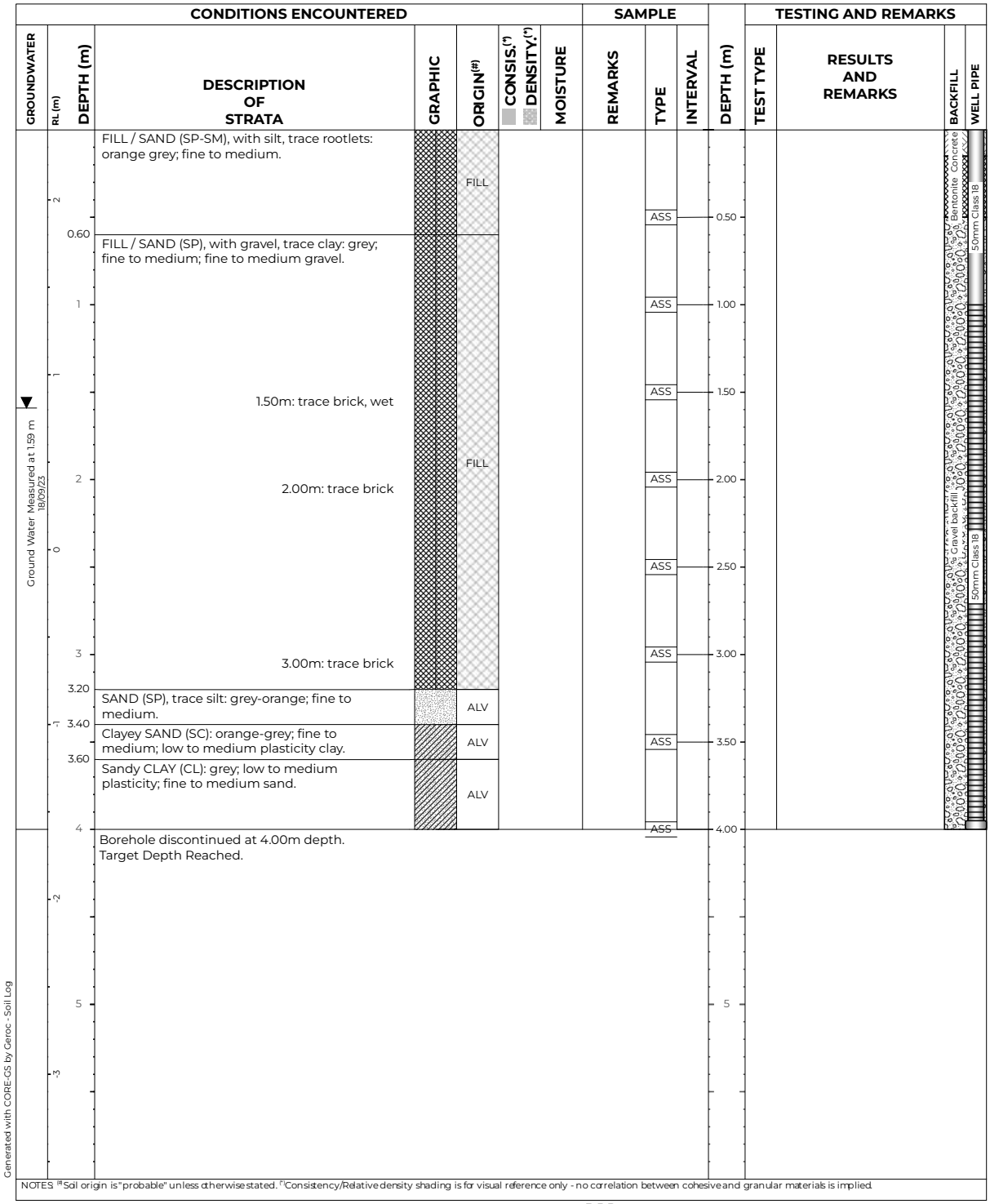
Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.4 AHD
**COORDINATE:** E:397812.0, N:6466346.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 04
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1




NOTES: (#)Soil origin is "probable" unless otherwise stated. (^)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

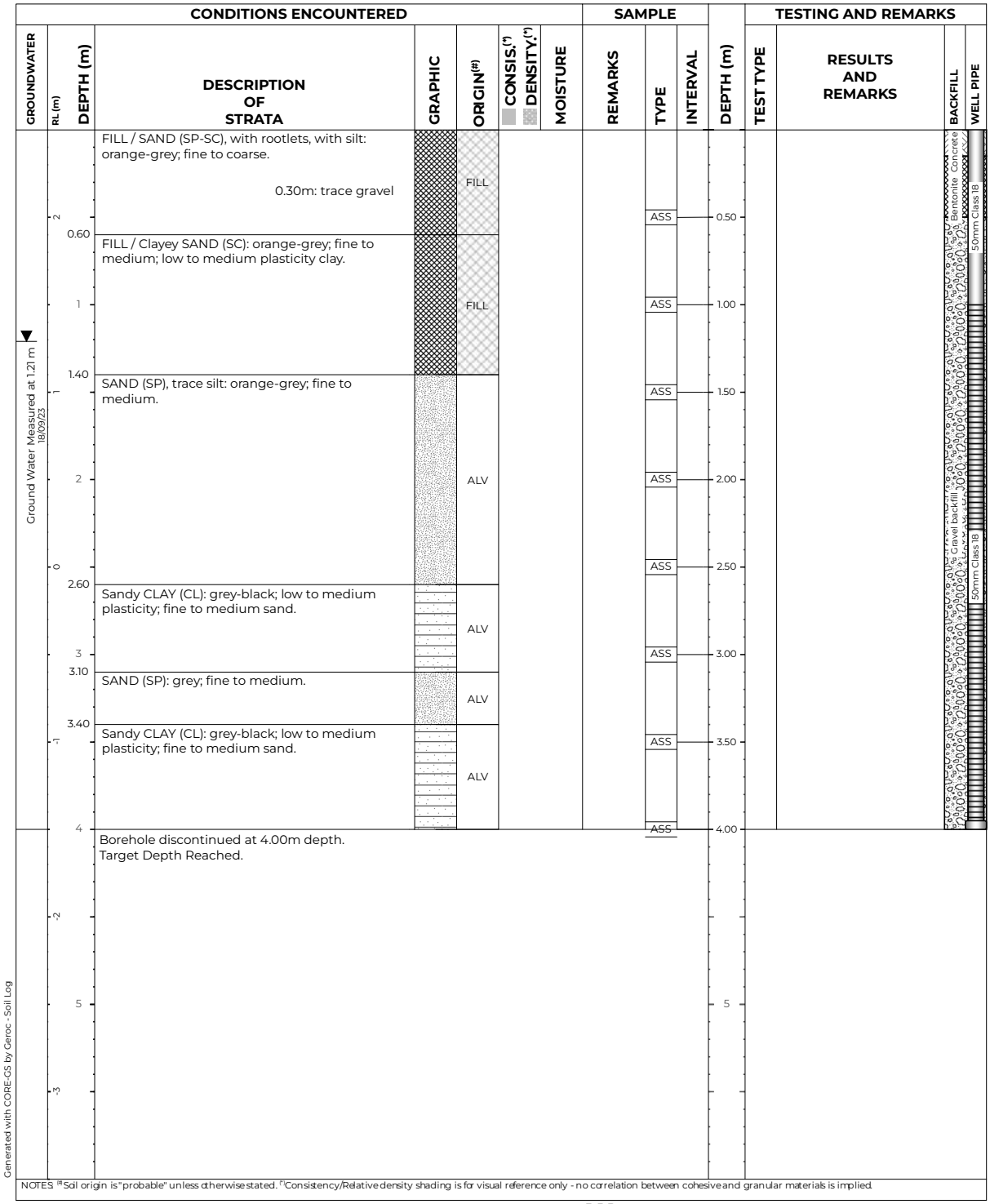
Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.5 AHD
**COORDINATE:** E:397900.0, N:6466193.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 05
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1




**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397790.0, N:6466249.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 06
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) / DENSITY.(*) | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | TESTING AND REMARKS: RESULTS AND REMARKS | BACKFILL | WELL PIPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ground Water Measured at 1.09 m 18/09/23 | 2 | 0 | FILL / SAND (SP) : Sand, with rootlets, trace silt: orange-grey; fine to medium. | | FILL | | | | | | 0 | | | Bentonite Concrete | 50mm Class 18 |
| | | 0.40 | FILL / SAND (SP), with gravel: grey-brown; fine to medium. | | | | | | ASS | | 0.50 | | | | |
| | 1 | 1 | From 0.80m: becoming grey, no gravel | | | | | | | | 1 | | | | |
| | | | From 1.10m: becoming orange-grey | | FILL | | | | | | | | | | |
| | 0 | 2 | From 1.80m: becoming grey and trace brick | | | | | | | | 2 | | | Gravel backfill | |
| | | 2.20 | FILL / Clayey SAND (CL): grey; fine to medium; low to medium plasticity clay; may be natural. | | FILL | | | | | | | | | | |
| | | 2.60 | SAND (SP): grey; fine to medium. | | ALV | | | | | | 3 | | | | 50mm Class 18 |
| | -1 | 3.10 | Sandy CLAY (CL): dark grey; low to medium plasticity; fine to medium sand. | | ALV | | | | | | | | | | |
| | | 4 | Borehole discontinued at 4.00m depth. Target Depth Reached. | | | | | | | | 4 | | | | |
| | -2 | 5 | | | | | | | | | 5 | | | | |
| | -3 | | | | | | | | | | | | | | |

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log

**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

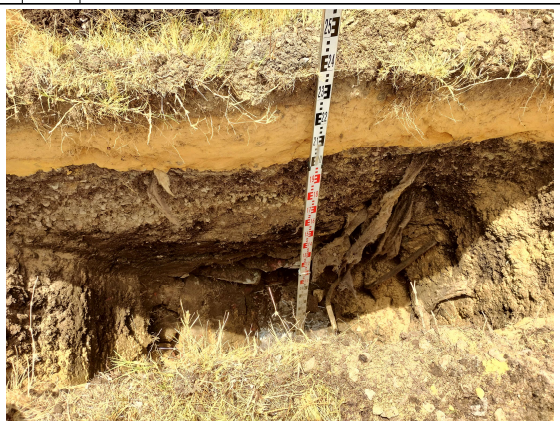
# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.9 AHD
**COORDINATE:** E:397852.9, N:6466410.7
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP07
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. From 0.17m: becoming orange. 0.54m: trace geo-fabric | | FILL | MD to VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | 0.60 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. 0.84m: trace geo-fabric | | FILL | | | | ES | | 0.40 | DCP9/150 | |
| | | 0.90 | FILL / GRAVEL (GP-GM) : Gravel, with mulch, with sand: dark brown and dark grey-brown; with silt. | | FILL | | | | ES | | 0.50 | PID | <1ppm |
| | | 1.40 | FILL / SAND (SP-SM), with silt: dark grey; fine to medium. 1.50m: trace PACM fragment. From 1.60m-2.60m: with fragments of bricks, concrete and metal roofing sheetings | | FILL | ND | M | | ES | | 1.00 | PID | <1ppm |
| | | | | | | | | | | | 1.10 | | |
| | | | | | | | | ASB9, ASB10, AF/FA | D | | 1.50 | PID | <1ppm |
| | | | | | | | | | ES | | 1.60 | | |
| | | | | | FILL | | | | ES | | 2.00 | PID | <1ppm |
| | | | | | | | | | | | 2.10 | | |
| ▼ 09/11/23 | | | | | | | W | | ES | | 2.50 | PID | <1ppm |
| | | | Test Pit discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | 2.60 | | |





NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.3 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 3.6 AHD
**COORDINATE:** E:397905.7, N:6466414.7
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP08
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) / DENSITY.(*) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 3 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | | VD | | | ES | | 0.10 | PID | <1 ppm |
| | | From 0.43m: becoming pale grey, trace gravel | | FILL | | | | ES | | 0.50<br>0.60 | PID | <1 ppm |
| | 1 | From 1.20m: becoming grey | | | | | | ES | | 1.00<br>1.10 | PID | <1 ppm |
| | 1.40 | FILL / organic SAND (SP-SM), with silt, with gravel: dark grey-brown; fine to medium; trace fragments of brick and concrete. | | FILL | ND | M | AF/FA<br>ASB 8 | D<br>ES<br>MAT | | 1.50<br>1.60 | PID | <1 ppm |
| | 2 | 1.55m-2.00m: with fragments of brick, concrete and PVC | | | | | | | | | | |
| | 1.80 | FILL / SAND (SP), trace gravel, fragments of brick and concrete, trace silt: dark grey; fine to medium. | | FILL | | | | D<br>ES | | 2.00<br>2.10 | PID | <1 ppm |
| | 2 | 2.20m: trace metal sheet, PVC | | | | | | | | | | |
| | | 2.40m: trace rubber pipe, metal bar | | | | | | ES | | 2.50<br>2.60 | PID | <1 ppm |
| | | Test Pit discontinued at 2.70m depth. (Test Pit terminated due to slow digging). | | | | | | | | | | |

PSP/150: 5, 10, 15, Refusal 20





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NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.1 AHD
**COORDINATE:** E:397768.9, N:6466392.5
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP09
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | FILL | D to VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | 0.45 | FILL / Clayey SAND (SC): orange-brown; fine to medium; low to medium plasticity clay. | | FILL | | | | D<br>ES | | 0.50<br>0.60 | PID<br>PSP/150 | <1ppm<br>5 10 15<br>REFUSAL 25 25 |
| | | 0.95<br>0.98 | FILL / ASPHALTIC CONCRETE: black, 7 mm sized nominal aggregate. | | | | | | | | | | |
| | 1 | | FILL / Silty SAND (SM): brown; fine to medium. From 1.15m: becoming grey-brown<br>From 1.20m: with fragments of brick, concrete slab of 0.4 m in thickness, geo-fabric, metal bar and terracotta pipe<br>1.40m: trace metal sheet | | FILL | ND | M | | ES | | 1.00<br>1.10<br>1.50<br>1.60 | PID<br>PID | <1ppm<br><1ppm |
| 09/11/23 | 0 | 2 | 1.90m-2.10m: trace pockets of Clayey SAND SC | | | | W | | ES | | 2.00<br>2.10 | PID | <1ppm |
| | | | Test Pit discontinued at 2.30m depth. (Collapsing conditions). | | | | | | | | | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.1 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

Generated with CORE-GS by Geroc - Soil Log with Photo

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.4 AHD
**COORDINATE:** E:397829.1, N:6466375.7
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP10
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 2 | FILL / SAND (SP-SM), with silt, trace rootlets: bands of grey, orange-brown and pale grey; fine to medium. | | FILL | MD to D | | DUP 2 | ES | 0.10 | 0.10 | PID | <1ppm |
| | | 0.70m: trace geo-fabric | | | | | | ES | 0.50<br>0.60 | 0.50 | PID | <1ppm |
| | 0.80 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | | | | ES | 1.00<br>1.10 | 1.00 | PID | <1ppm |
| | 1.20 | FILL / SAND (SP), trace rootlets, trace silt: grey -brown; fine to medium. | | FILL | ND | | | ES | 1.50<br>1.60 | 1.50 | PID | <1ppm |
| | 1 | From 1.40m-1.80m: with fragments of brick and concrete | | | | | | | | | | |
| | | From 1.80m: becoming dark grey, trace fragments of brick and concrete | | | | | | ES | 2.00<br>2.10 | 2.00 | PID | <1ppm |
| | 2 | Test Pit discontinued at 2.15m depth. (Test Pit terminated due to slow digging). | | | | | | | | | | |
| | 0 | | | | | | | | | | | |

PSP/hr





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NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

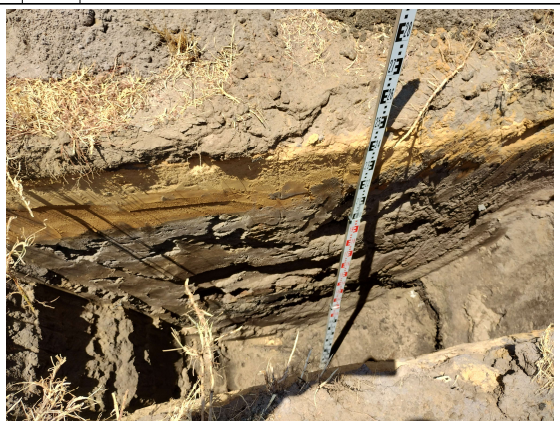
# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 3.1 AHD
**COORDINATE:** E:397881.2, N:6466387.1
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP11
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 3 | FILL / SAND (SP-SM), with silt: grey and orange-brown; fine to medium. | | FILL | VD | D to M | | ES | | 0.10 | PSP/150 | 5 10 15 REFUSAL 25 25 |
| | | From 0.35m: becoming grey | | | | | | ES | | 0.50<br>0.60 | | |
| | 1 | | | | | | DUP 3 | D<br>ES | | 1.00<br>1.10 | | |
| | 2 | | | | ND | M | | | | | | |
| | | From 1.60m: becoming dark grey, trace fragments of brick | | | | | | D<br>ES | | 1.60<br>1.70 | | |
| | | From 1.70m-2.40m: with fragments of brick and concrete | | | | | | | | | | |
| | 2 | 1.80m: piece of concrete boulder (1 m x 0.5 m) observed | | | | | | ES | | 2.00<br>2.10 | | |
| | 1 | 2.10m: trace plastic bottle, glass bottle, concrete rubble | | | | | | | | | | |
| | | 2.30m: trace fragments of wooden plank and timer | | | | | | D | | 2.30 | | |
| | | Test Pit discontinued at 2.40m depth.<br>(Test Pit terminated due to slow digging). | | | | | | | | | | |





NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

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# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.1 AHD
**COORDINATE:** E:397785.4, N:6466366.6
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP12
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | | FILL / SAND (SP-SM), with silt, trace gravel and rootlets: grey; fine to medium. | | | | | | ES | | 0.10 | PID | <1ppm |
| | | | From 0.20m: becoming yellow-brown | | FILL | D to VD | D to M | | | | | | |
| | | | | | | | | | ES | | 0.50 | PID | <1ppm |
| | | | | | | | | | | | 0.60 | | |
| | | 0.85 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | | | | | | | | |
| | 1 | 0.90 | | | | | | | D | | 1.00 | PID | <1ppm |
| | | | FILL / SAND (SP), trace fragments of brick, scrap metal, timber and rubber cable, trace silt: dark grey-brown; fine to medium. | | | | | AF/FA, ASB 6, ASB 7 | ES | | 1.10 | | |
| | | | 1.30m-1.80m: with fragments of plastic waste, insulation material, terracotta pipes and concrete, trace PACM fragments | | FILL | ND | M | | ES | | 1.50 | PID | <1ppm |
| | | | | | | | | | | | 1.60 | | |
| | | | From 1.90m: becoming green-grey, trace pockets of CLAY CL-CI | | | | | | B | | 2.00 | PID | <1ppm |
| 09/11/23 | 0 | 2 | | | | | W | | ES | | 2.10 | | |
| | | | Test Pit discontinued at 2.30m depth. (Collapsing conditions). | | | | | | | | | | |

PSP/Nail: 5, 10, 15, 25





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NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.1 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.8 AHD
**COORDINATE:** E:397872.7, N:6466350.7
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP13
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium; 10% non-plastic fines. From 0.15m: becoming orange | | FILL | D to VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | | 0.70m: trace geo-fabric | | | | | | D | | 0.50 | PID | <1ppm |
| | 2 | 0.75 | | | | | | | ES | | 0.60 | PSP/150 | 5 10 15 25 |
| | 1 | | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | | | | ES | | 1.00 | PID | <1ppm |
| | | | 1.20m: trace geo-fabric | | | | | | | | 1.10 | | |
| | | 1.30 | FILL / SAND (SP), trace gravel, fragments of brick and concrete, trace silt: dark grey; fine to medium. 1.50m-2.40m: with fragments of bricks and concrete slab | | | ND | M | | D | | 1.50 | PID | <1ppm |
| | | | | | | | | | ES | | 1.60 | | |
| | 1 | | | | FILL | | | | | | | | |
| | | 2 | | | | | | | ES | | 2.00 | PID | <1ppm |
| | | | | | | | | | | | 2.10 | | |
| 09/11/23 | | | | | | | | | | | 2.50 | PID | <1ppm |
| | | | | | | | W | | ES | | 2.60 | | |
| | 0 | | Test Pit discontinued at 2.70m depth. (Collapsing conditions). | | | | | | | | | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.5 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397745.6, N:6466334.5
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP14
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) / DENSITY.(*) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 2 / 0.25 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | FILL | D to VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | FILL / Silty SAND (SM): brown and grey-brown; weakly to moderately cemented. | | | | | | | | | DCP9/150 | 5 10 15 29 30 |
| | | | | | | | | D | | 0.50 | PID | <1ppm |
| | | | | | | | | ES | | 0.60 | | |
| | | 0.65m: trace fragments of brick and glass | | | | | | | | | | |
| | | 0.72m-2.00m: with framgnes of brick, metal sheet and insulation material | | | | | | | | | | |
| | 1 | 0.92m: trace fragments of plastic waste, glass and limestone boulders | | | | | | ES | | 1.00 | PID | <1ppm |
| | | | | | | | | | | 1.10 | | |
| | | | | FILL | ND | M | | ES | | 1.50 | PID | <1ppm |
| | | | | | | | | | | 1.60 | | |
| | 2 / 0 | 2.00m: becoming gren-grey, trace fragments of timber, brick and concrete blocks, with pockets of Clayey SAND SC | | | | | | ES | | 2.00 | PID | <1ppm |
| | | | | | | | | | | 2.10 | | |
| | | From 2.20m: with fragments of brick and scrap metal | | | | | | D | | 2.40 | | |
| | | Test Pit discontinued at 2.50m depth. (Test Pit terminated due to slow digging). | | | | | | | | | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397794.3, N:6466319.4
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP15
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(†) DENSITY.(†) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 0 | FILL / SAND (SP-SM), with silt, trace gravel and rootlets: orange-brown; fine to medium. | | FILL | VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | From 0.24m: becoming grey | | | | | | | | | DCP9/150 | |
| | | From 0.42m: becoming pale grey | | | | | | D | | 0.50 | PID | <1ppm |
| | | | | | | | | ES | | 0.60 | | |
| | 0.75 | FILL / Sandy GRAVEL (GP-GM), with silt: dark brown and grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | ND | | | | | | | 22 |
| | 0.95 | FILL / SAND (SP), with fragments of brick and concrete, trace silt: grey; fine to medium. | | | | | | D | | 1.00 | PID | <1ppm |
| | 1 | | | | | | | ES | | 1.10 | | |
| | | 1.20m: trace fragments of timber, terracotta pipe and scrap metal | | | | | | | | | | |
| | | 1.50m: trace redundant cable | | | | M | | ES | | 1.50 | PID | <1ppm |
| | | | | | | | | | | 1.60 | | |
| | | From 1.80m: becoming orange-brown | | FILL | ND | | | | | | | |
| | 2 | 2.00m: trace PACM pipe | | | | | AF/FA, ASB 5 | ES | | 2.00 | PID | <1ppm |
| | | 2.10m: trace fragments of timer | | | | | | | | 2.10 | | |
| ▼ 08/11/23 | 0 | From 2.40m: becoming dark grey | | | | W | | ES | | 2.50 | | |
| | | | | | | | | | | 2.60 | | |
| | | Test Pit discontinued at 2.70m depth. (Test Pit flodded with water seepage). | | | | | | | | | | |





NOTES: (#) Soil origin is "probable" unless otherwise stated. (†) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.4 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.4 AHD
**COORDINATE:** E:397837.5, N:6466321.2
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP16
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FILL / SAND (SP-SM), with silt, trace gravel and rootlets: grey; fine to medium. | | FILL | | | | ES | | 0.10 | PID | <1ppm |
| | 2 | 0.34 | FILL / Sandy (GP-GM), with silt: grey; fine to medium sand. | | FILL | ND | D to M | | ES | | 0.50<br>0.60 | PID | <1ppm |
| | | | 0.80m: trace fragments of plastic waste | | | | | | | | | | |
| | | 0.84 | FILL / SAND (SP), with fragments of brick and concrete, trace silt: grey; fine to medium. | | | | | | ES | | 1.00<br>1.10 | PID | <1ppm |
| | 1 | | | | | MD to D | | | | | | DCP9/150 | 5 10 15 |
| | | | 1.50m: trace fragments of plastic waste | | FILL | | M | | D<br>ES | | 1.50<br>1.60 | PID | <1ppm |
| | | | 2.00m: trace metal plate (0.5 m x 0.5 m) | | | | | | ES | | 2.00<br>2.10 | PID | <1ppm |
| | 2 | | 2.10m: with limestone boulders | | | ND | | | | | | | |
| ▼ 08/11/23 | 0 | | | | | | W | | D<br>ES | | 2.50<br>2.60 | PID | <1ppm |
| | | | Test Pit discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.5 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

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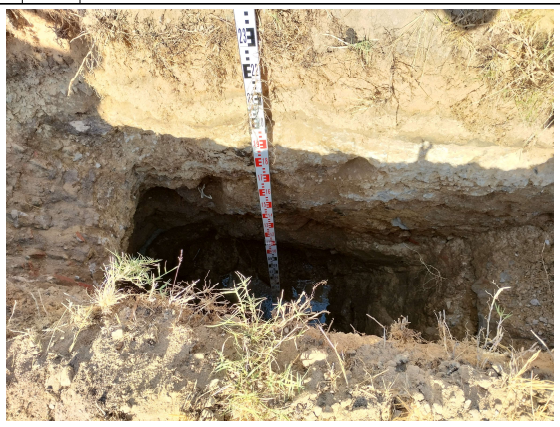
# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397775.7, N:6466289.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP17
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | DEPTH (m) / RL (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 0.15 / 2 | FILL / SAND (SP-SM), with silt, trace rootlets: orange - grey; fine to medium. | | FILL | | | | ES | | 0.10 | PID | <1ppm |
| | | FILL / Sandy GRAVEL (GP-GM), with fragments of concrete, with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | L to VD | D to M | | | | | DCP9/150 | 5 10 15 25 |
| | | | | | | | | ES | | 0.50 / 0.60 | PID | <1ppm |
| | 0.90 / 1 | FILL / SAND (SP), with fragments of brick and concrete, trace silt: grey; fine to medium. | | | | | | ES | | 1.00 / 1.10 | PID | <1ppm |
| | | 1.10m: trace fragments of plastic waste | | | | | | | | | | |
| | | 1.60m: trace metal sheets | | FILL | ND | M | ASB 3 | ES | | 1.50 / 1.60 | PID | <1ppm |
| | | 1.90m: piece of concrete block observed | | | | | | | | | | |
| ▼ 08/11/23 | 2 / 0 | | | | | | ASB 4 | ES | | 2.00 / 2.10 | PID | <1ppm |
| | | | | | | W | | | | | | |
| | | Test Pit discontinued at 2.50m depth. (Collapsing conditions). | | | | | | | | | | |





NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.1 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397816.0, N:6466272.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP18
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) / DENSITY.(*) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 2 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium; weakly cemented. | | FILL | | D to M | | ES | 0.10 | | PID | <1ppm |
| | 0.26 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | ND | | | | | | | |
| | 0.45 | FILL / SAND (SP), with fragments of brick and concrete, with clay: grey; fine to medium. | | | | | ASB 1 | ES | 0.50<br>0.60 | | PID | <1ppm |
| | | 0.50m-1.50m: with fragments of tile and brick, trace PACM fragments | | | | | | | | | | |
| | 1 | 0.75m: trace metal bar<br>1.00m: trace fragments of redundant cables, glass, geo-fabric and limestone blocks | | FILL | MD to VD | M | | D<br>ES | 1.00<br>1.10 | | PID | <1ppm |
| | | From 1.20m: with limestone boulders | | | ND | | | | | | | |
| | | | | | | | | ES | 1.40<br>1.50 | | PID | <1ppm |
| | 2 | Test Pit discontinued at 1.50m depth.<br>(Test Pit terminated due to slow digging). | | | | | | | | 2 | | |





NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

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# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397856.8, N:6466280.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP19
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 2 / 0.20 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | FILL | | | DUP 1 | ES | | 0.10 | PID | <1ppm |
| | | FILL / Sandy GRAVEL (GP-GM), with silt: orange-brown; medium to coarse; fine to medium sand; Gravel is crushed limestone. | | FILL | ND | D | | D | | 0.50 | PID | <1ppm |
| | | | | | | | | ES | | 0.60 | | |
| | 0.70 | FILL / SAND (SP-SM), with silt, trace gravel: grey-brown; fine to medium. | | | | | | | | | | |
| | 1 | 0.75m: trace concrete slab, fragments of brick and terracotta pipes | | | | | | | | | | |
| | | From 0.90m: with fragments of brick | | | MD | | | ES | | 1.00 | PID | <1ppm |
| | | From 1.20m: becoming grey, trace fragments of timber | | FILL | | M | | | | 1.10 | PSP | 150 |
| | | From 1.60m: becoming grey-brown | | | | | | ES | | 1.50 | PID | <1ppm |
| ▼ 09/11/23 | 1.90 | | | | | | | | | 1.60 | | |
| | 2 / 0 | FILL / SAND (SP), trace roots, trace silt: dark grey; fine to medium. | | FILL | ND | W | | ES | | 2.00 | PID | <1ppm |
| | | 2.40m: trace fragments of sea shells | | | | | | | | 2.10 | | |
| | | | | | | | | D | | 2.50 | PID | <1ppm |
| | | | | | | | | ES | | 2.60 | | |
| | | Test Pit discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | | | |





NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 1.8 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.0 AHD
**COORDINATE:** E:397838.6, N:6466231.5
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP20
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | DEPTH (m) / RL (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 0.05 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | FILL | | D to M | | ES | | 0.10 | PID | <1ppm |
| | 0.34 | FILL / Sandy GRAVEL (GP-GM), with silt: yellow-brown; medium to coarse; fine to medium sand. | | FILL | | | | | | | | |
| | | FILL / SAND (SP-SM), with silt, trace gravel: grey and orange-brown; fine to medium. 0.50m: with fragments of brick and concrete | | | MD to VD | | | ES | | 0.50 0.60 | PID | <1ppm |
| | 1 | 0.80m: trace fragments of rubber waste and scrap metal | | FILL | | M | | D ES | | 1.00 1.10 | PID | <1ppm |
| | | From 1.20m: becoming dark grey, with fragments of brick 1.30m-2.10m: with hydrocarbon odour 1.50m: with pockets of Clayey SAND SC | | | | | | D ES | | 1.50 1.60 | PID | 9.4ppm |
| | 1.80 | FILL / Clayey SAND (SC): dark grey; fine to medium; low to medium plasticity clay. | | | ND | | | | | | | |
| 08/11/23 | 2 | From 2.10m: becoming green-grey | | FILL | | W | | ES | | 2.00 2.10 | PID | 1.4ppm |
| | | | | | | | | ES | | 2.50 2.60 | PID | 1.1ppm |
| | | Test Pit discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | | | |

PSP/hr





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NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.1 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

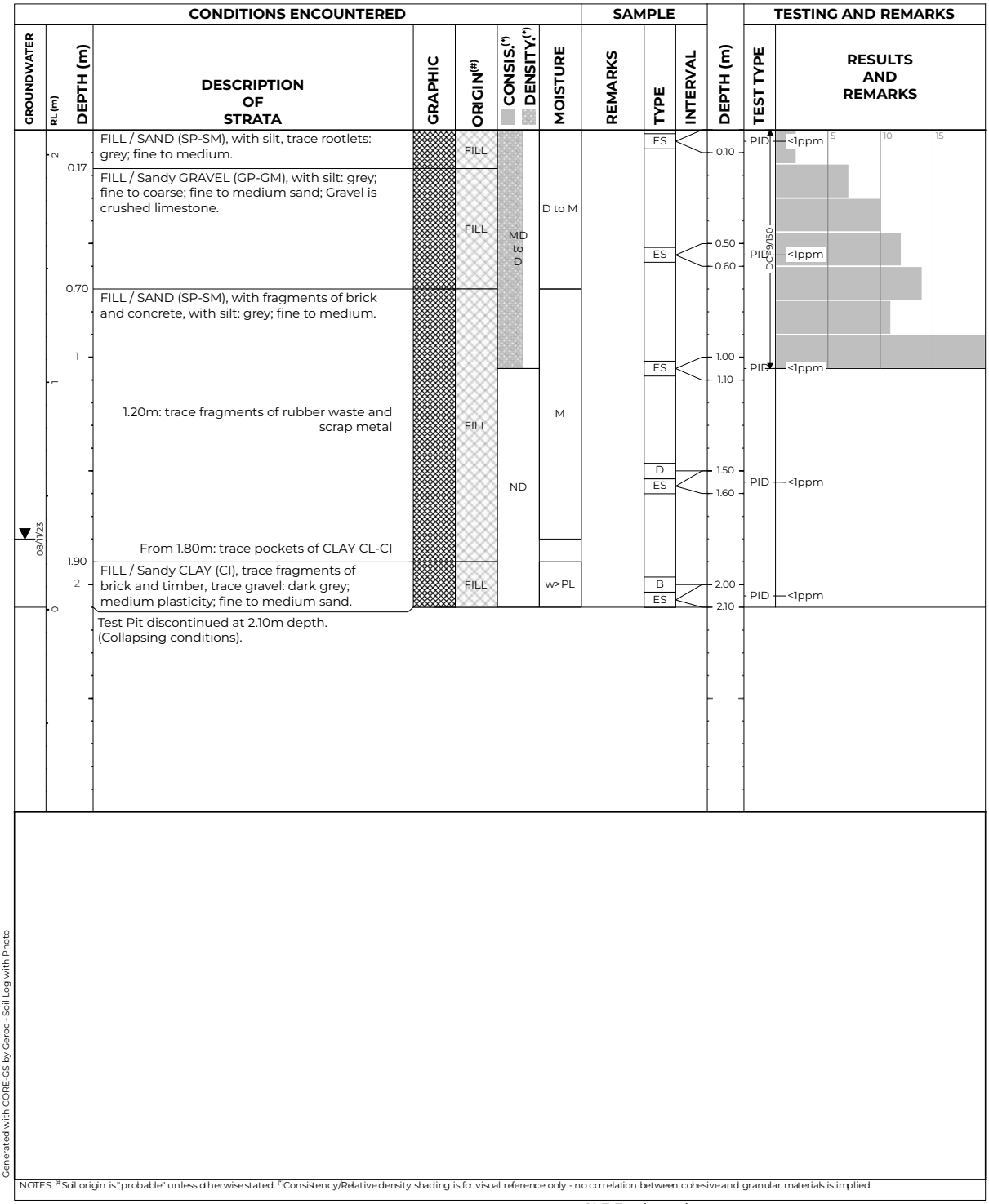
Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.1 AHD
**COORDINATE:** E:397896.5, N:6466231.5
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP21
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1




NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 1.8 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.3 AHD
**COORDINATE:** E:397941.6, N:6466244.9
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP22
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | | | D to M | | ES | | 0.10 | PID | <1ppm |
| | | | From 0.22m: becoming orange | | | | | | | | | | |
| | | | From 0.40m: becoming brown | | | MD | | | ES | | 0.50 | PID | <1ppm |
| | | | From 0.70m: becoming dark grey-brown | | FILL | | | | | | 0.60 | | |
| | 1 | | | | | | M | | ES | | 1.00 | PID | <1ppm |
| | | | | | | | | | | | 1.10 | | |
| | 1 | 1.40 | SAND (SP-SM), with silt: pale yellow-brown; fine to medium. | | | ND | | | ES | | 1.50 | PID | <1ppm |
| ▼ 09/11/23 | | | From 1.70m: becoming orange-grey | | possibly ALV | | | | | | 1.60 | | |
| | 2 | | | | | | W | | B | | 2.00 | PID | <1ppm |
| | | | | | | | | | ES | | 2.10 | | |
| | 0 | | Test Pit discontinued at 2.20m depth. (Collapsing conditions). | | | | | | | | | | |

PSP/ISC: 5 10 15





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 1.8 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.4 AHD
**COORDINATE:** E:397844.9, N:6466181.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP23
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | DEPTH (m) / RL (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 0.05 | ASPHALT: black, 7 mm sized nominal aggregate. | | FILL | | D | | | | | | |
| | 0.15 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand; BASECOURSE, gravel is crushed rock. | | FILL | ND | | | | | | | |
| | 0.30 | FILL / Sandy GRAVEL (GP-GM), with silt: red-brown; medium to coarse, angular to sub-angular; fine to medium sand; SUB-BASE, gravel is granitic and lateritic. | | FILL | | M | | ES | | 0.50<br>0.60 | PID | <1ppm |
| | 0.65 | FILL / Silty SAND (SM), trace gravel: brown; fine to medium; with pockets of Clayey SAND SC. 0.90m: trace fragments of brick | | FILL | MD to D | | | | | | | |
| | 1 | FILL / Clayey SAND (SC): orange-grey; fine to medium; low to medium plasticity clay. | | FILL | | M | | D<br>ES | | 1.00<br>1.10 | PID | <1ppm |
| | 1.40 | FILL / SAND (SP), trace silt: grey; fine to medium; trace pockets of Clayey SAND SC. 1.80m: trace fragments of brick | | FILL | | | | ES | | 1.50<br>1.60 | PID | <1ppm |
| 08/11/23 | 1.90 | FILL / Sandy CLAY (CI), trace gravel: dark grey; medium plasticity; fine to medium sand. | | FILL | ND | W | | D<br>ES | | 2.00<br>2.10 | PID | <1ppm |
| | 2.20 | FILL / SAND (SP-SM), with silt: dark grey; fine to medium. | | FILL | | | | D<br>ES | | 2.50<br>2.60 | PID | <1ppm |
| | | Borehole discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | | | |

DCP9/150





NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**CASING:** Nil

**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 1.7 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

## Appendix C

Geotechnical Laboratory Test Certificates

WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

## TEST REPORT - ASTM D2974-14 (Test Method C)

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18256-18262_1_ORG |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18256-18262 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | Various See Below | *Date Tested:* | 15/11/2023 |

## TEST RESULTS - Organic Content

**Sampling Method:** Sampled by Client, Tested as Received

**Testing Completed By:** WGLS-LC

**Furnace Temperature (°C):** 440

| Sample Number | Sample Identification | Ash Content (%) | Organic Content (%) |
|---|---|---|---|
| WG23.18256 | TP13/1.5 | 98.4 | 1.6 |
| WG23.18257 | TP8/1.5 m | 93.2 | 6.8 |
| WG23.18258 | TP19/2.5 | 98.5 | 1.5 |
| WG23.18262 | BH23/2.5 m | 98.8 | 1.2 |

***Comments:***

**Approved Signatory:** Coneill

**Name:** Cody O'Neill

**Date:** 16/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

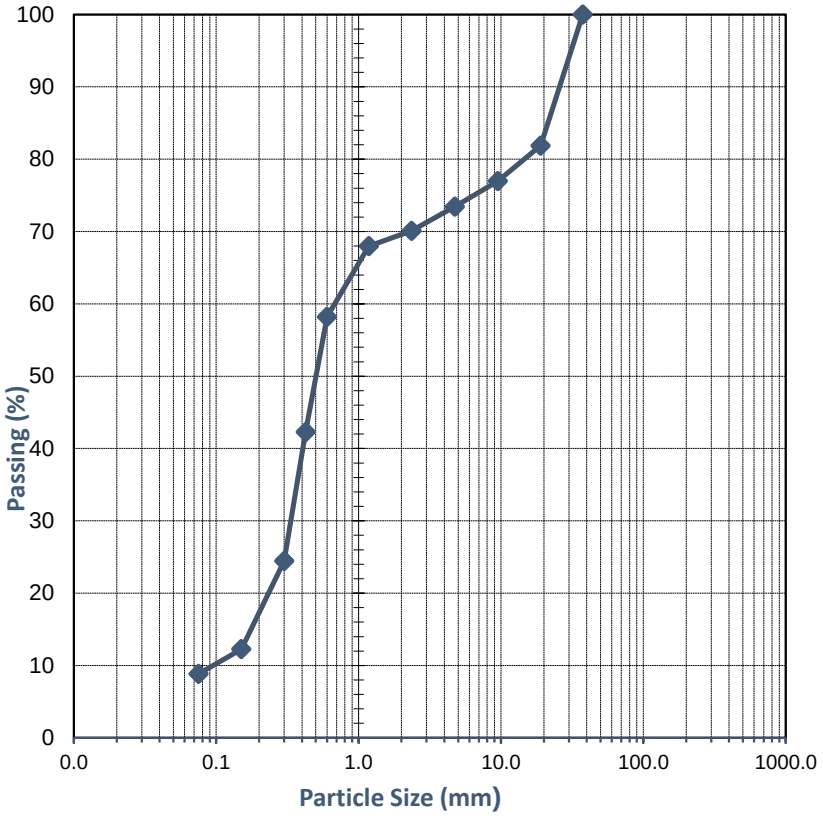
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18257_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18257 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP8/1.5 m | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | 100 |
| 19.0 | 82 |
| 9.5 | 77 |
| 4.75 | 73 |
| 2.36 | 70 |
| 1.18 | 68 |
| 0.600 | 58 |
| 0.425 | 42 |
| 0.300 | 24 |
| 0.150 | 12 |
| 0.075 | 9 |




*Comments:*

**Approved Signatory:**

**Name:** Cody O'Neill

**Date:** 17/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

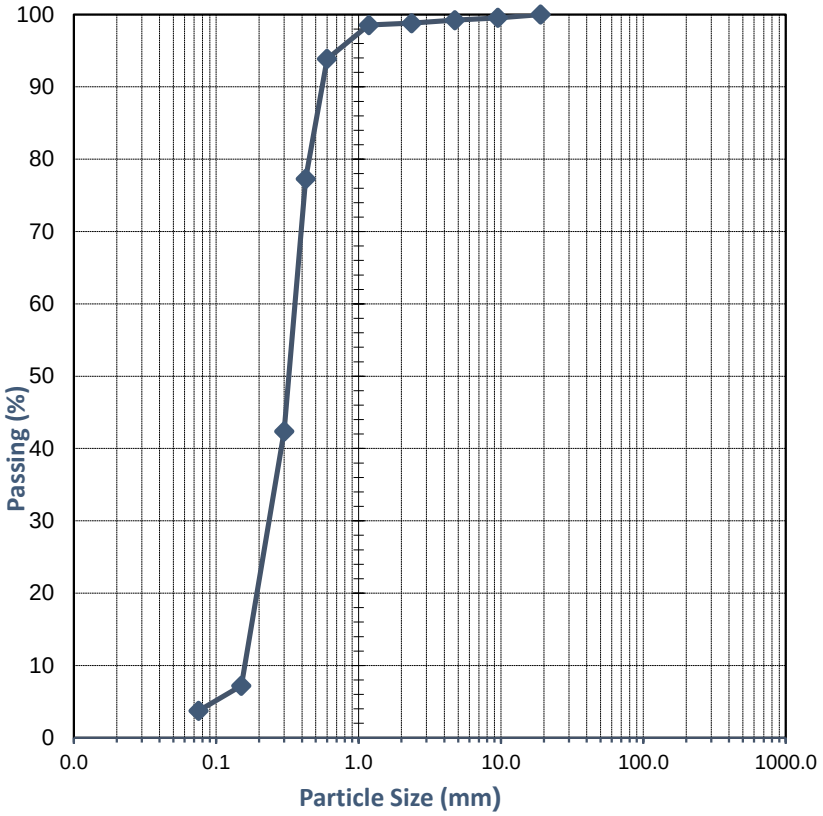
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18256_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18256 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP13/1.5 | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | 100 |
| 9.5 | 100 |
| 4.75 | 99 |
| 2.36 | 99 |
| 1.18 | 99 |
| 0.600 | 94 |
| 0.425 | 77 |
| 0.300 | 42 |
| 0.150 | 7 |
| 0.075 | 4 |




*Comments:*

**Approved Signatory:**

**Name:** Cody O'Neill

**Date:** 17/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

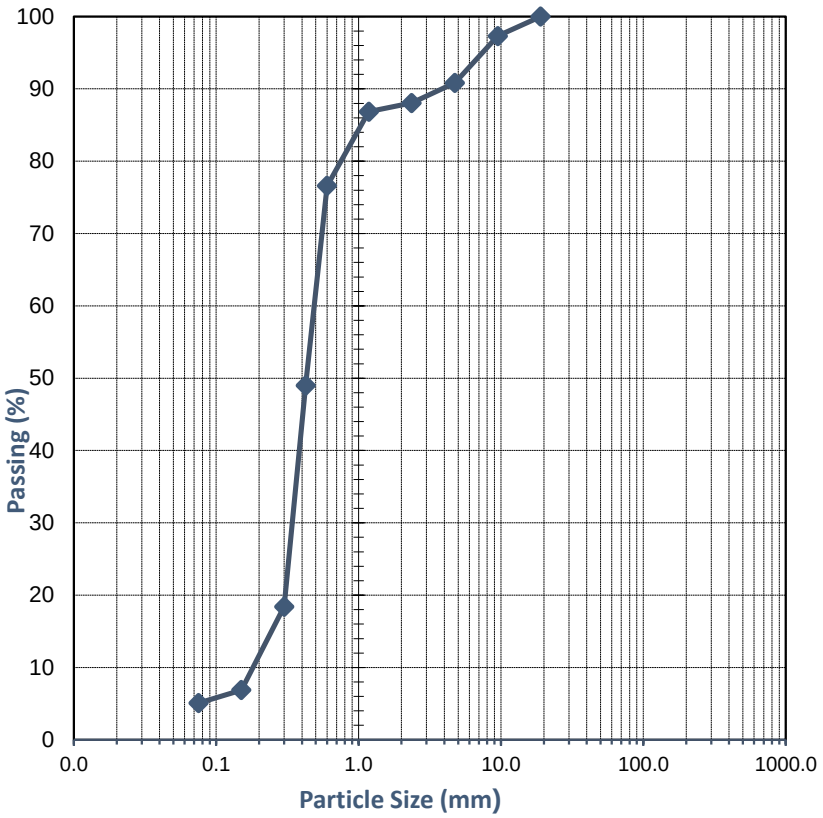
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18258_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18258 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP19/2.5 | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | 100 |
| 9.5 | 97 |
| 4.75 | 91 |
| 2.36 | 88 |
| 1.18 | 87 |
| 0.600 | 77 |
| 0.425 | 49 |
| 0.300 | 18 |
| 0.150 | 7 |
| 0.075 | 5 |




*Comments:*

**Approved Signatory:**

**Name:** Cody O'Neill

**Date:** 17/November/2023

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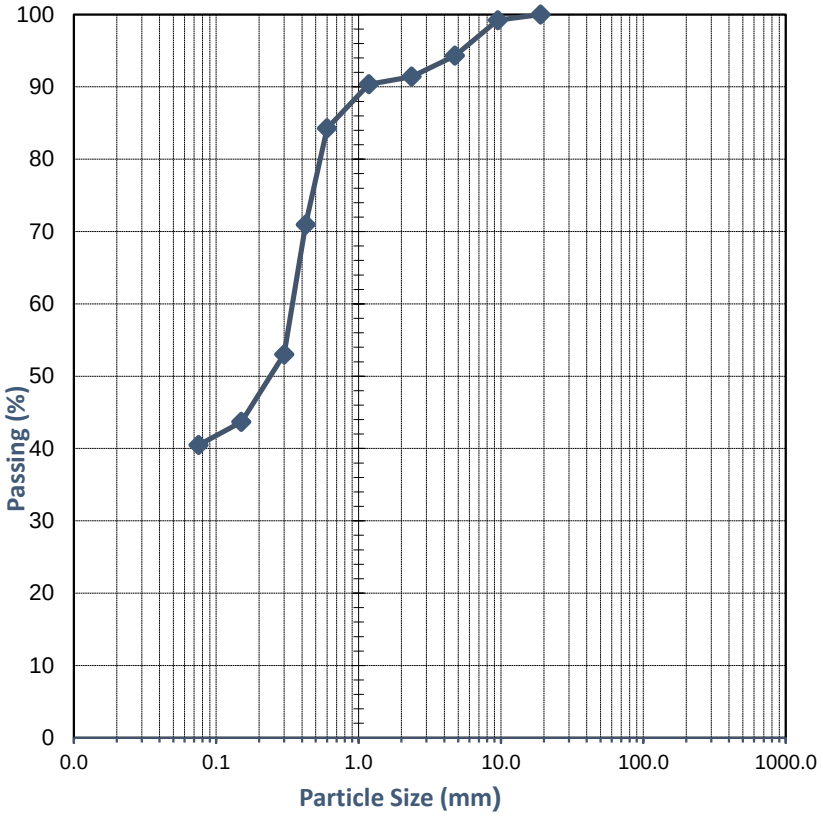
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18259_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18259 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP21/2.0 m | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | 100 |
| 9.5 | 99 |
| 4.75 | 94 |
| 2.36 | 91 |
| 1.18 | 90 |
| 0.600 | 84 |
| 0.425 | 71 |
| 0.300 | 53 |
| 0.150 | 44 |
| 0.075 | 40 |




*Comments:*

**Approved Signatory:** Cody O'Neill

**Name:** Cody O'Neill

**Date:** 17/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

**TEST REPORT - AS 1289.3.1.1, 3.2.1, 3.3.1 & 3.4.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18259_1_PI |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18259 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP21/2.0 m | *Date Tested:* | 17/11/2023 |

## TEST RESULTS - Consistency Limits (Casagrande)

| | |
|---|---|
| **Sampling Method:** | **Sampled by Client, Tested as Received** |
| **History of Sample:** | **Oven Dried <50°C** |
| **Method of Preparation:** | **Dry Sieved** |

| | | |
|---|---|---|
| **AS 1289.3.1.1** | **Liquid Limit (%)** | **37** |
| **AS 1289.3.2.1** | **Plastic Limit (%)** | **24** |
| **AS 1289.3.3.1** | **Plasticity Index (%)** | **13** |
| **AS 1289.3.4.1** | **Linear Shrinkage (%)** | **8.5** |
| **AS 1289.3.4.1** | **Length of Mould (mm)** | **250** |
| **AS 1289.3.4.1** | **Condition of Dry Specimen:** | **Curled** |

***Comments:***

**Approved Signatory:**

**Name:** Madhav Basnet

**Date:** 20/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

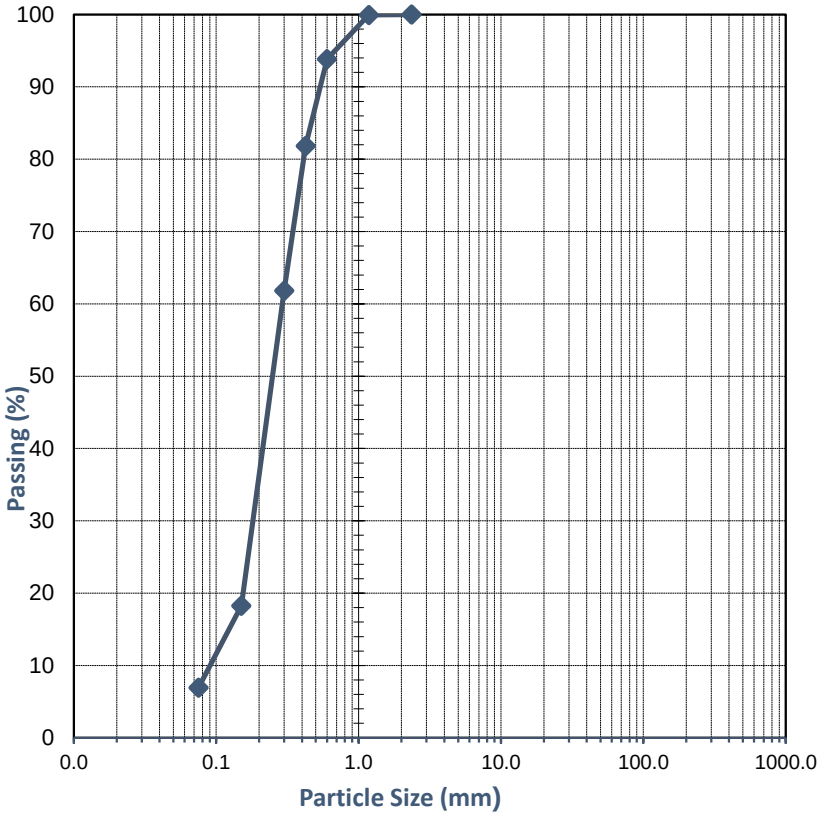
## TEST REPORT - AS 1289.3.6.1

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18260_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18260 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/2023 |
| *Sample Identification:* | TP22/2.0 | *Date Tested:* | 22/11 - 23/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | |
| 9.5 | |
| 4.75 | |
| 2.36 | 100 |
| 1.18 | 100 |
| 0.600 | 94 |
| 0.425 | 82 |
| 0.300 | 62 |
| 0.150 | 18 |
| 0.075 | 7 |




*Comments:*

**Approved Signatory:**

**Name:** Natasha Bielawski

**Date:** 23/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

**TEST REPORT - AS 1289.3.1.1, 3.2.1, 3.3.1 & 3.4.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18260_1_PI |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18260 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP22/2.0 | *Date Tested:* | 23/11/2023 |

## TEST RESULTS - Consistency Limits (Casagrande)

| | |
|---|---|
| **Sampling Method:** | **Sampled by Client, Tested as Received** |
| **History of Sample:** | **Oven Dried <50°C** |
| **Method of Preparation:** | **Dry Sieved** |

| | | |
|---|---|---|
| **AS 1289.3.1.1** | **Liquid Limit (%)** | **Not Obtainable** |
| **AS 1289.3.2.1** | **Plastic Limit (%)** | **Non-Plastic** |
| **AS 1289.3.3.1** | **Plasticity Index (%)** | **Non-Plastic** |
| **AS 1289.3.4.1** | **Linear Shrinkage (%)** | **0.0** |
| **AS 1289.3.4.1** | **Length of Mould (mm)** | **250** |
| **AS 1289.3.4.1** | **Condition of Dry Specimen:** | **-** |

***Comments:***

**Approved Signatory:**

**Name:** Matthew Lichon
**Date:** 24/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

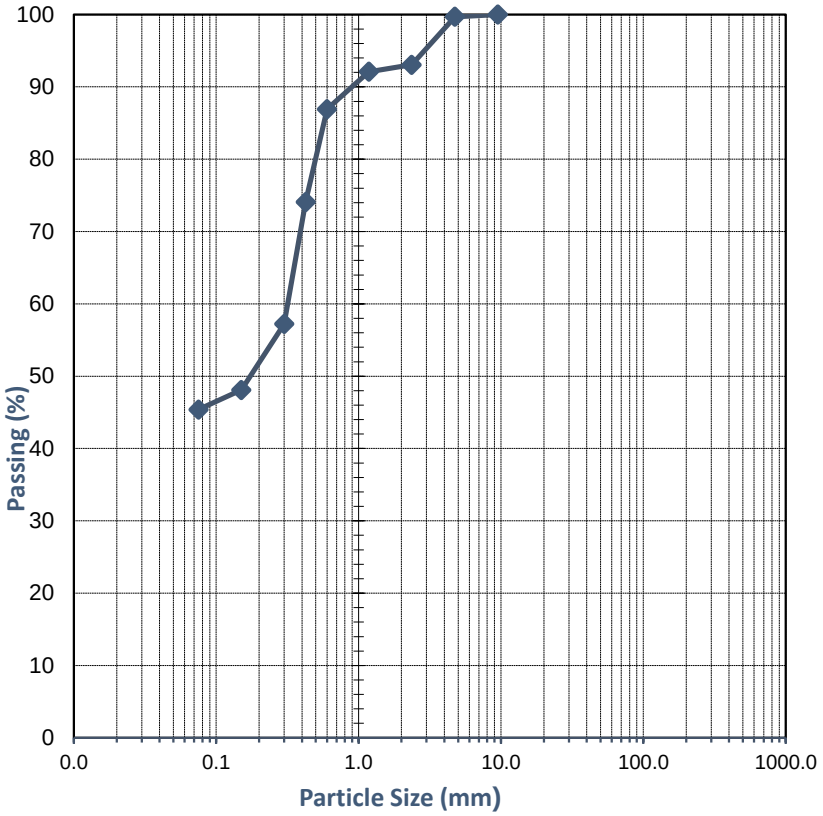
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18261_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18261 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | BH23/2.0 m | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | |
| 9.5 | 100 |
| 4.75 | 100 |
| 2.36 | 93 |
| 1.18 | 92 |
| 0.600 | 87 |
| 0.425 | 74 |
| 0.300 | 57 |
| 0.150 | 48 |
| 0.075 | 45 |




*Comments:*

**Approved Signatory:**

**Name:** Cody O'Neill

**Date:** 17/November/2023

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WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

**TEST REPORT - AS 1289.3.1.1, 3.2.1, 3.3.1 & 3.4.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18261_1_PI |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18261 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | BH23/2.0 m | *Date Tested:* | 17/11/2023 |

## TEST RESULTS - Consistency Limits (Casagrande)

| | |
|---|---|
| **Sampling Method:** | **Sampled by Client, Tested as Received** |
| **History of Sample:** | **Oven Dried <50°C** |
| **Method of Preparation:** | **Dry Sieved** |

| | | |
|---|---|---|
| **AS 1289.3.1.1** | **Liquid Limit (%)** | **44** |
| **AS 1289.3.2.1** | **Plastic Limit (%)** | **22** |
| **AS 1289.3.3.1** | **Plasticity Index (%)** | **22** |
| **AS 1289.3.4.1** | **Linear Shrinkage (%)** | **9.5** |
| **AS 1289.3.4.1** | **Length of Mould (mm)** | **250** |
| **AS 1289.3.4.1** | **Condition of Dry Specimen:** | **Curled** |

***Comments:***

**Approved Signatory:**

**Name:** Madhav Basnet
**Date:** 20/November/2023

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WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

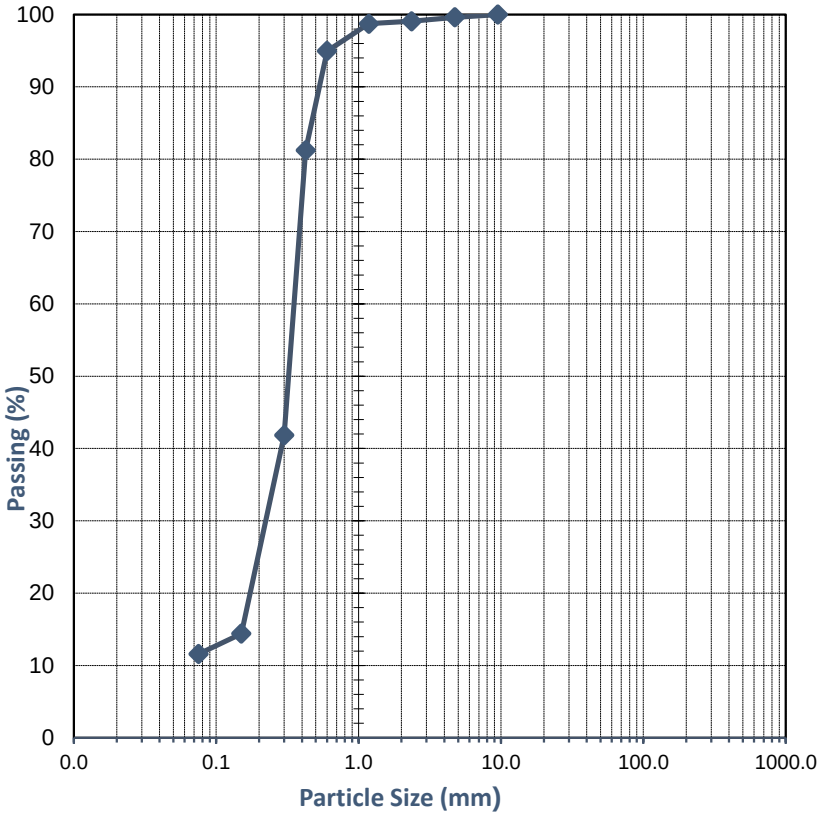
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18262_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18262 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | BH23/2.5 m | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | |
| 9.5 | 100 |
| 4.75 | 100 |
| 2.36 | 99 |
| 1.18 | 99 |
| 0.600 | 95 |
| 0.425 | 81 |
| 0.300 | 42 |
| 0.150 | 14 |
| 0.075 | 12 |




*Comments:*

**Approved Signatory:**

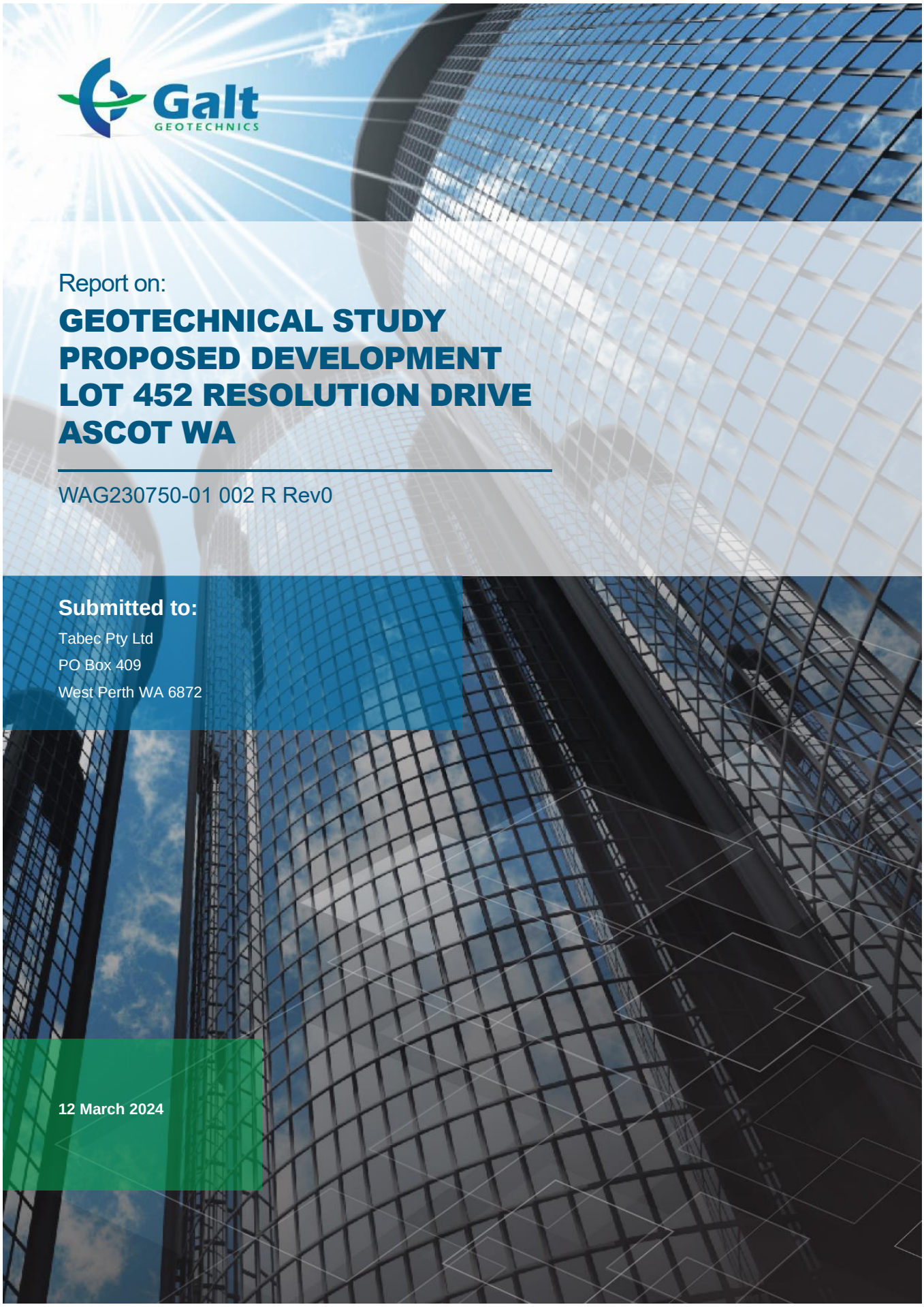
**Name:** Cody O'Neill

**Date:** 17/November/2023

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Galt GEOTECHNICS

Report on:

# GEOTECHNICAL STUDY PROPOSED DEVELOPMENT LOT 452 RESOLUTION DRIVE ASCOT WA

WAG230750-01 002 R Rev0

**Submitted to:**

Tabec Pty Ltd
PO Box 409
West Perth WA 6872

**12 March 2024**

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Standard Geotechnical Definitions, Recommendations, Requirements and Limitations

# 1. INTRODUCTION

This report presents the outcomes of Galt Geotechnics' (Galt's) geotechnical study for the proposed development at Lot 452 Resolution Drive, Ascot ("the site").

This report is to be read in conjunction with the appended "Geotechnical Definitions, Recommendations, Requirements and Limitations". 'Clause GDR1', etc. refer to this Appendix, found at the back of this report.

# 2. KEY FINDINGS

## Site Description

*Table 1: Summary of Site*

| Item | Comment |
|---|---|
| Site Extent | Refer Figure 1. |
| Site Area | About 1.14 Ha. |
| Current Site Surface Levels[1] | About RL 3 m AHD. |
| Vegetation | Mature trees, shrubs and lawn in landscaped areas covering a large portion of the site. |
| Existing Infrastructure | Single Storey building (used by Perth Racing Security Services) with surrounding accessways, car parking and landscaped areas. |
| Site History[2] | **Prior to 1953**: two residences in northern portion of site. Remainder of site relatively clear.<br>**1953 to 1985**: Relatively unchanged. Undeveloped portion of site used as laydown area, car park area, and to stockpile materials at different times.<br>**1989**: Existing Perth Racing Security Services development (as described above) is present<br>**1989 to Present**: Site relatively unchanged. |

***NOTES:*** ***1.*** *Site level based on correspondence with client.*

***2.*** *Site history based on aerial imagery (Landgate).*

# 3. PROPOSED DEVELOPMENT

*Table 2: Summary of Proposed Development*

| Item | Comment |
|---|---|
| Proposed Development | Unknown, assumed subdivision for commercial/residential purposes. |
| Proposed Finished Level | Assumed within about 1 m of current ground levels. |
| Cut/Fill | Assumed ± 1 m with up to 5 m excavation to connect development to existing sewer. |
| Assumed Foundation Type | Shallow Footings. |
| Assumed Retaining Walls | Gravity walls up to 1 m in height. |
| Assumed Stormwater Disposal | Off site into council network. |
| Assumed Sewage Disposal | Off site via reticulated sewer. |

***NOTES:*** ***1.*** *FFL – finished floor level*

***2.*** *Proposed development details based on supplied information.*

# 4. PROJECT OBJECTIVES

The objectives of the study were to:

- Assess the geotechnical suitability of the site for the proposed development;

- Geotechnical opportunities and constraints relevant to the proposed development;
- Areas of foundation risk including the presence of aggressive soils and strategies to address identified risks;
- Site preparation including possible reuse of existing soil as controlled fill;
- Excavation conditions;
- The likely site classification;
- Suitable foundation systems including preliminary design parameters;
- Preliminary design parameters for the design of retaining structures and batter slopes;
- Depth to groundwater at time of investigation; and
- Recommendations on additional geotechnical investigation at detailed design phase or to address specific ground conditions encountered.

# 5. FIELDWORK

Fieldwork was carried out in the presence of a representative from Galt between the 8 and 14 February 2024 and comprised:

*Table 3: Summary of Field Data*

| Type | Results Appendix | Summary | GDR Clause | Equipment Used | No. Tests | Depth Range (m) |
|---|---|---|---|---|---|---|
| Site Plan | Figure 1 | - | - | Hand held GPS[1] | - | - |
| Photographs | A | - | - | - | - | - |
| Cone Penetration Tests (CPTs) | B | Section 8 | GDR3.2 | 14-tonne truck | 5 | 1.6 to 10.1 |
| Machine Auger Boreholes (BH) | C | Section 8 | GDR3.3 | AMS Power Probe | 4 | 0.7 to 6.5 |
| Monitoring Well (MW) | C | Section 8 | GDR3.3 | AMS Power Probe | 1 | 6.0 |

***NOTES:*** ***1.*** *Hand held GPS is accurate to ±5 m.*

# 6. LABORATORY TESTING

Laboratory test certificates are presented in Appendix D, and summarised in Attached Tables 1 and 2.

# 7. SITE CONDITIONS

## 7.1. Geology

*Table 4: Summary of Geology Mapping*

| Map Sheet | Map Scale | Mapped Soils | Typical Site Findings |
|---|---|---|---|
| Perth | 50K | Guildford Formation, described as: *"SANDY SILT - strong brown to mid grey, mottled, blocky, disseminated fine sand, hard when dry, variable clay content of alluvial origin."* | **Thin topsoil** (landscaped areas) **and pavement materials** (car parks / access ways) **over FILL: SAND / SAND** to about 0.4 m to 0.9 m depth, **over Sandy CLAY / CLAY**. |

## 7.2. Groundwater

*Table 5: Summary of Groundwater Levels*

| Item | Date | Depth Range (m) | Elevation Range (m AHD) | Comment |
|---|---|---|---|---|
| Perth Groundwater Atlas | 1997 | - | 3.0 | Historical maximum |
| Department of Water and Environmental Regulation (DWER) Flood Mapping | - | - | 2.7 to 2.9 (DWER mapped 1% AEP flood event level) | Portion of site along southern and south western site boundaries, and the northern side of Grandstand road are mapped as being part of flood fringe by DWER. **Advice on development within the defined flood event (DFE) floodplain is provided by DWER on a case by case basis. DWER recommends a minimum building floor level of 0.50 metres above this level (RL 3.4 m AHD).** |
| Site observations in MW01 | February 2024 | 3.03 | - | Based on highest recorded water levels in monitoring well. |
| Site observations in CPT test probes | February 2024 | 1.90 to 2.80 | - | CPT probes may not have had sufficient time to recharge to hydrostatic levels. |
| Recommended Design | - | - | 2.7 to 2.9 | Groundwater likely to perch on clay soils at site. Proposed development must be designed for DWER DFE flood event. |

***NOTES:*** ***1.*** *Depths for site observations based on the site surface level at the time of investigation.*

# 8. GROUND MODEL

The encountered subsurface conditions are summarised as comprising:

- **Surficial Topsoil (in landscaped areas)** up to 0.3 m thick **and Hardstand Fill Layers** (in carparks and access ways); **overlying**
- **FILL: SAND / SAND (SP)**, fine to medium grained, sub-rounded to sub-angular, yellow / brown / grey layers, includes trace gravel / Sandy GRAVEL layers, trace / with fines, some typically medium dense to dense, extending to depths of about 0.4 m to 0.9 m; overlying
- **In BH03 and BH04 only: Silty SAND / Clayey SAND (SM/SC)** fine to medium grained, sub-rounded to sub-angular, brown / grey, low to medium plasticity fines, some typically medium dense to dense, extending to depths of about 0.7 m to 1.2 m; overlying
- **Sandy CLAY / CLAY (CI)**, medium plasticity, brown / orange / grey, trace sand to sandy, trace gravel in some zones, desiccated, CPT traces indicate presence of occasional sand layers, typically very stiff to hard, extending to the maximum depth investigated of 10 m.

Geotechnical design parameters for the generalised subsurface units described above are presented in Table 6.

*Table 6: Geotechnical Model Units and Design Parameters*

| Unit Name | $\gamma_{bulk}$ (kN/m$^3$) | $\phi'$ (°) | c' (kPa) | $S_u$ (kPa) | $E_v$ (MPa) | $\nu$ | $k_0$ | Wall Friction=0 | | Wall Friction=0.5$\phi$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | $k_a$ | $k_p$ | $k_a$ | $k_p$ |
| Compacted Approved FILL | 18 | 36 | - | - | 50 | 0.25 | 0.41 | 0.26 | 3.85 | 0.22 | 6.54 |
| SAND / Silty SAND / Clayey SAND | 18 | 35 | - | - | 25 | 0.3 | 0.43 | 0.27 | 3.69 | 0.24 | 6.08 |
| Sandy CLAY / CLAY | 18 | 21 | 0 to 5 | 150 | 30 | 0.45 | Earth pressure coefficients can be calculated for undrained or drained conditions as outlined in GDR11.2.2 using Firm parameters (undrained) or Fines Content >35% & PI 40% (drained). | | | | |

***NOTES:***

1. *These units are a generalization of results from individual tests, which should be referred to for more information.*
2. *Conditions at CPT locations below depth of soil sample recovery are inferred (refer to clause GDR3.2)*
3. *Surficial topsoil and hardstand layers are not included as discrete units.*
4. *Compacted approved fill is as described in Table 7.*
5. *For all earth pressure coefficients (retaining wall design) refer to clause GDR11.2 for more detail and interpretation. Unit weights for retaining structure design should be as per GDR11.2 or 1 kN/m$^3$ greater than the values in the table above.*

*$\gamma_{bulk}$ – bulk unit weight*
*$\phi'$ – effective friction angle*
*$S_u$ – undrained shear strength*
*c'– effective cohesion*
*$E_v$ – vertical elastic modulus*
*$\nu$ – Poisson's Ratio*
*$k_a$ – coefficient of active earth pressure (Coulomb – AS4678-2002, Appendix E)*
*$k_p$ – coefficient of passive earth pressure (Coulomb – AS4678-2002, Appendix E)*
*$k_0$ – coefficient of at-rest earth pressure (Jaky)*

# 9. GEOTECHNICAL ASSESSMENT

## 9.1. Summary

*Table 7: Summary of Geotechnical Assessment*

| Type | Clause | Parameter | Comment |
|---|---|---|---|
| Site Suitability | - | - | We consider the site to be geotechnically suitable for the proposed subdivision development. Standard site preparation measures will apply. However, groundwater could impact construction if it occurs during winter. Flood levels will impact site levels (refer Table 5). |
| Construction Methodology and Suitability | - | - | Shallow footings in accordance with AS2870-2011 will be suitable for this site. Mass retaining will be suitable for retaining however, must be designed for potential flooding of the site. Stormwater disposal via infiltration is **not** suitable. |
| Site Classification (AS2870) | GDR5 | S | Where **no less than 0.7 m of sand** (including insitu silty sand and clayey sand layers encountered in BH03 and BH04) is present **over in situ CLAY / Sandy CLAY.** |
| Site Subsoil Class (AS1170.4) | - | Ce | Base of superficial formation mapped to be about 25 m below ground. |
| Site Preparation | GDR6 | - | **GDR6.2.1 Common Measures** followed by **GDR6.2.4 Clayey Sites** followed by **GDR6.2.5 Sand Topping Layer.** |
| Approved Fill | GDR8 | - | **Approved Fill** for this site is to comprise **Permeable Sand**.<br>Only relatively thin surficial layers of sand at the site (excluding topsoil) are suitable as approved fill. If additional fill is required, imported **Permeable Sand** will be needed.<br>Although not classed as 'approved fill', where clay is encountered in trench excavations, this material could possibly be reused to backfill the same portion of the trench (excluding any special fill materials required around buried elements). However, this material will be difficult to work and moisture condition to near optimum (particularly if removed from below the groundwater table). |
| Compaction Control | GDR7 | - | A PSP may be used for compaction control on **Permeable Sand.** Deemed to comply values for 'Tamala' sand in GDR7.4 are applicable.<br>Where filling with clay is done (in trenches, etc), compaction control must be done with the NDG as outlined in GDR7.3 Nuclear Density Gauge. |
| Shallow Footings | GDR9 | $q_{all}$ = 100 kPa to 250 kPa | Design tables for shallow footings are presented in Section 9.2. Estimated settlements are not considered excessive. 70% of the settlement is expected to occur during construction. |
| Earth Pressure Coefficients | GDR11 | Table 6 | Earth pressure coefficients are presented in Table 6. |
| Unsaturated Hydraulic Conductivity | GDR13 | - | On site disposal of stormwater unlikely to be suitable due to shallow depth to clay and potential for flooding adjacent the site. Off site disposal of stormwater likely to be required. |
| Pavement Subgrade CBR | GDR16 | CBR = 10% | Subgrade to comprise compacted **Approved Fill no less than 0.6 m thick.** |
| Soil Aggressivity | GDR17 | - | Refer Section 9.3 |
| Batters | GDR12 | **Temporary:**<br>Sand: 1V:2H<br>Clay: 1V:1H<br>**Permanent:**<br>1V:3H | Batter angles apply to soil units (refer Table 6) above the water table, as per GDR12.3. Dewatering and possibly retention (i.e. shoring) required below the groundwater table. |
| Excavations | GDR12.1 | 20 Ton Excavator | Potential for obstructions (buried concrete, Soakwells etc…), cemented soils and surficial pavement layers must be considered when selecting earthmoving plant. |

***NOTES:***
1. *$q_{all}$ – allowable bearing pressure (maximum for all footings, refer to footing tables for further details)*

## 9.2. Shallow Footings

*Table 8: Isolated Pad Footing Allowable Bearing Pressures and Estimated Settlements*

| $d_e$ (m) | b (m) | $q_{all}$ (kPa) | s (mm) |
|---|---|---|---|
| 0.5 | 0.5 | 120 | < 5 |
| 0.5 | 1.0 | 130 | < 5 |
| 1.0 | 1.0 | 240 | 5 - 10 |
| 1.0 | 2.0 | 250 | 10 - 15 |
| 1.0 | 3.0 | 250 | 20 - 25 |

***NOTES:***
1. *$d_e$ – minimum embedment depth (below finished ground level or floor slab)*
2. *b – Footing breadth (footings assumed approximately square)*
3. *$q_{all}$ – allowable bearing pressure (peak). Limited to keep estimated settlements less than 25 mm. Higher $q_{all}$ may be possible if higher settlements can be tolerated – refer queries to us.*
4. *s – estimated settlement (excludes shrink/swell from site class)*
5. *Refer to GDR9*
6. *Groundwater assumed to be at ground level.*

*Table 9: Isolated Strip Footing Allowable Bearing Pressures and Estimated Settlements*

| $d_e$ (m) | b (m) | $q_{all}$ (kPa) | s (mm) |
|---|---|---|---|
| 0.5 | 0.5 | 100 | < 5 |
| 0.5 | 1.0 | 130 | 5 - 10 |
| 1.0 | 1.0 | 190 | 10 - 15 |
| 1.0 | 2.0 | 250 | 20 - 25 |

***NOTES:***
1. *$d_e$ – minimum embedment depth (below finished ground level or floor slab)*
2. *b – Footing breadth (footings assumed long relative to breadth)*
3. *$q_{all}$ – allowable bearing pressure (peak). Limited to keep estimated settlements less than 25 mm. Higher $q_{all}$ may be possible if higher settlements can be tolerated – refer queries to us.*
4. *s – estimated settlement (excludes shrink/swell from site class)*
5. *Refer to GDR9*
6. *Groundwater assumed to be at ground level.*

## 9.3. Soil Aggressivity

Results of aggressivity testing on clay samples is summarised in Attached Table 2. The results indicate the clay is 'non aggressive' to concrete and steel (in accordance with AS2159-2009) with a AS3600-2009 classification of 'A1'.

Based on regional experience, we anticipate the sand will have the same aggressivity classifications as the underlying clay where above the groundwater. However, for concrete in sand below the water table, an AS2159-2009 'mild' classification, and AS3600-2009 'A2' classification is appropriate.

Groundwater was not tested.

# 10. CLOSURE

**GALT GEOTECHNICS PTY LTD**





Owen Woodland CPEng
*Geotechnical Engineer*

Tyrone Mardesic CPEng
*Geotechnical Engineer*

https://galtgeo.sharepoint.com/sites/wag230750/shared documents/01 tabec si/03 correspondence/wag230750-01 002 r rev0.docx

*Attached Table 1: Summary of Geotechnical Index Test Results*

| Test Name | Sample Depth (m) | Soil Class (AS1726 2017) | Fines (%) | Sand (%) | Gravel (%) | LL (%) | PI (%) | LS (%) |
|---|---|---|---|---|---|---|---|---|
| BH03 | 1.5 - 2.2 | CLAY (CI) | 89 | 11 | 0 | 46 | 28 | 12.5 |
| BH04 | 1.0 - 1.3 | Sandy CLAY (CI) | 54 | 43 | 3 | 34 | 20 | 8.5 |

***Notes***

1. *Particle size distribution (by mass)*
   *Gravel: 2.36 mm – 63 mm* *Sand: 0.075 mm – 2.36 mm* *Fines: <0.075 mm*
2. *Atterberg Limits*
   *LL: Liquid limit* *PI: Plasticity index* *LS: Linear shrinkage*
   *NO: Not obtainable* *NP: Non-plastic*

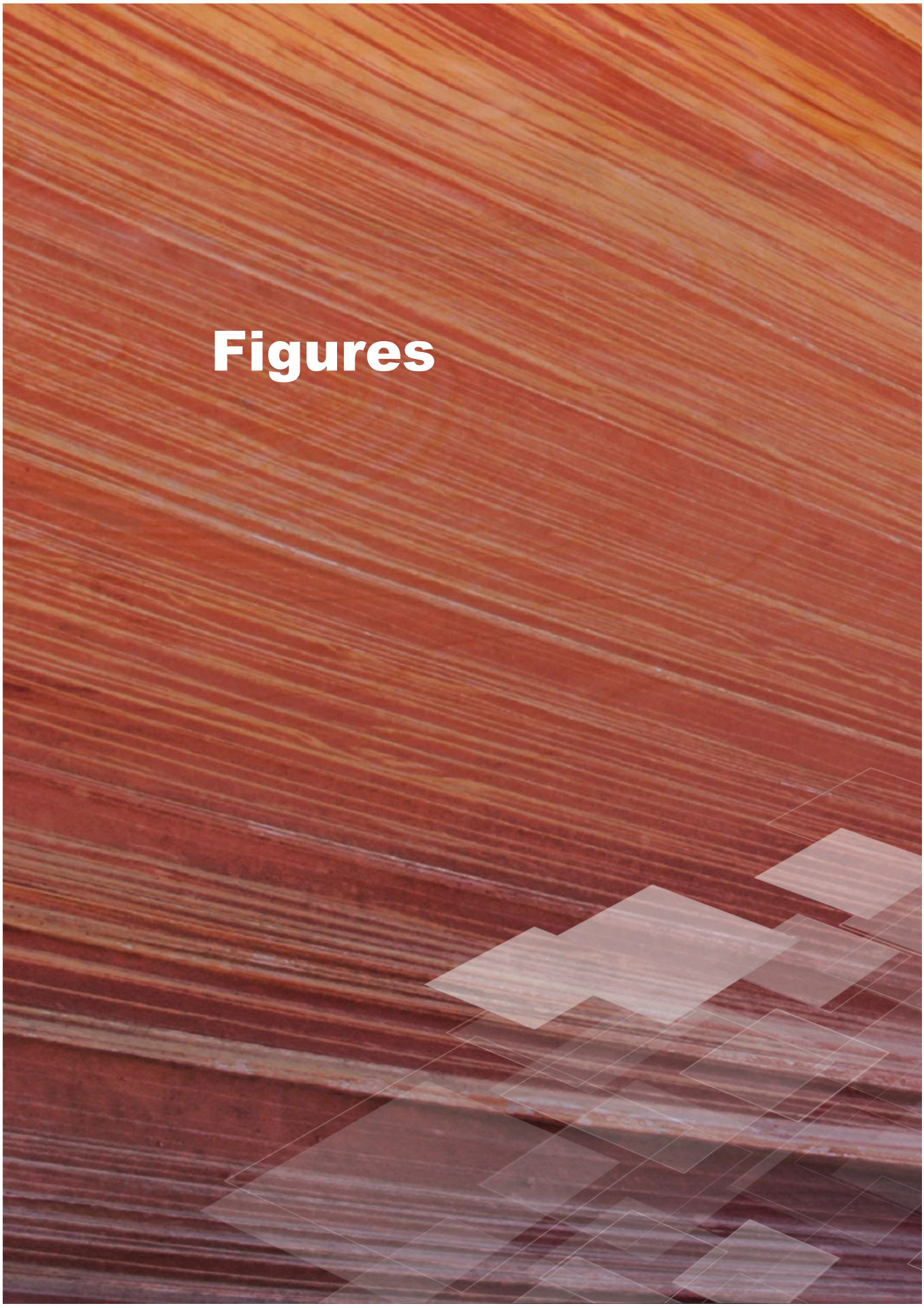
*Attached Table 2: Summary of Chemical Test Results and Exposure Classification*

| Location | Sample Depth (m) | Soil Description | Soil Condition | pH | $SO_4$ (ppm) | Cl (ppm) | AS2159 Steel EC | AS2159 Concrete EC | AS3600 Concrete EC |
|---|---|---|---|---|---|---|---|---|---|
| BH03 | 1.5 - 2.2 | CLAY (CI) | B | 8.8 | 100 | 210 | Non-Aggressive | Non-Aggressive | A1 |
| BH04 | 1.0 - 1.3 | Sandy CLAY (CI) | B | 7.5 | 170 | 94 | Non-Aggressive | Non-Aggressive | A1 |

***NOTES:***

1. *Soil condition*
   *A – high permeability soils (sands and gravels) which are below water table.* *B – Low permeability soils (silts and clays) and all soils above water table*
2. *Sulfate expressed as $SO_4$*
3. *Cl – Chloride*
4. *ER – Electrical Resistivity*
5. *EC – Exposure Classification*
5. *Exposure Classification for AS2159-2009 (for steel and concrete piles)*
   *[Exposure Classification for AS3600-2009 (for buried concrete structures)]*

| *Non-aggressive [A1]* | *Mild [A2]* | *Moderate [B1]* | *Severe [B2]* | *Very Severe [C2]* |
|---|---|---|---|---|


Figures







**Legend**

- Site Boundary
- Borehole
- Cone Penetration Test

N

0 10 20 30 40 50
Meters

***NOTES***
*Aerial Imagery and Cadastre sourced from Landgate/SLIP*




| | |
|---|---|
| SCALE | 1:750 (A3) |
| DRAWN | CED |
| DATE DRAWN | 13/2/2024 |
| CHECKED | _ |
| DATE CHECKED | _ |
| PROJECTION | GDA 1994 MGA Zone 50 |

Galt Geotechnics Pty Ltd
ACN : 138 490 865
Tel : +61 (0)8 6272-0200
Address : 50 Edward Street
Osborne Park WA 6017

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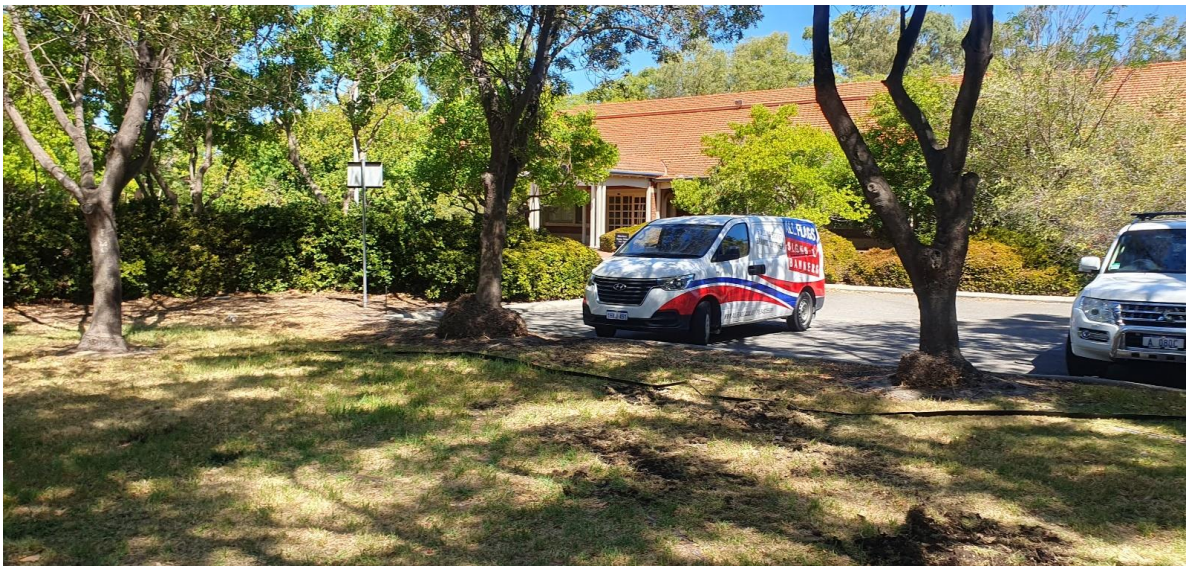
| | |
|---|---|
| CLIENT | **TABEC CIVIL ENGINEERING CONSULTANTS** |
| PROJECT | PROPOSED DEVELOPMENT |
| LOCATION | LOT 452 RESOLUTION DRIVE ASCOT |
| TITLE | SITE & LOCATION PLAN |
| Job No | WAG230750-01 |
| Fig No | FIGURE 1 |
| Rev | **A** |

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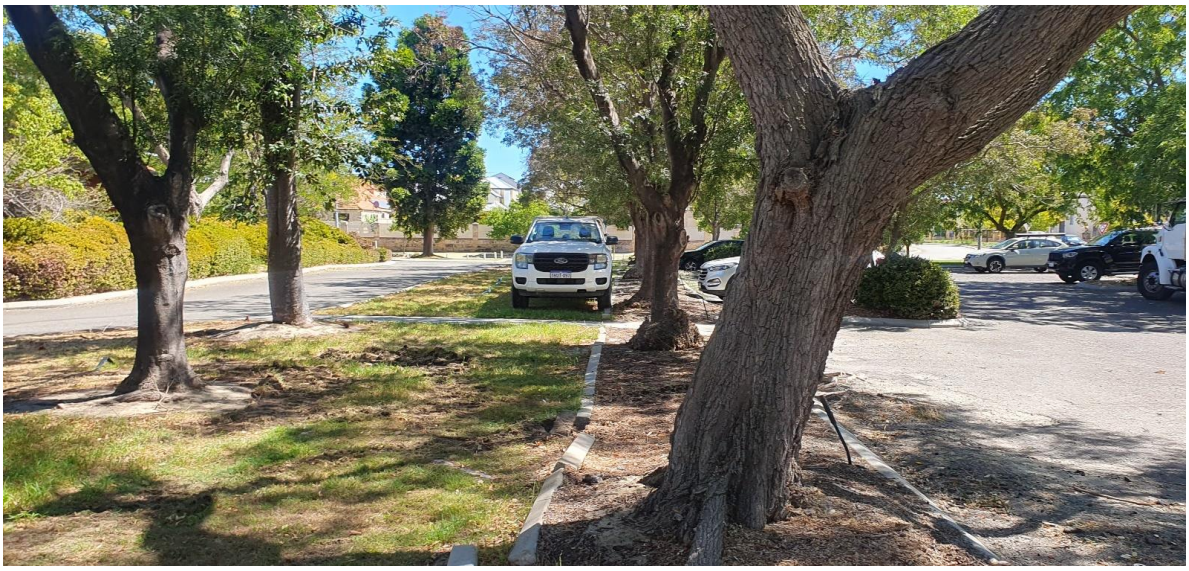

Appendices

# Appendix A: Site Photographs

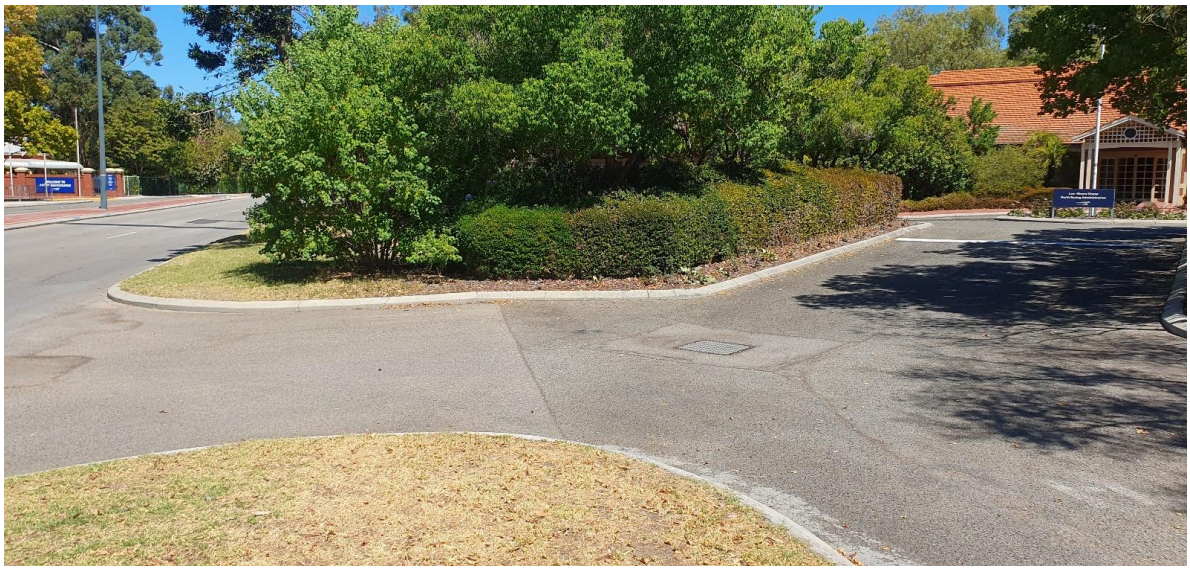
*Photograph 1: Near CPT02 facing south*



*Photograph 2: Near CPT02 facing south west*



*Photograph 3: Site photo from near northern portion of site*



# Appendix C: Machine Borehole and Monitoring Well Logs

# EXPLANATORY NOTES TO BE READ WITH BOREHOLE AND TEST PIT REPORTS

Galt GEOTECHNICS

## METHOD OF DRILLING OR EXCAVATION

| | | | | | |
|---|---|---|---|---|---|
| AC | Air Core | E | Excavator | PQ3 | PQ3 Core Barrel |
| AD/T | Auger Drilling with TC-Bit | EH | Excavator with Hammer | PT | Push Tube |
| AD/V | Auger Drilling with V-Bit | HA | Hand Auger | R | Ripper |
| AT | Air Track | HE | Hand Excavation | RR | Rock Roller |
| B | Bulldozer Blade | HQ3 | HQ3 Core Barrel | SON | Sonic Rig |
| BH | Backhoe Bucket | N | Natural Exposure | SPT | Driven SPT |
| CT | Cable Tool | NMLC | NMLC Core Barrel | WB | Washbore |
| DT | Diatube | PP | Push Probe | X | Existing Excavation |

## SUPPORT

| | |
|---|---|
| T | Timbering |

## PENETRATION EFFORT (RELATIVE TO THE EQUIPMENT USED)

| | | | | | |
|---|---|---|---|---|---|
| VE | Very Easy | E | Easy | F | Firm |
| H | Hard | VH | Very Hard | | |

## WATER

| | | | |
|---|---|---|---|
| ► | Water Inflow | ▼ | Water Level |
| ◄ | Water Loss (complete) | | |
| ◁ | Water Loss (partial) | | |

## SAMPLING AND TESTING

| | | | |
|---|---|---|---|
| B | Bulk Disturbed Sample | P | Piston Sample |
| BLK | Block Sample | PBT | Plate Bearing Test |
| C | Core Sample | U | Undisturbed Push-in Sample |
| CBR | CBR Mould Sample | | U50: 50 mm diameter |
| D | Small Disturbed Sample | SPT | Standard Penetration Test |
| ES | Environmental Soil Sample | | Example: 3, 4, 5 N=9 |
| EW | Environmental Water Sample | | 3,4,5: Blows per 150 mm |
| G | Gas Sample | | N=9: Blows per 300 mm after |
| HP | Hand Penetrometer | | 150 mm seating interval |
| LB | Large Bulk Disturbed Sample | VS | Vane Shear; P = Peak |
| M | Mazier Type Sample | | R = Remoulded (kPa) |
| MC | Moisture Content Sample | W | Water Sample |

## ROCK CORE RECOVERY

TCR = Total Core Recovery (%) $= \frac{CRL}{TCL} \times 100$

RQD = Rock Quality Designation (%) $= \frac{ALC>100}{TCL} \times 100$

| | |
|---|---|
| TCL | Length of Core Run |
| CRL | Length of Core Recovered |
| ALC>100 | Total Length of Axial Lengths of Core Greater than 100 mm Long |

# METHOD OF SOIL DESCRIPTION
# BOREHOLE AND TEST PIT REPORTS

Galt GEOTECHNICS

## GRAPHIC LOG & SOIL CLASSIFICATION SYMBOLS

| Graphic | USCS | Soil Name |
|---|---|---|
| | | FILL (various types) |
| | | COBBLES / BOULDERS |
| | GP | GRAVEL (poorly graded) |
| | GW | GRAVEL (well graded) |
| | GC | Clayey GRAVEL |
| | GM | Silty GRAVEL |
| | SP | SAND (poorly graded) |
| | SW | SAND (well graded) |
| | SC | Clayey SAND |

| Graphic | USCS | Soil Name |
|---|---|---|
| | SM | Silty SAND |
| | ML | SILT (low liquid limit) |
| | MH | SILT (high liquid limit) |
| | CL | CLAY (low plasticity) |
| | CI | CLAY (medium plasticity) |
| | CH | CLAY (high plasticity) |
| | OL | Organic SILT (low liquid limit) |
| | OH | Organic SILT (high liquid limit) |
| | Pt | PEAT |

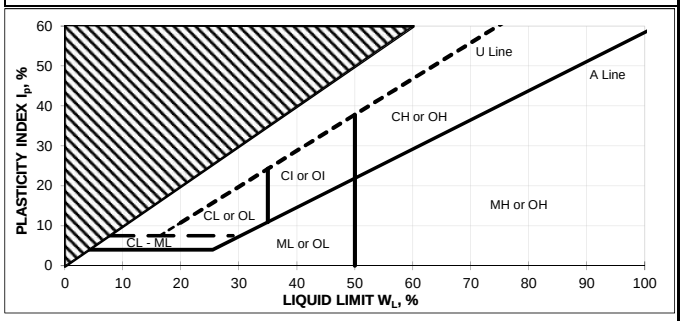
NOTE: Dual classification given for soils with a fines content between 5% and 12%.

## SOIL CLASSIFICATION AND INFERRED STRATIGRAPHY

Soil descriptions are based on AS1726-2017. Material properties are assessed in the field by visual/tactile methods in combination with field and laboratory testing techniques (where used).
NOTE: AS 1726-2017 defines a fine grained soil where the total dry mass of fine fractions (<0.075 mm particle size) exceeds 35%.

| PARTICLE SIZE | | |
|---|---|---|
| **Soil Name** | | **Particle Size (mm)** |
| BOULDERS | | >200 |
| COBBLES | | 63 to 200 |
| GRAVEL | Coarse | 19 to 63 |
| | Medium | 6.7 to 19 |
| | Fine | 2.3 to 6.7 |
| SAND | Coarse | 0.6 to 2.36 |
| | Medium | 0.21 to 0.6 |
| | Fine | 0.075 to 0.21 |
| FINES | SILT | 0.002 to 0.075 |
| | CLAY | <0.002 |

**PLASTICITY - MODIFIED CASAGRANDE CHART - AS1726-2017**




| RESISTANCE TO EXCAVATION | | |
|---|---|---|
| **Symbol** | **Term** | **Description** |
| VE | Very easy | All resistances are relative to the selected method of excavation |
| E | Easy | |
| F | Firm | |
| H | Hard | |
| VH | Very hard | |

| MOISTURE CONDITION | |
|---|---|
| **Symbol** | **Term** |
| D | Dry |
| M | Moist |
| W | Wet |

| CEMENTATION | |
|---|---|
| **Cementation** | **Description** |
| Weakly cemented | Soil may be easily disaggregated by hand in air or water |
| Moderately cemented | Effort is required to disaggregate the soil by hand in air or water |

| CONSISTENCY | | |
|---|---|---|
| **Symbol** | **Term** | **Undrained Shear Strength (kPa)** |
| VS | Very Soft | 0 to 12 |
| S | Soft | 12 to 25 |
| F | Firm | 25 to 50 |
| St | Stiff | 50 to 100 |
| VSt | Very Stiff | 100 to 200 |
| H | Hard | >200 |

| ORGANIC SOILS | |
|---|---|
| **Material** | **Organic Content % of dry mass** |
| Inorganic soil | <2% |
| Organic soil | 2% to 25% |
| Peat | >25% |

| DENSITY | | |
|---|---|---|
| **Symbol** | **Term** | **Density Index (%)** |
| VL | Very Loose | <15 |
| L | Loose | 15 to 35 |
| MD | Medium Dense | 35 to 65 |
| D | Dense | 65 to 85 |
| VD | Very Dense | >85 |

Galt

# REPORT OF BOREHOLE: BH01/MW01

| | | | | | |
|---|---|---|---|---|---|
| Job No | : WAG230750-01 | Easting | : 0.00 | Sheet | : 1 OF 1 |
| Client | : Tabec | Northing | : 0.00 | Logged | : MDS |
| Project | : Proposed Development | UTM | : | Logged Date | : 08/02/2024 |
| Location | : Lot 452 Resolution Drive, Ascot | Drill Rig | : AMS Super Rig | Checked | : TM |
| Contractor | : Galt Geotechnics | Inclination | : -90 deg | Checked Date | : 25/02/2024 |

**General comments: Monitoring Well Installed at this location**

| Drilling Method | Depth (m) | Water | Classification Code | Soil Origin | Graphic Log | Consistency/Density | Moisture | Material Description | Structural and Additional Observations | Well Diagram |
|---|---|---|---|---|---|---|---|---|---|---|
| 90mm Solid Auger | 0.3 | | SP | Natural | | | D | Natural SAND: dark brown and black, fine to coarse grained, with low plasticity clay, (trace organics present in upper 200mm). | (trace organics present in upper 200mm) | Backfill (Drill Spoil) |
| | 0.45 | | SP | Natural | | MD-D | | Natural SAND: pale yellow, fine to coarse grained, trace low plasticity clay. | | 50mm PVC Solid<br>Bentonite (Sealed above Slotted PVC) |
| | 0.9 | | SP | Natural | | | | Natural SAND: dark brown and black, fine to coarse grained, trace low plasticity clay. | | |
| | 1 | | Cl | Natural | | VSt-H | | Natural Sandy CLAY: medium plasticity, brown and pale orange, fine grained sand, inorganic, clay is highly desiccated. | Clay is highly desiccated | |
| | 2 | | | | | | | | | |
| | 2.3 | | SC | Natural | | | | Natural Clayey SAND: low plasticity clay, brown and dark brown, fine to coarse grained, trace fine to medium sized gravel. | | Filter Pack (Gravel Filter Medium Installed) |
| | 2.5 | | Cl | Natural | | VSt-H | | Natural CLAY: medium plasticity, brown and pale orange, trace fine to medium grained sand, inorganic, clay is desiccated at shallower depths. | Clay is desiccated at shallower depths | |
| | 3 | ▼ | | | | | | | | 50mm PVC Slotted |
| | 4 | | | | | | | | | |
| | 5 | | | | | | | | | |
| | 6 | | | | | | | **BH01/MW01 Terminated at 6m (Target Depth GW @3.03m)** | | |
| | 7 | | | | | | | | | |
| | 8 | | | | | | | | | |



Galt

# REPORT OF BOREHOLE: BH02

| | | | | | |
|---|---|---|---|---|---|
| Job No | : WAG230750-01 | Easting | : 0.00 | Sheet | : 1 OF 1 |
| Client | : Tabec | Northing | : 0.00 | Logged | : MDS |
| Project | : Proposed Development | UTM | : | Logged Date | : 08/02/2024 |
| Location | : Lot 452 Resolution Drive, Ascot | Drill Rig | : AMS Super Rig | Checked | : TM |
| Contractor | : Galt Geotechnics | Inclination | : -90 deg | Checked Date | : 25/02/2024 |

| Drilling Method | DCP graph | Water | Depth (m) | Soil Origin | Graphic Log | Classification Code | Material Description | Moisture | Consistency/Density | Remarks | Sample |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 90mm Solid Auger | | | | Natura | | SP | Natural SAND: dark grey and black, fine to coarse grained, trace low plasticity clay, (trace organics present in upper 200mm). | M-D | MD-D | | |
| | | | 1 | | | | **BH02 refusal at 0.7m (Refusal on Desiccated Clay Groundwater not encountered)** | | | | |
| | | | 2 | | | | | | | | |
| | | | 3 | | | | | | | | |
| | | | 4 | | | | | | | | |
| | | | 5 | | | | | | | | |
| | | | 6 | | | | | | | | |
| | | | 7 | | | | | | | | |
| | | | 8 | | | | | | | | |

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Galt

# REPORT OF BOREHOLE: BH03

| | | | | | |
|---|---|---|---|---|---|
| Job No | : WAG230750-01 | Easting | : 0.00 | Sheet | : 1 OF 1 |
| Client | : Tabec | Northing | : 0.00 | Logged | : PA |
| Project | : Proposed Development | UTM | : | Logged Date | : 14/02/2024 |
| Location | : Lot 452 Resolution Drive, Ascot | Drill Rig | : AMS Super Rig | Checked | : TM |
| Contractor | : Galt Geotechnics | Inclination | : -90 deg | Checked Date | : 25/02/2024 |

| Drilling Method | DCP graph | Water | Depth (m) | Soil Origin | Graphic Log | Classification Code | Material Description | Moisture | Consistency/Density | Remarks | Sample |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 90mm Solid Auger | | | 0.1 | Topsoil | | SP | Topsoil SAND: dark grey, fine to medium grained, trace medium plasticity clay, with roots / organics. | D | | | |
| | | | 0.25 | Fill | | SP | Fill SAND: brown, medium dense to dense, fine to medium grained, trace low plasticity clay. | | MD-D | | |
| | | | 0.4 | Fill | | GP | Fill Sandy GRAVEL: grey, medium dense to dense, fine to medium sized, fine to medium grained sand, trace low to medium plasticity clay. | | | | |
| | | | | Natural | | SM | Natural Silty SAND: grey brown, fine to medium grained. | | | | |
| | | | 0.7 | Natural | | CI | Natural CLAY: medium plasticity, grey, with fine to medium grained sand, inorganic, trace organics, clay is desiccated at shallow depths. | | VSt-H | | |
| | | | 1 | | | | | | | | |
| | | | 1.5 | Natural | | CI | As above, brown, trace organics. | | | | |
| | | | 2 | | | | | | | | |
| | | | 3 | | | | | | | | |
| | | | 4 | Natural | | CI | As above. | M | | | |
| | | | 5 | | | | | | | | |
| | | | 6 | | | | **BH03 Terminated at 6m (Target depth. Groundwater not encountered)** | | | | |
| | | | 7 | | | | | | | | |
| | | | 8 | | | | | | | | |



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Galt

# REPORT OF BOREHOLE: BH04

| | | | | | |
|---|---|---|---|---|---|
| Job No | : WAG230750-01 | Easting | : 0.00 | Sheet | : 1 OF 1 |
| Client | : Tabec | Northing | : 0.00 | Logged | : PA |
| Project | : Proposed Development | UTM | : | Logged Date | : 14/02/2024 |
| Location | : Lot 452 Resolution Drive, Ascot | Drill Rig | : AMS Super Rig | Checked | : TM |
| Contractor | : Galt Geotechnics | Inclination | : -90 deg | Checked Date | : 25/02/2024 |

| Drilling Method | DCP graph | Water | Depth (m) | Soil Origin | Graphic Log | Classification Code | Material Description | Moisture | Consistency/Density | Remarks | Sample |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 90mm Solid Auger | | | 0.25 | Topsoil | | SP | Topsoil SAND: grey, fine to medium grained, trace medium plasticity clay, trace / with organics. | D | | | |
| | | | 0.5 | Fill | | SP | Fill SAND: brown, fine to medium grained, trace low plasticity clay. | | | | |
| | | | 1 | Natural | | SC | Natural Clayey SAND: medium plasticity clay, brown, fine to medium grained. | | | | |
| | | | 1.2 | Natural | | CI | Natural Sandy CLAY: medium plasticity, brown mottled red, fine to medium grained sand, trace fine to medium sized gravel, inorganic, clay is desiccated. | | VSt-H | | |
| | | | 1.5 | Natural | | CI | Natural CLAY: medium plasticity, brown, with fine to medium grained sand, inorganic, clay is desiccated at shallow depths. | | | | |
| | | | 3 | Natural | | CI | As above. | M | | | |
| | | | 4.5 | Natural | | CI | As above. | W | | | |
| | | | | | | | **BH04 Terminated at 6.5m (Target depth. Groundwater possibly at 4.5 m depth)** | | | | |

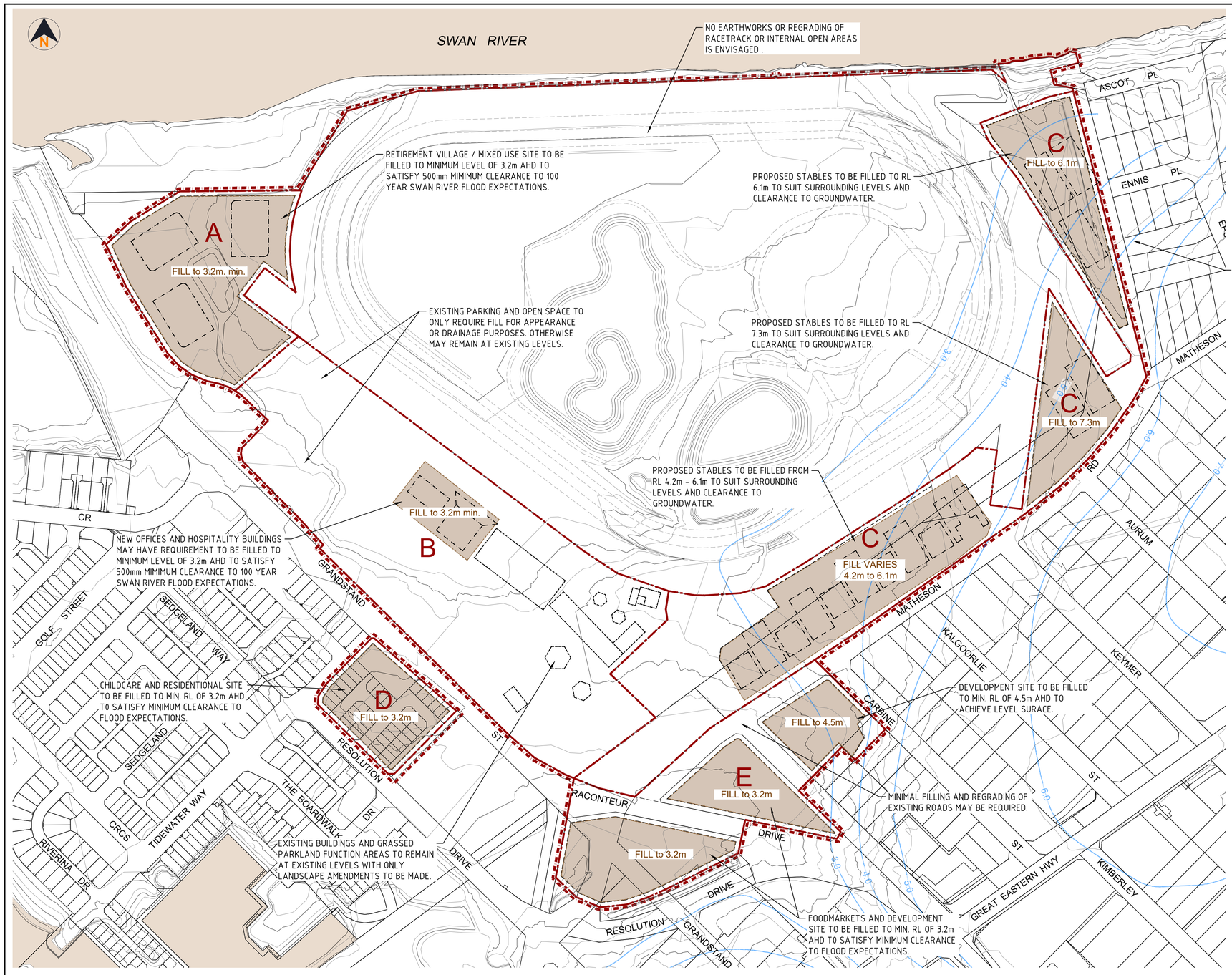


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# Appendix C

Preliminary Civil Drawing

Tabec 2024




| No. | DATE | DRAWN | APPROVED | AMENDMENT |
|---|---|---|---|---|
| C | 21.06.24 | PK | JZ | MINIMUM FILL LEVELS AMENDED IN LINE WITH THE LWMS |
| B | 18.06.24 | PK | JZ | PRELIMINARY ISSUE FOR INFORMATION ONLY |
| A | 24.01.24 | PK | JZ | PRELIMINARY ISSUE FOR REVIEW |

FOR INFORMATION

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COLOUR
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CLIENT: PERTH RACING

| DESIGNED | CHECKED | APPROVED |
|---|---|---|
| PK | JZ | |
| DRAWN | CHECKED | DATE |
| PK | JZ | |

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PROJECT: ASCOT RACECOURSE - LOCAL STRUCTURE PLAN

TITLE: EARTHWORKS CONCEPT PLAN

DRAWING NUMBER: 2541-00-100

ISSUE: C

Plotted By: jkeenan Plot Date: 21/06/24 - 14:47 Cad File: C:\JOBS\Admin\TB-JOBS\2541 - Ascot Racecourse LSP_JOY\CAD\CAD\2541-100\2541-100.dwg

# Appendix D

Modelling Assumption Report

Emerge Associates 2024

# Modelling Assumptions Report

## Golden Gateway Local Structure Plan

Project No: EP23-109(03)

**Prepared for Perth Racing**
**May 2024**



# Document Control

| Doc name: | Modelling Assumptions Report<br>Golden Gateway Local Structure Plan | | | | |
|---|---|---|---|---|---|
| Doc no.: | EP23-109(03)--008 JM | | | | |
| Version | Date | Author | | Reviewer | |
| 1 | May 2024 | Joyti Mabruk | JM | David Coremans | DPC |
| | Appendix to the LWMS | | | | |

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# 1 Background

Perth Racing (the 'proponent') proposed to progress a local structure plan (LSP) over its landholdings in Ascot. The area is bounded by the Swan River to the North, Grandstand Road to the west and south, Matheson Road and Resolution Drive to the south and residential areas to the east, referred to herein as 'the site'. The structure plan area also includes the Ascot Racecourse area. The site is located approximately 8.5 km east of Perth central business district (CBD) and is approximately 62 ha in size, within City of Belmont (CoB). The LSP consists of six precincts: Precinct A, Precinct B, Precinct C, Precinct D, Precinct E, and the racecourse.

# 2 Methodology

XPSWMM hydrologic and hydraulic modelling software (v21.3) was used to calculate the surface water runoff volumes within the road reserves and lots associated with the development of Ascot Racecourse.

The hydrologic component of the software uses the Laurenson non-linear runoff-routing method to simulate runoff from design storm events. Key assumptions regarding the hydrologic model include:

- Runoff is proportional to slope, area, infiltration and percentage of imperviousness of a catchment.
- Sub-catchment areas and slopes are determined from surveyed topographical data and earthworks plans.
- Infiltration rates and percentage imperviousness have been selected based on experience with model preparation for similar soil conditions.

Runoff from each sub-catchment is routed through the catchment using the hydraulic component of XPSWMM. Generally, assumptions associated with the hydraulic component of the model include:

- Virtual links (i.e. purely for model construction, not equivalent to flow path onsite) between nodes within a sub-catchment are given the length of 10 m and slope of 0.05 to minimise the lag time of conveying the water from a sub-catchment node to a 'storage' node, a 'dummy intermediate' node or a conduit/link.
- Links between sub-catchment storages act as conveyance channels (e.g. sheet flow within roads in a 1% annual exceedance probability (AEP)). These links are given lengths and slopes that are representative of the site conditions and actual pathway lengths between catchments.
- All channels are designed with a width of 5 m, roughness of 0.014 (Manning's n) and are trapezoidal in shape. This allows for easy conveyance and represents concrete pipes and road surfaces within the model.
- Where relevant median swales, bio-retention areas (BRAs), and flood storage areas (FSAs) are modelled as nodal-reservoirs with infiltration depth-rating curves to account for differential infiltration rates with changing depth.

## 2.1 Rainfall

The ensemble temporal patterns obtained from the Australian Rainfall and Runoff (AR&R) Data Hub (AR&R 2019) were used for the rainfall analysis.

Durations ranging between 15 min and 72 hours were tested, with the peak flood elevation being assessed as the determining result.

Following the process suggested by AR&R (Ball J et al. 2019), the highest mean duration was selected as the critical duration. AR&R also recommends that when it is not practical to run the entire ensemble array, the ensemble that produces the result closest to the mean (for the critical duration) should be adopted and provided in **Table 1**.

*Table 1: Critical Duration Analysis*

| Catchment | Critical Duration (20% AEP) | Critical Duration (10% AEP) | Critical Duration (1% AEP) |
|---|---|---|---|
| Precinct A | 3 hour duration ensemble 4 | 3 hour duration ensemble 1 | 3 hour duration ensemble 1 |
| Precinct C | 30 min duration ensemble 6 | 30 min duration ensemble 7 | 30 min duration ensemble 8 |
| Precinct D | 1 hour duration ensemble 1 | 30 min duration ensemble 5 | 30 min duration ensemble 1 |
| Precinct E | 45 min duration ensemble 6 | 30 min duration ensemble 5 | 30 min duration ensemble 8 |

# 3 Pre-development model

The catchment parameters determined for Precinct D within the LWMS for the initial loss – continuous loss model have been adopted to account for catchment losses. The pre-development loss parameters used are given in **Table 2**.

*Table 2: Pre-development loss parameters*

| Land type | Initial loss (mm) | Continual loss (mm) | Roughness |
|---|---|---|---|
| Existing residential/Carpark | 15 | 0.1 | 0.014 |

Catchment analysis for pre-development scenario was based on topographic contour data, site visit and aerial photography. Pre-development catchment area within Precinct D is 1.145 ha.

# 4 Post-development model

An initial loss continuing loss model was adopted to account for post-development catchment losses. The post-development catchment area, land types and loss values were based on the structure plan design, typical infiltration rates for the soils which occur onsite and based on project team experience. Post-development catchment areas and land types within the site were informed by sub-division plan provided by LPD surveyors. **Table 3** summarises the loss parameters used within the post-development model.

*Table 3: Post-development loss parameters*

| Land type | Initial loss (mm) | Continual loss (mm) | Roughness |
|---|---|---|---|
| Road Surface | 1 | 0.1 | 0.02 |
| Road Verge | 9 | 1.5 | 0.05 |
| Fully Impervious | 1 | 0.1 | 0.02 |
| Roof | 1 | 0.1 | 0.02 |
| Lot IMP | 1 | 0.1 | 0.02 |
| Gardens | 25 | 2 | 0.05 |
| POS | 25 | 2 | 0.05 |
| Precinct E Lots | 15 | 0.1 | 0.014 |

A summary of post-development catchment information is provided in **Table 4** with the catchment plan and basin location shown in Figure 08 of the LWMS.

*Table 4: Post-development catchment areas (ha)*

| Road reserve | Lots | Road Reserve | POS | Fully Impermeable | Child Care |
|---|---|---|---|---|---|
| Precinct A | 0.714 | 0.606 | 1.360 | 0.330 | - |
| Precinct C | - | 5.903 | - | - | - |
| Precinct D | 0.526 | 0.421 | - | - | 0.199 |
| Precinct E | 3.622 | 0.365 | 0.219 | - | - |

The following assumptions were incorporated into the model:

- Precinct A
  - Lots will have 100% roof areas and road reserve contains 5% pervious verge and 95% impervious bitumen areas.
  - POS will be 100% pervious.
  - There is no current connection point for drainage to be exported from Precinct A.
  - 1 single basin/Flood storage area (FSA) for both treatment and flood mitigation.
  - Base of the FSA will need to be vegetated with reeds/rushes as per a biofilter.
  - FSA will have 1:6 side slopes and maximum depth 1.2m in a 1% AEP – to avoid the need for fencing or access control.

- A hydraulic conductivity of 1m/day is assumed.

- Precinct C
  - The existing portion of Precinct C already connected to the centre of the track (existing buildings and stables) and no change has been assumed.
  - Rest of the Precinct C were modelled as two separate catchments i.e., carpark and stables which are 95% impervious and 5% pervious.
  - 1m deep sub-surface storage has been designed to accommodate 1% AEP event.
  - A hydraulic conductivity of 1m/day is assumed.
  - The storage configuration could be changed/modified to suit site layout/constraints.
  - The carpark in Precinct C that discharges to the southwest will discharge to Precinct E.

- Precinct D
  - Lots will have 50% roof areas, 45% paved areas and 5% pervious garden areas, the childcare has roof areas and Road reserve contains 20% pervious verge and 80% impervious bitumen areas.
  - 1m deep sub-surface storage has been designed to accommodate and detain upto 1% AEP events that will mimic pre-development flow of 0.4.
  - A hydraulic conductivity of 1m/day is assumed.
  - The storage configuration could be changed/modified to suit site layout/constraints.

- Precinct E
  - The carpark in Precinct C discharges to Precinct E.
  - Outflow of pre-development Water Corporation (WC) drain is 0.95 $m^3/s$ as per WC modelling.
  - All lots of Precinct E retain 15mm of rainfall.
  - Runoff above 15 mm rainfall up to the 1% AEP will be managed by a detention basin which will mimic pre-development 1% AEP peak flow of 0.463 $m^3/s$.
  - The basin will have 1:6 side slopes and maximum depth 1.2m in a 1% AEP – to avoid the need for fencing or access control.
  - A hydraulic conductivity of 1m/day is assumed.

# 5 References

## 5.1 General references

The references listed below have been considered as part of preparing this document.

Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M and Testoni I (Editors) 2019, *Australian Rainfall and Runoff: A Guide to Flood Estimation*, Commonwealth of Australia (Geoscience Australia).

## 5.2 Online references

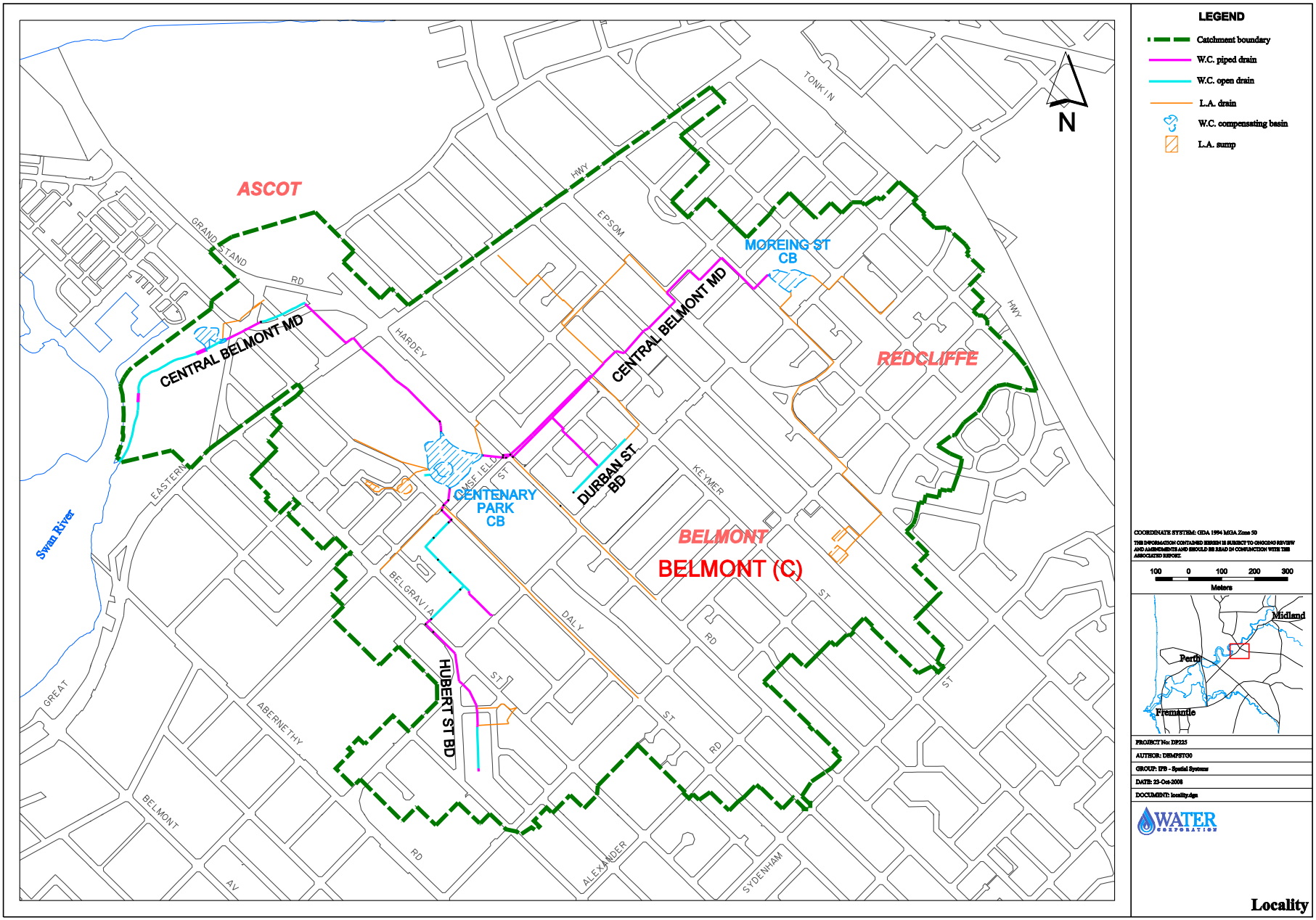
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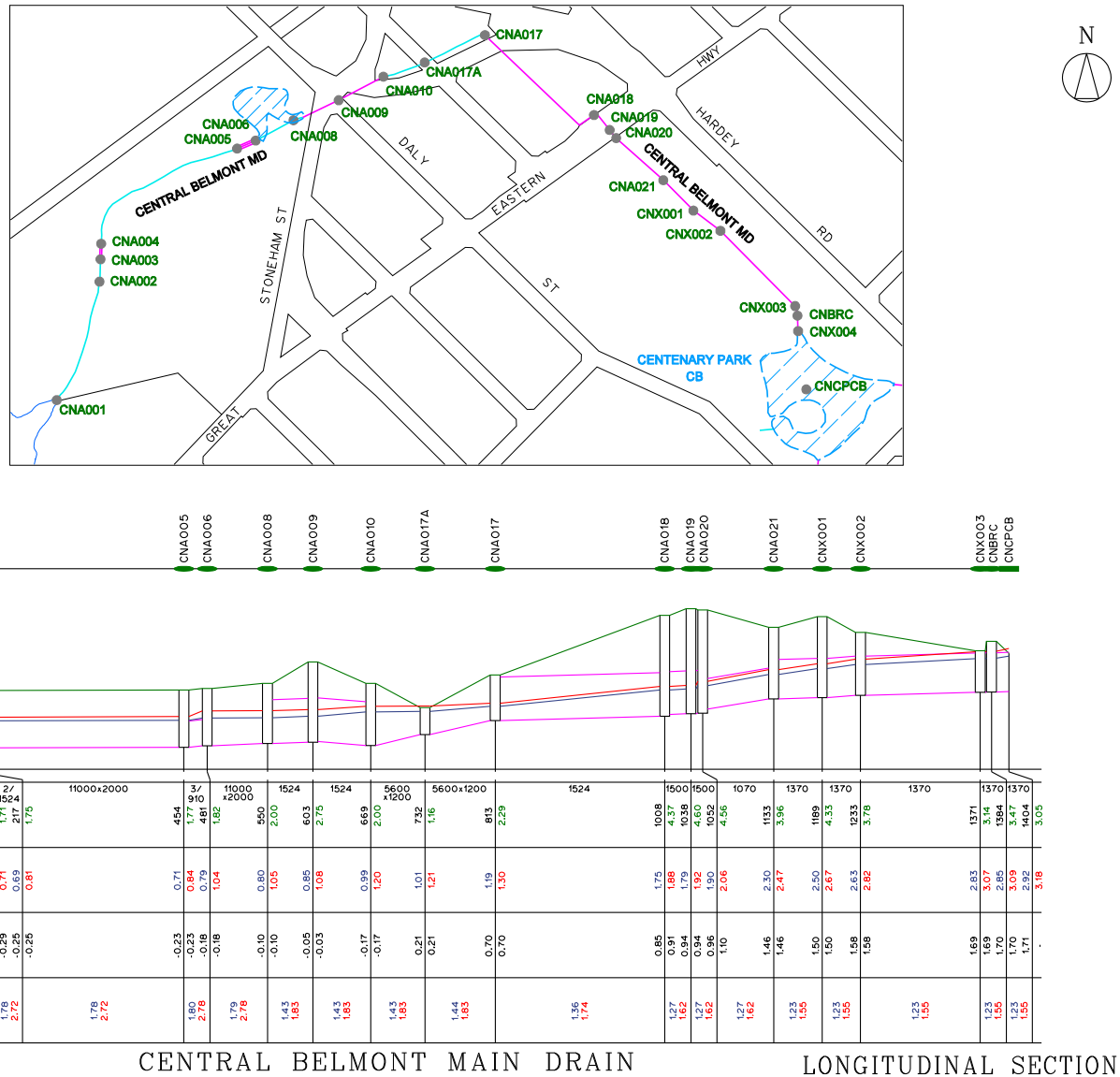
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# Appendix E

Central Belmont Main Drain Water Corporation


ASCOT
REDCLIFFE
BELMONT
BELMONT (C)
CENTRAL BELMONT MD
CENTRAL BELMONT MD
MOREING ST CB
CENTENARY PARK CB
DURBAN ST BD
HUBERT ST BD
Swan River
GRAND STAND RD
HARDEY
EPSOM
TONKIN HWY
HWY
EASTERN
KEYMER
BELGRAVIA
DALY
GREAT
ABERNETHY
BELMONT
RD
ST
AV
ALEXANDER
SYDENHAM
N
LEGEND
Catchment boundary
W.C. piped drain
W.C. open drain
L.A. drain
W.C. compensating basin
L.A. sump
COORDINATE SYSTEM: GDA 1994 MGA Zone 50
100 0 100 200 300
Meters
Midland
Perth
Fremantle
PROJECT No: DP225
AUTHOR: DEMPSTOO
GROUP: IPD - Spatial Systems
DATE: 23-Oct-2008
DOCUMENT: locality4gs
WATER CORPORATION
Locality
Figure 1.1

THE INFORMATION CONTAINED HEREIN IS SUBJECT TO ONGOING REVIEW AND AMENDMENTS AND SHOULD BE READ IN CONJUNCTION WITH THE ASSOCIATED REPORT.




CENTRAL BELMONT MAIN DRAIN LONGITUDINAL SECTION

Hgls and Flows Existing Scheme (1 of 2)

Figure C1.1

AUTHOR: DEMPSTER DESIGN FILE: Central Belmont MD.dgn

WATER CORPORATION

PROJECT N°: DP225 DATE: 05/01/2009 COORDINATE SYSTEM: MGA94 - Zone 50

# ATTACHMENT 4

Retail Assessment (Net Benefit Test)

Taktics4

Proposed Activity

Ascot, City of Belmont

# Net Benefit Test

*In accordance with SPP4.2*

### Project

| | |
|---|---|
| Project name | **Ascot Centre** |
| Project number | **2360** |
| Prepared for | **Perth Racing / Rowe Group** |

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| | | | | |

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### Acknowledgement of Country

Taktics4 acknowledges the First Nations people as the custodians of the land which is the subject of this assessment. Taktics4 recognise and respect their continuing culture, and Elders past, present, and emerging.

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## 1. EXECUTIVE SUMMARY

This assessment considers the net benefit of two proposed activity categories proposed in Ascot, in the City of Belmont. The assessment has been prepared in response to the policy requirements established by State Planning Policy 4.2. This Net Benefit Test assesses:

1. Proposed local centre of 3,400 sqm NLA (PLUC 5 – 'SHOP')
2. Proposed bulky goods precinct of 9,600 sqm (PLUC 6 – 'OTHER RETAIL')

**Proposed Local Centre**

The assessment reveals that the proposed local centre activity will generate a Net Benefit by:

- being sustainable from 2026 – satisfying an existing resident trade area and filling an existing demand/gap/need in the market
- having low – insignificant impacts on surrounding activity network – with any impacts likely to be offset by potential sales growth generated by additional resident population and spending over the next 15 years.
- creating up to 85 full time equivalent jobs,
- reducing the number of vehicle km required to be travelled by residents in the immediate trade area.

Residents in Ascot and Belmont:

- are the communities most likely to experience the benefit from the proposed activity.
- are estimated to account for 40% of total sales / trips at the proposed activity.
- do not currently have access to a full line supermarket-based centre within 2.5 km.
- travel up to 2.5 km each way (5 km round trip) every time they access their full line supermarket needs.

**Proposed Bulky Goods**

The assessment reveals that the proposed activity will generate a Net Benefit by:

- complementing the existing offer in the vicinity
- being accessible through strong north south and east west connections.
- creating up to 120 jobs.
- having low/insignificant impacts on existing and planned activity precincts – which will subsequently be offset by planned population and retail spending growth in the trade area.

**Net Benefit**

Subsequently, the proposed activity:

- will not impact the integrity of the surrounding activity centre network – and as such will not have any negative impact on existing or planned public or private investment in the trade area.
- will reduce the amount of trip kilometres that Ascot and Belmont residents must travel each year to satisfy their daily/weekly and bulky goods shopping needs.
- will save over 530,000 to 700,000 trips p.a. to centres outside their trade area
- will save between 40 and 50 trips per person per annum.

- will save between 2.7 M km p.a. and 3.5 M km p.a. of vehicular travel per annum
- is consistent with the objectives and outcomes of SPP 4.2.
- is aligned with local planning strategies.

## 2. INTRODUCTION

This assessment represents a 'Net Benefit Test' for two activity categories proposed in Ascot, City of Belmont. The Net Benefit Test has been prepared in response to the policy requirements established by State Planning Policy 4.2 – Activity Centres. The Net Benefit Test assesses:

1. a proposed local centre of 3,400 sqm NLA (PLUC 5 – 'SHOP')
2. a proposed bulky goods precinct of 9,600 sqm (PLUC 6 – 'OTHER RETAIL')

This assessment has been prepared in three distinct parts and should be read in conjunction with the proposed Local Structure Plan and Scheme Amendment documents.

| | | |
|---|---|---|
| **Part 1** | Relevant market variables appropriate to the assessment of both activity types | Activity Centre Network<br>Trade Area Definition<br>Population<br>Retail Spending Profile<br>Retail Spending capacity |
| **Part 2** | Proposed Local Centre (PLUC 5) | Market Demand/Need<br>Impact Test<br>Net Benefit Test |
| **Part 3** | Proposed Bulky Goods (PLUC 6) | Market Demand/Need<br>Impact Test<br>Net Benefit Test |

### 2.1 Purpose

A net benefit occurs when the benefits (pros) to the community arising from a proposal outweigh any identified impacts (cons) to the community arising from a proposal. The Net Benefit Test assesses the potential impacts and benefits of a proposal to the community and on existing and planned activity centres and is expected to answer the following questions.

- Is there a demand for additional floorspace, and if so, how does the proposal meet this demand?
- How will the proposed development impact on the role of the activity centre?
- How will the proposal impact the viability and vibrancy of other activity centres in the hierarchy?
- Are any potential impacts reduced or mitigated over the longer term?
- What is the anticipated loss and/or gain of services to the community?
- What is the anticipated impact on access (distance, time, mode of travel) to services by the community?
- Will the proposal contribute to a net increase in employment?
- Does the proposal align with the objectives and outcomes of this policy and the planning framework?

A Net Benefit Test is to be prepared when:

- A proposal introduces floorspace in an existing or planned activity centre which exceeds the floorspace identified for that centre in a current 'Needs Assessment'.
- A proposal introduces new land or rezones land to facilitate major development or out-of-centre development.

### 2.2 Out-of-Centre Development

An Out of Centre Development is defined by SPP4.2 as a proposal which introduces:

- Category A or B activity centre (see table) uses outside of an existing or planned activity centre as identified by a Needs Assessment (regardless of land size).
- More than 500 sqm NLA of Category A uses outside an existing or planned activity centre as identified by a Needs Assessment.

Exemptions to Out of Centre Development includes:

- Development applications for Category B activity centre uses where the existing zoning contemplates (P, D, A) land uses.
- Development applications for Category A activity centre uses up to 1,500 sqm NLA where they are located substantially within the 400m walkable catchment of a rail station.

Out of Centre Development may only be appropriate where a proposal:

- is sufficiently separated from nearby activity centres to minimise negative impacts to those activity centres (as demonstrated through the Net Benefit Test).
- is in proximity to existing housing at an average dwelling density of at least 25 dwellings per gross Urban Zone (Region Schemes) hectare within a 400 m walkable catchment of the development; and
- accessible to its catchment community by walking and cycling, minimising the need for additional private vehicle trips.

### 2.3 Major Development

A major development is defined by SPP4.2 as a proposal which introduces additional Category A activity floor space which exceeds the threshold for the activity centre hierarchy in the table below.

*FIGURE 1 - MAJOR DEVELOPMENT FLOORSPACE THRESHOLDS by CENTRE TYPE*

| **Existing Activity Centre Hierarchy** | **Additional Floor space threshold (sqm NLA)** |
|---|---|
| Strategic | 10,000 |
| Specialised | 3,000 |
| Secondary | 10,000 |
| District | 5,000 |
| Neighbourhood | 3,000 |
| Local | 1,500 |
| **Proposed Activity Centre Hierarchy** | any development in a proposed / planned centre is a major development regardless of floor space amount |

## 2.4 Activity Centre Uses

Assessments are only required to be undertaken for the following activity types.

*FIGURE 2 – PLANNING CATEGORY*

| Planning Land Use Code (PLUC) | Category A<br>Activity Centre Uses | Category B<br>Activity Centre Uses |
|---|---|---|
| **5 – 'SHOP'** | Shop<br>Liquor Store - Large<br>Fast Food Outlet<br>Lunch Bar<br>Restaurant & Café | Convenience store<br>Liquor store - small<br>Restricted premises<br>Service station |
| **6 – 'OTHER RETAIL'** | | Bulky goods showroom<br>Motor vehicle, boat, or caravan sales |

## 2.5 Scope and Methodology

The Net Benefit Test is to be based on:

- The contextual description of the proposal and location with supporting maps, identifying if out-of-centre, within-centre or new activity centre.
- The change in net lettable area (NLA) of the shop/ retail (PLUC 5 - SHP) and/or other retail (PLUC 6 - RET) floor space.
- The defined trade area (including primary trade area and any secondary and tertiary trade areas).
- The estimated existing and forecast population of the trade area.
- The trade area resident attributes and implications for floorspace need and spending estimates.
- The estimated existing and forecast expenditure of the trade area using latest ABS Household Expenditure Survey or other reliable source.
- The estimated average annual sales (aggregate and per sqm NLA) for the proposed development and/or activity centre pre-and post-development proposal.

## 2.6 Modelling Method

The retail model is designed to assess the likely propensity for a resident in a particular area to visit/spend at each centre in the network. Based on the proximity of the resident to each centre, the role and function of each centre, the size of the retail offer at each centre, relative to other centres. The sales potential for the proposed centre will be based on the extent to which it may capture retail sales from each trade area. The results of the retail modelling shows:

- The expected market share that each centre may expect to capture from each trade area.
- The retail sales that may therefore be expected to be captured by each centre in the network from the designated trade areas.
- The relative contribution of each trade area to the overall sales at each centre.

The model results are focused primarily on the centres which can be expected to generate most of their sales from within the modelled trade areas. Centres located on the fringe of, or outside the trade areas will only show that proportion of sales captured from the trade areas. Subsequently, centres on the fringe of, or outside will not show a true sales figure, but rather

that part of the sales captured solely from within the trade area modelled. The impact assessment typically focuses primarily on the existing and planned centres closest to the proposed centre.

### 2.7 Measuring Impact

The potential sales generated by the development of the proposed centre will be drawn from centres in the network that would have reasonably expected to capture those sales had the proposed centre not been developed. The impact of the proposal on existing and planned activity centres is defined as an estimate of the retail turnover for each relevant activity centre identified for the following scenarios:

- without the proposed activity centre and
- with the new activity centre(s) assumed to be developed (or expanded).
- The differences between the 'without' and 'with' scenario is the potential turnover impact for each activity centre.

Competition between businesses in and of itself is not considered a relevant planning consideration. The impact of a proposal on an activity centre is defined as the potential loss of services and any associated detriment to the community caused by the proposed development. The following impact percentage and risk level for retail turnover is provided as a general guide and should not be used as the only indicator of acceptability of a proposal.

*FIGURE 3 - SPP4.2 IMPACT and RISK GUIDE*

| Impact Percentage | Potential Impact | Risk Level | Description |
|---|---|---|---|
| **0-5%** | Insignificant | Low | Any impacts are likely to be temporary and have no long-term effects on the viability of individual activity centres. |
| **5-10%** | Moderate | Medium | Impacts are likely to be more significant for individual centres, but overall network sustainability is unlikely to be undermined in the long term. |
| **10% +** | Significant | High | Impacts are likely to be very significant for individual centres and are likely to undermine the long-term network sustainability. |

Where the short-term impact is initially high before falling to a medium or low level in the long term, consideration should be given to how the development can be staged or if there needs to be any additional short-term benefits to ensure that level of service is always maintained. However, the overall impact of the proposal may be lessened or offset by the potential growth in sales each activity centre may generate from the introduction of additional residents and spending in the trade area over time.

# 3. ACTIVITY CENTRE NETWORK

The existing and planned activity centres in the immediate network of a proposed activity centre represents a key determinant for assessing the demand for a proposed activity centre. The following activity centres are considered most likely to influence and be influenced by the proposed activity.

## 3.1 Strategic / Secondary Activity Centres

A Strategic Centre and two Secondary Centres are estimated to influence the potential demand and sustainability of the proposed activity.

***Morley Strategic Centre***

| | | |
|---|---|---|
| Designated / Classified | Strategic Centre | SPP4.2 |
| Performs the role of a | Strategic Centre | |
| Location from proposed activity | 4.5 km north | |
| Estimated current 'Shop' floor space (PLUC 5) | 99,000 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | C, W, A, S, K, T | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 22,500 sqm NLA | (LUS 2015/17) |
| Development potential | Medium | |

***Belmont***

| | | |
|---|---|---|
| Designated / Classified | Secondary Centre | SPP4.2 |
| Performs the role of a | Secondary Centre | |
| Location from proposed activity | 3.0 km south | |
| Estimated current 'Shop' floor space (PLUC 5) | 63,000 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | C, W, A, K, BW | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 30,000 sqm NLA | (LUS 2015/17) |
| Development potential | Medium | |

***Victoria Park***

| | | |
|---|---|---|
| Designated / Classified | Secondary Centre | SPP4.2 |
| Performs the role of a | Neighbourhood | |
| Location from proposed activity | 4.5 km southwest | |
| Estimated current 'Shop' floor space (PLUC 5) | 22,000 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | W | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 25,000 sqm NLA | (LUS 2015/17) |
| Development potential | Low | |

## 3.2 District Centres

Four district centres are estimated to influence the potential demand and sustainability of proposed the activity.

***Inglewood***

| | | |
|---|---|---|
| Designated / Classified | District Centre | SPP4.2 |
| Performs the role of a | Neighbourhood | |
| Location from proposed activity | 4 km north | |
| Estimated current 'Shop' floor space (PLUC 5) | 10,000 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | C, W, A | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 2,700 sqm NLA | (LUS 2015/17) |
| Development potential | Low | |

***Bayswater***

| | | |
|---|---|---|
| Designated / Classified | District Centre | SPP4.2 |
| Performs the role of a | Local | |
| Location from proposed activity | 2.5 km north | |
| Estimated current 'Shop' floor space (PLUC 5) | 3,800 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | IGA | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 0 sqm NLA | (LUS 2015/17) |
| Development potential | Low | |

***Maylands***

| | | |
|---|---|---|
| Designated / Classified | District Centre | SPP4.2 |
| Performs the role of a | Neighbourhood | |
| Location from proposed activity | 3 km northwest | |
| Estimated current 'Shop' floor space (PLUC 5) | 12,000 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | C, 2 x IGA | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 0 sqm NLA | (LUS 2015/17) |
| Development potential | Low | |

***Ashfield***

| | | |
|---|---|---|
| Designated / Classified | District Centre | SPP4.2 |
| Performs the role of a | Local | |
| Location from proposed activity | 3 km northeast | |
| Estimated current 'Shop' floor space (PLUC 5) | 750 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | IGA | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 0 sqm NLA | (LUS 2015/17) |
| Development potential | Medium | |

### 3.3 Neighbourhood/Local

Four neighbourhood/local centres are estimated to influence the potential demand and sustainability of the proposed activity.

***Rivervale***

| | | |
|---|---|---|
| Designated / Classified | Neighbourhood Centre | |
| Performs the role of a | Local | |
| Location from proposed activity | 2.5 km southwest | |
| Estimated current 'Shop' floor space (PLUC 5) | 3,000 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | IGA | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 0 sqm NLA | (LUS 2015/17) |
| Development potential | Low | |

***Kooyong***

| | | |
|---|---|---|
| Designated / Classified | Neighbourhood Centre | |
| Performs the role of a | Local | |
| Location from proposed activity | 3 km southwest | |
| Estimated current 'Shop' floor space (PLUC 5) | 2,250 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | IGA | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 0 sqm NLA | (LUS 2015/17) |
| Development potential | Low | |

***Belvidere***

| | | |
|---|---|---|
| Designated / Classified | Neighbourhood Centre | |
| Performs the role of a | Local | |
| Location from proposed activity | 1.5 km east | |
| Estimated current 'Shop' floor space (PLUC 5) | 6,200 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | IGA | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 0 sqm NLA | (LUS 2015/17) |
| Development potential | Low | |

***Epsom***

| | | |
|---|---|---|
| Designated / Classified | Local Centre | |
| Performs the role of a | Local | |
| Location from proposed activity | 1.5 km east | |
| Estimated current 'Shop' floor space (PLUC 5) | 6,200 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | IGA | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 0 sqm NLA | (LUS 2015/17) |
| Development potential | Low | |

## 3.4 Service Commercial Precincts / Other Centres

***Airport***

| | | |
|---|---|---|
| Designated / Classified | Specialised Centre | |
| Performs the role of a | Neighbourhood | |
| Location from proposed activity | 2.5 km east | |
| Estimated current 'Shop' floor space (PLUC 5) | 5,000 sqm NLA | |
| Majors / Anchor Tenants | W | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 25,000 sqm NLA | |
| Development potential | High | |

***Great Eastern Highway***

| | | |
|---|---|---|
| Designated / Classified | N/a | |
| Performs the role of a | Service Commercial | |
| Location from proposed activity | 1.5 km east | |
| Estimated current 'Shop' floor space (PLUC 5) | 8,600 sqm NLA | (LUS 2015/17) |
| Majors / Anchor Tenants | - | |
| Estimated current 'Other Retail' floor space (PLUC 6) | 4,700 sqm NLA | (LUS 2015/17) |
| Development potential | Medium | |

## 3.5 Summary

Analysis of the activity centre network reveals that:

- Residents in the trade area have access to approximately 70,500 sqm NLA of total convenience-based retail floor space.
- There are no full line supermarkets within 1.5 km of the proposed activity.
- There are only two full line supermarkets (Coles at Maylands and Woolworths at Airport) within 3km of the proposed activity.
- There are four small, limited line IGA supermarkets located between 1.5 km and 3 km of the proposed activity.
- The closest 'clusters' of multiple supermarket operators are located at Belmont (3 km) and Inglewood (4 km)

- There are three classified district activity centres north of the proposed activity (Maylands, Bayswater, Ashfield), yet none of these activity centres perform the role of a district centre and function more as neighbourhood or local centres due to their limited retail offer.
- Residents in the trade area have access to nearly 105,000 sqm NLA of bulky goods retail activity across six precincts.

*FIGURE 4*
*EXISTING & PLANNED ACTIVITY CENTRES FRAMEWORK*
*By Centre Name, by Centre Type, by Floorspace /Year*

| Total Convenience | | Estimated NLA Floorspace (sqm) by Year | | | | |
|---|---|---|---|---|---|---|
| **Centre Name** | **Centre Type** | **2023** | **2026** | **2031** | **2036** | **2041** |
| Morley | Strategic | 13,100 | 13,100 | 13,100 | 13,100 | 13,100 |
| Belmont | Secondary | 11,250 | 11,250 | 11,250 | 11,250 | 11,250 |
| East Vic Park | District | 5,400 | 5,400 | 5,400 | 5,400 | 5,400 |
| Victoria Park | Secondary | 3,750 | 3,750 | 3,750 | 3,750 | 3,750 |
| Inglewood | District | 8,750 | 8,750 | 8,750 | 8,750 | 8,750 |
| Bassendean | District | 4,400 | 4,400 | 4,400 | 4,400 | 4,400 |
| Maylands | District | 4,600 | 4,600 | 4,600 | 4,600 | 4,600 |
| GEH (west) | Local | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |
| Airport | Special | 4,400 | 4,400 | 4,400 | 4,400 | 4,400 |
| Bayswater | District | 500 | 500 | 500 | 500 | 500 |
| Belvidere | Local | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 |
| Rivervale (Kooyong) | Local | 1,250 | 1,250 | 1,250 | 1,250 | 1,250 |
| Ashfield | District | 550 | 550 | 550 | 550 | 550 |
| GEH (east) | District | 6,900 | 6,900 | 6,900 | 6,900 | 6,900 |
| Epsom | Local | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 |
| **All Existing and Planned Centres** | | **70,550** | **70,550** | **70,550** | **70,550** | **70,550** |
| Ascot | | - | 3,400 | 3,400 | 3,400 | 3,400 |
| **All Centres** | | **70,550** | **73,950** | **73,950** | **73,950** | **73,950** |

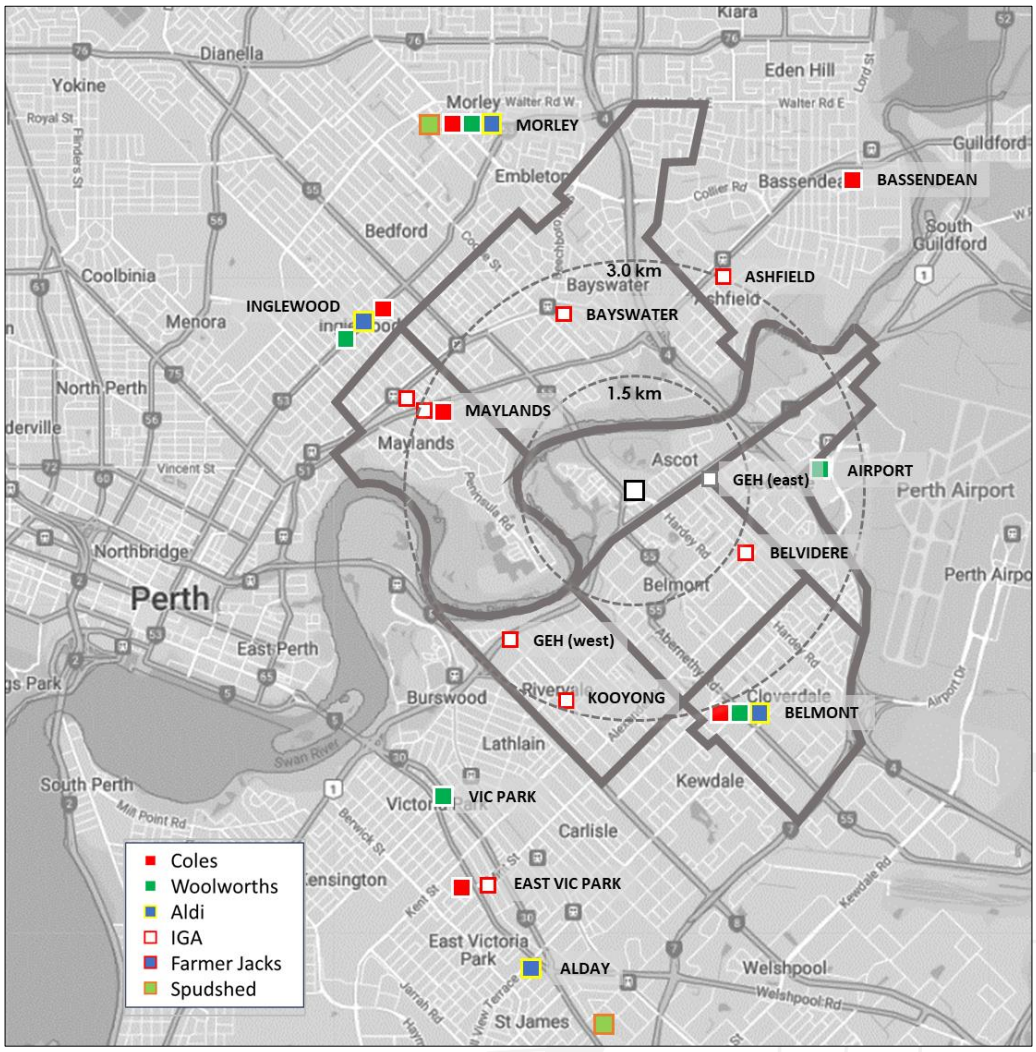
*Land Use Employment Survey (WAPC 2015) / Taktics4*

*FIGURE 5*
*EXISTING & PLANNED ACTIVITY CENTRES FRAMEWORK*
*By Centre Name, by Centre Type, by Floorspace /Year*

| Bulky Goods/LFR | | Estimated NLA Floorspace (sqm) by Year | | | | |
|---|---|---|---|---|---|---|
| **Centre Name** | **Centre Type** | **2023** | **2026** | **2031** | **2036** | **2041** |
| Morley | Strategic | 22,500 | 22,500 | 22,500 | 22,500 | 22,500 |
| Belmont | Secondary | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 |
| East Vic Park | District | 0 | 0 | 0 | 0 | 0 |
| Victoria Park | Secondary | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 |
| Inglewood | District | 2,700 | 2,700 | 2,700 | 2,700 | 2,700 |
| Bassendean | District | 0 | 0 | 0 | 0 | 0 |
| Maylands | District | 0 | 0 | 0 | 0 | 0 |
| GEH (west) | Local | 0 | 0 | 0 | 0 | 0 |
| Airport | Special | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| Bayswater | District | 0 | 0 | 0 | 0 | 0 |
| Belvidere | Local | 0 | 0 | 0 | 0 | 0 |
| Rivervale (Kooyong) | Local | 0 | 0 | 0 | 0 | 0 |
| Ashfield | District | 0 | 0 | 0 | 0 | 0 |
| Eastgate/GE Hwy | District | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| Epsom | District | 0 | 0 | 0 | 0 | 0 |
| **All Existing and Planned Centres** | | **104,900** | **104,900** | **104,900** | **104,900** | **104,900** |
| Ascot | | | 9,600 | 9,600 | 9,600 | 9,600 |
| **All Centres** | | **104,900** | **114,500** | **114,500** | **114,500** | **114,500** |

*Land Use Employment Survey (WAPC 2015) / Taktics4*

*FIGURE 6 - SUPERMARKET BASED ACTIVITY CENTRES*




*Taktics4*

# 4. TRADE AREA

The trade area for retail activity is largely determined by a range of industry, market and consumer-based principles. Consumer dynamics vary significantly between different retail categories and is influenced by the frequency in which consumers require access to certain retail goods and services. Retailers, shopping centre developers, and urban planners acknowledge this variation in dynamics through the establishment of a clearly defined hierarchy of activity centres which reflect different shopping trips and expectations for consumers/residents.

## 4.1 Market Behaviour

Convenience retail

Convenience retail trips include visits to supermarkets, other food and grocery stores, newsagencies, and cafes/takeaway stores. These trips are typically daily or weekly trips and are generally made to activity centres closest to the resident/consumer. Activity centres serving this category are typically anchored by a supermarket, or small grocery store and classified as Neighbourhood and/or Local Centres.

Comparative retail

Comparative retail trips include visits to department stores, discount department stores, fashion, and household goods stores. These are typically less frequent trips than convenience-based trips and consumers are more likely to target specific items, brands, products, and prices on these trips. They are therefore more likely to travel further to access these goods and services. Centres serving this category are typically anchored by a Department Store or DDS and classified as Strategic, Secondary, or District Centres. These centres invariably also serve a convenience-based role.

Large Format/Bulky Goods

Homewares, furnishing, and recreation goods are more likely to reflect infrequent trips for targeted goods/purchases. Consumers are prepared to travel further for these goods and services. These centres are less likely to include a convenience-based role beyond access to cafes/takeaway facilities as part of the shopping experience.

Behaviour Philosophy

The fundamental retail consumer principles adopted by modelling techniques in this assessment are that residents are generally:

- Less likely to travel beyond the nearest Strategic Centre and or Secondary Centre to visit another centre with the same role/function/offer.
- Less likely to travel beyond the nearest District Centre to visit another District Centre with the same role/function/offer.
- Just as likely to travel beyond one supermarket-based neighbourhood centre to visit another supermarket-based centre with another operator (i.e., to shop at a Coles instead of a Woolworths or vice versa).
- Less likely to travel beyond the nearest local centre to visit another local centre with the same role/function/offer (i.e., to drive past one IGA to shop at another IGA).

That is not to say that residents will not visit other centres, but that they will not visit these centres frequently enough to establish a pattern of behaviour.

### 4.2 Delineation of Trade Area

The trade area for proposed activity represents the area likely to generate most of the sales for a proposed activity centre. A trade area can be defined by applying these market behaviour principles, collating proximity of existing and planned urban areas with their accessibility to existing and planned centres, based on road networks, and physical barriers.

The trade area for the proposed activity may be delineated by residents in**:**

| | |
|---|---|
| ***Ascot, Belmont*** | Mainly within 1.5 km of the proposed activity. |
| ***Redcliffe, Rivervale, Bayswater, Maylands, Cloverdale*** | All or partly within 1.5 km-3.0 km of the proposed activity. |

This trade area comprises residents which are likely to generate most of the sales for the proposed activity. The trade area is divided north and south by the Swan River. However, the proposed activity is located on a road with access across the river, which therefore creates direct access to residents in the trade areas to the north and the south. The trade area incorporates residents across three Local Government Areas – City of Belmont, City of Bayswater, and Town of Victoria Park.

### 4.3 Population

The existing and forecast resident population in the trade area represents the first variable for determining the demand for retail activity in a trade area. According to adopted population forecasts for the three local government areas the total trade area is:

- Estimated to contain nearly 78,000 residents in 2026.
- Forecast to increase to 93,500 residents by 2041.
- Therefore, estimated to grow by 15,800 additional residents over the 15-year period at an average of over 1,050 additional residents p.a.

Ascot and Belmont trade areas are:

- Estimated to contain a resident population of 11,000 residents in 2026.
- Forecast to increase to 16,400 residents by 2041.
- Therefore, estimated to grow by an additional 5,400 over a 15-year period at an average of 300 additional residents per annum.
- Expected to be the trade areas with the largest proportional growth over the next 15 years.

*FIGURE 7 - TRADE AREA MAP*




*Taktics4/Australian Bureau of Statistics/ id forecast*

*FIGURE 8*

*CURRENT and FORECAST POPULATION*
*By Trade Area by Year*

| Catchment | 2023 | 2026 | 2031 | 2036 | 2041 | 2023-2041 | % |
|---|---|---|---|---|---|---|---|
| Bayswater | 25,050 | 25,600 | 26,800 | 28,000 | 29,200 | 4,150 | 17% |
| Maylands | 13,350 | 13,400 | 13,900 | 14,400 | 14,900 | 1,550 | 12% |
| Ascot | 3,300 | 3,400 | 3,700 | 4,600 | 5,200 | 1,900 | 58% |
| Belmont | 7,400 | 7,600 | 9,000 | 10,300 | 11,200 | 3,800 | 51% |
| Rivervale | 11,850 | 12,400 | 13,400 | 14,200 | 15,000 | 3,150 | 27% |
| Redcliffe | 5,400 | 5,500 | 5,700 | 5,800 | 7,000 | 1,600 | 30% |
| Cloverdale | 9,500 | 9,800 | 10,200 | 10,500 | 11,000 | 1,500 | 16% |
| **Total Trade Area** | **75,850** | **77,700** | **82,700** | **87,800** | **93,500** | **17,650** | 23% |
| Average growth per census | | 1,850 | 5,000 | 5,100 | 5,700 | | |
| Average growth p.a. | - | 617 | 1,000 | 1,020 | 1,140 | | |
| Average growth p.a. (%) | | 0.8% | 1.3% | 1.2% | 1.3% | | |

*id forecast - LGA Bayswater, Belmont Victoria Park*

*Taktics4/Australian Bureau of Statistics/ id forecast*

### 4.4 Resident Demographic Profiles

The demographic profile of the resident population in a trade area represents a second level of demand for retail activity in a trade area. Consumer spending surveys confirm that residents with different personal, household and economic characteristics are likely to exhibit different spending behaviour regarding the amount they buy and the type of goods they buy. The demographic characteristics of the resident population in the trade area will determine the retail spending profile and retail spending capacity available to retailers/centres in the trade areas. Key demographic characteristics include household composition, dwelling tenure, and income potential. Relevant socio-economic characteristics for residents in the trade area are highlighted below.

Person and Household Profile

The resident population in the Ascot, Belmont, Bayswater trade area is characterised by:

- an average age of 40 years which is 3.8% above the Perth average.
- an average household size of 2.3 persons per dwelling which is 9% smaller than the Perth average.
- a higher representation of one person households.
- a predominantly Australian born population.
- an ethnic/cultural balance consistent with Perth averages.
- a stable resident base with longevity in the trade area.

Employment, Income, Economic Profile

The resident labour force in the Ascot, Belmont, Bayswater trade area is characterised by:

- a labour force participation rate consistent with Perth averages.
- a higher representation of professionals.
- a higher representation of labour force employed in the retail, accommodation, and F&B sector and professional services sector.
- an average personal income that is 6% above Perth averages.
- an average of 2 incomes per dwelling which is 5% below Perth averages.
- an average household income that is 1% higher than Perth averages.
- an average mortgage that is 1% higher than Perth averages.
- an average rent that is 6% lower than Perth averages.
- a higher representation of rental dwellings.
- a slightly lower representation of dwellings with a mortgage.

Dwelling Profile

The dwelling stock in the Ascot, Belmont, Bayswater trade area is characterised by:

- slightly higher representation of townhouses and semi-detached dwellings.
- an average of 3 bedrooms per dwellings which is 9% smaller than the average Perth dwelling.

### 4.5 Resident Retail Spending Profile

Resident retail spending profiles for the trade area are derived by extrapolating data from a range of sources including:

- Household Expenditure Survey by socio economic characteristics (ABS 2015)
- Population and Household Census by socio economic characteristics (ABS 2021)
- Retail Sales by store categories (ABS 2024)

Correlation of data from these sources relative to the demographic profiles of an area produces an estimate of the average retail spending potential of residents within that area. Some of the trade areas may not currently have sufficient population bases to extract valid demographic profiles. Where trade areas do not have sufficient population base the retail spending profiles have been adopted from neighbouring/adjoining trade areas. Correlation of demographic profiles to retail spending profiles for residents in the trade area reveal that:

- Ascot and Bayswater residents are estimated to have an average total retail spending profile of between $19,550 and $21,900 per resident p.a. which is higher than Perth averages.
- Maylands, Belmont, Rivervale, Redcliffe, and Cloverdale residents have an average total retail spending profile of between $15,200 and $16,600 per resident p.a. which is lower than Perth averages.

*FIGURE 9*

*ESTIMATED AVERAGE RETAIL SPENDING PER CAPITA*
*By Retail Category by Trade Area*
*Dec-23*

| Retail Store Category | Total Convenience Retail | Total Comparison Retail | Total Shop | Bulky Goods/LFR | Total 'Shop' & 'Other Retail' |
|---|---|---|---|---|---|
| Bayswater | $11,143 | $5,367 | $16,510 | $3,046 | $19,556 |
| Maylands | $9,464 | $4,446 | $13,910 | $2,605 | $16,515 |
| Ascot | $12,289 | $6,240 | $18,529 | $3,363 | $21,891 |
| Belmont | $8,933 | $4,198 | $13,130 | $2,468 | $15,598 |
| Rivervale | $9,495 | $4,461 | $13,956 | $2,613 | $16,568 |
| Redcliffe | $8,829 | $4,149 | $12,977 | $2,441 | $15,418 |
| Cloverdale | $8,741 | $4,108 | $12,848 | $2,418 | $15,267 |
| ***Perth Average*** | ***$10,374*** | ***$4,872*** | ***$15,246*** | ***$2,839*** | ***$18,086*** |

*8501.0 Retail Trade, Australia*
*Retail Turnover, State by Industry Subgroup*

### 4.6 Resident Retail Spending Capacity

The resident retail spending capacity represents the total retail spending that is generated by residents in a trade area that is available to be capture by existing and planned centres in the trade area (and beyond). It is measured by multiplying the average potential resident retail spending profile for each area by the forecast resident population in each area to determine the forecast resident retail spending capacity of each trade area over time. Based on the average potential resident retail spending profiles for supermarkets, residents in the trade area are estimated to generate:

*FIGURE 10*

*ESTIMATED ANNUAL RESIDENT RETAIL SPENDING CAPACITY in TRADE AREA ($M p.a.)*
*By Retail Category by Year*

| | 2023 | 2026 | 2031 | 2036 | 2041 |
|---|---|---|---|---|---|
| Total Convenience Retail | $755 | $774 | $823 | $875 | $931 |
| Total Comparison Retail | $360 | $368 | $392 | $417 | $444 |
| Total Shop | $1,115 | $1,142 | $1,215 | $1,291 | $1,374 |
| Bulky Goods/LFR | $208 | $213 | $226 | $240 | $256 |
| Total 'Shop & Other' Retail | $1,323 | $1,355 | $1,441 | $1,532 | $1,630 |

*8501.0 Retail Trade, Australia*
*Retail Turnover, State by industry Subgroup*

Convenience based retail spending

Residents across the total trade area are estimated to spend:

- $774 M p.a. in convenience-based shops/centres in 2026.
- $931 M p.a. in convenience-based shops/centres by 2041.

Residents in Ascot and Belmont trade areas are estimated to:

- spend $106 M p.a. in convenience-based shops/centres in 2026.
- spend $164 M p.a. in convenience-based shops/centres by 2041.

Other Retail (Bulky Goods/Showroom)

Residents across the total trade area are estimated to spend:

- spend $213 M p.a. in total bulky goods/LFR outlets in 2026.
- spend $256 M p.a. in total bulky goods/LFR outlets by 2041.

# 5. PART A – LOCAL CENTRE

This section assesses the potential market demand for, and potential sustainability of a proposed local centre at Ascot. This assessment subsequently informs the assessment of potential impacts at existing and planned activity centres. The proposed local centre is:

- Included as part of the planning for the City of Belmont Golden Gateway Precinct.
- Located 3 km from the nearest supermarket-based activity centre.
- Classified as a planned activity centre.
- Not classified as an out of centre development.
- Considered a major development because it proposes 3,400 sqm NLA of PLUC 5 activity.

Eligibility for Exemption from a Net Benefit Test

The proposed local centre activity:

- is accessible to an existing walkable trade area.
- includes more than 1,500 sqm NLA of PLUC 5 activity
- is not located within 400 metres of a railway station.
- is therefore not eligible for exemption from a Net Benefit Test under the provisions of SPP4.2.

## 5.1 Market Share

Market share represents the proportion of resident spending generated from a trade area to a proposed activity centre. Market share is a measure of influence that a centre will have over customers in an area.

*Example:*

*Total annual retail spending generated by residents in a trade area is $100M p.a.*

*A centre is capturing a market share of 20% of that retail spending*

*The centre therefore captures $20M p.a. in sales from the trade area*

The proposed local centre if developed by 2026, is estimated to capture:

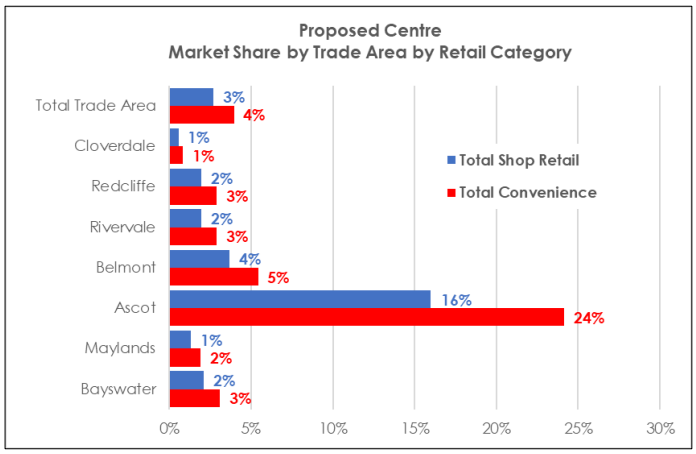
Convenience Spending

- 24% of all convenience/food/grocery/local spending generated by residents in Ascot.
- 5% of all convenience/food/grocery/local spending generated by residents in Belmont.
- A combined total of 4% of all convenience/food/grocery/local spending generated by residents across the total trade area.

Total Retail Spending

- 16% of all retail spending generated by residents in Ascot.
- 4% of all retail spending generated by residents in Belmont.
- A combined total of 3% of all retail spending generated by residents in the total trade area.

*FIGURE 11*




*Taktics4 Retail Model*

## 5.2 Sales Contribution

Sales contribution represents the proportion of a centres annual sales that is captured from a trade area. Sales contribution is a measure of the reliance / exposure that an activity centre has to a trade area.

*Example:*

*A centre is capturing total retail sales of $20M p.a.*

*$15M p.a. of those sales are being captured from one trade area.*

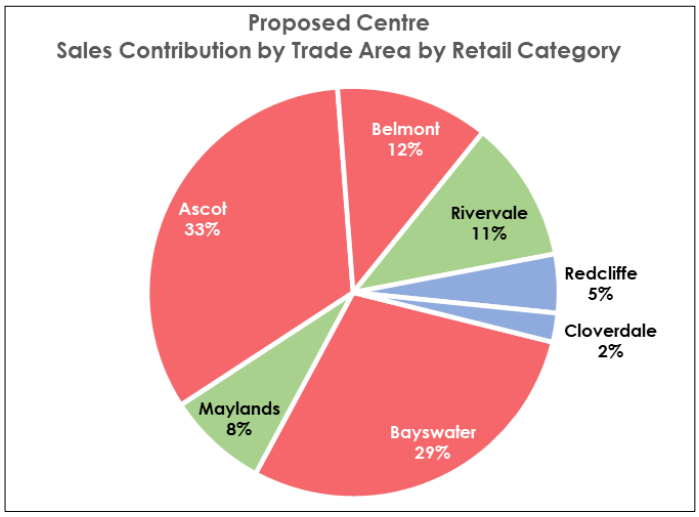
*Therefore 75% of the centre sales are being contributed from that trade area.*

The proposed local centre is ultimately estimated to generate:

- 62% of its forecast annual retail sales from residents in the immediate suburbs of Ascot (33%), and Bayswater (29%).
- 31% of its forecast annual retail sales from residents in Maylands, Belmont, and Rivervale.
- A combined total of 74% of its forecast annual retail sales will be derived from residents in the immediate local catchment it is intended to serve.

This sales contribution level is consistent with industry expectations.

*FIGURE 12*




*Taktics4 Retail Model*

### 5.3 Sales Potential

The Sales Potential represents the total sales that a centre may be expected to capture based on achieving the estimated market share from each trade area. It is a measure of a centre's viability and sustainability. Sales potential is measured by either annual sales and/or by sales productivity. Sales productivity is the total annual sales of centre divided by the total retail floor space NLA of the centre.

*Example:*

*A centre captures total annual retail sales of $20M p.a.*

*The centre has a retail floor space of 4,000 sqm NLA.*

*The centre has a sales productivity of $20M p.a. divided by 4,000 sqm NLA = $5,000/sqm p.a.*

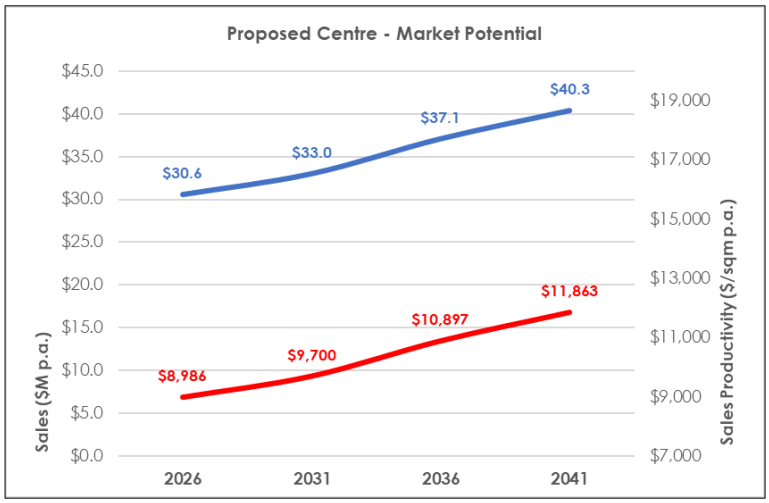
The proposed local centre if developed in 2026 is estimated to have the potential to generate:

- $30.6M p.a. at $9,000/sqm p.a. by 2026
- $33.0M p.a. at $9,700/sqm p.a. by 2031
- $37.1M p.a. at $10,900/sqm p.a. by 2036
- $40.3M p.a. at $11800/sqm p.a. by 2041

The proposed local centre at Ascot:

- Has the potential to generate sufficient sales to be sustainable by 2026, satisfying industry measures conducive to a sustainable supermarket based local centre.
- Serve an immediate role in meeting the day-to-day convenience needs of residents in the immediate walkable catchment of the proposed local centre.
- Rely predominantly on sales being captured from the immediate suburbs of Ascot, Maylands and Belmont.
- Be sustainable despite a potential market capture of only 16% of total retail sales from resident spending in Ascot, leaving 84% of retail spending to be captured by existing and planned centres.

*FIGURE 13*




*Taktics4 Retail Model*

## 5.4 Sales Impact

Sales impact represents the potential loss of sales at a centre due to the development of another centre. Sales impact is measured by comparing the potential sales of a centre at a particular year/period with the other centre included and excluded from the equation/modelling. Sales impact may be measured by potential actual annual sales or a percentage of potential annual sales.

*Example*

*A centre is forecast to generate annual sales of $20M p.a. in 2026 without the proposed centre being developed by 2026.*

*The centre is forecast to generate annual sales of $18M p.a. in 2026 if the proposed centre is developed by 2026.*

*The centre is therefore estimated to experience a potential sales impact of $2M p.a. in 2026.*

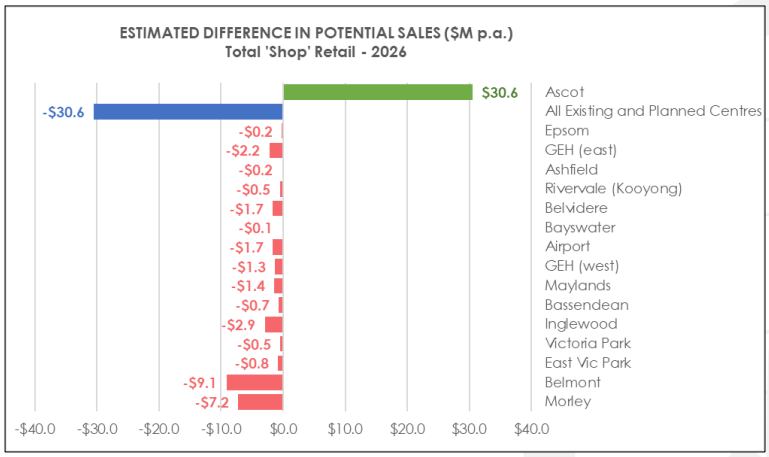
*The centre is estimated to subsequently experience a potential sales impact of 10% of its sales ($2M p.a. loss from its $20M p.a.)*

***Actual Sales***

Modelling the activity centres network with and without the proposed activity reveals that the development of the proposed activity by 2026 would have the potential to capture $30.6M p.a. in retail sales that might otherwise be captured from existing or planned centres.

Over 68% of all retail sales generated by the proposed local centre would be captured from four centres including Belmont Centre (-$9.1M p.a.), Morley Centre (-$7.2M p.a.), Inglewood (-$2.9M p.a.), and Maylands ($1.4M p.a.). This is because these centres currently contain the retail offer that a proposed local centre is likely to provide at Ascot.

*FIGURE 14*
*ESTIMATED ACTUAL ANNUAL SALES CAPTURED from OTHER ACTIVITY CENTRES by SHOP SALES by FIRST YEAR TRADE of PROPOSED ACTIVITY (2026)*




*Taktics4 Retail Model (2024)*

***Percentage of Sales***

The modelling shows that upon trading in 2026, the retail sales captured by a proposed local centre has the potential to impact the overall retail sales generated by residents in the trade area at:

Belmont

The public and private investment at Belmont Centre will not be impacted by the proposed local centre. The potential sales impact is forecast to be less than 3.0% which is classified as insignificant impact/risk. The potential sales impact at Belmont is in effect considerably less than 3.0% as the model only shows the potential loss in sales at Belmont from residents in the modelled trade area. The Belmont Centre generates sales from a more extensive trade area than the trade area for the proposed local centre.

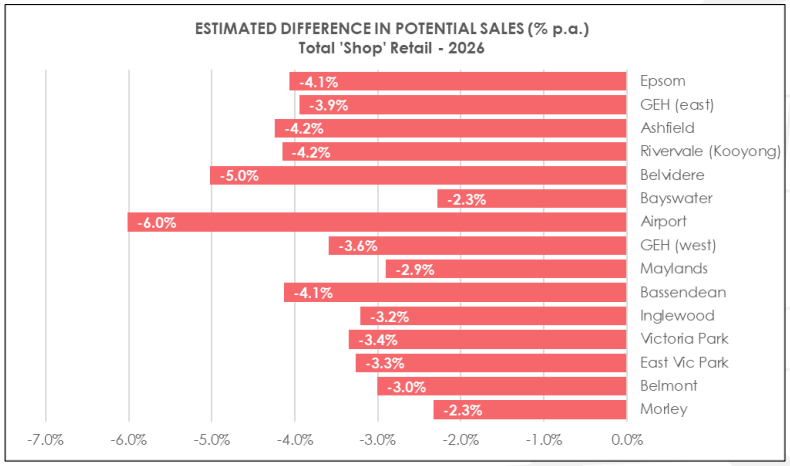
Morley

The public and private investment at Morley Centre will not be impacted by the proposed local centre. The potential sales impact is forecast to be less than 2.3% which is classified as insignificant impact/risk. The potential sales impact is in effect considerably less than 2.3% as the model only shows the potential loss in sales at Morley from residents in the modelled trade area. The Morley Centre generates sales from a more extensive trade area than the trade area for the proposed local centre.

Bayswater

The public and private investment at Bayswater will not be impacted by the proposed local centre. The potential sales impact at Bayswater is less than 2.3% which is classified as low impact/low risk. The low impact is because the Bayswater Centre does not provide the offer intended at the proposed local centre. Therefore, the Bayswater Centre is not capturing the sales that will be captured by the proposed local centre.

*FIGURE 15*
*ESTIMATED IMPACT of PROPOSED ACTIVITY on ANNUAL SALES at OTHER ACTIVITY CENTRES by SHOP SALES by FIRST YEAR TRADE of PROPOSED ACTIVITY (2026)*




*Taktics4 Retail Model (2024)*

Local Centres

Centres at Epsom (4.1%), Ashfield (4.2%), Rivervale/Kooyong (4.2%) and Belvidere (5.0%) are all estimated to be impacted by between 4% and 5%. These impacts are classified as insignificant impact65/ low risk. There is not expected to be an impact to private or public investment. This is because these centres do not currently offer the extent of the retail offer intended to be provided by the proposed local centre.

Airport

The convenience-based centre anchored by Woolworths at the Airport, is the only centre which is estimated to experience a moderate impact (6%). The potential sales impact is in effect considerably less than 6.0% as the model only shows the potential loss in sales at the Airport from resident spending generated from within the modelled trade area. The Airport Centre generates sales from a far more extensive trade area than the trade area for the proposed local centre.

### 5.5 Sales Growth

Sales Growth represents the increase in retail sales that may be expected from a centre because of an increase in population growth in the trade area.

*For example:*

*A centre is currently capturing total retail sales of $20M p.a.*

*It achieves these sales by capturing 20% market share of all resident spending in the trade area.*

*Therefore, the trade area has a current resident retail spending capacity of $100M p.a.*

*Residential development occurs in the trade area at 10% growth over a five-year period.*

*In five years, the resident retail spending capacity in the trade area has increased to $110M p.a.*

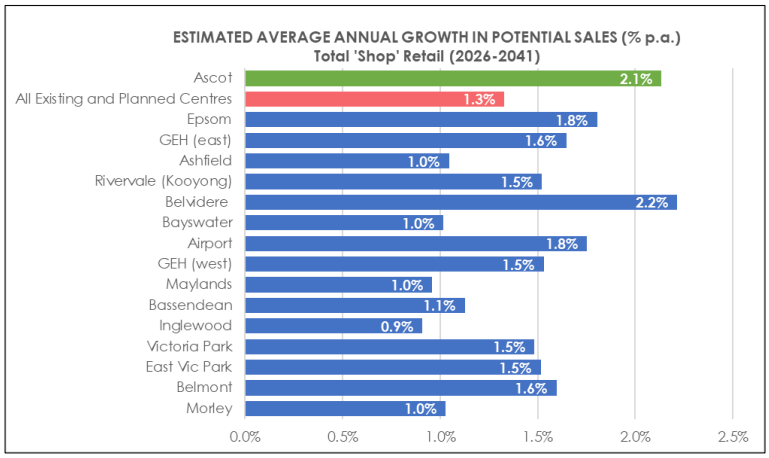
*The sales potential for the centre is forecast to increase to $22M p.a. (in constant dollars) despite maintain the same market share within the trade area.*

*This potential sales growth across centres has the potential to offset any initial sales impact generated by the development of a proposed local centre.*

The population in the total trade area is expected to increase from 77,700 in 2026 to 93,500 in 2041. This population growth will result in an increase in resident retail spending capacity in the total trade area from $1,142M p.a. in 2026 to $1,374M p.a. in 2041. That represents an additional $232M p.a. in the total trade area for all centres to capture.

The graph shows that beyond the development of the proposed local centre in 2026, all centres in the trade area, or area of influence by the proposed local centre is forecast to have the potential to experience an average annual growth in sales of between 1% and 2.0% p.a. over the subsequent 15 years.

*FIGURE 16*
*ESTIMATED AVERAGE ANNUAL SALES GROWTH at ACTIVITY CENTRES SHOP SALES Between 2026 and 2041*




*Taktics4 Retail Model (2024)*

## 5.6 Summary

The findings in this Net Benefit Test confirm that a proposed local centre at Ascot will result in insignificant/low risk impacts on the surrounding existing and planned activity centres network. With any potential sales impact offset by the potential for substantial average sales growth in the trade area over the next 15 years.

Overall, the development of the proposed local centre at Ascot is not expected to generate significant impacts for the surrounding centres network. The centres network is currently bereft of full line supermarket-based centres. This means that residents in the trade area are already bypassing the smaller local centres to access their convenience retail needs at centres further afield than they should have to travel.

# 6. PART B - BULKY GOODS

This section assesses the potential market demand for, and potential sustainability of proposed 'Other' Retail Bulky Goods Precinct at Ascot. This assessment is necessary to subsequently inform the assessment of potential impacts at existing and planned activity centres. The proposed bulky goods activity is considered an 'out of centre' development.

## 6.1 Market Share

Market share represents the proportion of resident spending generated from a trade area to the proposed centre. Market share is a measure of influence that a centre will have over customers in an area.

*Example:*

*Total annual retail spending generated by residents in a trade area is $100M p.a.*

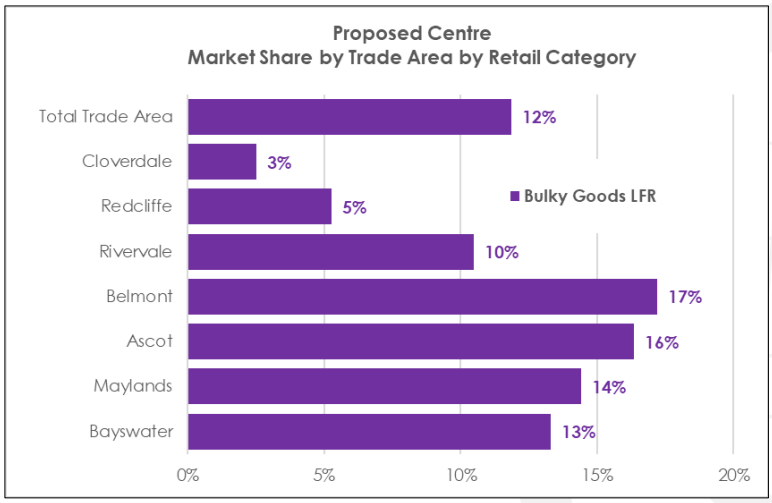
*A centre is capturing a market share of 20% of that retail spending*

*The centre therefore captures $20M p.a. in sales from the trade area*

The proposed bulky goods activity if developed by 2026, is estimated to capture:

- 12% of all bulky goods spending generated by residents across the total trade area.
- relatively consistent market capture between 13%-17% of all bulky goods retail spending from residents in Ascot, Belmont, Maylands, Bayswater and Rivervale.5% of all convenience/food/grocery/local spending generated by residents in Belmont, reflecting the propensity for residents to travel further to access this type of retail category.

FIGURE 17




*Taktics4 Retail Model*

### 6.2 Sales Potential

The Sales potential represents the total sales that a centre may be expected to capture based on achieving the estimated market share from each trade area. It is a measure of a centre's viability and sustainability. Sales potential is measured by either annual sales and/or by sales productivity. Sales productivity is the total annual sales of centre divided by the total retail floor space NLA of the centre.

*Example:*

*A centre captures total annual retail sales of $20M p.a.*

*The centre has a retail floor space of 4,000 sqm NLA.*

*The centre has a sales productivity of $20M p.a. divided by 4,000 sqm NLA = $5,000/sqm p.a.*

The proposed local centre if developed in 2026 is estimated to have the potential to generate:

$25.2M p.a. at $2,600/sqm p.a. by 2026

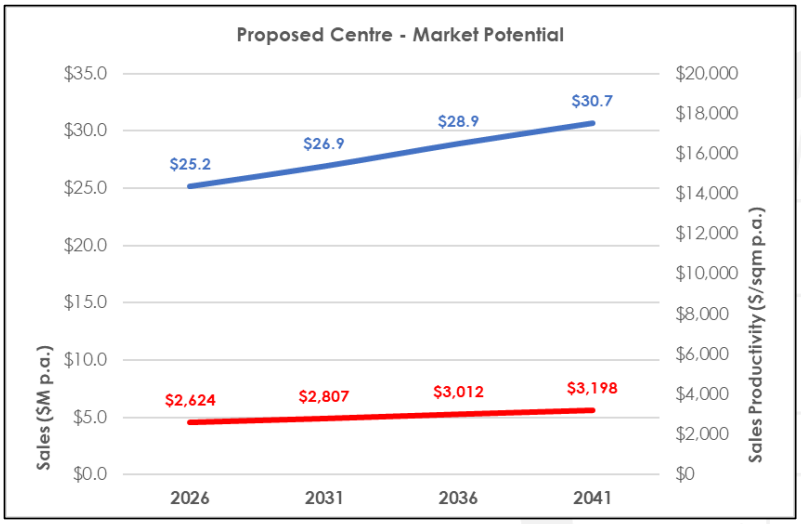
$26.9M p.a. at $2,800/m p.a. by 2031

$28.9M p.a. at $3,000/sqm p.a. by 2036

$30.7M p.a. at $3,200/sqm p.a. by 2041

The proposed bulky goods activity at Ascot has the potential to generate sufficient sales to be sustainable by 2026, satisfying industry measures conducive to a sustainable bulky goods activity. Be sustainable despite a potential market capture of only 12% of total bulky goods sales from resident spending in the total trade area, leaving 88% of bulky goods retail spending to be captured by existing and planned centres.

*FIGURE 18*




*Taktics4 Retail Model*

### 6.3 Sales Impact

Sales impact represents the potential loss of sales at a centre due to the development of another centre. Sales impact is measured by comparing the potential sales of a centre at a particular year/period with the other centre included and excluded from the equation/modelling. Sales impact may be measured by potential actual annual sales or a percentage of potential annual sales.

*Example*

*A centre is forecast to generate annual sales of $20M p.a. in 2026 without the proposed centre being developed by 2026.*

*The centre is forecast to generate annual sales of $18M p.a. in 2026 if the proposed centre is developed by 2026.*

*The centre is therefore estimated to experience a potential sales impact of $2M p.a. in 2026.*

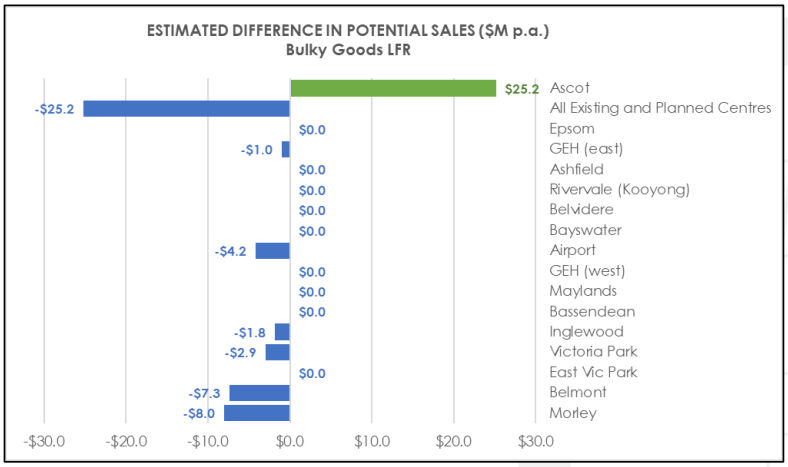
*The centre is estimated to subsequently experience a potential sales impact of 10% of its sales ($2M p.a. loss from its $20M p.a.)*

**Actual Sales**

The development/introduction of the proposed bulky goods activity in Ascot by 2026 will have the potential to capture $25.2M p.a. in retail sales that might otherwise be captured from existing or planned centres.

Over 81% of all retail sales generated by the proposed bulky goods activity to be captured from four centres including Belmont Centre (-$7.3M p.a.), Morley Centre (-$8.0M p.a.), Airport (-$-4.2M p.a.), and Victoria Park ($-2.9M p.a.).

*FIGURE 19*




*Taktics4 Retail Model*

**Percentage of Sales**

The modelling shows that upon trading in 2026, the retail sales captured by proposed bulky goods activity centre has the potential to impact the overall retail sales generated by residents in the trade area at:

Belmont

The public and private investment at Belmont Centre will not be impacted by the proposed local centre. The potential sales impact is forecast to be less than 4.2% which is classified as insignificant impact/risk. The potential sales impact at Belmont is in effect considerably less than 4.2% as the model only shows the potential loss in sales at Belmont from residents in the modelled trade area. The Belmont Centre generates sales from a more extensive trade area than the trade area for the proposed bulky goods activity at Ascot.

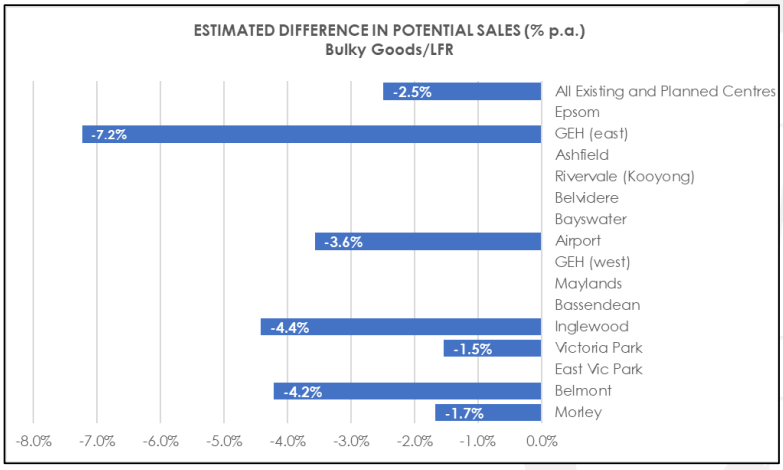
Morley

The public and private investment at Morley Centre will not be impacted by the proposed bulky goods activity. The potential sales impact is forecast to be less than 1.7% which is classified as insignificant impact/risk. The potential sales impact is in effect considerably less than 1.7% as the model only shows the potential loss in sales at Morley from residents in the modelled trade area. The Morley Centre generates sales from a more extensive trade area than the trade area for the proposed bulky goods activity at Ascot.

Airport

The public and private investment at the Airport will not be impacted by the proposed bulky goods activity. The potential sales impact is forecast to be less than 3.6% which is classified as insignificant impact/risk. The potential sales impact is in effect considerably less than 3.6% as the model only shows the potential loss in sales at the Airport from residents in the modelled trade area. The Airport generates sales from a more extensive trade area than the trade area for the proposed bulky goods activity at Ascot.

*FIGURE 20*




*Taktics4 Retail Model*

### 6.4 Sales Growth

Sales Growth represents the increase in retail sales that may be expected from a centre because of an increase in population growth in the trade area.

*For example:*

*A centre is currently capturing total retail sales of $20M p.a.*

*It achieves these sales by capturing 20% market share of all resident spending in the trade area.*

*Therefore, the trade area has a current resident retail spending capacity of $100M p.a.*

*Residential development occurs in the trade area at 10% growth over a five-year period.*

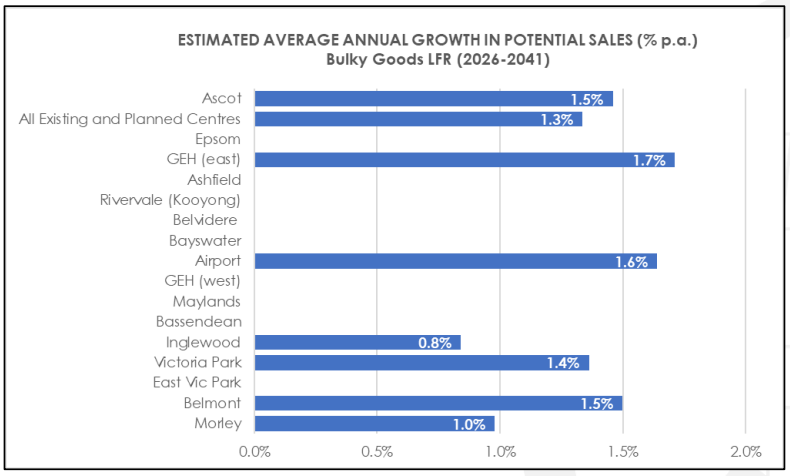
*In five years, the resident retail spending capacity in the trade area has increased to $110M p.a.*

*The sales potential for the centre is forecast to increase to $22M p.a. (in constant dollars) despite maintain the same market share within the trade area.*

*This potential sales growth across centres has the potential to offset any initial sales impact generated by the development of a proposed local centre.*

The population in the total trade area is expected to increase from 77,700 in 2026 to 93,500 in 2041. This population growth will result in an increase in resident retail spending capacity in the total trade area from $1,142M p.a. in 2026 to $1,374M p.a. in 2041. That represents an additional $232M p.a. in the total trade area for all centres to capture. The graph shows that beyond the development of the proposed bulky goods in 2026, all relevant centres in the trade area, or area of influence by the proposed bulky goods activity at Ascot is forecast to have the potential to experience an average annual growth in sales of between 1.0% and 2.0% p.a. over the subsequent 15 years.

*FIGURE 21*




*Taktics4 Retail Model*

### 6.5 Summary

The findings in this Net Benefit Test confirm that proposed bulky goods activity at Ascot will.

- Result in insignificant/low risk impacts on the surrounding existing and planned activity centres network. With any potential sales impact offset by the potential for substantial average sales growth in the trade area over the next 15 years.
- Subsequently not have an unreasonable impact on the delivery and sustainability of private and public infrastructure at other activity centres.

# 7. NET BENEFIT TEST

When estimating benefits to the community, the Net Benefit Test should:

- Detail what benefit will occur due to the proposed development.
- Use existing data and standards to measure the size of the benefit and how important it will be to the community.
- Identify those in the community who will be likely to experience the benefit.
- Estimate how many individuals are expected to experience the benefit.
- Describe the degree of change expected due to the benefit.
- Determine the expected duration for which stakeholders are expected to experience the benefit.

SPP4.2 provides a guide to estimating/measuring the net benefit to the community including:

## 7.1 Employment

*Will the proposal provide new jobs in addition to any that may be lost elsewhere – net additional jobs?*

The proposed activity has the potential to create up to 205 Full Time Equivalent jobs including 85 in the shopping precinct and 120 in the bulky goods showroom precinct.

*FIGURE 22*

*TOTAL EMPLOYMENT OPPORTUNITIES*

| PLUC | Activity Type | Floor space (sqm NLA) | Ratio (FTE jobs/sqm) | FTE Jobs |
|---|---|---|---|---|
| PLUC 5 | Shops | 3,400 | 40 | 85 |
| PLUC 6 | Bulky Goods/Showroom | 9,600 | 80 | 120 |
| **Combined** | | **13,000** | **63** | **205** |

*Land Use and Employment Survey (WAPC 2017)*

*Will the proposed activity contribute to diversifying local jobs – creating more strategic employment versus population-driven employment?*

*Will the proposal have the potential to improve access to economic opportunity for minority and vulnerable groups?*

Employment in shop and bulky goods activity typically attracts residents which fit the following:

- Female labour force
- Part time labour force
- Young adult labour force
- Local labour force
- Labour force without access to a motor vehicle

| Gender | Employment Sector | |
|---|---|---|
| | Total Retailing | All Sectors |
| Male Employees | 34% | 43% |
| Female Employees | 66% | 57% |
| All Employees | 100% | 100% |

The proposed activity is conducive to the female employment labour force. Females on average represent 66% of all retail related jobs compared to 57% for all job sectors.

| Employment Status | Employment Sector | |
|---|---|---|
| | Total Retailing | All Sectors |
| Full Time Employment | 38% | 54% |
| Part time Employment | 62% | 46% |
| All Employment | 100% | 100% |

The proposed activity is conducive to the part time employment labour force. Part time employees represent 62% of all retail related jobs compared to 46% for all job sectors.

| Age of Employee | Employment Sector | |
|---|---|---|
| | Total Retailing | All Sectors |
| 15-19 years | 19% | 9% |
| All Ages | 100% | 100% |

The proposed activity is conducive to young adults in the labour force. Young adults represent 19% of all retail related jobs compared to 9% for all job sectors.

| Distance Travelled | Employment Sector | |
|---|---|---|
| | Total Retailing | All Sectors |
| less than 2.5 km | 15% | 10% |
| 2.5 km - 10 km | 42% | 32% |
| All Distances | 100% | 100% |

The proposed activity is conducive to residents who live within 2.5 km of the proposed activity. 15% of all residents in retail related jobs on average travel up to 2.5km from their home compared to 10% for all job sectors.

| Travel Mode | Employment Sector | |
|---|---|---|
| | Total Retailing | All Sectors |
| Car, as passenger | 9% | 6% |
| Bicycle | 1% | 0% |
| Walked only | 2% | 2% |
| Walked, Cycled, Passenger | 11% | 8% |
| All Modes | 100% | 100% |

The proposed activity is conducive to residents who do not have ready access to motor vehicle for travel to work. 11% of residents working in the retail sector cycle, walk or travel by passenger to work compared to 8% for all job sectors.

The impact assessment shows that all activity centres in the network have the potential to increase sales and subsequently not need to reduce employment levels. The proposed local centre is therefore expected to provide new local jobs for residents.

### 7.2 Impact

*How is the proposal expected to impact upon the current and expected turnover and role of relevant activity centres?*

The proposed activity is estimated to have an initial low / insignificant risk to activity centres in the network. Any impacts on these activity centres are likely to be temporary and have no long-term effects on the viability of individual activity centres. The initial impacts to activity centres are expected to be offset by future growth in sales from resident and spending growth.

*Will the proposal increase the choice and availability of goods and services in the area?*

Retail modelling confirms that the residents in Ascot and Belmont are the communities most likely to experience the benefit from the proposed activity. Residents in Ascot and Belmont are estimated to account for 60% of total sales / trips at the proposed activity confirming the importance of the proposed activity to these residents.

Ascot and Belmont trade area currently comprise 11,000 residents. Ascot and Belmont trade area resident population base will grow to 16,400 residents by 2041. Despite this population profile, residents in Ascot do not currently have access to a full line supermarket-based centre within 2.5 km. Ascot residents must therefore travel up to 2.5 km each way (5 km round trip) every time they access their full line supermarket needs.

The introduction of the proposed activity will fill an identified gap in the supply and demand of convenience-based activity in the Ascot and Belmont area.

### 7.3 Impact on Activity Centre Hierarchy

Retail modelling confirm that the proposed activity centre is sufficiently sized, located and configured to satisfy the local trade area needs without impinging on the trading potential of other centres. And that the proposed centre will not have a significant or long-term impact on any of the individual activity centres modelled as part of the centres network.

It therefore follows that the proposed activity centre will not create any unreasonable or detrimental impact on the role and function of the activity centre hierarchy and framework in the trade area.

All centres will have the opportunity to compete for the additional retails sales available through the increased retail spending capacity planned in the trade area. It will be up to each of the centres and their respective operators in the existing and planned network to establish plans and strategies to target that additional retail spending capacity.

The forecast population growth in the trade area will ultimately create the potential for all centres in the network to achieve an average increase in sales of between 1% and 3% per annum over the period between 2026 and 2041. This average sales growth will further offset the immediate impact experienced from the introduction of the proposed activity.

### 7.4 Compatibility

*Is the proposal compatible with surrounding land uses?*

The proposed activity will introduce proposed activity in the middle of a trade area which contains 11,000 – 16,400 residents within a 1.5 km radius of the proposed activity. This resident population is a significant base for a supermarket-based centre.

### 7.5 Environment

*Will there be an improvement in the level of amenity and vibrancy that benefits the wider community? Will the proposal include land uses such as healthcare, education, and community facilities? Will the proposal have an impact on overall vehicle trips? Will car-based net trips (by distance) increase or reduce because of the proposal?*

The proposed activity has the potential to create a community hub for the Ascot and Belmont communities. increasing a sense of place for residents. The proposed activity does not in itself create these facilities. However, some of these facilities will likely be attracted to the area because of the introduction of the proposed activity.

The proposed activity has the potential to reduce the amount of trip kilometres that Ascot and Belmont residents must travel each year to satisfy their daily/weekly shopping needs. As stated, the Ascot and Belmont resident population base represents 11,000 growing to 16,400 residents who will benefit directly from the proposed activity. Ascot and Belmont residents therefore have the potential to:

- reduce the amount of trip kilometres that Ascot and Belmont residents must travel each year to satisfy their daily/weekly shopping needs.
- save over 530,000 to 700,000 trips p.a. to centres outside their trade area
- save between 40 and 50 trips per person per annum.
- save between 2.7 M km p.a. and 3.5 M km p.a. of vehicular travel per annum

### 7.6 Infrastructure

*Is there significant government investment in services, infrastructure or development in the area or nearby centres that may be affected by the proposal? Will the proposal impact patronage/viability of the investment and what is the expected impact? Will the proposal include new, or improvements to existing transport infrastructure, particularly walking, cycling and public transport, that increases access and helps manage congestion? Will the proposal include enhancements to utilities that benefit the local area?*

As previously stated, the proposed activity has the potential to significantly reduce the number of trips/trip km by residents especially for residents in Ascot and Belmont. Residents in these areas will be far more likely to walk to the proposed activity than their current trip patterns to supermarket-based centres over 2 km from the proposed activity. The proposed activity has the potential to generate demand for enhancements to community and non-retail related to services in the local area.

### 7.7 Strategic Alignment

*Is the proposal consistent with the strategic planning for the area? Is it aligned with the relevant regional strategy and approved local planning strategy? Is the size and scale of the proposal consistent with the level of the hierarchy? What are the potential impacts on the activity centre hierarchy? Is the proposal consistent with the objectives and outcomes of SPP 4.2?*

The proposed activity is classified as a planned centre in an adopted planning instrument. The proposed activity is a size, scale, function, and role that is consistent with and complements the overall activity centre hierarchy. The proposed local centre activity is consistent with the City of Belmont's Activity Centre Planning strategy.

The proposed activity will not have a significant impact on any of the activity centres in the network. The proposed activity does not have the potential to result in the loss of or change the role and function of any activity centre in the network. As such the proposed activity is not have the potential to have any impact or change to the activity centre hierarchy.

The Net Benefit Test confirms that the proposed activity satisfies the criteria for assessing the benefits to the community and is therefore consistent with the objectives and outcomes of SPP4.2.

# ATTACHMENT 5

Transportation Noise Assessment

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# Transportation Noise Assessment

## Ascot Racecourse Structure Plan

**Reference: 23118540-01**

Prepared for:
Perth Racing C/- Davison Advisory Services

**Reference: 23118540-01**

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|---|---|---|---|---|
| 16-Nov-23 | 0 | Issued to Client | Terry George | - |
| | | | | |

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## 1. INTRODUCTION

A Local Structure Plan (LSP) and Scheme Amendment are being prepared for landholdings in Ascot, referred to as the Ascot Racecourse Structure Plan (refer *Figure 1-1*). Parts of the site will be potentially impacted by road traffic noise, being the subject of this report, with consideration given to *State Planning Policy No. 5.4 Road and Rail Noise*, being the subject of this report.

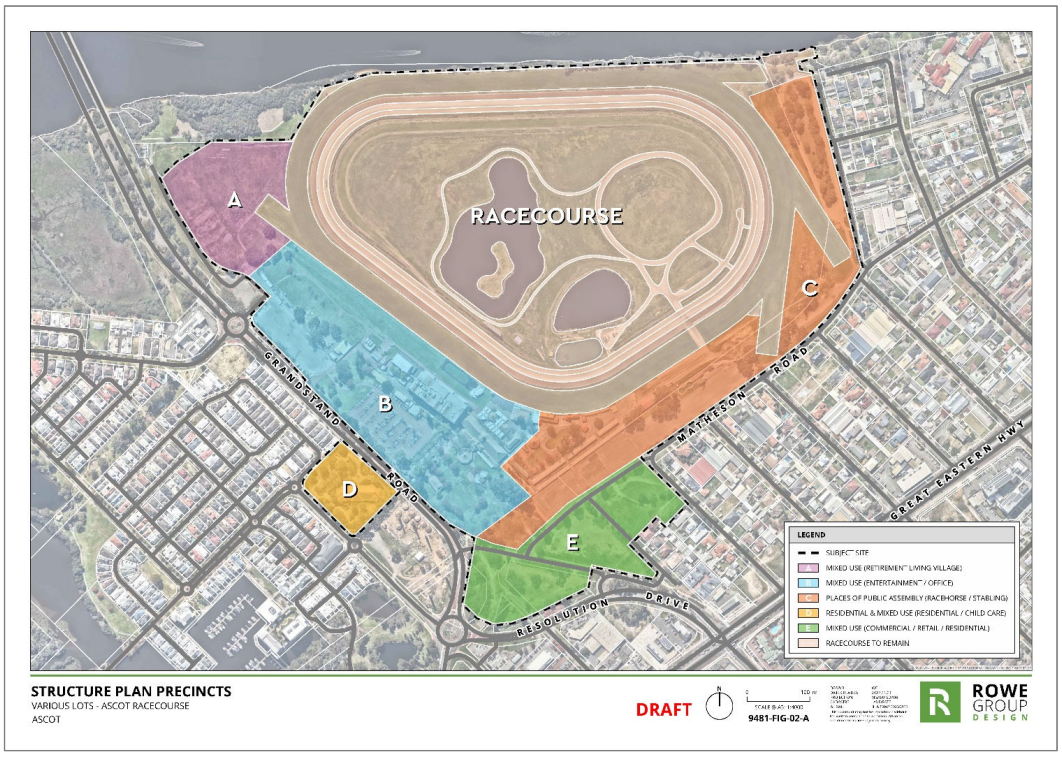



***Figure 1-1: Structure Plan Precincts***

*Appendix B* contains a description of some of the terminology used throughout this report.

## 2. CRITERIA

The criteria relevant to this project is provided in *State Planning Policy No. 5.4 Road and Rail Noise* (hereafter referred to as SPP 5.4) produced by the Western Australian Planning Commission (WAPC). SPP 5.4 is supported by the *Road and Rail Noise Guidelines* (the Guidelines) and the Department of Planning, Lands and Heritage mapping. The objectives of SPP 5.4 are to:

- Protect the community from unreasonable levels of transport noise;
- Protect strategic and other significant freight transport corridors from incompatible urban encroachment;
- Ensure transport infrastructure and land-use can mutually exist within urban corridors;
- Ensure that noise impacts are addressed as early as possible in the planning process; and
- Encourage best practice noise mitigation design and construction standards.

*Table 2-1* sets out noise targets that are to be achieved by proposals under which SPP 5.4 applies. Where the targets are exceeded, an assessment is required to determine the likely level of transport noise and management/mitigation required.

***Table 2-1: Noise Targets for Noise Sensitive Land-Use***

| Scenario | Outdoor Noise Target | | Indoor Noise Target | |
|---|---|---|---|---|
| Noise-sensitive land-use and/or development | 55 dB $L_{Aeq(Day)}$ | 50 dB $L_{Aeq(Night)}$ | 40 dB $L_{Aeq(Day)}$ (Living and Work Areas) | 35 dB $L_{Aeq(Night)}$ (Bedrooms) |

Notes:

- Day period is from 6am to 10pm and night period from 10pm to 6am.
- The outdoor noise target is to be measured at 1-metre from the most exposed, habitable[1] facade of a noise sensitive building.
- For all noise-sensitive land-use and/or development, indoor noise targets for other room usages may be reasonably drawn from Table 1 of Australian Standard/New Zealand Standard AS/NZS 2107:2016 *Acoustics – Recommended Design Sound Levels and Reverberation Times for Building Interiors* (as amended) for each relevant time period.
- Outdoor targets are to be met at all outdoor areas as far as is reasonable and practicable to do so using the various noise mitigation measures outlined in the Guidelines.

The application of SPP 5.4 is to consider anticipated traffic volumes for the next 20 years from when the noise assessment has been undertaken.

[1] *A habitable room is defined in State Planning Policy 3.1 as a room used for normal domestic activities that includes a bedroom, living room, lounge room, music room, sitting room, television room, kitchen, dining room, sewing room, study, playroom, sunroom, gymnasium, fully enclosed swimming pool or patio.*

## 3. METHODOLOGY

The site is within the trigger distance of Great Eastern Highway, considered to be a 'Strategic Freight/Major Traffic Route' as shown on the PlanWA Maps (refer *Table 1-1* and *Figure 3-1*).

***Table 3-1: Transport Corridor Classification and Trigger Distances***

| Transport Road Classification | Trigger Distance | Distance Measured From |
|---|---|---|
| **Strategic Freight and Major Traffic Routes**<br>Roads as defined by Perth and Peel Planning Frameworks and/or roads with either 500 or more Class 7 to 12 Austroads vehicles per day, and/or 50,000 per day traffic volume | 300 metres | Road carriageway edge |
| **Other Significant Freight/Traffic Routes**<br>These are generally any State administered road and/or local government road identified as being a future State administered road (red road) and other roads that meets the criteria of either ≥ 100 Class 7 to 12 Austroads vehicles daily or ≥ 23,000 daily traffic count (averaged equivalent to 25,000 vehicles passenger car units under region schemes) | 200 metres | Road carriageway edge |



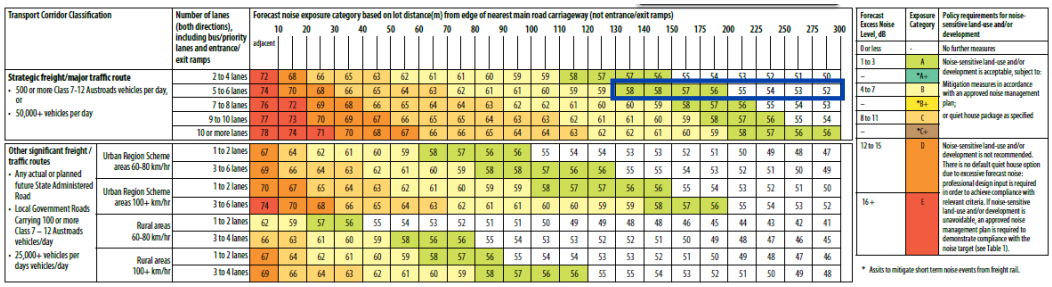

***Figure 3-1: Subject Site Locality in Relation to Road (Source: DPLH PlanWA)***

The methodology used in this assessment is to follow the screening assessment procedure provided in the Guidelines. From *Table* 2 of the Guidelines (refer *Figure 3-2*), noise levels at the proposed site are up to 58 dB $L_{Aeq(Day)}$, with Great Eastern Highway being a total of 6 lanes and at its closest point at a distance of 130 metres.

The forecast levels provided in the Guidelines assume open and level ground. The Guidelines allow a 4 dB reduction in noise level where:

- an existing building or structure screens more than 50% of the most exposed part of the noise-sensitive land-use; or
- where a solid continuous minimum 1.8 metre noise wall/fence exists or is proposed; or
- through a combination of permanent structures and terrain so there is no direct line of sight.

In this project, the 4 dB reduction is applicable to the ground floor due to other buildings located between the subject site and road corridor.



| Transport Corridor Classification | | Number of lanes (both directions), including bus/priority lanes and entrance/ exit ramps | Forecast noise exposure category based on lot distance(m) from edge of nearest main road carriageway (not entrance/exit ramps) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | adjacent | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 175 | 200 | 225 | 250 | 275 | 300 |
| **Strategic freight/major traffic route**<br>• 500 or more Class 7-12 Austroads vehicles per day, or<br>• 50,000+ vehicles per day | | 2 to 4 lanes | 72 | 68 | 66 | 65 | 63 | 62 | 61 | 61 | 60 | 59 | 59 | 58 | 57 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 |
| | | 5 to 6 lanes | 74 | 70 | 68 | 66 | 65 | 64 | 63 | 62 | 61 | 61 | 60 | 59 | 59 | 58 | 58 | 57 | 56 | 55 | 54 | 53 | 52 |
| | | 7 to 8 lanes | 76 | 72 | 69 | 68 | 66 | 65 | 64 | 64 | 63 | 62 | 62 | 61 | 60 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 |
| | | 9 to 10 lanes | 77 | 73 | 70 | 69 | 67 | 66 | 65 | 65 | 64 | 63 | 63 | 62 | 61 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 |
| | | 10 or more lanes | 78 | 74 | 71 | 70 | 68 | 67 | 66 | 66 | 65 | 64 | 64 | 63 | 62 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 56 |
| **Other significant freight / traffic routes**<br>• Any actual or planned future State Administered Road<br>• Local Government Roads Carrying 100 or more Class 7 – 12 Austroads vehicles/day<br>• 25,000+ vehicles per days vehicles/day | Urban Region Scheme areas 60-80 km/hr | 1 to 2 lanes | 67 | 64 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 56 | 55 | 54 | 54 | 53 | 53 | 52 | 51 | 50 | 49 | 48 | 47 |
| | | 3 to 6 lanes | 69 | 66 | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 58 | 57 | 56 | 56 | 55 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |
| | Urban Region Scheme areas 100+ km/hr | 1 to 2 lanes | 70 | 67 | 65 | 64 | 63 | 62 | 61 | 60 | 59 | 59 | 58 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 |
| | | 3 to 6 lanes | 74 | 70 | 68 | 66 | 65 | 64 | 63 | 62 | 61 | 61 | 60 | 60 | 59 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 |
| | Rural areas 60-80 km/hr | 1 to 2 lanes | 62 | 59 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 51 | 50 | 49 | 49 | 48 | 48 | 46 | 45 | 44 | 43 | 42 | 41 |
| | | 3 to 4 lanes | 66 | 63 | 61 | 60 | 59 | 58 | 56 | 56 | 55 | 54 | 53 | 53 | 52 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 |
| | Rural areas 100+ km/hr | 1 to 2 lanes | 67 | 64 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 54 | 53 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 |
| | | 3 to 4 lanes | 69 | 66 | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 56 | 55 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 |

| Forecast Excess Noise Level, dB | Exposure Category | Policy requirements for noise-sensitive land-use and/or development |
|---|---|---|
| 0 or less | – | No further measures |
| 1 to 3 | A | Noise-sensitive land-use and/or development is acceptable, subject to: |
| – | *A+ | Mitigation measures in accordance with an approved noise management plan; |
| 4 to 7 | B | |
| – | *B+ | or quiet house package as specified |
| 8 to 11 | C | |
| – | *C+ | |
| 12 to 15 | D | Noise-sensitive land-use and/or development is not recommended. There is no default quiet house option due to excessive forecast noise-professional design input is required in order to achieve compliance with relevant criteria. If noise-sensitive land-use and/or development is unavoidable, an approved noise management plan is required to demonstrate compliance with the noise target (see Table 1). |
| 16 + | E | |

* Assits to mitigate short term noise events from freight rail.

***Figure 3-2: Noise Exposure Forecast Table from Guidelines***

## 4. RESULTS

The results of the screening assessment are summarised as follows:

- Zone E is within 200 metres of Great Eastern Highway;
- Zone E is mixed use and therefore may have some noise sensitive (residential) uses subject to compliance with SPP 5.4;
- Zone E is no closer than 130 metres to Great Eastern Highway placing parts within Exposure A:
  - Due to the screening effect of existing buildings, any ground floor noise sensitive uses would be compliant with the outdoor noise target; and
  - Noise sensitive uses above ground floor and within 200 metres of Great Eastern Highway would be subject to Package A (refer *Appendix A*), including a notification on title. Alternatives to the Deemed to Comply Package A can be accepted if supported by a report from a suitably qualified acoustical consultant (member firm of the Association of Australasian Acoustical Consultants (AAAC)) once the specific plans are available.




***Figure 4-1: Exposure Levels to Upper Floors of Noise Sensitive Buildings***

## 5. CONCLUSION

The objectives of SPP 5.4 are to achieve:

- Indoor noise levels specified in *Table 2-1* in noise-sensitive areas (e.g. bedrooms and living rooms of houses); and
- A reasonable degree of acoustic amenity for outdoor living areas on each residential lot.

Where the outdoor noise targets of *Table 2-1* are achieved, no further noise controls are necessary. Based on the SPP 5.4 screening assessment procedure, any part of the development outside of 200 metres is compliant. Any ground floor noise sensitive development within 200 metres is also compliant.

The only area of potential exceedance, based on the screening assessment procedure of SPP 5.4 are upper residential floors within Zone E where a small area is shown to be in Exposure A. As the Structure Plan develops further, measurements could be undertaken to quantify actual noise levels from Great Eastern Highway, rather than using the screening assessment procedure. Alternatively given the relatively low impact, the screening assessment procedure can be adopted, applying Quiet House Package A to upper floors of noise sensitive dwellings within the marked area on *Figure 4-1*. Alternatives to the Deemed to Comply Package A can be accepted if supported by a report from a suitably qualified acoustical consultant (member firm of the Association of Australasian Acoustical Consultants (AAAC)) once the specific plans are available

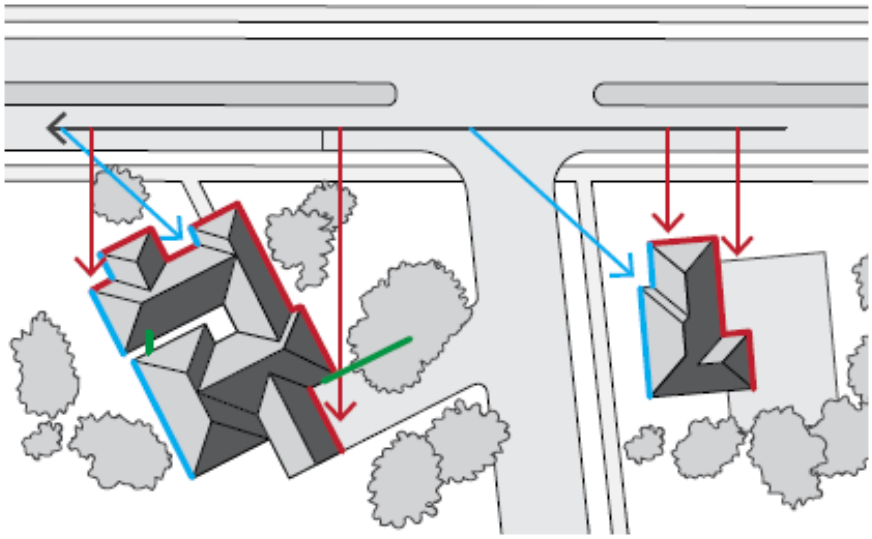
## Appendix A – Quiet House Packages

The packages and information provided on the following pages are taken from *Road and Rail Noise Guidelines* (September 2019).

Where outdoor and indoor noise levels received by a noise-sensitive land-use and/or development exceed the policy's noise target, implementation of quiet house requirements is an acceptable solution.

With regards to the packages, the following definitions are provided:

- **Facing** the transport corridor (red): Any part of a building façade is 'facing' the transport corridor if any straight line drawn perpendicular (at a 90 degree angle) to its nearest road lane or railway line intersects that part of the façade without obstruction (ignoring any fence).
- **Side-on** to transport corridor (blue): Any part of a building façade that is not 'facing' is 'side-on' to the transport corridor if any straight line, at any angle, can be drawn from it to intersect the nearest road lane or railway line without obstruction (ignoring any fence).
- **Opposite** to transport corridor (green): Neither 'side on' nor 'facing', as defined above.



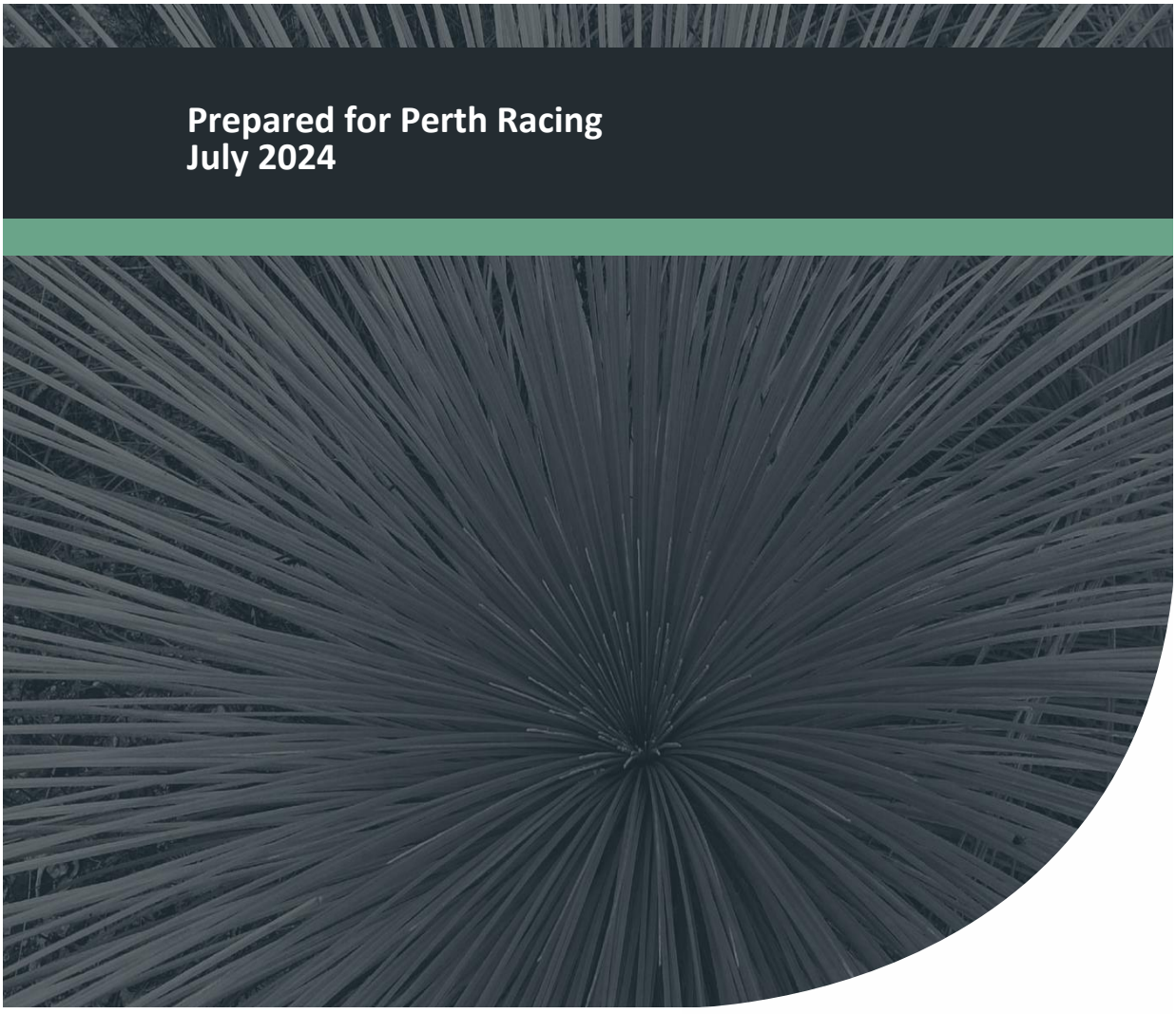
# ATTACHMENT 6

Environmental Assessment Report

# Environmental Assessment Report

## Ascot Racecourse Structure Plan

Project No: EP23-109(05)



# Document Control

| Doc name: | Environmental Assessment Report<br>Ascot Racecourse Structure Plan | | | | |
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| | Submitted for client review. | | | | |
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| | Submitted for client review. | | | | |

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# Executive Summary

Perth Racing (the 'proponent') propose to progress a structure plan (SP) over an area of land in Ascot. The area is bounded by the Swan River to the north, Grandstand Road to the west and south, Matherson Road to the south and existing residential areas to the east, and is referred to herein as 'the site'. The site includes the Ascot Racecourse area. The site is located approximately 8.5km east of Perth central business district (CBD) and is approximately 62 ha in size, within the City of Belmont (CoB). The SP consists of six precincts: Precinct A, Precinct B, Precinct C, Precinct D, Precinct E, and the racecourse. The proponent additionally intends to progress a local planning scheme amendment for the site in parallel with the structure plan process.

The site is currently zoned 'Urban', 'Parks and Recreational', and 'Private Recreation' under the Metropolitan Regional Scheme (MRS). Under the Local Planning Scheme No. 15 (LPS 15), the site is currently zoned as 'Place of Public Assembly' and 'Mixed Use'. A small portion of the site is 'Parks and Recreation: water supply sewerage and drainage'.

This Environmental Assessment Report (EAR) supports the SP and is the principal supporting environmental document for the scheme amendment and SP process for the site. It includes a preliminary assessment of the proposed SP land uses, future management considerations and associated predicted environmental outcomes, against the applicable environmental factors as defined by the Environmental Protection Authority (EPA) policy framework.

The proponent has taken a range of measures to provide for the accommodation of environmental values within the Ascot SP. This is primarily achieved through the strategic location of public open space (POS) in the northern area of the site to retain intact native vegetation, as well as retention of existing wetland features located centrally within the site.

In this context, the SP has considered the identified environmental values within the site, including the proposed future retention of:

- Subtropical and temperate coastal saltmarsh TEC/PEC
- Native vegetation
- Fauna habitat.

As part of the future development process, considerations, approvals and management plans are likely to be necessary for individual proponents of development proposals within the Ascott SP, which would further minimise environmental impacts that have the potential to arise through development in accordance with the SP. The management framework and relevant considerations are summarised in **Table 1**.

*Table 1: Summary of environmental management framework and relevant considerations*

| Environmental Factor | Management Framework and considerations | | |
|---|---|---|---|
| | Local Structure Plan | Subdivision and/or Development | Construction |
| Flora and Vegetation | Environmental Assessment Report including preliminary investigations (Emerge Associates 2024a) (**Appendix D**). | • Native Vegetation Clearing permit pursuant to Part V of the EP Act if clearing is required within the SP area and clearing is not exempt.<br>• Preparation of a Conservation and Environment Management Plan (CEMP), where required. | Clearing Permit and compliance with approval conditions and management plans, in accordance with the EP Act. |
| Terrestrial Fauna | Environmental Assessment Report including preliminary investigations (Emerge Associates 2024a) (**Appendix D**). | • Potential impacts to MNES (listed black cockatoo species) in relation to the EPBC Act and the need to consider referral in accordance with the *Matters of National Environmental Significance Significant Impact Guidelines* (DotE 2013).<br>• Preparation of a fauna management plan, where required, to minimise impacts to fauna through the clearing and construction works. | Compliance with approval conditions and management plans, in accordance with the EP Act and EPBC Act, where required. |
| Acid Sulfate Soils | Environmental Assessment Report including preliminary investigations. | • Detailed ASS Investigation and Management Plan for intrusive works in areas mapped as 'Class 1: High to moderate risk' will likely be required in accordance with the WAPC's *Acid Sulfate Soils Planning Guidelines* (2008). | Implementation of ASS Management Plan. |
| Inland Waters | The LWMS prepared for the SP by Emerge Associates (2024b) (**Appendix E**). | • Detailed UWMPs will be required (most relevant to Precinct D) to support individual subdivision applications. Other precincts may be developed under Development Approval and therefore water management will likely be documented through Stormwater Management Plans (SMs). Both UWMPs and SMPs will be prepared in accordance with the *Better Urban Water Management* Framework.<br>• Protection of the Swan River and associated Conservation Category Wetland (CCW) through consideration of hydrological processes and water quality management into design of future development areas to protect the adjacent Swan River and associated values.<br>• Development Control Area (DCA) permit application for works within or affecting the DCA to the DBCA in accordance with the *Swan and Canning Rivers Management Act 2006* and the *Swan and Canning River Management Regulations 2007*. | Compliance with UWMP/SMP and DCA permit if necessary. |

*Table 1: Summary of environmental management framework and relevant considerations (continued)*

| Environmental Factor | Management Framework and considerations | | |
|---|---|---|---|
| | Local Structure Plan | Subdivision | Construction |
| Social Surroundings | Preliminary investigations for Aboriginal Cultural Heritage.<br><br>Transport Noise Assessment for the proposed SP (Lloyd George Acoustics 2023) in accordance with SPP 5.4. | • Detailed Acoustic Assessment and Management Plan (where required) or 'Quiet House Package A' implemented to upper floors of noise sensitive dwellings within Precinct E. | Section 18 approval may be required pursuant to the *Aboriginal Heritage Act 1972* prior to ground disturbing works.<br><br>Compliance with noise management plan and appropriate house packages applied where appropriate. |

Overall, a range of environmental impact mitigation measures (primarily impact avoidance and minimisation) are proposed within the SP layout and through the future environmental management framework. In this context, it is anticipated that implementation of the proposed SP can be suitably managed through future stages of the land use planning processes (including development) such that the EPA objectives for the relevant environmental factors can be achieved.

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# Appendices

**Appendix A**

Ascot Racecourse Structure Plan (ROWE Group Design, 2024)

**Appendix B**

Ascot Racecourse Precinct Plan (ROWE Group Design, 2024)

**Appendix C**

Draft Master Plan Concept (ROWE Group Design, 2024)

**Appendix D**

Flora, Vegetation and Fauna Assessment (Emerge Associates 2024a)

**Appendix E**

Local Water Management Strategy (Emerge Associates 2024b)

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# Abbreviation Tables

*Table A1: Abbreviations – Organisations*

| Organisations | |
|---|---|
| CoB | City of Belmont |
| DEC | Department of Environment and Conservation (now DER) |
| DEP | Department of Environmental Protection (now DER) |
| DER | Department of Environment Regulation |
| DFES | Department of Fire and Emergency Services |
| DoE | Department of Environment (now DER) |
| DoW | Department of Water |
| DPLH | Department of Planning, Lands and Heritage |
| EPA | Environmental Protection Authority |
| WAPC | Western Australia Planning Commission |

*Table A2: Abbreviations – General terms*

| General terms | |
|---|---|
| AHEF | Aboriginal Heritage Enquiry Form |
| BPA | Bushfire prone area |
| CBD | Central Business District |
| CCW | Conservation category wetland |
| EAR | Environmental Assessment Report |
| ESA | Environmentally sensitive area |
| MUW | Multiple use wetland |
| PEC | Priority ecological community |
| P3 | Priority 3 |
| REW | Resource enhancement wetland |
| SP | Structure Plan |
| SPP | State Planning Policy |
| T | Threatened |
| TEC | Threatened ecological community |
| UFI | Unique feature identifier |

*Table A3: Abbreviations –Legislation*

| Legislation | |
|---|---|
| AH Act | *Aboriginal Heritage Act 1972* |
| BAM Act | *Biosecurity and Agriculture Management Act 2007* |
| CS Act | *Contaminated Sites Act 2003* |
| EP Act | *Environmental Protection Act 1986* |
| EPBC | *Environment Protection and Biodiversity Conservation Act 1999* |

*Table A4: Abbreviations – units of measurement*

| Units of measurement | |
|---|---|
| ha | Hectare |
| m | Metre |
| m AHD | m in relation to the Australian height datum |
| mBNS | m below natural surface |

# 1 Introduction

## 1.1 Background

Perth Racing (the proponent) proposes to progress a structure plan (SP) over an area of land in Ascot to support and guide future development (the Ascot SP; referred to herein as 'the SP'). The SP area includes the existing Ascot Racecourse and is bounded by the Swan River to the north, Grandstand Road to the west and south, Matherson Road to the south and existing residential areas to the east (referred to herein as 'the site'; see **Figure 1**). The site is located approximately 8.5 km east of Perth central business district (CBD) and is approximately 62 ha in size, within the City of Belmont (CoB). The SP layout is shown in **Appendix A** and consists of six precincts: Precinct A, Precinct B, Precinct C, Precinct D, Precinct E, and the racecourse, as demonstrated below on **Plate 1**, **Figure 1**, and provided in **Appendix B**.

The proponent additionally intends to progress a local planning scheme amendment as well as the structure planning process in parallel for the site. The site is currently zoned 'Urban', 'Parks and Recreation', and 'Private recreation' under the Metropolitan Regional Scheme (MRS). Under the Local Planning Scheme No. 15 (LPS 15), the site is currently zoned as 'Place of Public Assembly' and 'Mixed Use'.

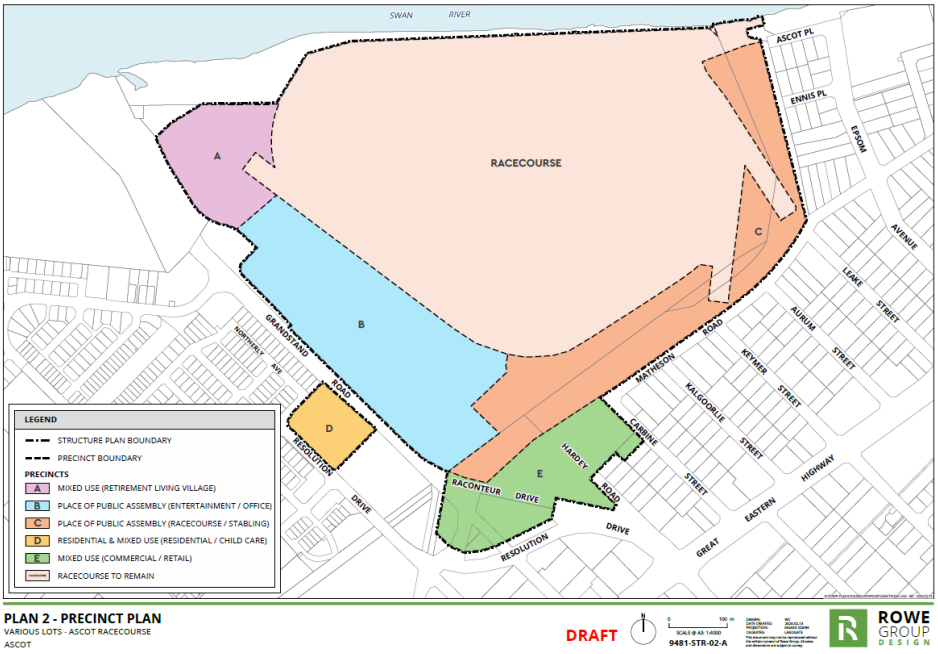



*Plate 1: Ascot Racecourse Precinct Plan with proposed uses (draft)*

## 1.2 Purpose of this report

The proponent engaged Emerge Associates (Emerge) to prepare an Environmental Assessment Report (EAR), with the intent to be the principal supporting environmental document for the local scheme amendment and SP process for the site. The EAR supports the structure planning process and provides a synthesis of information regarding the environmental values and attributes of the site. The EAR is consistent with the Western Australia Planning Commission's (WAPC) *Structure Plan Framework* (WAPC 2015) and:

- Identifies and assesses the existing environmental values and attributes of the site (**Section 2**).
- Discusses the land use planning context and the proposed SP, in the context of applicable statutory requirements under applicable legislation (**Section 3**).
- Provides an assessment of the proposed SP layout and land uses and predicted environmental outcomes against the applicable Environmental Protection Authority (EPA) environmental factors and objectives (**Section 4**).

## 1.3 Previous surveys and assessments

The following surveys, investigations and assessment reports were prepared to support preparation of the SP and are relevant to this EAR:

- Reconnaissance Flora, Vegetation, Fauna and Targeted Black Cockatoo Habitat Assessment (Emerge 2024a) (Appendix D)
- Ascot Racecourse Local Water Management Strategy (Emerge 2024b) (Appendix E)
- Transport Noise Assessment (Lloyd George Acoustics 2023).

An Environmental Report was prepared for the Draft Golden Gateway Local Structure Plan (LSP) in 2018 by Essential Environmental for the CoB (Essential Environmental 2018). The Draft Golden Gateway LSP is located immediately south of the site and is being progressed but has not been finalised. The Golden Gateway LSP no longer includes the site, and this SP is proposed to progress on Perth Racings landholdings exclusively. A review of the Golden Gateway LSP was undertaken as part of the preparation of this report to understand background information and context for the proposed SP.

The Draft Golden Gateway LSP provides contextual information for the proposed SP due to the proximity, and specifically through the following documents:

- Golden Gateway Bushfire Management Plan (Urbaqua 2018)
- Golden Gateway Local Structure Plan Environmental Report (Essential Environmental 2018)
- Golden Gateway Local Water Management Strategy (Essential Environmental 2018).

# 2 Existing Environment

The outcomes of desktop and site-specific investigations undertaken by Emerge and others have informed the identification and assessment of the existing environmental attributes and values within the site and are discussed in the below **Section 2.1** to **Section 2.8**.

The Environmental Protection Authority (EPA) identifies a number of environmental principles, factors and objectives within the *Statement of Environmental Principles, Factors and Objectives* (EPA 2018), which are used to guide the determination of significant environmental impacts and whether impacts can be appropriately mitigated or managed. Existing environmental values have been described according to the applicable EPA environmental factor (where applicable to the site), which include:

- Landforms
- Terrestrial environmental quality
- Flora and vegetation
- Terrestrial fauna
- Inland waters
- Social surroundings.

## 2.1 Landforms

### 2.1.1 Landform, soils and geology

The site occurs on the Swan Coastal Plain, the geomorphic unit that characterises much of the Perth metropolitan area. The site is within the Pinjarra System with a portion of the site within the Bassendean System. The Pinjarra System is described as *poorly drained coastal plain with variable alluvial and aeolian soils*, whilst the older Bassendean Dune system is characterised by lower relief, with variable depth to groundwater, consisting of lower sandy hills interspersed with permanent and seasonal wetlands (Churchward and McArthur 1980; Gozzard 2011).

*Geological Survey of Western Australia* (Gozzard 2007) indicates that the site lies within the Swan River Terraces system having Guildford formation of Alluvial and leached yellow sand. As shown on **Figure 2**, the site soil types include:

- **Ms2 –** Sandy Silt: Strong brown to mid grey, mottled, blocky, disseminated fine sand, hard when dry, variable clay content of alluvial origin.
- **Ms4 –** Sandy Silt: light yellow brown, blocky, mottled some some fine to medium sand, soft when moist, variable clay content.
- **S8 –** Sand: very light grey at surface, yellow at depth, fine to medium-grained, sub rounded quartz, moderately well sorted of eolian origin.

### 2.1.2 Topography

The site is generally flat with a slightly higher elevation in its eastern extent. The northern portion of the site, adjacent to the Swan River, lies at 0 m Australian Height Datum (mAHD). The remainder of the site is slightly elevated, ranging from 1 mAHD to the northwest to 7 mAHD to the east.

The topographic contours of the site are shown on **Figure 3**.

## 2.2 Terrestrial Environmental Quality

### 2.2.1 Acid sulfate soils

Acid sulfate soils (ASS) refers to naturally occurring soils and sediment containing iron sulphide (iron pyrite) materials. In their natural state, present in waterlogged and/or anoxic conditions, ASS generally do not present any risk to the environment. However, when oxidised, ASS can pose issues through sulphuric acid production, which can present a range of risks for the surrounding environment, infrastructure, and human health.

The Department of Water and Environmental Regulation (DWER) provides broad-scale mapping indicating areas of potential ASS risk (DWER 2023). A review of the DWER mapping indicates that the majority of the site is considered to have 'high to moderate' risk of ASS occurrence and a small portion in the south is considered to have 'moderate to low' risk of ASS occurring within the 3 m of the natural surface.

The DWER ASS risk mapping is shown on **Figure 4**.

### 2.2.2 Potential site contamination

A review of the publicly available DWER Contaminated Sites Database indicates that no areas within the site are registered as a 'contaminated site' pursuant to the *Contaminated Sites Act 2003*. A basic summary of records (BSR) of Lot 9002 on DP60342 was requested from DWER which shows that Lot 9002 (including the racecourse, Precinct A and Precinct B) is classified as "possibly contaminated – investigation required" and the extent of which is shown on **Figure 4**Figure 4. The contamination is associated with the sites historical land use for horse racing and runoff from animal storage on the site and agistment in the surrounding areas causing the potential for contamination, including nutrient runoff. Monitoring and investigation is required to be reviewed by DWER and potentially re-classified and the proponent has commenced investigations to address this. The BSR notes that if groundwater is to be abstracted, analytical testing should be undertaken to determine if groundwater is suitable for its intended use.

### 2.2.3 Historical context

Historical aerial images available from 1953 and onwards (Landgate 2023) were reviewed and show that Ascot Racecourse has existed since prior to 1953 (**Plate 2**) and the associated racecourse infrastructure, including grandstands and stables were established between 1953 and 1977. Residential development to the south east of the site steadily increased between 1953 to 1995 and majority of residential development to the south west occurred between 1995 and 2005 (see **Plate 2** to **Plate 4**).




*Plate 2: 1953 aerial (Landgate 2023)*




*Plate 3: 2005 aerial (Landgate 2023)*



*Plate 4: 2024 aerial (Landgate 2023)*

## 2.3 Flora and Vegetation

### 2.3.1 Regional Context

Native vegetation within the site can be classified based on regional vegetation mapping. Heddle *et al.* (1980) mapping shows the site as comprising the 'Guildford' complex , which is described as 'open forest to tall open forest and woodland'. The site is within 'Bassendean association 1009',typically comprising a combination of *Corymbia calophylla*, *Eucalyptus wandoo* and *Eucalyptus marginata (DPIRD 2021).* This association was determined to have 16.4% remaining of its original pre-European extent within the Swan Coastal Plain, of which 0.02% is protected for conservation purposes (Government of Western Australia 2019).

The EPA's *Environmental Guidance for Planning and Development Studies* (EPA 2008) states that the loss of biodiversity caused by habitat fragmentation is significantly greater once a habitat type falls below 30% of its original extent. The Guidance also references the biodiversity conservation national objective and target of retaining 30% of the original extent of each vegetation association, and the states' minimum target of 10% for constrained urban areas such as the Swan Coastal Plain. The percentage remaining of the Bassendean vegetation association (16.4%) is below the 30% retention objective but above the 10% minimum retention target for the Swan Coastal Plain.

Vegetation is typically considered to represent an intact occurrence of its overarching vegetation complex when it is in 'good' or better condition. As outlined in **Section 2.3.4**, vegetation in some portions of the site has been assessed to be in 'good' or 'very good' condition; therefore, this indicates that these areas of remnant native vegetation within the site, is consistent with vegetation associations of the 'Guildford' formation.

### 2.3.2 Site-specific investigations

Emerge completed a reconnaissance flora and vegetation survey for the site on 27 March 2023 in accordance with EPA's *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016; Emerge Associates 2024a). The survey boundary incorporated the entire site.

The survey included traversing the site on foot and recording composition and condition of vegetation. Photographs were taken during the survey to show particular site conditions. Prior to the field survey, information on the habitat preferences of threatened and priority flora species and communities were reviewed. Areas of potentially suitable habitat for threatened and priority flora species were opportunistically traversed along transects and searched for conservation significant species, as required.

The findings of the survey and the associated assessment report (Emerge Associates 2024a) is summarized below and is contained within **Appendix D.**

### 2.3.3 Vegetation units

Four vegetation units were identified within the site during the field survey and descriptions of each is provided below in **Table 2**. The associated vegetation mapping is shown in **Figure 5.**

*Table 2: Description and extent of vegetation type identified within the site*

| Vegetation Community | Description | Area (ha) |
|---|---|---|
| Er | Woodland *Corymbia calophylla* over closed grass/forbland of pasture weeds and scattered native species (or absent). | 1.12 |
| Cc | Woodland *Eucalyptus rudis* over closed grass/forbland of pasture weeds and scattered native species (or absent).. | 0.28 |
| ErJkSt | Open woodland Eucalyptus rudis and occasional Melaleuca raphiophylla over sedgeland Juncus kraussii and Schoenoplectus tabernaemontani over low shrubland Suaeda australis over forbland Apium prostratum subsp. prostratum var. prostratum and Heliotropium curassavicum over grassland *Avena sp., Cynodon dactylon and * Paspalum vaginatum (or absent). | 0.17 |
| To | Fringing rushland of *Typha orientalis*, with occasional planted native and non-native trees, shrubs and/or non-woody vegetation, over closed grass/forbland of pasture weeds. | 0.46 |
| Non-native | Heavily disturbed areas comprising bare ground and weeds with occasional native trees and forbs and/or sealed ground and buildings. | 56.62 |

### 2.3.4 Vegetation condition

The majority of the site was heavily disturbed with limited intact native vegetation present. The vegetation was therefore mostly determined to be in 'degraded – completely degraded' and 'completely degraded' condition with a small portion determined to be 'very good – good'. Vegetation condition is shown in **Figure 6** and detailed below in **Table 3**.

*Table 3: Vegetation condition categories within the site*

| Condition category (Keighery (1994)) | Size (ha) |
|---|---|
| Pristine | 0 |
| Excellent | 0 |
| Very good | 0 |
| Good – very good | 0.07 |
| Good | 0 |
| Degraded | 1.04 |
| Degraded – completely degraded | 0.98 |
| Completely degraded | 56.57 |

### 2.3.5 Threatened and Priority Ecological Communities

Threatened Ecological Communities (TECs) are recognised as ecological communities that are rare or under threat and therefore warrant special protection.

At a Commonwealth level, TECs are afforded statutory protection under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and at a State level, TECs are afforded statutory protection under the *Biodiversity Conservation Act 2016* (BC Act). Under both Acts, TECs are listed as either 'critically endangered', 'endangered' or 'vulnerable', noting listing status may be different between Commonwealth and State frameworks.

Ecological communities that are not listed as threatened, but are otherwise considered rare or under threat, may be added to the Department of Biodiversity, Conservation and Attractions (DBCA) priority list (DBCA 2022, 2023). PECs are classified as either 'priority 1' (P1), 'priority 2' (P2), 'priority 3' (P3) or 'priority 4' (P4). Whilst PECs are not afforded statutory protection under the BC Act, they are recognised and categorised by the DBCA and are considered through State environmental approval processes.

The 'subtropical and temperate coastal saltmarsh' ecological community is listed as a TEC ('vulnerable') under the EPBC Act and as a PEC (P3) under the BC Act. The TEC/PEC was identified within a portion of the ErJkSt vegetation unit, located in a small part of the site to the north (**Figure 7**). A total of 0.07 ha of this TEC/PEC was mapped within the site. Only part of the ErJkSt vegetation unit represents the TEC/PEC with the remaining ErJkSt vegetation unit representing canopy overhang into the site with limited to no understory vegetation, which is not characteristic of the TEC/PEC.

### 2.3.6 Conservation significant flora

Flora species that are considered to be rare or under threat warrant special protection under Commonwealth and/or State legislation. At a Commonwealth and State level, flora species may be listed as 'threatened' pursuant to the EPBC Act and BC Act. However, listing status may be different between Commonwealth and State levels. Flora species that are not listed as threatened, but are otherwise considered rare or under threat, may be added to the DBCA priority list (DBCA 2022, 2023). Priority flora are classified as either 'priority 1' (P1), 'priority 2' (P2), 'priority 3' (P3) or 'priority

4' (P4). Whilst priority flora are not afforded statutory protection under the BC Act, they are recognised and categorised by the DBCA and are considered through approval processes.

The desktop search results identified a total of 100 flora species including 25 threatened and 75 priority flora species as occurring or potentially occurring within a 9 km radius of the site. Of these, two priority flora species (*Angianthus micropodioides* (P3) and *Aponogeton hexatepalus* (P4)) were considered to have 'high' or 'moderate' likelihood of occurrence within the site (Emerge Associates 2024a).

No threatened or priority flora species were recorded during the survey and suitable habitat for threatened or priority species was not considered to be present (Emerge Associates 2024a). The two threatened and priority flora species identified in the desktop assessment were not considered likely to occur due to lack of suitable habitat.

### 2.3.7 Weeds

The term 'weed' can refer to any plant that requires some form of action to reduce its effect on the economy, the environment, human health and amenity. At a State level, a particularly invasive or detrimental weed species may be listed as a 'declared pest' pursuant to the *Biosecurity and Agriculture Management Act 2007* (BAM Act), indicating that it warrants special management to limit its spread. At a Commonwealth level, the Australian government has compiled a list of 32 Weeds of National Significance (WoNS) (DoEE 2019c).

A total of 58 weed species were recorded during the field survey. One weed species recorded, (**Tamarix aphylla* (athel pine)), is listed as a declared pest. Athel pine is listed in the exempt keeping category, meaning management is not obliged.

### 2.3.8 Environmentally Sensitive Areas

Environmentally sensitive areas (ESAs) are prescribed protection under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* and have been identified to protect native vegetation values of areas surrounding significant, threatened or scheduled flora, vegetation communities or ecosystems.

Within an ESA, no exemptions under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* apply and would indicate that the site is likely to support significant environmental values. However, exemptions under Schedule 6 of the *Environmental Protection Act 1986* (EP Act) apply, including any clearing in accordance with a subdivision approval under the *Planning and Development Act 2005* (a recognised exemption under the Schedule 6 of the *Environmental Protection Act 1986*).

The Swan River, located adjacent to the site, is also considered a "Conservation Category Wetland" and as such, a portion of the site (3.4 ha) is listed as an ESA (**Figure 8**).

A total of 1.10 ha of vegetation meeting the definition of 'native vegetation' pursuant to the EP Act occurs within the site, as shown in **Figure 7**. This is comprised of scattered flooded gum (*Eucalyptus rudis*) and marri (*Corymbia calophylla*) trees, and fringing vegetation (vegetation type ErJkSt).

### 2.3.9 Bush Forever

The Government of Western Australia's *Bush Forever Policy* (Government of WA 2000) is a strategic plan for conserving regionally significant bushland within the Swan Coastal Plain portion of the Perth Metropolitan Region. The objective of Bush Forever is to protect comprehensive representations of all original vegetation complexes by targeting a minimum of 10% of each for protection. Bush Forever areas represent regional ecosystems and habitat and have a vital role in conserving Perth's biodiversity.

No Bush Forever Sites occur within the site. The closest Bush Forever Site is Bush Forever Site 313 – Swan River Saltmarshes, Bayswater/Maylands, located approximately 100 m to the northwest of the site, separated by Grandstand and Garrett Road (see **Figure 8**).

### 2.3.10 Ecological linkages

Ecological linkages are linear landscape elements that allow the movement of fauna, flora and genetic material between areas of remnant habitat. The Perth Biodiversity Project, supported by the Western Australian Local Government Association have identified and mapped regional ecological linkages within the Perth Metropolitan Region (WALGA and PBP 2004). While the linkages generally align with areas of vegetation and Bush Forever areas, in many locations these linkages are not contiguous with vegetation coverage.

Ecological linkage ID 35 (Swan River) partially overlaps the northern portion of the site. However, most of the northern portion of the site does not support native vegetation due to historical clearing, and only a small portion remains within the northeast of the site.

Broadscale identified ecological linkages are shown in **Figure 8**.

### 2.3.11 City of Belmont Collective Local Biodiversity Strategy

In partnership with Town of Bassendean and City of Bayswater, the CoB developed a collective Local Biodiversity Strategy (LBS) as a commitment to the protection and enhancement of a network of local natural areas (LNAs).

LNAs across the three councils were ranked by viability using the Natural Area Initial Assessment templates detailed in the Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region (WALGA, 2004). The viability assessment was used to determine the reserves of high biodiversity value that would benefit from increased protection status. The highest viability areas within the CoB were as follows:

- Goodwood Parade Estuarine Dampland
- Signall Hill
- Tomato Lakes Bushland.

No reserves deemed to have high biodiversity value, as outlined in the LBS, were identified as occurring within the site. As such, no LNAs need to be considered as part of future development within the site.

## 2.4 Terrestrial Fauna

### 2.4.1 Site-specific surveys and investigations

In conjunction with the flora and vegetation assessment, Emerge Associates undertook a basic fauna and targeted black cockatoo survey, and the assessment boundary encompassed the entire site. The targeted black cockatoo survey extended beyond the SP area, and three potential habitat trees located adjacent to the site were identified outside the SP area. These trees are located beyond the SP area however the location of the trees are shown in Figure 7 of **Appendix D**.

Transects were traversed across the site, during the day, and the characteristics of fauna habitat and presence of fauna species was recorded. Microhabitats such as logs, rocks and leaf litter were investigated and evidence of species presence such as tracks, scats, skeletal remains, foraging evidence or calls was also noted. An opportunistic fauna species list was compiled and fauna habitat values were described, with particular reference to conservation significant fauna species that have the potential to occur within the site.

The findings of the survey and the associated assessment report (Emerge Associates 2024a) is summarised below and contained within **Appendix D.**

### 2.4.2 Fauna habitat

Emerge (2024) identified four habitat types within the site with most of the site (52.64 ha) described as 'cleared' (see **Table 4**). Habitat values in the site are limited by historical disturbance and are primarily suited to widespread fauna species with non-specific habitat requirements.

The fringing woodland fauna habitat, associated with the **ErJkSt** vegetation unit, was noted to provide a cover of native trees and understory cover of riparian vegetation that offers habitat for ground dwelling fauna. The fringing woodland is associated with the Swan River and extends into the northeast of the site. The scattered trees and shrubs habitat type comprised of large native trees was associated with vegetation units **Cc** and **Er** would provide value to native birds and other arboreal fauna (see **Figure 5**).

*Table 4: Fauna habitats identified within the site*

| Fauna habitat | Description | Area (ha) |
|---|---|---|
| **Fringing woodland** | Native fringing vegetation consisting of a native tree overstorey and an understorey of sedges/rushes. | 0.07 |
| **Wetland** | Wetland waterbodies and associated riparian sedgeland/rushland. | 3.72 |
| **Scattered trees and shrubs** | Scattered native and non-native trees and shrubs, providing habitat mainly for avifauna. | 5.45 |
| **Cleared** | Predominantly grassy weeds, bare ground and built form. | 52.64 |

Twenty-four fauna species were recorded within the site including two conservation significant fauna species.

### 2.4.3 Conservation significant fauna

Fauna species that are considered to be rare or under threat warrant special protection under Commonwealth and/or State legislation. At a Commonwealth and State level, fauna species may be listed as 'threatened' pursuant to the EPBC Act and BC Act, respectively. However, listing status may be different between Commonwealth and State levels. Fauna species that are not listed as threatened, but are otherwise considered rare or under threat, may be added to the DBCA priority list (DBCA 2022, 2023). Priority fauna are classified as either 'priority 1' (P1), 'priority 2' (P2), 'priority 3' (P3) or 'priority 4' (P4). Whilst priority fauna are not afforded statutory protection under the BC Act, they are recognised and categorised by the DBCA and are considered through environmental approval processes.

A total of 77 conservation significant fauna species were identified as occurring or potentially occurring within a 10 km radius of the site (Emerge Associates 2024a). Of these, 11 species were considered to have a 'moderate' or 'high' likelihood of occurrence within the site, including six migratory and/or specifically protected bird species, two threatened bird species, one priority bird species and two priority mammal species **Table 5**.

The field survey confirmed the 11 species identified from the desktop assessment have the potential to occur within the site. Based on observations of fauna habitat for migratory species, it was noted that occurrences of migratory species within the site are likely to be a flyover or for marginal foraging habitat due to the site and surrounding area lacking suitable habitat.

Rakali may utilise the Swan River and are likely to occasionally occur in the northern most portion of the site associated with the fringing woodland habitat type. Quenda may occur in understorey vegetation or where grasses provide dense cover.

One threatened species, *Zanda banksii naso* (forest red-tailed black cockatoo (FRTBC)) and one P4 species (*Oxyura australis* (blue-billed duck)) were recorded at the time of survey (Emerge Associates 2024a). FRTBC were observed foraging in the southern portion of the site in cape lilac (*Melia azedarach*), which were overhanging from adjacent private properties.

*Table 5: Conservation significant fauna species with potential to occur within the site*

| Taxa | Common name | Conservation Status | |
|---|---|---|---|
| | | EP Act | EPBC Act |
| **Birds** | | | |
| *Zanda banksii naso*[1] | Forest red-tailed black cockatoo | VU | VU |
| *Zanda latirostris*[2] | Carnaby's black cockatoo | EN | EN |
| *Oxyura australis* | Blue-billed duck | P4 | - |
| *Pandion haliaetus* | Osprey | MI | MI |
| *Apus pacificus* | Pacific swift | MI | MI |

[1] Previously *Calyptorhynchus*
[2] Previously *Calyptorhynchus*

*Table 5: Conservation significant fauna species with potential to occur within the site (continued)*

| Taxa | Common name | Conservation Status | |
|---|---|---|---|
| | | EP Act | EPBC Act |
| *Calidris ruficollis* | Red-necked stint | MI | MI |
| *Plegadis falcinellus* | Glossy Ibis | MI | MI |
| *Thalasseus bergii* | Crested tern | MI | MI |
| *Falco peregrinus* | Peregrine falcon | OS | - |
| **Mammals** | | | |
| *Hydromys chrysogaster* | Rakali | P4 | - |
| *Isoodon fusciventer* | Quenda | P4 | - |

#### 2.4.3.1 Black Cockatoos

Three threatened species of black cockatoo occur in the south-west of WA:

- *Zanda*[3] *latirostris* (Carnaby's black cockatoo) (CBC) which is listed as 'endangered' under the EPBC Act and the BC Act.
- *Zanda*[4] *baudinii* (Baudin's black cockatoo) (BBC) which is listed as 'endangered' under the EPBC Act and the BC Act.
- *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) (FRTBC) which is listed as 'vulnerable' under the EPBC Act and the BC Act.

The site is within the modelled distribution of CBC and FRTBC (DAWE 2022) and are therefore these species have been considered further in this section. Additionally, FRTBC were observed during the survey, in cape lilac (*Melia azedarach*) overhanging the site boundary (Emerge Associates 2024a). The site does not lie within the modelled distribution of BBC and therefore, the species is not likely to occur and have not been considered further.

Black cockatoo habitat consists of breeding, roosting and foraging categories. Foraging and breeding habitat for CBC and FRTBC was identified. No roosts or evidence of roosts were observed. However, tall trees within the site have the potential to be roosting trees. Foraging and breeding habitat for CBC and FRTBC was identified.

Foraging habitat was identified and classified as either 'primary' or 'secondary' based on black cockatoo foraging preferences. Primary food plants were defined as those with historical and contemporary records of regular consumption by a black cockatoo species. Secondary food plants were defined as plant species that black cockatoo species have been recorded consuming occasionally or that, based on their limited extent or agricultural origin, should not be considered a sustaining resource.

A total of 1.27 ha of foraging habitat for CBC was recorded, of which 0.35 ha comprised primary foraging habitat. Primary foraging habitat included 0.28 ha of primary native foraging habitat

[3] Previously *Calyptorhynchus*
[4] Previously *Calyptorhynchus*

associated with *Corymbia calophylla,* 0.07 ha of primary non-native foraging habitat associated with *Pinus pinaster*. A total of 0.92 ha of secondary foraging habitat was recorded, including 0.41 ha of secondary native foraging habitat associated with *Acacia saligna*, *Jacksonia furcellata* and X*anthorrhoea* spp*.* and 0.51 ha of secondary non-native habitat associated with *Eucalyptus gomphocephala* (**Figure 9**).

A total of 0.84 ha of foraging habitat for FRTBC was recorded in the site, which comprises 0.28 ha of primary native habitat associated with *Corymbia calophylla,* 0.07 ha of secondary native foraging habitat associated with *Jacksonia furcellata* and 0.49 ha of non-native secondary habitat associated with *Eucalyptus gomphocephala* and *Eucalyptus camaldulensis* (see **Figure 10**).

The extent of foraging habitat by value category is detailed in **Table 6**.

*Table 6: Foraging habitat recorded within the site*

| Foraging habitat | Black cockatoo species and area of foraging habitat (ha) | |
|---|---|---|
| | Carnaby's | Forest red-tailed |
| Primary native | 0.28 | 0.28 |
| Primary non-native | 0.07 | 0 |
| Secondary native | 0.41 | 0.07 |
| Secondary non-native | 0.51 | 0.49 |
| **Total** | **1.27** | **0.84** |

Breeding habitat was identified through 'habitat trees' which are typically defined as a native eucalypt that is known to support (or with the potential to support) black cockatoo breeding. Habitat trees include species such as marri, jarrah, blackbutt, tuart, wandoo, salmon gum or to a lesser extent flooded gum, with a diameter at breast height (DBH) of greater than 50 cm (or DBH greater than 30 cm for wandoo or salmon gum). A total of 66 habitat trees were recorded during the fauna survey. Of these, 5 trees contained hollows potentially suitable for black cockatoo breeding and the remaining 61 habitat trees did not contain hollows potentially suitable for black cockatoo breeding. Hollow potential for breeding habitat was based on inspection from ground level, which could be further verified through more detailed hollow inspections (Emerge Associates 2024a). The location of the habitat trees within the site are shown on **Figure 11**.

## 2.5 Inland Waters

### 2.5.1 Surface water

The surface hydrology within the site is dominated by the Swan River, which is located adjacent to the site. During summer, the influence of the river is limited to the riverine fringe, while in winter levels rise and can extend inland. The 1 in 100-year flood and fringe level area (see **Figure 12**) shows that the north east corner and the north west corner of the site is within the floodway and the flood fringe area extends into the site.

Within the centre of the racecourse there are three lakes including an irrigation lake, a lined lake for overflow from the irrigation lake and a wetland lake, which is the largest lake and allows excess

water to flow under the grass track to the Swan River (Emerge Associates 2024b). The irrigation lake is filled from an adjacent production bore and provides irrigation for the racetrack and surrounding landscaped areas. The lined lake is sealed with a natural clay liner and is used to provide irrigation for landscaped areas and water features.

### 2.5.2 Groundwater

#### 2.5.2.1 Regional groundwater

The *Water Register* (DWER 2023) indicates that groundwater beneath the site is a multi-layered system comprised of the following:

- City of Bayswater – Perth Superficial Swan unconfined aquifer
- Perth South – Perth Leederville confined aquifer
- Perth South – Perth Yarragadee confined aquifer.

The Perth Groundwater Map indicates (DWER 2023) that the groundwater level sits at 0.5 mAHD across the site. The groundwater clearance from southeast to northwest of the site ranges from 6.5 m to 0.5 m (**Figure 12**).

#### 2.5.2.2 Site-specific groundwater monitoring

Groundwater monitoring has been undertaken within the SP area. There are two groundwater level and quality monitoring bores and one production bore within the Racecourse, which are monitored by Perth Racing.

Groundwater depth monitoring undertaken by D.C. Blandford & Associates Pty Ltd in 2001 (D.C Blandford & Associates 2001) indicated groundwater depths ranging between 2.03 mAHD to 0.16 mAHD at the site. Additional results from bore monitoring of the Ascot Racecourse undertaken by JDA in 2022 indicated that groundwater levels ranged from 2.06 m below natural surface (mBNS) to 0.34 mBNS.

Groundwater depth monitoring was undertaken within Precinct A where six monitoring wells were installed for the geotechnical investigation by Douglas Partners (2024). The groundwater depth varied from 1.09 m below ground level (mBGL) to 2.37 mBGL during January 2024 (Douglas Partners 2024). Groundwater depth monitoring was undertaken within Precinct D by Galt Geotechnics during the geotechnical investigation. The highest groundwater level was reported as 3.03 mBGL during February 2024 (Galt 2024).

Groundwater quality monitoring was also undertaken by D.C. Blandford & Associates Pty Ltd in 2001. Concentrations of total nitrogen, nitrate, total phosphorus, as well as pH indicated minor fluctuations throughout the year, but trends were generally consistent with previous results. Results indicated metals concentrations below laboratory detection limits, with the exception of one elevated nickel concentration detected.

Groundwater quality monitoring undertaken by JDA Consulting Hydrologists in 2022 (JDA 2022) indicated similar conditions to the 2001 results. Groundwater salinity and pH levels were below the trigger value and within the guideline limits. Concentrations of total nitrogen and total phosphorous were in exceedance but were generally consistent with historical trends at the site.

### 2.5.3 Wetlands

Wetlands include "*areas of seasonally, intermittently or permanently waterlogged soils or inundated land, whether natural or otherwise, fresh and saline, e.g. waterlogged soils, ponds, billabongs, lakes, swamps, tidal flats, estuaries, rivers and their tributaries*" (Wetlands Advisory Committee 1977). Wetlands can further be recognised by the presence of vegetation associated with waterlogging or the presence of hydric soils such as peat, peaty sand or carbonate mud (Hill *et al.* 1996).

Wetlands of international significance (such as Ramsar wetlands) are afforded protection under the EPBC Act. No such wetlands occur within or in close proximity to the site.

At a regional level, DBCA maintains the Geomorphic Wetlands of the Swan Coastal Plain dataset (DBCA 2023), which categorises wetland features into management categories to guide land use and conservation, as outlined in **Table 7**. Wetland types are based on landform shape and water permanence, whilst management categories of wetlands are determined based on hydrological, biological and human use features.

*Table 7: Geomorphic wetland management categories*

| Management Category | Description of wetland | Management objectives |
|---|---|---|
| Conservation Category Wetland (CCW) | Support high levels of attributes | Preserve wetland attributes and functions through reservation in national parks, crown reserves and state owned land. Protection provided under environmental protection policies. |
| Resource Enhancement Wetland (REW) | Modified or degraded but still supporting substantial attributes and functions | Restore wetland through maintenance and enhancement of wetland functions and attributes. Protection via crown reserves, state or local government owned land, environmental protection policies and sustainable management on private properties. |
| Multiple Use Wetland (MUW) | Few remaining important wetland attributes and functions but still provide important hydrological functions | Use, development and management considered in the context of water, town and environmental planning through land care. |

The Geomorphic Wetlands of the Swan Coastal Plain dataset indicates three Multiple Use Category Wetland (MUW) areas (UFI 8424, UFI 8425 and UFI 8426) and one Resource Enhancement Wetland (REW) area (UFI 8423 are present within the site. After review of local surface water hydrology, the Geomorphic Wetlands of the Swan Coastal Plain dataset mapping and field observations (refer to **Figure 5** and **Figure 6** of Emerge Associates 2024b), it was determined that the area designated as an REW in the Geomorphic Wetlands of the Swan Coastal Plain dataset does not accurately reflect the conditions observed on ground.

The Swan River Estuary, situated outside the northern boundary of the site, is recognised as a "Conservation Category Wetland" (CCW) (UFI 1316 - Estuary waterbody) within the Geomorphic Wetlands of the Swan Coastal Plain dataset and has additional significant ecological, cultural and heritage values (DEC 2011). The riparian vegetation identified in Emerge Associates (2024a) is associated with the Swan River and extends into the northeast of the site. Riparian vegetation would provide habitat for waterbirds, including birds which nest in dense stands of sedges and rushes and those waterbirds which forage in mud flats along the river. In addition, the fringing vegetation would

provide habitat for both terrestrial and aquatic fauna species, including reptiles, small mammals, fish and invertebrates.

The location of the geomorphic wetlands is shown on **Figure 12.**

### 2.5.4 Public drinking water source areas

DWER proclaims Public Drinking Water Source Areas (PDWSAs) to protect identified drinking water sources, including surface water and groundwater sources (DoW 2009). They are proclaimed under the *Metropolitan Water Supply, Sewerage and Drainage Act 1909* or the *Country Areas Water Supply Act 1947* as Water Reserves, Catchment Areas or Underground Water Pollution Control Areas.

No PDWSAs exist within or surrounding the site.

## 2.6 Social Surroundings

### 2.6.1 Aboriginal cultural heritage

An enquiry was submitted to the Department of Planning, Lands and Heritage (DPLH) through the Aboriginal Heritage Enquiry Form (AHEF), which identified Site 3753 partially intersects with the western edge of the site and Site 3756 is located immediately adjacent to the site (**Figure 13**). Details on these sites are shown below:

- Site ID 3753 – Registered site, Name: Perth, Type: Historical, mythological, hunting place, named place, natural feature.
- Site ID 3536 – Registered site, Name: Swan River, Type: Creation / Dreaming Narrative.

It should be noted that the Site 3753 boundary is a broader area and the exact area is not defined (**Figure 13**). Therefore, it is possible that the exact location of Site 3753 is outside the site boundary.

### 2.6.2 Non-Indigenous heritage

A review of the State Heritage Office database (Heritage Council WA 2022) was undertaken to determine presence of sites or features of non-indigenous heritage significance within the site at a federal, state and local government level.

The Ascot Racecourse Complex (place number 06123) is listed at a local level with the CoB and occurs across the racecourse itself, which is excluded from any development areas within the SP. A portion of the Ascot Racecourse Complex is also mapped across the site (Precinct A, B and C) and comprises original buildings and newly established buildings.

The following places occur in the surrounding area and are state or local listed places:

- Bristile Kilns (fmr), Belmont (place number 00868) (state)
- Garratt Road Bridge (place number 11342) (state)
- Ascot Residential & Stables Precinct (place number 16779) (local).

### 2.6.3 Surrounding land uses

The surrounding area is mostly residential, with the exception of commercial land and some public open space to the south and the Swan River and public open space to the north (**Figure 13**). A Parks and Recreation Reserve (reserved under the MRS), associated with the Swan River foreshore, extends along the northern boundary of the site and intersects with a portion of the site. This area includes part of the racecourse itself and vegetation within the northeast of the site. Both of these areas are planned to be retained as part of the SP.

No surrounding land uses are likely to cause amenity impacts associated with dust, gaseous or odour emissions.

Great Eastern Highway is less than 300 m south of the southern boundary of the SP which will require consideration of transport noise and management/mitigation in line with the State Planning Policy (SPP) 5.4 *Road and Rail Noise*. Precinct E falls within the SPP 5.4 area and requires further consideration regarding potential noise impacts.

## 2.7 Other Considerations

### 2.7.1 Bushfire hazards

Review of the Department of Fire and Emergency Services (DFES) Bushfire Prone Area (BPA) mapping (DFES 2021) indicated no Bushfire Prone Areas (BPA) within the site. The nearest BPA is greater than 500 m to the west of the site and therefore no further consideration to bushfire hazards is required.

## 2.8 Summary of Existing Environmental Values

**Table 8** below summarises the existing environmental values occurring within the site, as identified and discussed previously in **Sections 2.1** to **2.7**.

*Table 8: Summary of existing environmental values within the site relevant to EPA factors*

| EPA factor | Summary of existing environmental values within the site |
|---|---|
| Landforms | • No restricted landforms or unique geological features have been identified within the site.<br>• The Swan River is located adjacent to the site. |
| Terrestrial environmental quality | • The majority of the site is considered to have high to moderate risk of ASS occurrence and a small portion in the south is considered to have moderate to low risk of ASS occurring within the 3 m of the natural surface.<br>• Lot 9002 (including Precinct A and Precinct B) is classified as "possibly contaminated – investigation required" pursuant to the *Contaminated Sites Act 2003.* |

*Table 8: Summary of existing environmental values within the site relevant to EPA factors (continued)*

| EPA factor | Summary of existing environmental values within the site |
|---|---|
| Flora and vegetation | • No threatened or priority flora species were recorded in the site. The threatened and priority flora species identified in the desktop assessment are not considered to occur in the site due to lack of suitable habitat.<br>• The majority of the site is heavily disturbed (degraded to completely degraded) and limited native intact native vegetation is present.<br>• One small patch of vegetation (vegetation community type ErJkSt) was identified in 'good – very good' condition.<br>• A total of 0.07 ha of the 'subtropical and temperate coastal saltmarsh' TEC/PEC (listed as Vu under the EPBC Act and listed as P3 under the EP Act) occurs within the northern portion of the site adjacent to the Swan River.<br>• A total of 1.1 ha of native vegetation as classified under the EP Act was mapped within the site. |
| Terrestrial fauna | • Eleven conservation significant fauna species were considered to have a 'moderate' or 'high' likelihood of occurrence within the site including six migratory and/or specifically protected bird species, two threatened bird species, one priority bird species and two priority mammal species.<br>• One priority listed species, blue-billed duck (P4) was recorded during the survey (Emerge Associates 2024a).<br>• As a result of historical disturbance, the site contains limited fauna habitat and is likely only utilised by fauna traversing through the wider area, especially birds. However, the small patch of 'Fringing Woodland' in the site's northeast may provide habitat value for smaller ground-dwelling fauna.<br>**Black cockatoos**<br>• CBC (EN) and FRTBC (VU) have the potential to occur within the site based on the desktop assessment undertaken.<br>• FRTBC was observed foraging in the southern portion of the site in cape lilac (*Melia azedarach*), which were overhanging from adjacent private properties (Emerge Associates 2024a).<br>• 66 potential black cockatoo habitat trees were recorded within the site.<br>• A total of 1.27 ha of foraging habitat for CBC was recorded, of which 0.35 ha comprised primary foraging habitat.<br>• A total of 0.84 ha of foraging habitat for FRTBC was recorded, of which 0.28 ha comprised primary foraging habitat. |
| Inland waters | • No CCWs have been identified within the site; however, the Swan River is a CCW and occurs immediately north of the site.<br>• Three MUWs (UFI 8424, UFI 8425, UFI 8426) are mapped across the site.<br>• One REW (UFI 8423) is mapped across the site, however, after review of local surface water hydrology, the Geomorphic Wetlands of the Swan Coastal Plain dataset mapping and field observations (refer to **Figure 5** and Figure 6 of Emerge Associates 2024b), it was determined that the area designated as an REW in the Geomorphic Wetlands of the Swan Coastal Plain dataset does not accurately reflect the conditions observed on ground. |
| Social surroundings | • Aboriginal Cultural Heritage Site 3753 partially overlaps with a portion of the west of the site and Site ID 3536 (Swan River) is located immediately north of the site. These places are associated with creation/dreaming narrative and is also associated with a mythological value.<br>• The Ascot Racecourse Complex, place number 06123, occurs across the racecourse itself and Precinct A, B and C.<br>• Noise and acoustic impact from Great Eastern Highway must be considered for Precinct E residential development. |
| Other considerations | • No Bushfire Prone Areas exist within the site. |

# 3 Proposed Land Use and the Planning and Approval Framework

## 3.1 Ascot Racecourse Proposed Development

The proposed zoning for the SP is in line with existing zoning in adjacent areas and aims to provide a framework of what might be considered appropriate from a land use planning perspective, and provides a framework for the future land use, subdivision and development within the site. Additionally, a master plan has been prepared which provides a detailed conceptual layout for proposed residential and commercial areas, the road network, public open spaces and other facilities (**Appendix C**). The master plan (**Appendix C**) indicates the following future land use per precinct as:

- The racecourse is proposed to remain, within which there is expected to be minimal future additional development.
- Precinct A is proposed to include a retirement living village.
- Precinct B includes the existing car parking and racecourse grandstand and is proposed to include additional car parking spaces and provide new buildings for offices/hospitality.
- Precinct C includes proposed stables, horse float parking and car parking.
- Precinct D includes a proposed residential area and childcare centre.
- Precinct E includes proposed equine and jockey services, car parking and pad site and potential retail and bulky goods.

The SP has been developed through an iterative and collaborative design process involving a variety of stakeholders, including a multi-disciplinary design team providing expertise in the following fields:

- Town planning and urban design
- Environmental planning
- Aboriginal heritage
- Hydrology
- Civil and geotechnical engineering
- Traffic engineering
- Economic analysis.

### 3.1.1 Environmental considerations of the structure plan

Environmental values and considerations have been addressed as part of the SP design process, which has culminated in the proposed SP and master plan layout provided in **Appendix A** and **Appendix C**.

As outlined above, the primary structural basis of the SP layout has generally been informed by the location and extent of the various existing district-scale land uses. This has provided a level of restriction to the ability for the SP layout to strategically respond to environmental values within the site. Notwithstanding, the proponent has taken a range of measures to provide for the future retention of significant environmental values where possible (i.e. where there remains flexibility in the layout design process).

#### 3.1.1.1 Public Open Space

The area reserved for Parks and Recreation in the northern extent of the SP, along the foreshore of the Swan River, has been retained as Parks and Recreation as part of the proposed land uses within the SP. Retention of this vegetation avoids direct impacts to the 0.07 ha of subtropical and temperate coastal saltmarsh TEC/PEC. In addition, this vegetation was identified as being in good to very good condition with potential to provide canopy cover and habitat for avian species as well as riparian vegetation for ground dwelling fauna.

#### 3.1.1.2 Hydrology

To address the proximity of the Swan River and support the SP design and process, a Local Water Management Strategy (LWMS) has been prepared by Emerge Associates (2024b) to consider water sensitive urban design principles, flood storage requirements and a water conservation strategy. The principal management objective for hydrology within the site is to ensure that post-development environmental flows and/or hydrological cycles are maintained or improved upon pre-development conditions, especially regarding the Swan River located adjacent to the site and lake features within the site. Specifically, the LWMS has aimed to:

- Protect water quality in the Swan River by providing appropriate water quality treatment at source.
- Mitigate potential flooding within the SP area and immediate surrounds.
- Take account of existing drainage infrastructure capacity and ensure that sufficient land is set aside to manage stormwater.
- Provide a broad level stormwater management framework to support future urban development.
- Incorporate appropriate best management practices into the drainage systems that address the environmental and stormwater management issues identified.
- Minimise transport of nutrients/pollutants to groundwater.
- Develop a non-potable water conservation strategy that will accommodate existing groundwater allocation constraints for the area.
- Gain support from DWER, DBCA, CoB and Water Corporation for the proposed method to manage stormwater within the site.

#### 3.1.1.3 Wetlands

A total of three MUW as per the Geomorphic Wetlands of the Swan Coastal Plain dataset exist within the site, specifically within the boundary of the Ascot Racecourse track. No considerations are required for MUWs however the planning and design of the SP does not intend to disturb the MUW.

One REW (UFI 8423) is mapped across the site, however, after review of local surface water hydrology, the Geomorphic Wetlands of the Swan Coastal Plain dataset mapping and field observations (refer to **Figure 5** and Figure 6 of Emerge Associates 2024b), it was determined that the area designated as a REW is unlikely represent a REW. Regardless, the planning and design of the SP has avoided the REW and no disturbance to the REW is anticipated.

#### 3.1.1.4 Conservation significant fauna

The SP design retains the most suitable fauna habitat, the fringing woodland habitat type which is associated with the remnant vegetation along the foreshore reserve. This vegetation was noted to provide habitat for conservation significant fauna species, including rakali and will be retained in the current SP design.

The black cockatoo foraging habitat identified by the field survey is patchily distributed across the site and interspersed with plant species not used by CBC or FRTBC. No signs of use were identified during the targeted black cockatoo survey, such as chew marks, droppings or moulted feathers within any of the habitat trees with hollow(s) in the site.

The potential foraging habitat and habitat trees for CBC and FRTBC within the site is unlikely to represent critical foraging or breeding habitat, given its small extent within an urban setting with minimal potentially suitable hollows and no evidence of use by CBC or FRTBC. Potential black cockatoo habitat trees identified will be opportunistically retained. The potential foraging and breeding habitat in the SP occurs within the 'Place of public assembly,' where future development is permitted to occur. Black cockatoo habitat will need to be considered as part of future subdivision and development approvals.

#### 3.1.1.5 Aboriginal cultural heritage

Whilst not identified as occurring within the precinct areas, the Swan River (Site ID 3536) is a key Aboriginal cultural heritage site for consideration. The SP design retains the Parks and Recreation Reserve which excludes future development adjacent to the Swan River and protects this place of cultural heritage significance from potential development impacts.

No works associated with SP development are currently proposed to directly impact the Swan River, however, should any future proposed works impact the riverbank, foreshore or any other Aboriginal cultural heritage site, approval for the proposed works under Section 18 of the *Aboriginal Heritage Act 1972* would be required.

#### 3.1.1.6 Non-Indigenous heritage

The Ascot Racecourse Complex (place 06123) includes the racecourse itself and the surrounding proposed precincts, excluding Precinct D, as outlined in the SP. The SP design proposes to retain the racecourse itself and does not propose development within the racecourse. The remaining part of the Ascot Racecourse Complex (place 06123) is within Precinct A, B, C and E. The SP design for these precincts allows for the development of additional facilities and renovation of current facilities.

### 3.2 Future planning and environmental approvals process

A key component of implementing the future development of any area is the relevant environmental management framework. Subject to approval and endorsement of the structure plan by the WAPC, development of the site will be progressed through subdivision and/or development approval/s. Where required, the environmental management requirements can be implemented through

applicable subdivision and/or development approval conditions. The future planning and environmental approvals process is discussed in this section.

### 3.2.1 Metropolitan Region Scheme

The site is currently zoned a combination of 'Urban,' 'Private Recreation' and 'Parks and Recreation' under the Metropolitan Region Scheme (MRS). The majority of surrounding land is zoned as 'Urban,' and land abutting the Swan River reserved for 'Parks and Recreation'. The MRS zoning of Precinct A area is currently 'Private Recreation' and lodgment of an MRS amendment may be required with the Western Australian Planning Commission (WAPC) to rezone the Precinct A area from 'Private Recreation' to be consistent with finalised land uses.Correspondingly, LPS 15 could be amended either through a concurrent or subsequent local scheme amendment (see further details regarding LPS 15 in **Section 3.2.2**).

Any scheme amendment request received and initiated by the responsible authority (WAPC), would be formerly referred to the EPA under Section 48A of the EP Act (unless exempt under Section 48AAA of the EP Act). This is discussed further in **Section 3.2.4**.

### 3.2.2 Local Planning Scheme No. 15

The site is currently zoned 'Public place of assembly' and 'Mixed Use' under the CoB LPS 15. The existing Ascot Racecourse covers the majority of the site, which attributes the 'Place of public assembly' zoning and the south of the site within part of Precinct E is zoned 'Mixed Use'.

The current LPS 15 zonings are inconsistent with the proposed land uses within Precinct A and Precinct D. As such, a local scheme amendment will be required to rezone Precinct A from 'place of public assembly' to 'retirement living/mixed use' and to rezone Precinct D from 'Place of Public Assembly' to 'Mixed Use'.

The Swan River foreshore is also subject to the *City of Belmont Foreshore Precinct Plan* (CoB 2018) which guides the future use and management of the Belmont foreshore and the development interface with the Parks and Recreation reserve.

### 3.2.3 *Environmental Protection Act* 1986 - Section 38 proposals

Section 38 of the EP Act enables any person to refer a 'proposal' (as opposed to a planning scheme, as per Section 48) likely to have a significant impact on the environment to the EPA, who then decide whether or not to assess the proposal. The SP area, or part thereof, will need to be considered in relation to Section 38 of the EP Act.

A preliminary assessment of the anticipated environmental outcomes as a result of the anticipated future urban development (based on the SP layout) has been undertaken against relevant EPA factors and objectives, which is outlined in **Section 4**. Based on this assessment, it is not considered likely that any future development within the SP would require referral to the EPA pursuant to Section 38 of the EP Act.

### 3.2.4 *Environmental Protection Act 1986* - Section 48 scheme amendment referral

An amendment to a planning scheme (regional or local) is required to be referred to the EPA (unless exempt under Section 48AAA of the EP Act) to determine whether environmental assessment is required, pursuant to Section 48 of the EP Act. All amendments to a planning scheme are required to be referred to the EPA by the responsible authority (in this case, the WAPC) unless the amendment is exempt under Section 48AAA of the EP Act. Exemptions under Section 48AAA relate to amendments that seek changes to the planning scheme that do not relate to the environment and will not impact the environment and therefore do not require EPA consideration. Exemptions include:

- Amendments seeking to correct an administrative or minor error, amend a definition or correct a title in the planning scheme if it will not impact the operation of the scheme.
- Amendments seeking to classify an area of land as a reserve for Parks and Recreation or Regional Open Space.
- Amendments seeking to zone an area of land as a reserve if the land has been subdivided and developed by an approved redevelopment scheme and the redevelopment scheme no longer applies and the amendment is required to reflect a zone or reserve created in accordance with the approved redevelopment scheme.
- Amendments seeking to create, alter or remove a road reserve of a regional road if a clearing permit under Part V of the EP Act has been granted or if the impacts associated with construction of the road has been assessed under Part IV of the EP Act and a decision has been made that the proposal can be implemented.

The required scheme amendment for the SP will not be exempt under Section 48AAA of the EP Act. Upon referral on an amendment to a planning scheme, the EPA will make a decision on whether the proposed scheme amendment requires formal assessment and often consider significance in their assessment. The EPA may also provide informal advice on the proposed scheme amendment without formally assessing the scheme or determine that the proposed amendment is not capable of being environmentally acceptable. Areas of the SP area not assessed under Section 48A will need to be considered and referred under Section 38 of the EP Act if impacts to the environment are considered significant. As stated above, a preliminary assessment of the anticipated environmental outcomes as a result of the anticipated future urban development (based on the SP layout) has been undertaken against relevant EPA factors and objectives and is outlined in **Section 4**.

Section 48A outlines that any proposal likely to have a significant impact on the environment, but which is within an area and for a land use that is subject to an assessed scheme (i.e. a scheme for which a determination has been made by the EPA under Section 48A), is not required to be referred to the EPA under Section 38 of the EP Act.

Section 48A will only apply to the SP area which has undergone a scheme amendment (regional or local) through the Section 48A process and where the potential environmental impacts were considered by the EPA. The EPA may choose to provide advice at this time and defer assessment of environmental factors to subsequent stages of the planning process, which would mean Section 48A would not apply and referral under Section 38 would be required. Based on the assessment undertaken and the nature/layout of the SP it is unlikely that any future development within the SP extent would quire referral to the EPA pursuant to Section 38 of the EP Act.

### 3.2.5 Environmental Protection Act 1986 – Part V Clearing Permits

Where native vegetation is required to be cleared within the site, this will likely be undertaken in accordance with a subdivision approval and associated authorised subdivision works, which will provide an exemption from the requirements for a native vegetation clearing permit. Should bulk earthworks or any other works be commenced within the site that requires clearing of native vegetation before subdivision approvals are gained, a clearing permit pursuant to Part V of the EP Act will be required.

In addition, and as part of subdivision, the WAPC may include a standard condition (model subdivision condition EN2) which requires:

*Prior to the commencement of subdivisional works, measures being undertaken to identify any vegetation on the site worthy of retention, including any potential habitat or foraging trees for threatened fauna species, and protection measures implemented to ensure such vegetation is not impacted by subdivisional works (Local Government).*

This can be used to ensure that vegetation retention opportunities (likely to be limited to mature trees) are considered through the subdivisional works process.

### *3.2.6 Environment Protection and Biodiversity Conservation Act 1999*

The EPBC Act provides statutory protection for listed Matters of National Environmental Significance (MNES). The CBC is listed as endangered and FRTBC is listed as vulnerable under the EPBC Act. Any future development proposals within the SP should consider the requirements of the EPBC Act in relation to CBC and FRTBC and their habitat, which will primarily be in relation to the potential breeding habitat.

The subtropical and temperate coastal saltmarsh TEC is listed as vulnerable under the EPBC Act. TEC's listed in the vulnerable category are not considered matters of national environmental significance (MNES) for the purposes of Part 3 of the EPBC Act and therefore no further considerations to the TEC/PEC are required in relation to the EPBC Act.

Individual proponents of future development within the site will need to consider their obligations under the EPBC Act and the potential need to refer any proposed action that may have a significant impact on MNES. This would largely be limited to the consideration of potential impacts on listed black cockatoo species. While this would be considered on a proposal-by-proposal basis (and potentially progressed by different proponents), it is unlikely that the potential impacts on black cockatoo would be considered significant.

### 3.2.7 Swan and Canning River Development Control Area

The northern boundary of the site falls within the Swan Canning Development Control Area (DCA) (CoB 2018) and the Swan Canning River Park. Any proposed development on land adjacent to the river within the DCA and/or partly within DCA would be subject to assessment and approval by the DBCA through a permit application, under Part 5 of the *Swan and Canning Rivers Management Act 2006* and the *Swan and Canning River Management Regulations 2007*.

# 4 Assessment of Predicted Environmental Outcomes

The predicted environmental outcomes that will need to be accommodated in the implementation of the proposed SP, through future development, have been assessed against the EPA objectives for each environmental factor relevant to the site (as listed in **Section 2**).

This is provided in **Table 9**, which considers the spatial layout responses of the SP and provision of POS intended to provide for the protection and conservation of existing environmental assets within the site. In addition, **Table 9** also outlines the future management of environmental values or considerations that will require further specific attention as part of the future development of the site.

A range of environmental impact mitigation measures (primarily impact avoidance and minimisation) are proposed within the SP layout and through the future environmental management framework. In this context, it is anticipated that implementation of any future development within the proposed SP can be suitably managed through future stages of the land use planning processes (including subdivision and development) such that the EPA objectives for the relevant environmental factors can be achieved.

*Table 9: Summary of EPA environmental factors and objectives relevant to the proposed future land use*

| Environmental factor | EPA objective | Ascot Local Structure Plan spatial response | Future management considerations | Predicted environmental outcome |
|---|---|---|---|---|
| Landforms | To maintain the variety and integrity of distinctive physical landforms so that environmental values are protected. | The Swan River is located immediately adjacent to the north of the site. No development is proposed within the Swan River foreshore Reserve. Additionally, retention of the riparian vegetation associated with the Swan River in the northern portion of the site allows for protection of biological diversity and ecological integrity along the Swan River foreshore. Further responses associated with the Swan River in regard to hydrology are discussed below. | Future management considerations for the Swan River in regard to inland waters are discussed below. | No significant impacts likely |
| Terrestrial environmental quality | To maintain the quality of land and soils so that environmental values are protected. | There are no SP spatial responses to terrestrial environmental quality considerations, which primarily relate to ASS risk.<br><br>To address Lot 9002 which is classified as "potentially contaminated – investigation required", investigations have been commenced by the proponent in preparation of anticipated subdivision or development approval conditions. | To facilitate development within the site, ASS investigations and management considerations for the site will likely be required (as a portion of the site is mapped as Class 1 'high to moderate' risk of ASS occurring within 3 m of the natural soil surface). Given the relatively shallow depths to groundwater within portions of the site, any dewatering that may be required for development works would likely trigger the need for a dewatering and ASS management plan.<br><br>If required, any future ASS considerations will be identified and suitably managed by each proponent as part of the future development process in accordance with the WAPC's *Acid Sulfate Soils Planning Guidelines* (2008).<br><br>Any future development within Lot 9002 will need to resolve the current CS Act classification, and this would involve the completion of investigations and any remediation that is identified as being required. | Any potential impacts associated with ASS can be suitably minimised at future development stages within the site. If determined to be required, an ASS management plan and dewatering management plans would be prepared and implemented as part of any works associated with subdivision or development works.<br><br>Site contamination will be adequately investigated and remediation completed (if required) to resolve any site contamination risk. |

*Table 9: Summary of EPA environmental factors and objectives relevant to the proposed future land use (continued)*

| Environmental factor | EPA objective | Ascot Structure Plan spatial response | Future management considerations | Predicted environmental outcome |
|---|---|---|---|---|
| Flora and vegetation | To protect flora and vegetation so that biological diversity and ecological integrity are maintained. | The SP layout has been designed to maintain the northern vegetated area within Parks and Recreation Reserve. This includes 0.07 ha of the subtropical and temperate coastal saltmarsh TEC/PEC. Retention of this vegetation in the northern portion of the site allows for protection of flora, vegetation, biological diversity and ecological integrity along the Swan River foreshore.<br><br>Remaining vegetation within the site was recorded in 'degraded' to 'completely degraded' condition with minimal environmental value. As such, no additional SP vegetation retention provisions are considered necessary. | Should any works within the site that require clearing of native vegetation prior to subdivision approvals, a clearing permit pursuant to Part V of the EP Act will be required, unless otherwise exempt from a clearing permit. Subdivision approval and associated authorised subdivision works will provide an exemption from the requirements for a clearing permit. Future subdivision and/or development applications and approval conditions would consider vegetation retention where possible.<br><br>Conditions associated with subdivision and/or development approvals often require the preparation of a Conservation and Environment Management Plan, which would further minimise potential impacts to retained flora and vegetation values during proposed construction in development stages. | Overall, the SP layout responds to flora and vegetation values where possible, primarily associated with retention of established vegetation along the Swan River foreshore. Protection of an area of subtropical and temperate coastal saltmarsh TEC/PEC is also a key outcome of this response. |

*Table 9: Summary of EPA environmental factors and objectives relevant to the proposed future land use (continued)*

| Environmental factor | EPA objective | Ascot Structure Plan spatial response | Future management considerations | Predicted environmental outcome |
|---|---|---|---|---|
| Terrestrial fauna | To protect terrestrial fauna so that biological diversity and ecological integrity are maintained. | The SP layout has been designed to maintain the northern vegetated area within POS. Retention of this vegetation in the northern portion of the site allows for protection of biological diversity and ecological integrity along the Swan River foreshore.<br><br>A total of 66 habitat trees potentially suitable for black cockatoo breeding were identified within the site, of which five contain potentially suitable hollows for black cockatoo breeding habitat. A total of 1.27 ha and 0.84 ha of foraging habitat (primary and secondary) for CBC and FRTBC, respectively, was recorded within the site. Of this, primary foraging habitat (native and non-native) comprised a total of 0.35 ha and 0.27 ha for CBC and FRTBC, respectively. The remaining area consisted of secondary foraging habitat.<br><br>The foraging habitat is patchily distributed and is interspersed with plant species not used for CBC or FRTBC for foraging. No signs of use were identified during the targeted black cockatoo survey, such as chew marks, droppings or moulted feathers within any of the habitat trees with potential hollow(s).<br>The potential foraging habitat and habitat trees for threatened black cockatoo species mapped within the site are unlikely to represent critical foraging or breeding habitat, given its small extent within an urban setting with minimal potentially suitable hollows and no evidence of use by CBC or FRTBC. | Where future development works within the site will result in potential impacts to MNES (including CBC and FRTBC), proponents will need to consider their EPBC Act obligations and need for referral, based on the specific impacts of their proposed action. Individual proposed actions can be addressed through preliminary self-assessment against the *Matters of National Environmental Significance Significant Impact Guidelines* (DotE 2013) in relation to any potential impacts on MNES.<br><br>As part of future subdivision, there may be requirements to prepare a fauna management plan prior to works commencing for development involving clearing of native vegetation or any fauna habitat in order to minimise impacts to fauna during clearing and construction works. Fauna management plans can be prepared as required as part of future subdivision works and are often associated with conditions of subdivision and/or development approval.<br><br>Conditions associated with subdivision and/or development approvals often require the preparation of a Conservation and Environment Management Plan, which would further minimise potential impacts to fauna during proposed construction in development stages. | Overall, the SP layout responds to terrestrial fauna values, primarily associated with retention of intact native vegetation along the northern border of the site, providing potential habitat for terrestrial fauna. Notwithstanding, impacts to MNES such as CBC and FRTBC are possible and EPBC Act obligations will need to be considered by proponents before development, depending on the nature and extent of the development and magnitude of likely impacts. In general, the extent of impact on black cockatoo is not likely to be considered significant. |

*Table 9: Summary of EPA environmental factors and objectives relevant to the proposed future land use (continued)*

| Environmental factor | EPA objective | Ascot Local Structure Plan spatial response | Future management considerations | Predicted environmental outcome |
|---|---|---|---|---|
| Inland waters | To maintain the hydrological regimes of groundwater and surface water so that environmental values are protected. | The *State Water Strategy for Western Australia* (Government of WA 2003) and *Better Urban Water Management* (WAPC 2008) endorses the promotion of integrated water cycle management and application of water sensitive urban design (WSUD) principles to provide improvements in the management of stormwater, and to increase the efficient use of other existing water supplies. Whilst not a spatial response, a Local Water Management Strategy (LWMS) has been prepared by Emerge Associates for the site in line with water sensitive urban design principles, flood storage requirements and a water conservation strategy. The principal management objective for hydrology within the site is to ensure that post-development environmental flows and/or hydrological cycles are maintained or improved upon pre-development conditions, especially regarding the Swan River adjacent to the site and lake features retained within the site. Specifically, the LWMS has aimed to:<br>• Protect water quality in the Swan River by providing appropriate water quality treatment at source.<br>• Mitigate potential flooding within the SP area and immediate surrounds.<br>• Take account of existing drainage infrastructure capacity and ensure that sufficient land is set aside to manage stormwater.<br>• Provide a broad level stormwater management framework to support future urban development.<br>• Incorporate appropriate best management practices (BMPs) into the drainage systems that address the environmental and stormwater management issues identified. | A LWMS has been prepared to support the SP process. Detailed Urban Water Management Plans (UWMP) will be required in support of individual subdivision applications in accordance with the *State Water Strategy for Western Australia* (Government of WA 2003) and *Better Urban Water Management* (WAPC 2008). UWMPs will be most relevant most relevant to Precinct D. Other precincts may be developed under a Development Approval and therefore water management will likely be documented within a Stormwater Management Plan (SMP) also in accordance with *Better Urban Water Management* (WAPC 2008).<br><br>Should any future developments propose to impact the Swan River CCW and as such impact the mapped ESA associated with the Swan River, wetland buffers and separation distances should be implemented in accordance with the draft *Guideline for the Determination of Wetland Buffer Requirements* (WAPC 2005) for protection of wetland values, habitat protection, edge effects and water quality management with relevant guidelines to protect wetland values, habitat and water quality.<br><br>Where proposed development is within or adjacent to the Swan and Canning River Development Control Area (DCA), proponents will be required to submit a DCA permit application to the DBCA in accordance with the *Swan and Canning Rivers Management Act 2006* and the *Swan and Canning River Management Regulations 2007.* | The SP does not specifically respond to the inland waters environmental factor. However, the LWMS defines the intended hydrological management approach, which will be implemented during future development. |

*Table 9: Summary of EPA environmental factors and objectives relevant to the proposed future land use (continued)*

| Environmental factor | EPA objective | Ascot Local Structure Plan spatial response | Future management considerations | Predicted environmental outcome |
|---|---|---|---|---|
| Inland waters (continued) | To maintain the hydrological regimes of groundwater and surface water so that environmental values are protected (continued). | • Minimise transport of nutrients/pollutants to groundwater.<br>• Develop a non-potable water conservation strategy that will accommodate existing groundwater allocation constraints for the area.<br><br>Three MUWs and one REW will be retained in the current SP design. Although an REW is mapped within the site, after review of local surface water hydrology, aerial imagery and field observations (refer to Figure 5 and Figure 6 of Emerge Associates 2024b), it was determined that the area designated as an REW in the Geomorphic Wetlands of the Swan Coastal Plain dataset does not accurately reflect the conditions observed on ground. However, the REW will be retained in the current SP design.<br><br>The Swan River is a CCW and is located immediately adjacent to the site. The SP design avoids the CCW and associated ESA by retaining the Parks and Recreation Reserve which encompasses the CCW buffer area and values associated with the Swan River. | | |

*Table 9: Summary of EPA environmental factors and objectives relevant to the proposed future land use (continued)*

| Environmental factor | EPA objective | Ascot Local Structure Plan spatial response | Future management considerations | Predicted environmental outcome |
|---|---|---|---|---|
| Social Surroundings | To protect social surroundings from significant harm. | Aboriginal Cultural Heritage (ACH) site 3536 (Swan River) is located immediately north of the site and ACH Site3753 has a minor overlap with the western boundary of the site. These sites are not considered to be potentially impacted by the proposed SP layout. However, should any future development propose to impact these sites, further consultation and AH Act requirements would be required.<br><br>The Ascot Racecourse Complex (place 06123) is a non-indigenous heritage place, located within the site. The SP design proposes to retain the racecourse itself and excludes the racecourse from proposed development. The remaining part of the Ascot Racecourse Complex (place 06123) is within Precinct A, B and C. The SP design of these precincts allows for the development of additional facilities and renovation of current facilities.<br><br>No responses are required in regard to noise and acoustics. | The Swan River is associated with Site 3536 and as such any future proposed works that may impact the riverbank and/or the foreshore will require approval under Section 18 of the *Aboriginal Heritage Act 1972*. Further requirements and consultation would be required to identify the extent of Site 3753 within the SP area and if future consideration is required in accordance with the *Aboriginal Heritage Act 1972*.<br><br>Future development would need to consider the Ascot Racecourse Complex heritage site and can be addressed as part of any Development Approval process.<br><br>A Transport Noise Assessment for the proposed SP was undertaken by Lloyd George Acoustics in November 2023 (Lloyd George Acoustics 2023) to understand the spatial responses that might be required to address potential noise and acoustic impacts in the SP from the adjacent Great Eastern Hwy. Based on the results, future proponents undertaking noise sensitive development in Precinct E could undertake further noise assessments to quantify actual noise levels from Great Eastern Highway, rather than using the screening assessment criteria. Alternatively, the screening assessment procedure could be adopted, resulting in requirements for a 'Quiet House Package A' to upper floors of noise sensitive dwellings within Precinct E.<br><br>Future development would need to consider noise impacts from the racecourse and can be addressed as part of any Development Approval process. | Any potential impacts to social surroundings can be suitably mitigated through a range of impact avoidance and minimisation measures such that it is unlikely any significant residual impacts will occur. |

# 5 Conclusions

The proponent has taken a range of measures to provide for the future retention of relevant environmental values within the Ascot SP. This is primarily achieved through the strategic location of the Parks and Recreation Reserve in the northern area of the site to preserve intact native vegetation.

In this context, the SP has been designed to respond to the identified environmental values within the site where possible, including the proposed retention of:

- Subtropical and temperate coastal saltmarsh TEC/PEC
- Fauna habitat
- Native vegetation.

A local scheme amendment will be required to rezone Precinct A from 'place of public assembly' to 'retirement living/mixed use' and to rezone Precinct D from 'Place of Public Assembly' to 'Mixed Use'.

Considerations, approvals and management plans may be necessary for each individual proponent for future development works, which would further minimise environmental impacts through development within the SP area. Environmental factors and the management framework considerations are summarised in **Table 10.**

Overall, a range of environmental impact mitigation measures (primarily impact avoidance and minimisation) are proposed within the SP layout and through the future environmental management framework. In this context, it is anticipated that implementation of the proposed SP can be suitably managed through future stages of the land use planning processes (including development) such that the EPA objectives for the relevant environmental factors can be achieved.

*Table 10: Summary of Environmental Management Framework Considerations*

| Environmental Factor | Management Framework and considerations | | |
|---|---|---|---|
| | Local Structure Plan | Subdivision and/or Development Approval | Construction |
| Flora and Vegetation | Environmental Assessment Report including preliminary investigations (Emerge Associates 2024a) (**Appendix D**). | • Native Vegetation Clearing permit pursuant to Part V of the EP Act if clearing is required within the SP area and clearing is not exempt.<br>• Preparation of a Conservation and Environment Management Plan (CEMP), where required. | Clearing Permit and compliance with approval conditions and management plans. |
| Terrestrial Fauna | Environmental Assessment Report including preliminary investigations (Emerge Associates 2024a) (**Appendix D**). | • Potential impacts to MNES in relation to the EPBC Act and need to consider the need for referral in accordance with the *Matters of National Environmental Significance Significant Impact Guidelines* (DotE 2013).<br>• Preparation of a fauna management plan for any development within the SP area prior to works commencing for development involving clearing of native vegetation or any fauna habitat. | Compliance with approval conditions and management plans, in accordance with EPBC Act, where required. |
| Acid Sulfate Soils | Environmental Assessment Report including preliminary investigations. | • Detailed ASS Investigation and Management Plan for areas mapped as 'Class 1: High to moderate risk' will likely be required in accordance with the WAPC's *Acid Sulfate Soils Planning Guidelines* (2008). | Implementation of ASS Management Plan. |
| Inland Waters | The LWMS prepared for the SP by Emerge Associates (2024b) (**Appendix E**). | • Detailed UWMPs will be required (mostly relevant to Precinct D) to support individual subdivision applications. Other precincts may be developed under Development Approval and therefore water management will likely be documented through SMPs. Both UWMPs and SMPs will be prepared in accordance with the *Better Urban Water Management* Framework.<br>• Protection of the Swan River CCW and ESA through consideration of hydrological processed and water quality management into design of future development areas to protect the adjacent Swan River and associated values.<br>• DCA permit application for works within or affecting the DCA to the DBCA in accordance with the Swan and Canning Rivers Management Act 2006 and the Swan and Canning River Management Regulations 2007. | Compliance with UWMP/SMP and approved DCA permit. |

*Table 10: Summary of Environmental Management Framework Considerations (continued)*

| Environmental Factor | Management Framework and considerations | | |
|---|---|---|---|
| | Local Structure Plan | Subdivision and/or Development Approval | Construction |
| Social Surroundings | Preliminary investigations for Aboriginal Cultural Heritage.<br><br>Transport Noise Assessment for the proposed SP (Lloyd George Acoustics 2023) in accordance with SPP 5.4. | • Detailed Acoustic Assessment and Management Plan (where required) or 'Quiet House Package A' implemented to upper floors of noise sensitive dwellings within Precinct E.<br>• Completion of any contamination investigations and identification of any remediation requirements within Lot 9002. | Approval pursuant to Section 18 of the *Aboriginal Heritage Act 1972* will be required prior to ground disturbing works if impacts to known sites are likely.<br><br>Compliance with noise management plan and appropriate house packages applied where appropriate.<br><br>Completion of remediation works (if required) for Lot 9002. |

# 6 References

## 6.1 General references

The references listed below have been considered as part of preparing this document.

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**Figure 1: Site Location**

| | |
|---|---|
| **Project:** | Environmental Assessment Report<br>Ascot Racecourse Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:** EP23-109(05)--F06

| | |
|---|---|
| Drawn: | WJC |
| Date: | 03/04/2024 |
| Checked: | EKB |
| Approved: | JDH |
| Date: | 29/04/2024 |

N

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Metres

Scale: 1:8,000@A4

GDA2020 MGA Zone 50

emerge ASSOCIATES

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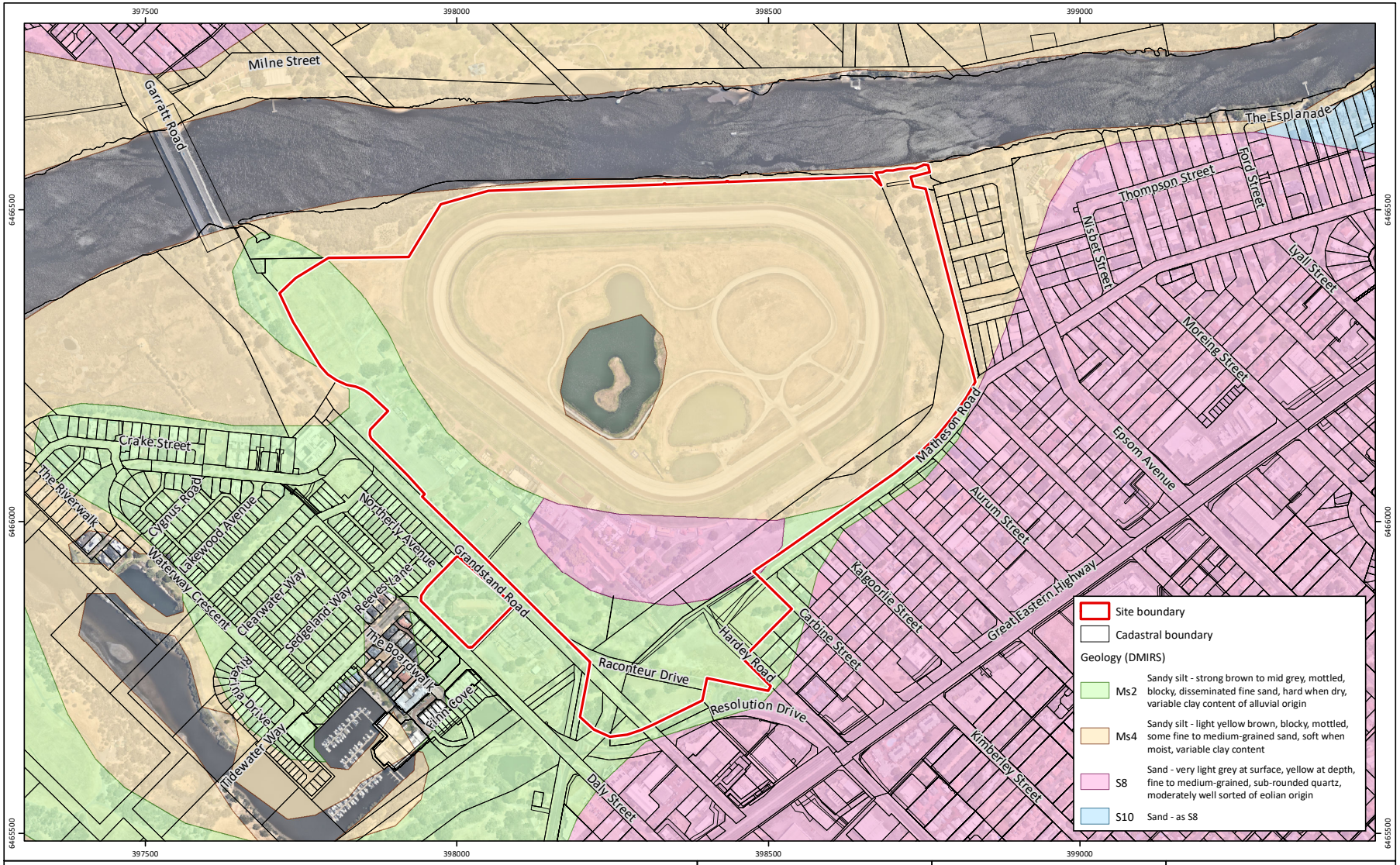



**Figure 2: Site Geology**

**Project:** Environmental Assessment Report
Ascot Racecourse Structure Plan

**Client:** Perth Racing

**Plan Number:** EP23-109(05)--F07
Drawn: WJC
Date: 03/04/2024
Checked: EKB
Approved: JDH
Date: 29/04/2024

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Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

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**Figure 3:** **Topographic Contours**

**Project:** Environmental Assessment Report
Ascot Racecourse Structure Plan

**Client:** Perth Racing

**Plan Number:** EP23-109(05)--F08
Drawn: WJC
Date: 03/04/2024
Checked: EKB
Approved: JDH
Date: 29/04/2024

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GDA2020 MGA Zone 50

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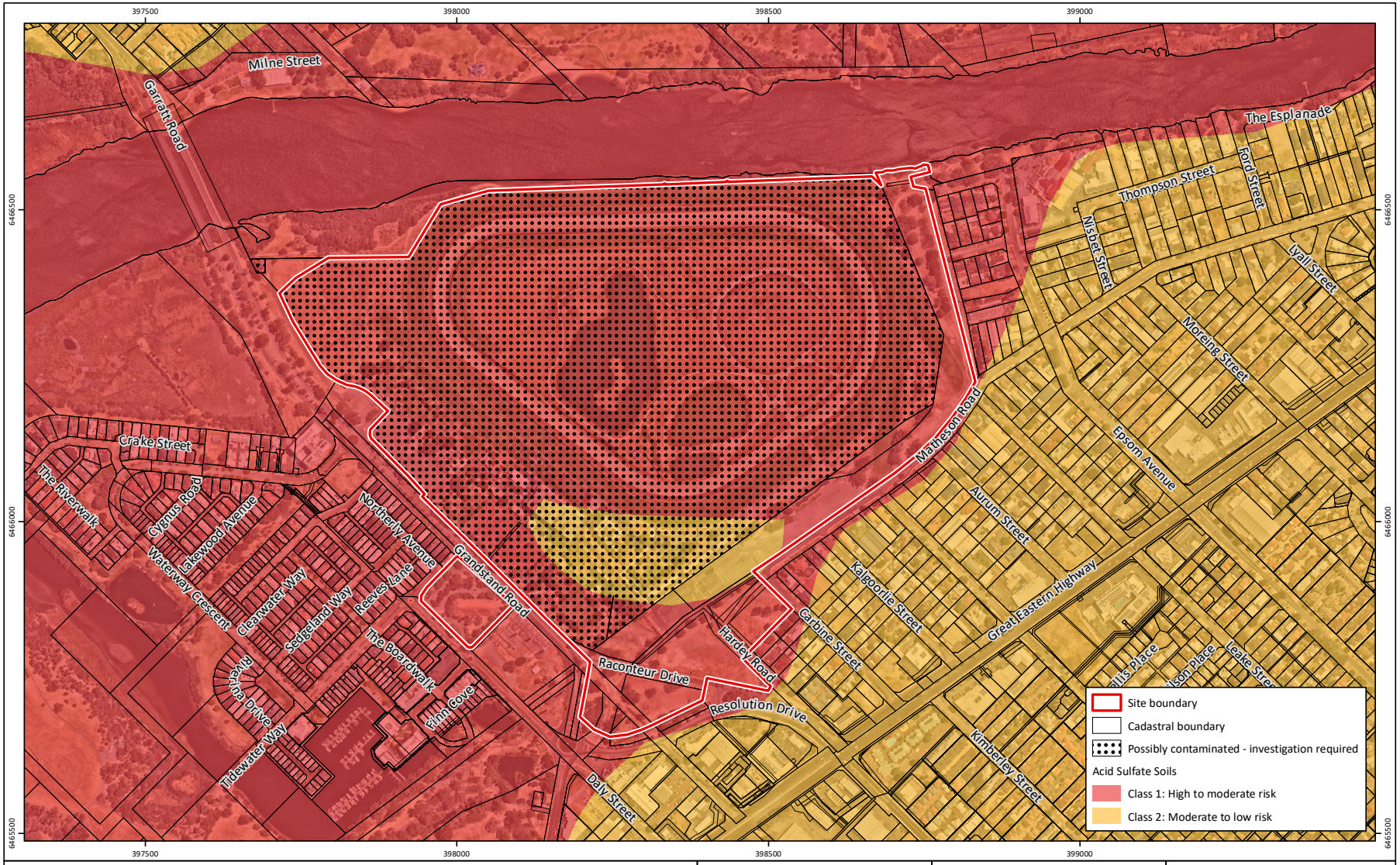



**Figure 4: Acid Sulfate Soils**

**Project:** Environmental Assessment Report
Ascot Racecourse Structure Plan

**Client:** Perth Racing

**Plan Number:**
**EP23-109(05)--F09a**
Drawn: WJC
Date: 22/07/2024
Checked: EKB
Approved: JDH
Date: 23/07/2024

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Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

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**Figure 5: Vegetation Types**

| | |
|---|---|
| **Project:** | Environmental Assessment Report<br>Ascot Racecourse Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:** EP23-109(05)--F10

| | |
|---|---|
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| Date: | 03/04/2024 |
| Checked: | EKB |
| Approved: | JDH |
| Date: | 29/04/2024 |

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GDA2020 MGA Zone 50

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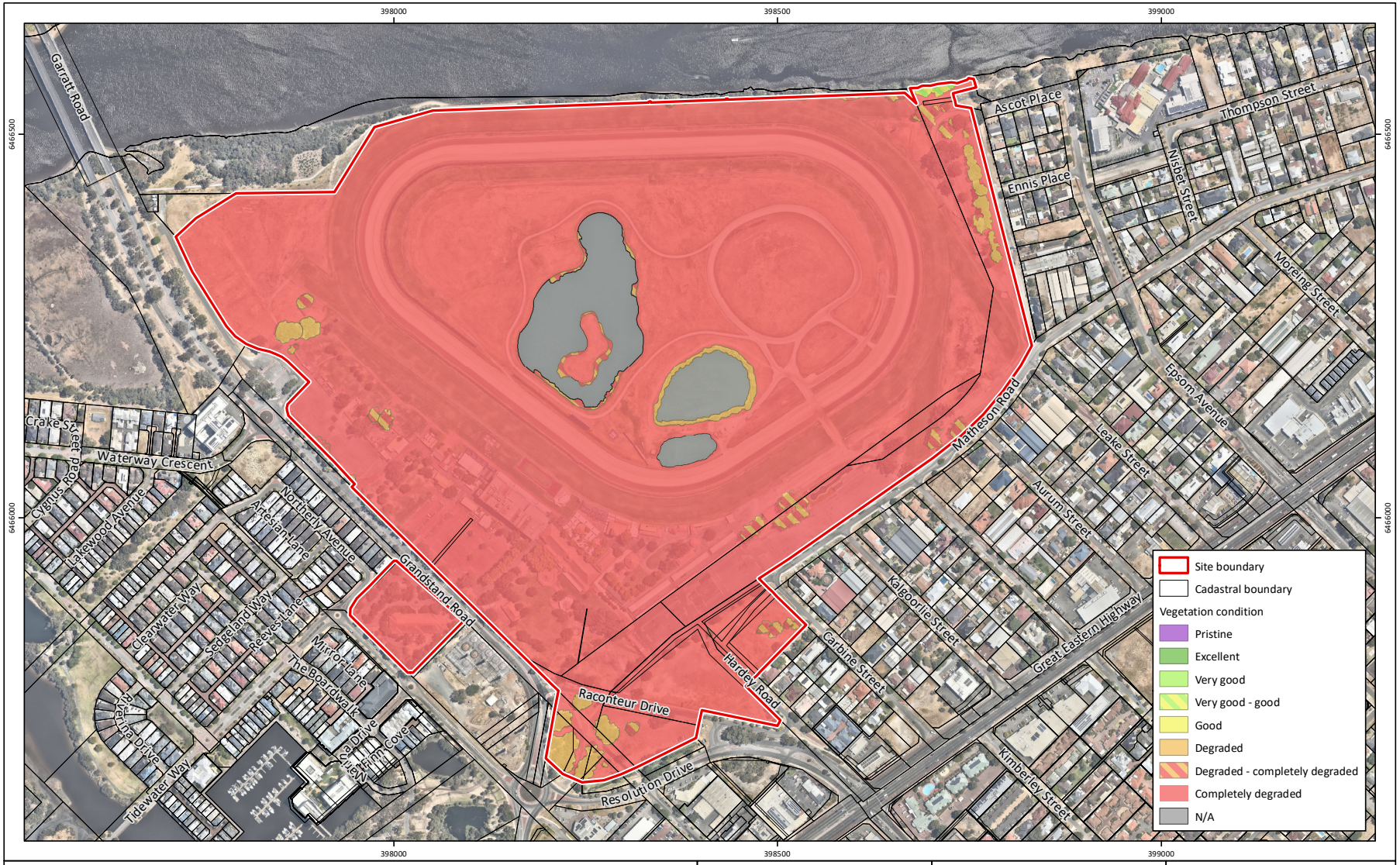



**Figure 6: Vegetation Condition**

| | |
|---|---|
| **Project:** | Environmental Assessment Report<br>Ascot Racecourse Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(05)--F11**

| | |
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| Date: | 03/04/2024 |
| Checked: | EKB |
| Approved: | JDH |
| Date: | 29/04/2024 |

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Metres
Scale: 1:6,500@A4
GDA2020 MGA Zone 50

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**Figure 7:** **Threatened and Priority Ecological Community and Native Vegetation under the EP Act**

**Project:** Environmental Assessment Report
Ascot Racecourse Structure Plan

**Client:** Perth Racing

**Plan Number:** EP23-109(05)--F12
Drawn: WJC
Date: 03/04/2024
Checked: EKB
Approved: JDH
Date: 01/05/2024

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Scale: 1:6,500@A4
GDA2020 MGA Zone 50

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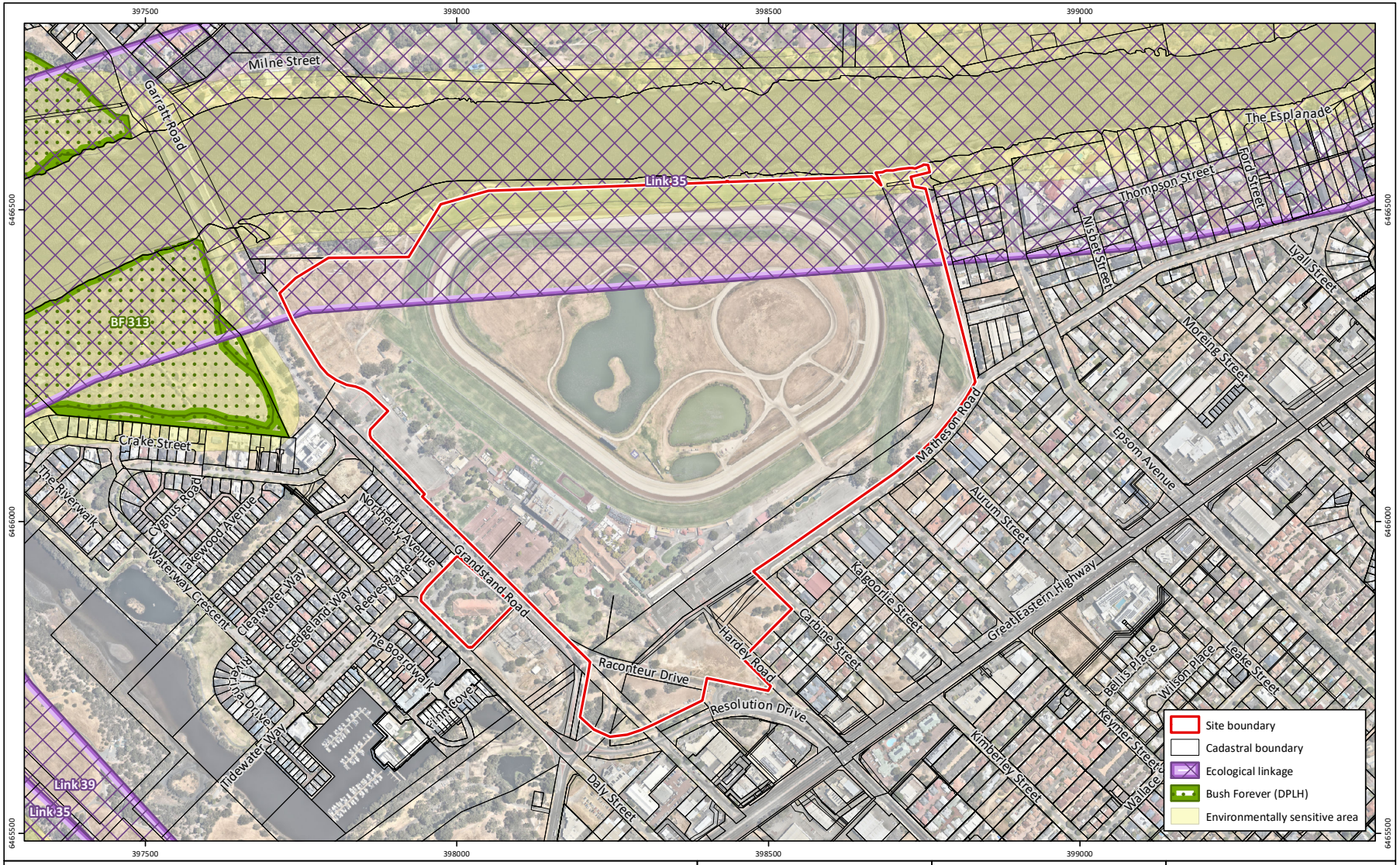



**Figure 8:** **Bush Forever, Ecological Linkages and Environmentally Sensitive Areas**

| | |
|---|---|
| **Project:** | Environmental Assessment Report<br>Ascot Racecourse Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(05)--F13**

| | |
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| Checked: | EKB |
| Approved: | JDH |
| Date: | 29/04/2024 |

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Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

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**Figure 9: Carnaby's Black Cockatoo Foraging Habitat**

| | |
|---|---|
| **Project:** | Environmental Assessment Report<br>Ascot Racecourse Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(05)--F20**

| | |
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| Checked: | EKB |
| Approved: | JDH |
| Date: | 29/04/2024 |

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Metres

Scale: 1:6,500@A4

GDA2020 MGA Zone 50

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**Figure 10: Forest Red-tailed Black Cockatoo Foraging Habitat**

| | |
|---|---|
| **Project:** | Environmental Assessment Report<br>Ascot Racecourse Structure Plan |
| **Client:** | Perth Racing |

| | |
|---|---|
| **Plan Number:** | **EP23-109(05)--F21** |
| Drawn: | WJC |
| Date: | 08/04/2024 |
| Checked: | EKB |
| Approved: | JDH |
| Date: | 29/04/2024 |

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Metres
Scale: 1:6,500@A4
GDA2020 MGA Zone 50

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**Figure 11: Black Cockatoo Habitat Trees**

| | |
|---|---|
| **Project:** | Environmental Assessment Report<br>Ascot Racecourse Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(05)--F22a**

| | |
|---|---|
| Drawn: | GAR |
| Date: | 28/06/2024 |
| Checked: | TDP |
| Approved: | RAW |
| Date: | 01/07/2024 |

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GDA2020 MGA Zone 50

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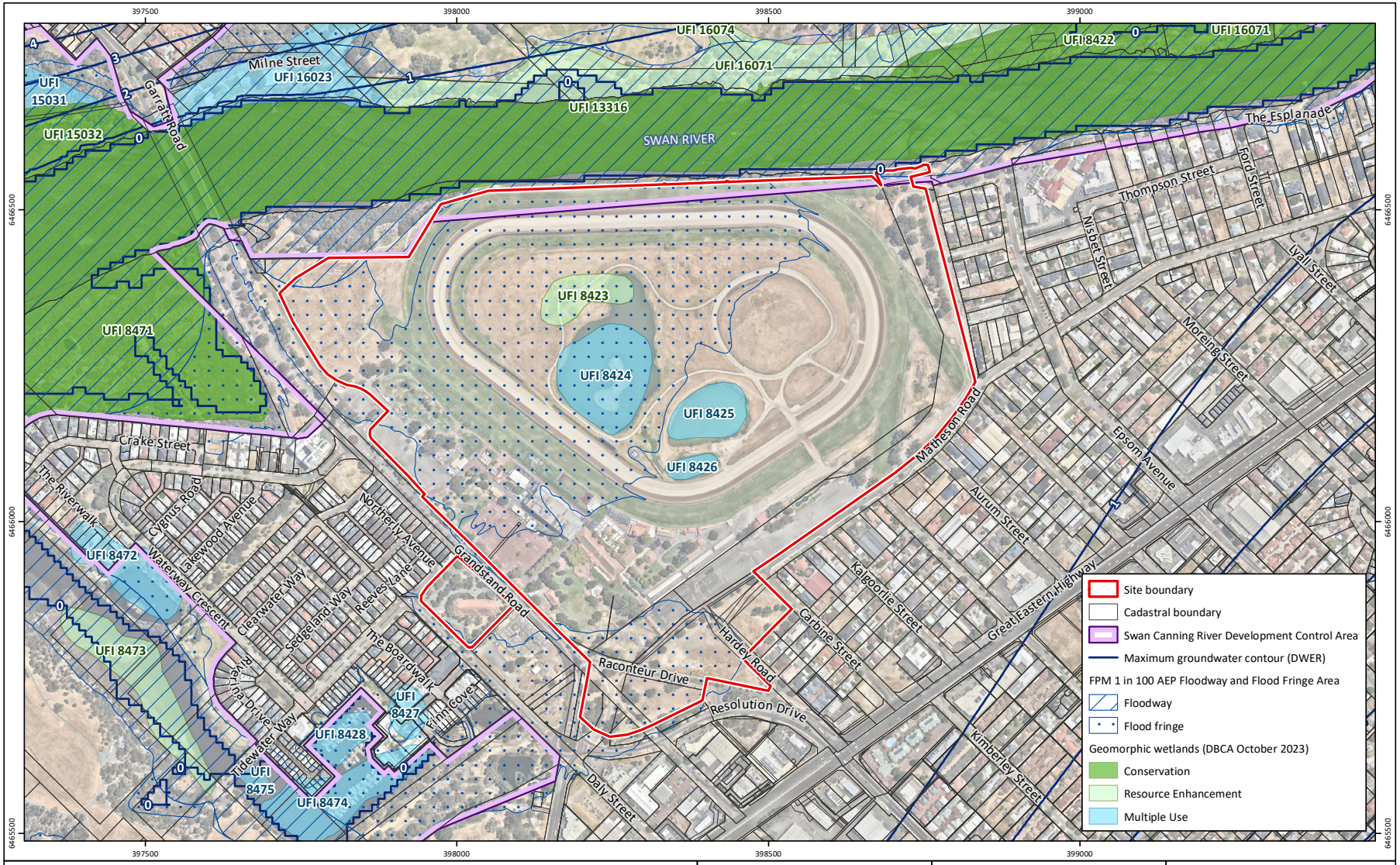



**Figure 12: Hydrological Features**

| | |
|---|---|
| **Project:** | Environmental Assessment Report<br>Ascot Racecourse Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(05)--F14**

| | |
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| Date: | 03/04/2024 |
| Checked: | EKB |
| Approved: | JDH |
| Date: | 01/05/2024 |

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Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

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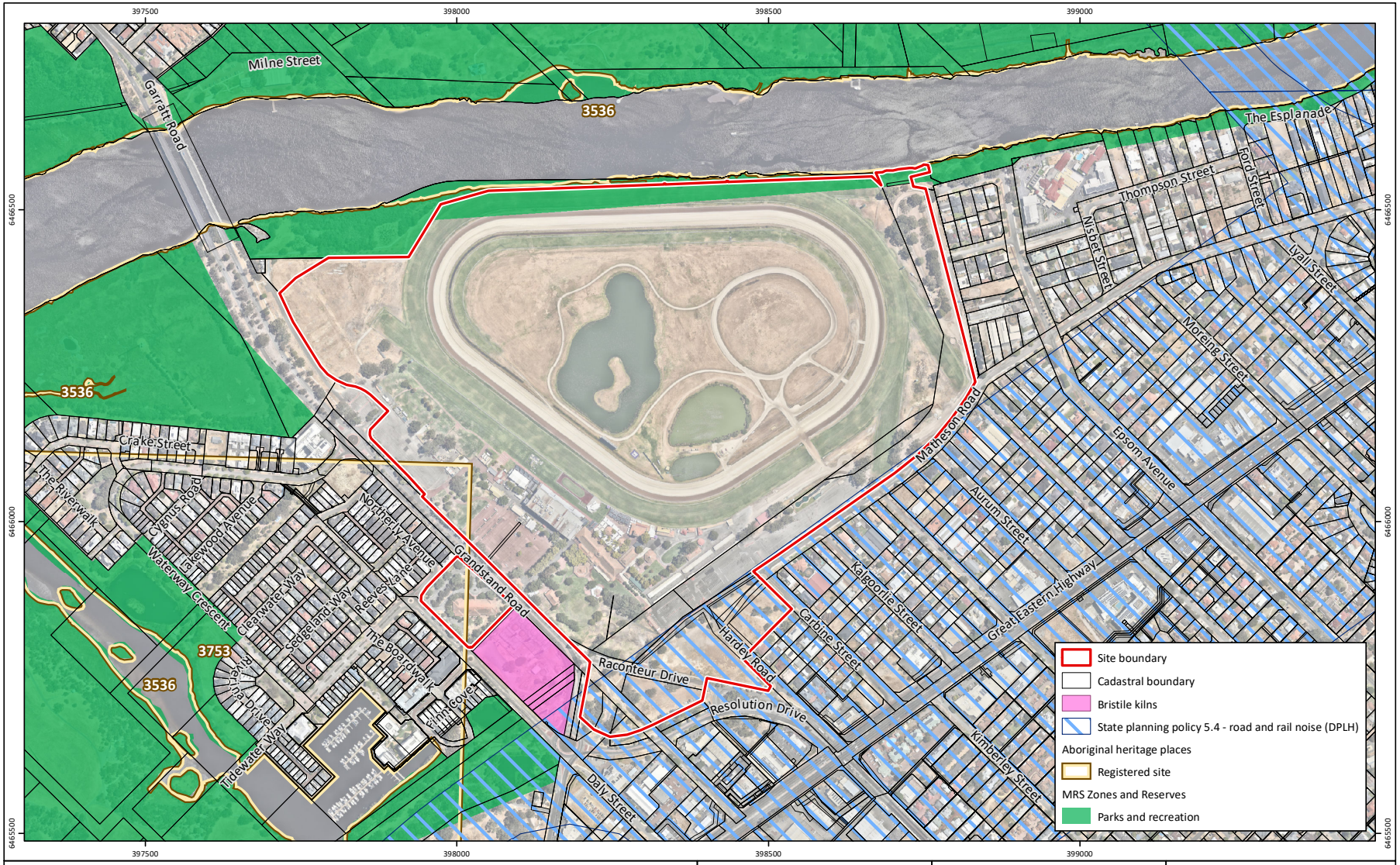



**Figure 13: Social Surroundings**

| | |
|---|---|
| **Project:** | Environmental Assessment Report<br>Ascot Racecourse Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(05)--F15a**

| | |
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| Date: | 08/05/2024 |
| Checked: | EKB |
| Approved: | JDH |
| Date: | 09/05/2024 |

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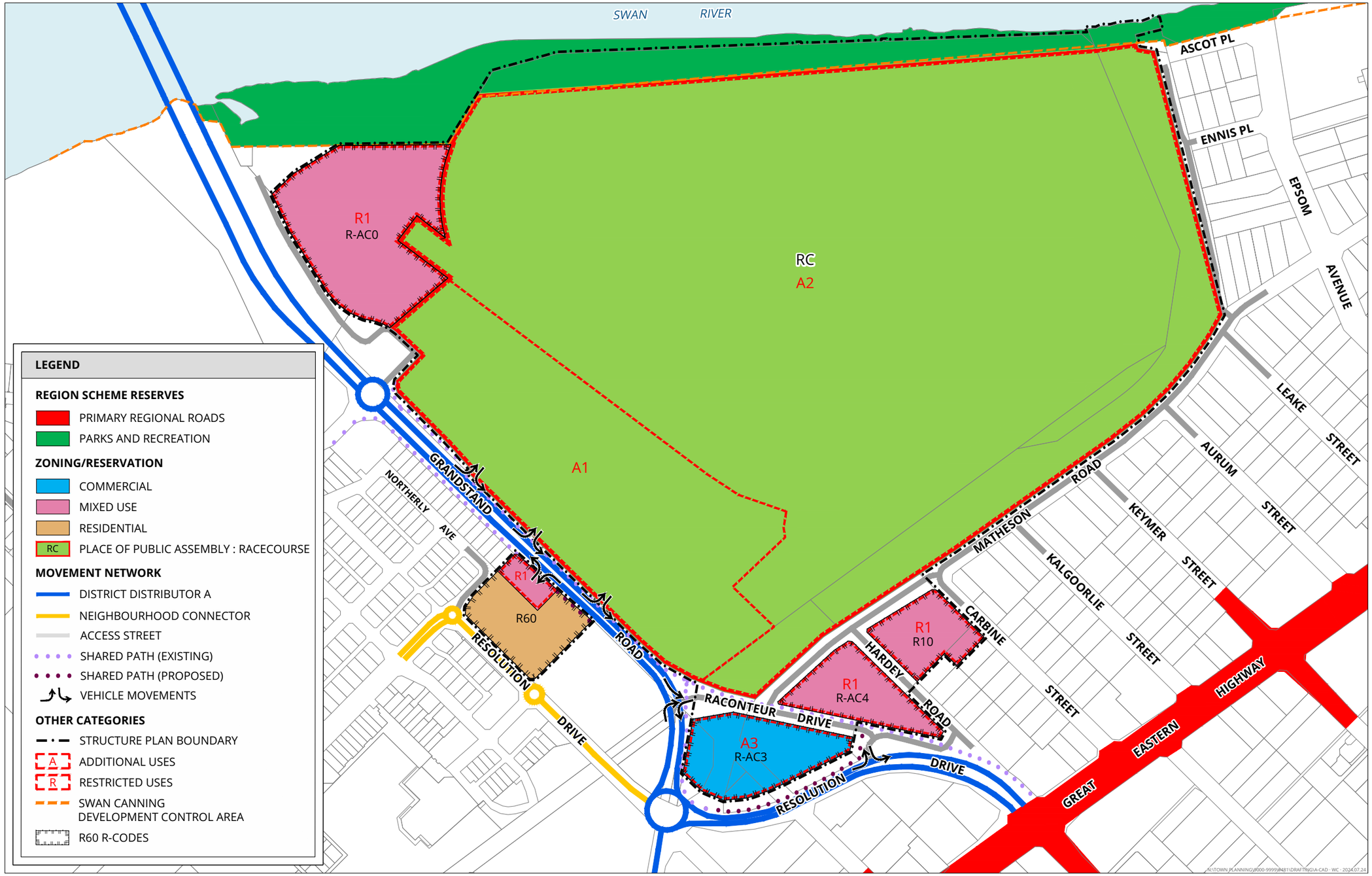
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GDA2020 MGA Zone 50

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# Appendix A

Ascot Racecourse Structure Plan (ROWE Group Design, 2024)




**PLAN 1 - STRUCTURE PLAN**
VARIOUS LOTS - ASCOT RACECOURSE
ASCOT

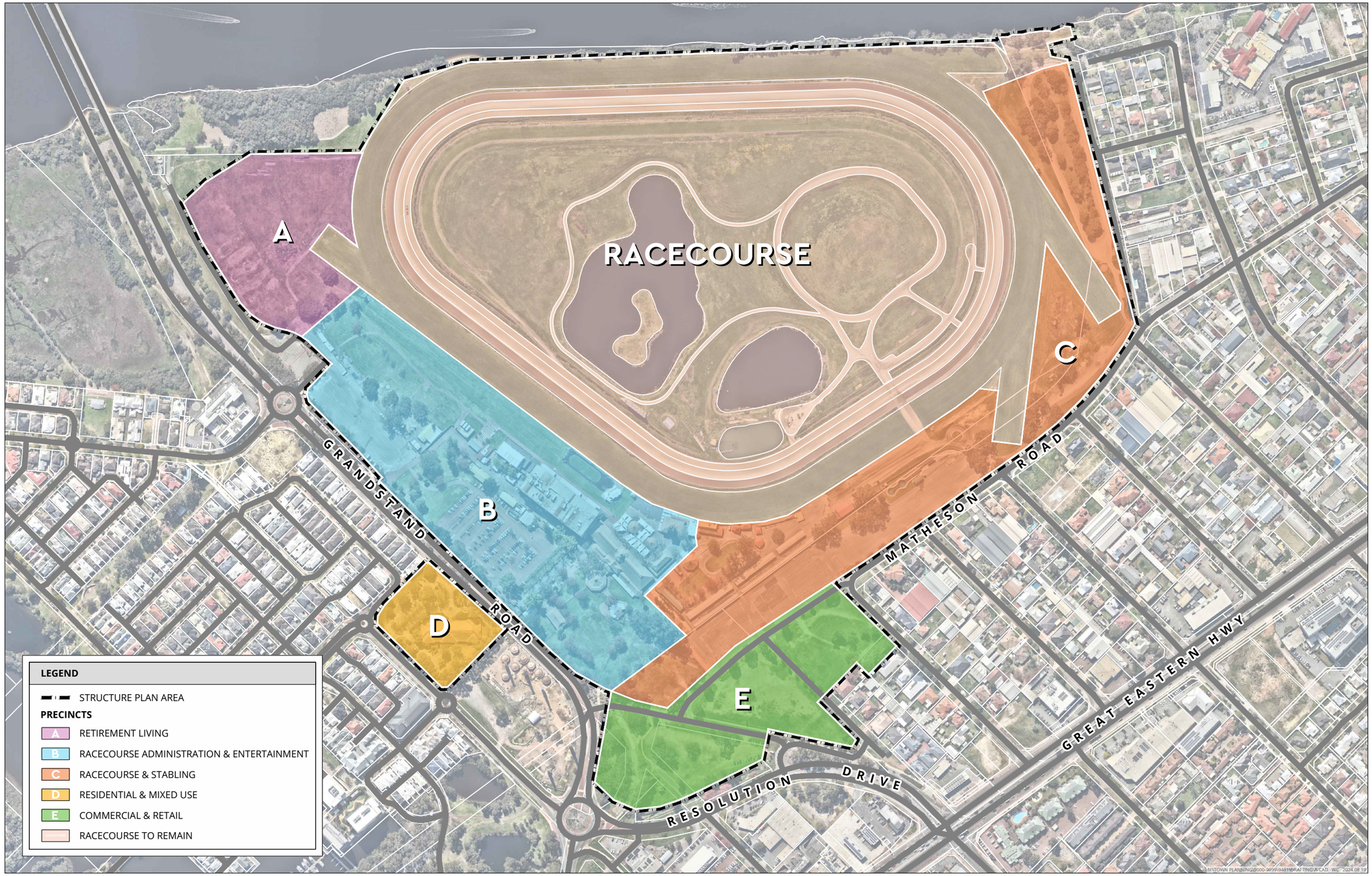
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DRAWN: WC
DATE CREATED: 2024.07.24
PROJECTION: MGA50 GDA94
CADASTRE: LANDGATE
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ROWE GROUP DESIGN

# Appendix B

Ascot Racecourse Precinct Plan (ROWE Group Design, 2024)




**STRUCTURE PLAN PRECINCTS**
VARIOUS LOTS - ASCOT RACECOURSE
ASCOT

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SCALE @ A3: 1:4000
**9481-FIG-02-C**

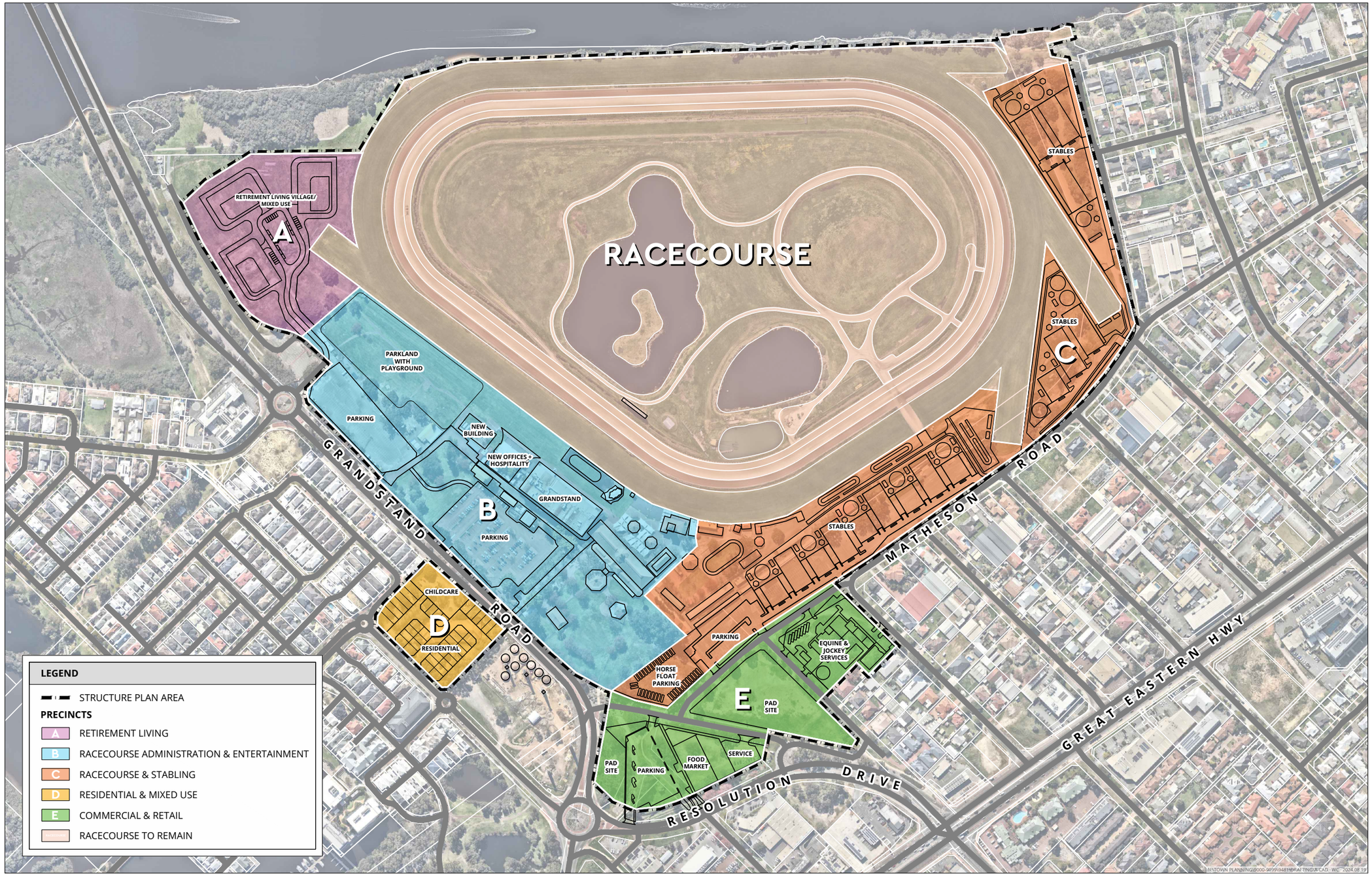
DRAWN: WC
DATE CREATED: 2024.08.19
PROJECTION: MGA50 GDA94
CADASTRE: LANDGATE
AERIAL: NEARMAP 20230831

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ROWE GROUP DESIGN

# Appendix C

Draft Master Plan Concept (ROWE Group Design, 2024)




**DRAFT MASTER PLAN CONCEPT**
VARIOUS LOTS - ASCOT RACECOURSE
ASCOT

N
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SCALE @ A3: 1:4000
**9481-CON-01-D**

DRAWN: WC
DATE CREATED: 2024.08.19
PROJECTION: MGA50 GDA94
CADASTRE: LANDGATE
AERIAL: NEARMAP 20230831

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ROWE GROUP DESIGN

# Appendix D

Flora, Vegetation and Fauna Assessment (Emerge Associates 2024a)

# TECHNICAL MEMORANDUM

## Flora, Vegetation and Fauna Assessment
## Various lots, Grandstand Rd and Raconteur Dr, Ascot

| | | | |
|---|---|---|---|
| **PROJECT NUMBER** | EP23-109(06) | **DOC. NUMBER** | EP23-109(06)—003A TDP |
| **PROJECT NAME** | Ascot Local Structure Plan | **CLIENT** | Perth Racing |
| **AUTHOR** | TDP/AJU | **REVIEWER** | RAW |
| **VERSION** | A | **DATE** | 11/07/2024 |

## 1. INTRODUCTION

### 1.1. Project background

Emerge Associates (Emerge) were engaged by Perth Racing to undertake a flora, vegetation and fauna assessment at Lots 1, 3, 13, 50, 452, 7705 and 9002 Grandstand Rd and Lots 51 and 100 Raconteur Dr, Ascot, in the City of Belmont (herein referred to as the 'site').

The site is located approximately 5.5 kilometres (km) east of the Perth Central Business District within the City of Belmont. The site extends over approximately 61.8 hectares (ha) and is bounded by Matheson Rd to the east, Grandstand Rd to the west, Resolution Dr to the south, and the Swan River to the north. The location of the site is shown in **Figure 1**.

### 1.2. Purpose and scope of work

The flora, vegetation and fauna assessment was required to support the development of a Local Structure Plan (LSP) within the site. Specifically, the scope of work was to provide sufficient detail on the flora, vegetation and fauna values within the site to inform this process.

As part of the scope of work the following tasks were completed:

- Desktop review of relevant background information pertaining to the site and surrounds, including database searches for conservation significant flora, fauna and communities.
- A field survey to record flora, vegetation and fauna values.
- Identification of potential habitat for conservation significant flora and vegetation.
- Documentation of the desktop assessment, methodology, field surveys and results into a report.

## 2. Desktop assessment

A search was conducted for threatened, specially protected and priority flora and fauna that may occur or have been recorded within a 10 km radius of the site using NatureMap (DBCA 2023), *Protected Matters Search Tool* (DCCEEW 2023), *Atlas of Living Australia* (ALA 2023) and the Department of Biodiversity, Conservation and Attraction's (DBCA) conservation significant fauna and flora databases (reference no. FAUNA#8125/53-0323FL).

## 2.1. Likelihood of occurrence method

### 2.1.1. Flora and vegetation

The distribution and habitat preferences of threatened flora species and ecological communities listed in **Section 2** were reviewed against site context information[1] and preliminary survey results. Likelihood of occurrence of threatened flora species and ecological communities within the site was classified as 'high', 'moderate', 'low' or 'negligible' as outlined below in **Table 1**.

*Table 1: Decision matrix for likelihood of occurrence of threatened and priority flora and ecological communities*

| | | Distribution[1] | |
|---|---|---|---|
| | | Reliable record within search area | No reliable record within search area (20 km) |
| Habitat | Suitable | High | Negligible |
| | Potentially suitable | Moderate | |
| | Unsuitable | Low | |

[1]Reliable record defined as validated, recent (within the last ~40 years) and spatially accurate (refer DBCA search meta data) in order to exclude unverified range or habitat projections.

### 2.1.2. Fauna

The distribution and habitat preferences of the threatened and specially protected fauna species identified from **Section 2** was reviewed against site context[1] information and preliminary survey results. Likelihood of occurrence of threatened and specially protected fauna species within the site was classified as 'high', 'moderate', 'low', 'negligible' or 'nil' as outlined in **Table 2**. Noting some marine species were excluded due to lack of suitable habitat.

*Table 2: Decision matrix for likelihood of occurrence of threatened, specially protected and priority fauna*

| | | Reliable record[1] | | Unreliable record[2] |
|---|---|---|---|---|
| | | Access to site not impeded | Access to site impeded | |
| Habitat | Suitable | High | Low | Nil |
| | Potentially suitable | Moderate | | |
| | Unsuitable | Negligible | | |

[1]Reliable record defined as DBCA or validated ALA record from the last ~20 years, [2]Unreliable record defined as record >20 years old or PMST prediction.

## 2.2. Likelihood of occurrence results

### 2.2.1. Threatened and priority flora

A total of 100 conservation significant flora species were identified from database searches as occurring or potentially occurring within 9km of the site. Based on background information available for the site and habitat preferences of the species, two priority flora species were considered to have a high or moderate likelihood of occurring within the site, as outlined in

[1] Including relevant Commonwealth documentation such as approved conservation advice, listing advice and other relevant literature.

Table 3. The complete likelihood of occurrence assessment is provided as **Appendix A**.

*Table 3: Threatened or priority flora species with a high or moderate likelihood occurrence in the site*

| Species | Status | | Life strategy | Flowering period |
|---|---|---|---|---|
| | WA | EPBC Act | | |
| *Angianthus micropodioides* | P | P3 | - | Nov-Dec or Jan-Feb |
| *Aponogeton hexatepalus* | P | P4 | - | Jul-Oct |

### 2.2.2. Vegetation

The database search results identified 13 TECs and 6 PECs as occurring or potentially occurring within a 10 km radius of the site. Information on these communities is provided in **Appendix C**.

Due to historical disturbance the likelihood of occurrence of any TEC or PEC was considered negligible.

### 2.2.3. Threatened, specially protected and priority fauna

A total of 77 conservation significant fauna species were identified from database searches as occurring or potentially occurring within 10 km of the site.

Two threatened, six specially protected and three priority species were classified as having a 'high' or 'moderate' likelihood of occurrence. The legislative or policy status and habitat preferences of these species are shown in **Table 4**.

The remainder of the conservation significant fauna species identified in the desktop assessment (66 species) were considered as having a 'low', 'negligible' or 'nil' likelihood of occurrence. Refer to **Table 4** and **Appendix D** for detail on individual species likelihood of occurrence.

*Table 4: Summary of conservation significant fauna species with potential to occur in the site*

| Species name | Common name | Status | | Habitat description |
|---|---|---|---|---|
| | | WA | EPBC Act | |
| **Birds** | | | | |
| *Apus pacificus* | Pacific swift | MI | MI | Aerial, migratory species that is most often seen over inland plains and sometimes above open areas, foothills or in coastal areas. Sometimes occurs over settled areas, including towns, urban areas and cities. |
| *Calidris ruficollis* | Red-necked stint | MI | MI | Tidal mudflats, saltmarshes, sandy or shelly beaches, saline and freshwater wetlands (coastal and inland), saltfields, sewage ponds. |
| *Calyptorhynchus banksii naso* | Forest red-tailed black cockatoo | VU | VU | Eucalypt and Corymbia forests, often in hilly interior. More recently also observed in more open agricultural and suburban areas including Perth metropolitan area. Attracted to seeding *Corymbia calophylla*, *Eucalyptus marginata*, introduced *Melia azedarach* and *Eucalyptus* spp. trees. |
| *Falco peregrinus* | Peregrine falcon | OS | - | Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes. |
| *Oxyura australis* | Blue-billed duck | P4 | - | Mainly deeper freshwater swamps and lakes; occasionally saltlakes and estuaries freshened by flood waters. |

| Species name | Common name | Status | | Habitat description |
|---|---|---|---|---|
| | | WA | EPBC Act | |
| *Pandion haliaetus* | Osprey | MI | MI | Coasts, estuaries, bays, inlets, islands, and surrounding waters; coral atolls, reefs, lagoons, rock cliffs, stacks. |
| *Plegadis falcinellus* | Glossy Ibis | MI | MI | Well-vegetated wetlands, wet pasture, ricefields, floodwaters, floodplains, brackish or occasionally saline wetlands, mangroves, mudflats and occasionally dry grassland. |
| *Thalasseus bergii* | Crested tern | MI | MI | Mainly blue-water seas (especially within 3 km of land), including southern estuaries in summer and autumn (when free of silt); also tidal creeks in north, but not penetrating far into larger estuaries. |
| *Zanda latirostris* | Carnaby's black cockatoo | EN | EN | Mainly proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests; also plantations of *Pinus* spp. Attracted to seeding *Banksia* spp., *Hakea* spp., *Eucalyptus* spp., *Corymbia calophylla*, *Grevillea* spp., and *Allocasuarina* spp. |
| **Mammals** | | | | |
| *Hydromys chrysogaster* | Rakali | P4 | - | Areas with permanent water, fresh, brackish or marine. Likely to occur in all major rivers and most of the larger streams as well as bodies of permanent water in the lower south-west. Intact riparian vegetation and associated bank stability is critical to their survival. |
| *Isoodon fusciventer* | Quenda | P4 | - | Dense scrubby, often swampy, vegetation with dense cover up to one metre high. |

## 3. Methods

### 3.1.1. Vegetation

Vegetation units were identified from information collected during the field survey in January 2024. The vegetation was described according to the dominant species present using the structural formation descriptions of the *National Vegetation Inventory System* (NVIS) (NVIS Technical Working Group 2017). The identified vegetation units were mapped on aerial photography during the field survey and boundaries were interpreted from aerial photography and notes taken in the field. Vegetation condition was mapped on aerial photography based on notes recorded during the field survey to define areas with differing condition and using the Keighery (1994) scale **Table 5**.

*Table 5: Vegetation condition scale applied during the field assessment*

| Condition | Definition (Keighery 1994) |
|---|---|
| Pristine | Pristine or nearly so, no obvious signs of disturbance. |
| Excellent | Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. |
| Very good | Vegetation structure altered obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing |
| Good | Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation |

| Condition | Definition (Keighery 1994) |
|---|---|
| | structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing. |
| Degraded | Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing. |
| Completely degraded | The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs. |

### 3.1.2. Threatened and priority ecological community

Areas of native vegetation potentially representing a TEC were assessed against key diagnostic characteristics and, if available, size and/or vegetation condition thresholds.

### 3.1.3. Native vegetation under the EP Act

Vegetation within the site that meets the definition of 'native vegetation' under the *Environmental Protection Act 1986* (EP Act) was mapped on aerial imagery.

### 3.1.4. Fauna habitat

Transects were traversed across the site, during the day, and the characteristics of fauna habitat and presence of fauna species was recorded. Microhabitats such as logs, rocks and leaf litter were investigated and secondary evidence of species presence such as tracks, scats, skeletal remains, foraging evidence or calls was also noted.

### 3.1.5. Black cockatoo habitat

Black cockatoo foraging, breeding and roosting habitat was assessed and mapped within the site.

Foraging habitat

Foraging habitat was identified by assessing vegetation in the site for plant species known to provide food for black cockatoos (Davies 1966; Saunders 1980; Johnstone and Storr 1998; Johnstone and Kirkby 1999; Groom 2011; Johnstone *et al.* 2011; DAWE 2022). Foraging habitat was classified as either 'native' or 'non-native' based on the predominant vegetation's naturalised status and in accordance with DAWE (2022).

It was also classified as either 'primary' or 'secondary' based on black cockatoo foraging preferences. Primary food plants were defined as those with historical and contemporary records of regular consumption by a black cockatoo species. Secondary food plants were defined as plants that black cockatoo species have been recorded consuming occasionally or that, based on their limited extent or agricultural origin, should not be considered a sustaining resource. A list of plant species classified as primary or secondary food plants is provided as **Appendix E**.

Each patch of foraging habitat was assigned a foraging value for each species of black cockatoo likely to occur within the site. As it is not always possible to separate out food plants from non-food plants,

mapped foraging habitat may also include vegetation comprising non-food plants. The proportion of non-food plants in mapped foraging habitat was minimised as far as practicable.

Evidence of black cockatoo foraging, such as chewed fruits, was searched for within the site and allocated to a black cockatoo species where possible.

Breeding habitat

Breeding habitat comprises 'habitat trees' which was defined as a native eucalypt that is typically known to support black cockatoo breeding such as marri, jarrah, blackbutt, tuart, wandoo, salmon gum or to a lesser extent flooded gum, with a DBH ≥50 cm or DBH ≥30 cm for wandoo or salmon gum.

All native eucalypts within the site that met the required DBH were recorded. Occasionally, native eucalypts were encountered that met DBH requirements but did not contain a trunk/branch of a sufficient size to support a hollow suitable for use by black cockatoos. For example, the tree may have been less than 3 m tall or had a trunk that forked between 1.3 m and 3 m in height and after the fork no limbs had a diameter of ≥50 cm or ≥30 cm for wandoo or salmon gum. These trees were not recorded as habitat trees as the likelihood they would form a suitable hollow was low.

Habitat trees were individually identified and the attributes outlined in **Table 6** were recorded for each tree.

*Table 6: Attributes recorded for each habitat tree in the site*

| Attribute | Description |
|---|---|
| GPS location | The location was recorded using a handheld GPS unit |
| Tree species | Species and common name were identified |
| Diameter at breast height (DBH) (cm) | DBH was measured at breast height (1.3 m) using a diameter tape |
| Hollows potentially suitable for breeding by a black cockatoo | Number of hollows potentially suitable for breeding by a black cockatoo recorded (assessed from ground level only) |

Each habitat tree was assigned to a category listed in **Table 7** based on current black cockatoo guidelines (DAWE 2022).

*Table 7: Habitat tree categories (DAWE 2022)*

| Category | Specifications |
|---|---|
| Known nesting tree | Trees (live or dead but still standing) which contains a hollow where black cockatoo breeding has been recorded or which demonstrates evidence of breeding (i.e. showing evidence of use through scratches, chew marks or feathers). |
| Suitable nesting tree | Trees with suitable nesting hollows present^, although no evidence of use. Note that any species of tree may develop suitable hollows for breeding. |
| Potential nesting tree | Trees that have a suitable DBH to develop a nest hollow, but do not currently have suitable nesting hollows. Trees suitable to develop a nest hollow in the future are 300-500 mm DBH. Note that many species of eucalypt may develop suitable hollows for breeding. |

^Hollow determined to be suitable for use as breeding habitat by black cockatoos.

Roosting habitat

If present, groups of tall native and non-native trees were assumed to provide roosting habitat. The presence of active or historical roosts in these trees was determined through evidence of roosting activity, such as branch clippings, droppings or moulted feathers.

## 4. Results

### 4.1. Flora

#### 4.1.1. Flora species inventory

A total of 58 weed species and 21 native species were recorded in the site during the field surveys. This comprises a total of 29 families and 60 genera. The dominant families containing native taxa were Myrtaceae (three native taxa) and Fabaceae (three native taxa). The family containing the most non-native taxa was Poaceae (thirteen non-native species).

A complete species list is provided in **Appendix B**.

#### 4.1.2. Threatened and priority flora

No threatened or priority flora were recorded and none are considered likely to occur in the site due to the lack of suitable habitat.

#### 4.1.3. Declared pests

One species listed as a declared pest (pursuant to s22(2) of the *Biosecurity and Agriculture Management Act 2007*), **Tamarix aphylla* (athel pine), was recorded within the site. Athel pine is listed in exempt keeping category meaning management is not obliged.

### 4.2. Vegetation

#### 4.2.1. Vegetation units

Four vegetation units were identified within the site: Cc, Er, ErJkSt, and non-native.

A description and the area of each vegetation unit is provided in **Table 8** and representative photographs of each are provided in **Plate 1** to **Plate 4**. The location of each vegetation unit is shown in **Figure 2**.

*Table 8: Vegetation unit present within the site*

| Vegetation Unit | Description | Area (ha) |
|---|---|---|
| **Er** | Woodland *Corymbia calophylla* over closed grass/forbland of pasture weeds and scattered native species (or absent) (**Plate 1**). | 1.12 |
| **Cc** | Woodland *Eucalyptus rudis* over closed grass/forbland of pasture weeds and scattered native species (or absent) (**Plate 2**). | 0.28 |
| **ErJkSt** | Open woodland *Eucalyptus rudis* and occasional *Melaleuca raphiophylla* over sedgeland *Juncus kraussii* and *Schoenoplectus tabernaemontani* over low shrubland *Suaeda australis* over forbland *Apium prostratum* subsp. *prostratum* var. *prostratum* and *Heliotropium curassavicum* over grassland **Avena* sp., *Cynodon dactylon* and **Paspalum vaginatum* (or absent) (**Plate 3**). | 0.17 |

| Vegetation Unit | Description | Area (ha) |
|---|---|---|
| **To** | Fringing rushland of *Typha orientalis*, with occasional planted native and non-native trees, shrubs and/or non-woody vegetation, over closed grass/forbland of pasture weeds. | 0.46 |
| **Non-native** | Heavily disturbed areas comprising bare ground and weeds with occasional native trees and forbs and/or sealed ground and buildings (**Plate 4**). | 56.62 |



*Plate 1: Vegetation unit **Er** in 'degraded' condition*



*Plate 2: Vegetation unit **Cc** in 'degraded' condition*



*Plate 3: Vegetation unit **ErJkSt** in 'good – very good' condition*



*Plate 4: Vegetation unit **Non-native** in 'completely degraded' condition*

### 4.2.2. Vegetation condition

The vegetation in the site occurred in 'good – very good', 'degraded', 'degraded - completely degraded' and 'completely degraded condition. The extent of vegetation by condition category is detailed in **Table 9** and shown in **Figure 3**.

*Table 9: Vegetation condition categories within the site*

| Condition category (Keighery (1994)) | Size (ha) |
|---|---|
| Pristine | 0 |
| Excellent | 0 |
| Very good | 0 |
| Good – very good | 0.07 |
| Good | 0 |
| Degraded | 1.04 |
| Degraded – completely degraded | 0.98 |
| Completely degraded | 56.57 |

#### 4.2.3. Threatened and priority ecological communities

The 'subtropical and temperate coastal saltmarsh' TEC which is listed as vulnerable under the EPBC Act was identified within a patch of ErJkSt the northern portion of the site as shown in **Figure 5**. A total of 0.07 ha of this TEC/PEC was mapped. Not all of the ErJkSt represents the TEC as some patches represent canopy overhang into the site with limited to no understory vegetation.

The 0.07 ha of coastal saltmarsh TEC vegetation mapped in the site also represents the State listed Priority 3 (P3) PEC of the same name.

#### 4.2.4. Native vegetation under the EP Act

A total of 1.10 ha of vegetation meeting the definition of 'native vegetation' pursuant to the EP Act occurs within the site, as shown in **Figure 4**. This comprises of scattered flooded gum (*Eucalyptus rudis*) and marri (*Corymbia calophylla*) trees, and fringing vegetation **ErJkSt** (**Table 8**).

### 4.3. Fauna

#### 4.3.1. Fauna habitat

Habitat values in the site are limited by historical disturbance and are primarily suited to widespread fauna species with non-specific habitat requirements.

The ErJkSt vegetation provides a cover of native trees and understory cover of riparian vegetation that would offer cover for ground dwelling fauna.

Large native trees associated with plant communities Cc and Er would also provide value to native birds and other arboreal fauna. The extent of fauna habitat is detailed in **Table 10** and shown in **Figure 5.**

*Table 10: Fauna habitats identified within the site*

| Fauna habitat | Description | Area (ha) |
|---|---|---|
| **Fringing woodland** | Native fringing vegetation consisting of a native tree overstorey and an understorey of sedges/rushes. | 0.07 |
| **Wetland** | Wetland waterbodies and associated riparian sedgeland/rushland. | 3.72 |

| | | |
|---|---|---|
| **Scattered trees and shrubs** | Scattered native and non-native trees and shrubs, providing habitat mainly for avifauna. | 5.45 |
| **Cleared** | Predominantly grassy weeds, bare ground and built form. | 52.64 |

### 4.3.2. Fauna species inventory

Twenty-four fauna species were recorded within the site:

- *Aix sponsa* (wood duck)
- *Anas gracilis* (grey teal)
- *Anas superciliosa* (Pacific black duck)
- *Anhinga novaehollandiae* (Australasian darter)
- *Cacatua sanguinea* (little corella)
- *Calyptorhynchus banksii* (forest red-tailed black cockatoo)
- *Columba livia* (feral pigeon)
- *Corvus coronoides* (Australian raven)
- *Cygnus atratus* (black swan)
- *Eolophus roseicapilla* (galah)
- *Equus ferus* (horse)
- *Fulica atra* (Eurasian coot)
- *Grallina cyanoleuca* (magpie-lark)
- *Gymnorhina tibicen* (Australian magpie)
- *Malacorhynchus membranaceus* (pink-eared duck)
- *Microcarbo melanoleucos* (little pied cormorant)
- *Oxyura australis* (blue-billed duck)
- *Pelecanus conspicillatus* (Australian pelican)
- *Phalacrocorax sulcirostris* (little black cormorant)
- *Porphyrio porphyria* (purple swamphen)
- *Rhipidura leucophrys* (willie wagtail)
- *Spilopelia chinensis* (spotted dove)
- *Tadorna tadornoides* (Australian shelduck)
- *Threskiornis moluccus* (Australian white ibis)
- *Trichoglossus moluccanus* (rainbow lorikeet)

### 4.3.3. Conservation significant fauna

One threatened (forest red-tailed black cockatoo, (VU)) and one priority (blue-billed duck, (P4)) fauna species were recorded at the time of survey.

*Zanda latirostris* (Carnaby's black cockatoo (EN)) is considered to have a high likelihood of occurring in this site and is discussed further below in **Section 4.3.4**. Six additional conservation significant bird species not recorded during the survey have potential to occur within the site:

*Apus pacificus* (Pacific swift (MI)), and *Falco peregrinus* (peregrine falcon (OS)) are both highly mobile species that are sometimes recorded over urbanised areas. Any occurrence of these species is likely

to be a flyover or brief forage as the site and surrounding area lacks suitable habitat for breeding or persistence of any other kind. *Calidris ruficollis* (red-necked stint (MI)), and *Thalasseus bergii* (crested tern (MI)) are both shorebirds which may briefly utilise the site as marginal foraging habitat. *Plegadis falcinellus* (glossy ibis (MI)) are known to forage in wet grassland areas when nearby to water sources but this type of habitat is likely to provide a marginal foraging resource. *Pandion haliaetus* (osprey (MI)), have been recorded nesting nearby and are therefore likely to forage near or within the site.

Two priority 4 mammal species not recorded during the survey, *Hydromys chrysogaster* (rakali) and *Isoodon fusciventer* (quenda), could also occur in the site. Rakali may utilise the Swan River and so could occasionally occur in the northern most portion of the site associated with the ErJkSt vegetation. Quenda commonly occur in urban areas, particularly where understorey vegetation or grasses provide dense cover.

### 4.3.4. Black cockatoos

Forest red-tailed black cockatoo was observed foraging in the site in cape lilac (*Melia azedarach*) overhanging the site. The site lies within the modelled distribution of Carnaby's black cockatoo and therefore they may also occur. The site does not lie within the modelled distribution of Baudin's black cockatoo and therefore they are not likely to occur and have not been considered further.

#### 4.3.4.1. Breeding habitat

A total of 66 black cockatoo habitat trees were recorded, of which five contained hollows potentially suitable for black cockatoo breeding based on inspection from ground level. Internal hollow inspection using a camera pole or drone would be required to confirm if hollows are suitable for breeding by black cockatoos. The remaining 61 habitat trees did not contain hollows suitable for black cockatoo breeding.

The habitat trees comprised four tuarts, eight marris and 54 *Eucalyptus rudis* (flooded gum) trees.

A summary of the habitat trees recorded within the site is provided in **Table 11** and the locations of habitat trees are shown in **Figure 7**.

*Table 11: Habitat trees*

| Category | No. trees |
|---|---|
| Known nesting trees | 0 |
| Suitable nesting trees | 5 |
| Potential nesting trees | 61 |
| Total nesting trees | 66 |

#### 4.3.4.2. Roosting habitat

No roosts or evidence of roosting was observed in the site. Tall trees within the site represent potential roosting trees.

#### 4.3.4.3. Foraging habitat

A total of 1.27 ha of foraging habitat for Carnaby's black cockatoo was recorded in the site, which comprised 0.28 ha of primary native foraging habitat associated with *Corymbia calophylla,* 0.07 ha of

primary non-native foraging habitat associated with *Pinus pinaster*, 0.41 ha of secondary native foraging habitat associated with *Acacia saligna*, *Jacksonia furcellata* and *Xanthorrhoea* spp. and 0.51 ha of secondary non-native habitat associated with *Eucalyptus gomphocephala*.

A total of 0.84 ha of foraging habitat for forest red-tailed black cockatoo was recorded in the site, which comprises 0.28 ha of primary native habitat associated with *Corymbia calophylla,* 0.07 ha of secondary native foraging habitat associated with *Jacksonia furcellata* and 0.49 ha of non-native secondary habitat associated with *Eucalyptus gomphocephala* and **Eucalyptus camaldulensis.*

The extent of foraging habitat by value category is detailed in **Table 12** and shown in **Figure 8** and **Figure 9**.

*Table 12: Foraging habitat recorded within the site*

| Foraging habitat | Black cockatoo species and area of foraging habitat (ha) | |
|---|---|---|
| | Carnaby's | Forest red-tailed |
| Primary native | 0.28 | 0.28 |
| Primary non-native | 0.07 | 0 |
| Secondary native | 0.41 | 0.07 |
| Secondary non-native | 0.51 | 0.49 |
| Total | 1.27 | 0.84 |

## 5. CONCLUSIONS

Outcomes of the assessment include the following:

- No threatened or priority flora species were recorded in the site. None of the threatened and priority flora species identified in the desktop assessment are considered to occur in the site due to lack of suitable habitat and/or because they were not recorded during the field survey.
- The majority of the site is heavily disturbed (degraded to completely degraded) and limited native intact native vegetation is present. One small patch of vegetation (ErJkSt) is identified in 'good – very good' condition.
- A total of 0.07 ha of the 'subtropical and temperate coastal saltmarsh' TEC/PEC occurs within the northern portion of the site adjacent to the Swan River.
- One threatened, forest red-tailed black cockatoo (EN), and one priority, blue-billed duck (P4), species were recorded in the site. A further nine conservation significant fauna species also have potential to occur in the site.
- As a result of historical disturbance, the site contains limited high-quality fauna habitat and is likely only utilised by fauna traversing through the wider area, especially birds. However, the small patch of 'fringing woodland' fauna habitat in the site's northeast (associated with vegetation type ErJkSt) may provide value for smaller ground-dwelling fauna.
- A total of 66 black cockatoo habitat trees were recorded of which five contained hollows potentially suitable for breeding. Internal hollow inspection would be required to confirm if these hollows are suitable for black cockatoo breeding.
- No evidence of roosting was recorded in the site. Tall trees in the site may represent potential roosting trees.
- A total of 1.27 ha of foraging habitat for Carnaby's black cockatoo and 0.84 ha of foraging habitat for forest red-tailed black cockatoo exists in the site.

# 6. REFERENCES

## 6.1. General references

Atlas of Living Australia (ALA) 2023, *Atlas of Living Australia - Spatial Portal*, <http://www.ala.org.au/>.

Department of Biodiversity, Conservation and Attractions (DBCA) 2023, *NatureMap*, <https://static.dbca.wa.gov.au/pages/naturemap.html>.

Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2022, *Referral guideline for 3 WA threatened black cockatoo species*.

Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2023, *Protected Matters Search Tool*, <https://pmst.awe.gov.au/#/map>.

Keighery, B. 1994, *Bushland Plant Survey: A guide to plant community survey for the community*, Wildflower Society of WA (Inc), Nedlands.

NVIS Technical Working Group 2017, *Australian Vegetation Attribute Manual: National Vegetation Information System*, Department of the Environment and Energy, Canberra.

## 6.2. Online references

The online resources that have been utilised in the preparation of this report are referenced in **Section 6.1**, with access date information provided in **Table R 1**.

*Table R 1 Access dates for online references*

| Reference | Date accessed | Website or dataset name |
|---|---|---|
| DCCEEW (2023) | 24 January 2024 | Protected Matters Search Tool |
| DBCA (2023) | 28 March 2023 | NatureMap |
| ALA(2023) | 24 January 2024 | Spatial Portal - Atlas of Living Australia |

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# Figures

*Figure 1: Site Location*

*Figure 2: Vegetation Units*

*Figure 3: Vegetation Condition*

*Figure 4: Threatened Ecological Community*

*Figure 5: Native Vegetation Under the EP Act*

*Figure 6: Fauna Habitat*

*Figure 7: Black Cockatoo Habitat Trees*

*Figure 8: Carnaby's Black Cockatoo Foraging Habitat*

*Figure 9: Forest Red-tailed Black Cockatoo Foraging Habitat*




**Figure 1: Site Location**

**Project:** Flora, Vegetation and Fauna Assessment
Golden Gateway Structure Plan
**Client:** Perth Racing

**Plan Number:** EP23-109(06)--F01
Drawn: AS
Date: 13/02/2024
Checked: AJU
Approved: RAW
Date: 08/04/2024

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Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

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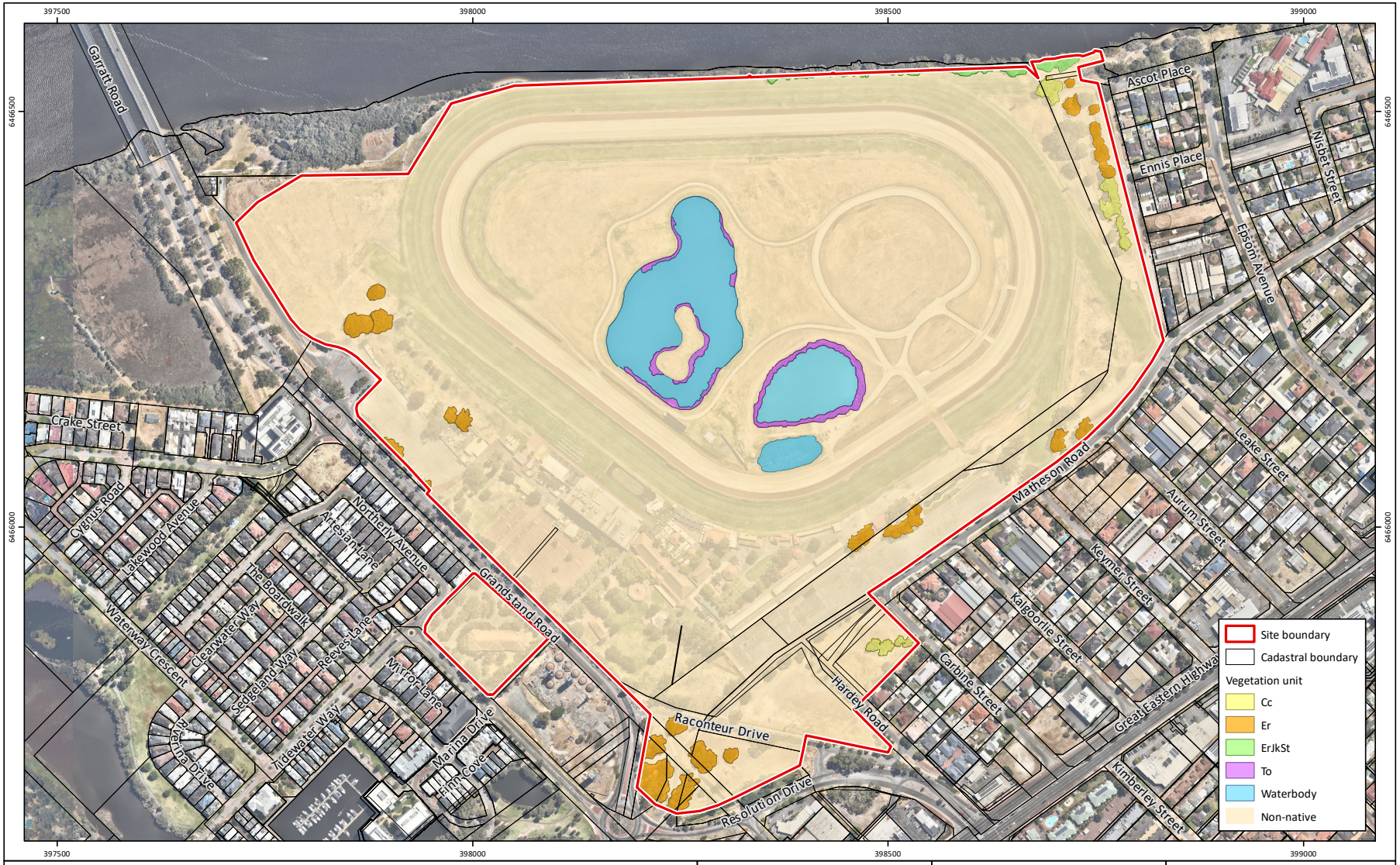



**Figure 2:** **Vegetation Units**

| | |
|---|---|
| **Project:** | Flora, Vegetation and Fauna Assessment<br>Golden Gateway Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:** EP23-109(06)--F02

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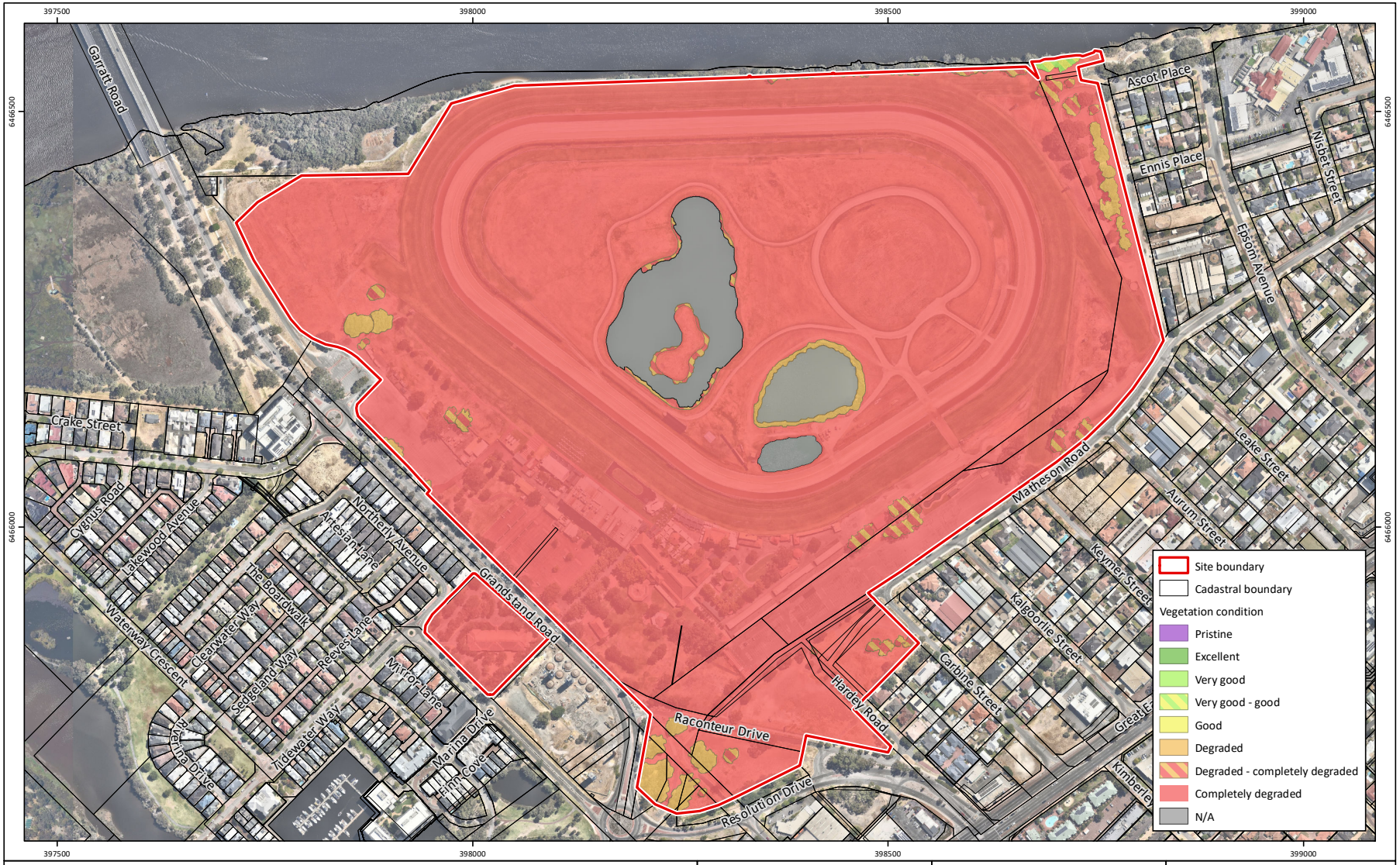



**Figure 3: Vegetation Condition**

| | |
|---|---|
| **Project:** | Flora, Vegetation and Fauna Assessment<br>Golden Gateway Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:** EP23-109(06)--F03

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**Figure 4: Threatened and Priority Ecological Community**

| | |
|---|---|
| **Project:** | Flora, Vegetation and Fauna Assessment<br>Golden Gateway Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:** EP23-109(06)--F04

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**Figure 5:** **Native Vegetation Under the EP Act**

| | |
|---|---|
| **Project:** | Flora, Vegetation and Fauna Assessment<br>Golden Gateway Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(06)--F16**

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| Date: | 04/04/2024 |
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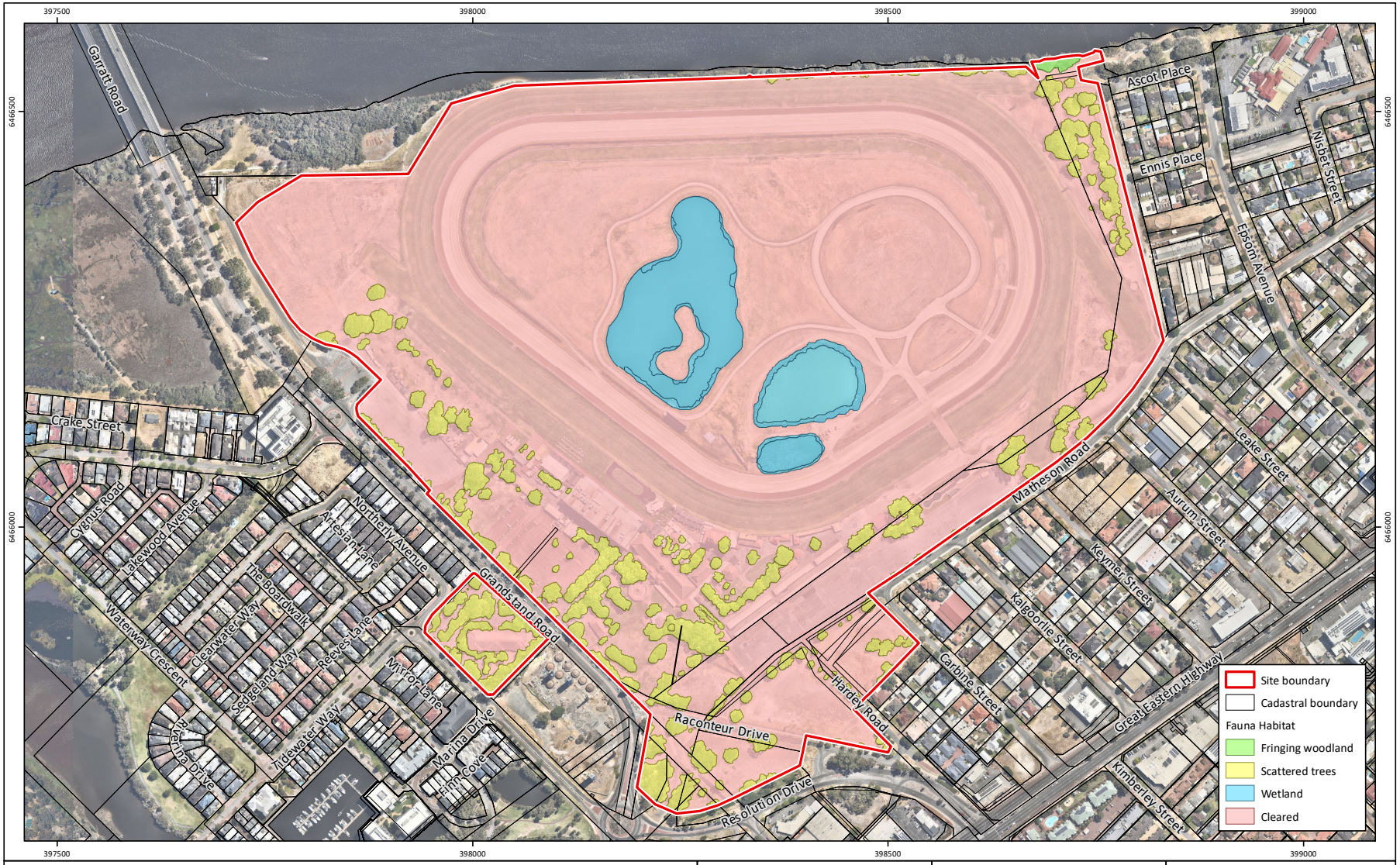



**Figure 6: Fauna Habitat**

| | |
|---|---|
| **Project:** | Flora, Vegetation and Fauna Assessment<br>Golden Gateway Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(06)--F05**

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**Figure 7: Black Cockatoo Habitat Trees**

| | |
|---|---|
| **Project:** | Flora, Vegetation and Fauna Assessment<br>Golden Gateway Structure Plan |
| **Client:** | Perth Racing |

| | |
|---|---|
| **Plan Number:** | **EP23-109(06)--F19a** |
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| Date: | 28/06/2024 |
| Checked: | TDP |
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**Figure 8:** **Carnaby's Black Cockatoo Foraging Habitat**

| | |
|---|---|
| **Project:** | Flora, Vegetation and Fauna Assessment<br>Golden Gateway Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(06)--F17**

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| Date: | 04/04/2024 |
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**Figure 9:** **Forest Red-tailed Black Cockatoo Foraging Habitat**

| | |
|---|---|
| **Project:** | Flora, Vegetation and Fauna Assessment<br>Golden Gateway Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(06)--F18**

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# Appendix A

Conservation Significant Flora Likelihood of Occurrence

**Conservation Significant Flora Likelihood of Occurrence**
**Perth Racing Golden Gateway Structure Plan**



| Species name | Level of | | Life strategy | Habitat | Flowering period | Likelihood of occurrence |
|---|---|---|---|---|---|---|
| | WA | EPBC Act | | | | |
| *Calectasia cyanea* | CR | CR | P | Heathland on white sand or laterite gravel over laterite. Known only from one population near Albany. | Jun-Oct | Low |
| *Grevillea thelemanniana* | CR | CR | P | Sand, sandy clay. Winter-wet low-lying flats. | May-Nov | Low |
| *Synaphea sp. Fairbridge Farm (D. Papenfus 696)* | CR | CR | P | Low woodland on grey, clayey sand with lateritic pebbles (Pinjarra Plain) near winter wet flats. | Sep-Nov | Low |
| *Caladenia huegelii* | CR | EN | PG | Well-drained, deep sandy soils in lush undergrowth in a variety of moisture levels. | Sep-early Nov | Low |
| *Calytrix breviseta subsp. breviseta* | CR | EN | P | Seasonally wet sandy-clay soil on swampy flats | Oct-Nov | Low |
| *Drakaea elastica* | CR | EN | PG | Bare patches of sand within otherwise dense vegetation in low-lying areas alongside winter-wet swamps. Typically in banksia woodland or thickets of Kunzea glabrescens. | late Sep-Oct/Nov, survey Jul-Aug | Low |
| *Eucalyptus x balanites* | CR | EN | P | Light coloured sandy soils over laterite. Habitat consists of gently sloping heathlands; open mallee woodland over shrubland (Population 2) or heathland with emergent mallees (population 1) | Oct - Feb | Low |
| *Trithuria occidentalis* | CR | EN | A | Partly submerged on the edge of shallow winter-wet clay pans in very open shrubland. | Oct-Nov | Low |
| *Diuris purdiei* | EN | EN | PG | Sand to sandy clay soils in areas subject to winter inundation. | late September to mid-October, but only after a summer or early autumn fire (Brown et al., 1998) | Low |
| *Grevillea curviloba subsp. incurva* | EN | EN | P | Sand, sandy loam. Winter-wet heath. | Aug-Sep | Low |
| *Macarthuria keigheryi* | EN | EN | P | Low-lying winter-wet damp grey/white sands in open patches. | Sep-Dec or Feb-Mar | Low |

| | WA | EPBC Act | strategy | | period | occurrence |
|---|---|---|---|---|---|---|
| *Thelymitra stellata* | EN | EN | PG | Sandy loam, clay or gravel over laterite or gravel. | Sep-Nov | Low |
| *Andersonia gracilis* | VU | EN | P | Seasonally damp, black sandy clay flats near or on the margins of swamps. | Sep-Nov | Low |
| *Banksia mimica* | VU | EN | P | Flat to gentle slopes in grey and white sand in open woodlands. | Dec-Jan | Low |
| *Drakaea micrantha* | EN | VU | PG | Open sandy patches often adjacent to winter-wet swamps. | Sept- early Oct | Low |
| *Acacia denticulosa* | VU | VU | P | Sand, loam, clay. Granite outcrops, rarely on sandplains. | Sep-Oct | Low |
| *Anigozanthos viridis subsp. Terraspectans* | VU | VU | P | Grey sand, clay loam. Winter-wet depressions. | Aug-Sep | Low |
| *Conospermum undulatum* | VU | VU | P | Sand and sandy clay soils, on flat or gently sloping sites between the Swan and Canning Rivers | May-Oct | Low |
| *Diuris drummondii* | VU | VU | PG | In low-lying depressions in peaty and sandy clay swamps. | Nov-Jan | Low |
| *Diuris micrantha* | VU | VU | PG | Dark grey-black sandy clay-loam in winter wet depressions or swamps. Often in shallow standing water. | Aug/Sep- early Oct | Low |
| *Eleocharis keigheryi* | VU | VU | P | Clay or sandy loam in freshwater creeks and transient waterbodies such as seasonally wet clay pans. | Aug-Dec | Low |
| *Eucalyptus rhodantha var. rhodantha* | VU | VU | P | Grey/yellow/red sand over laterite. Undulating country, hillslopes. | Jul-Sep or Dec-Jan | Low |
| *Morelotia australiensis* | VU | VU | P | Sand over clay, winter wet depressions and drainage lines. | Nov-Dec | Low |
| *Eremophila glabra subsp. chlorella* | EN | - | P | Sandy clay. Winter-wet depressions. | Jul-Nov | Low |
| *Hypocalymma magnificum* | EN | - | P | Sandy loam, granite. | Aug-Nov (limited information) | Low |
| *Bolboschoenus fluviatilis* | P1 | - | P | Floodplain with grey/brown wet sand. | Nov | Moderate |
| *Calandrinia sp. Bayswater (C. Andrews s.n. 11/1902)* | P1 | - | Unknown | Unknown | Unknown | Low |

| | WA | EPBC Act | strategy | | period | occurrence |
|---|---|---|---|---|---|---|
| *Drosera patens* | P1 | - | P | Sandy soils on margins of winter-wet depressions, swamps and lakes. | Aug-Dec | Low |
| *Drosera x sidjamesii* | P1 | - | P | Along lake margins, close to winter high-water line | Nov-Dec or Jan-Mar | Low |
| *Haloragis scoparia* | P1 | - | P | Clay in winter-wet areas. | May | Low |
| *Hydrocotyle striata* | P1 | - | A | Sand and clay in springs and creeklines. | Nov | Low |
| *Levenhookia preissii* | P1 | - | A | Grey or black, peaty sand. Swamps | Sep-Dec/Jan | Low |
| *Ptilotus sericostachyus subsp. roseus* | P1 | - | P | Unknown. Seem to be associated with wetlands/rivers. | Sep-Dec | Moderate |
| *Senecio gilbertii* | P1 | - | P | Peaty sand in swamps and on slopes. | Sep-Nov | Low |
| *Thelymitra magnifica* | P1 | - | PG | Gravelly soil on stony ridges. | Sep-Oct | Low |
| *Typhonium peltandroides* | P1 | - | P | Shallow sand amongst rough sandstone, red clay. Sides of gorges, vine thickets, rocky sites or along watercourses. | Dec or Jan-Feb | Low |
| *Acacia benthamii* | P2 | - | P | Sand, typically on limestone breakaways | Aug - Sept | Low |
| *Calothamnus macrocarpus* | P2 | - | P | Rocky quartzite soils, sand. Slopes. | Feb or Aug-Dec | Low |
| *Chamelaucium floriferum subsp. diffusum* | P2 | - | P | Sand, clay. Frequently with outcropping granite. | Jan-Dec | Low |
| *Eucalyptus educta* | P2 | - | P | Shallow soils. Granite rocks. | Apr | Low |
| *Grevillea manglesii subsp. ornithopoda* | P2 | - | P | Red-brown loam over clay | Sep-Nov | Low |
| *Hypocalymma inopinatum* | P2 | - | P | White sand on laterite. Shallow sandy loam Slopes and rises (limited information). | Nov? (limited information | Low |
| *Johnsonia pubescens subsp. cygnorum* | P2 | - | P | Grey white yellow sands on flats and seasonally wet areas. | Sep | Low |
| *Lepyrodia curvescens* | P2 | - | P | Sand, laterite. Seasonally inundated swampland. | Sep-Nov | Low |
| *Melaleuca viminalis* | P2 | - | P | Sand, clay in creeklines and wetlands. | Oct-Dec | Moderate |
| *Phyllangium palustre* | P2 | - | A | Winter-wet claypans, low-lying seasonal wetlands on clay | Oct-Nov | Low |
| *Poranthera moorokatta* | P2 | - | A | Sandy or clay soils. Dampland or low sandy dunes. | Oct or Feb | Low |
| *Thelymitra variegata* | P2 | - | P | Sandy clay, sand, laterite. | Jun-Sep | Low |

| | WA | EPBC Act | strategy | | period | occurrence |
|---|---|---|---|---|---|---|
| *Thysanotus brachiatus* | P2 | - | P | Grey sand | Nov-Dec | Low |
| *Adenanthos cygnorum subsp. chamaephyton* | P3 | - | P | Grey sand, lateritic gravel. | Jul or Sep to Dec or Jan | Low |
| *Alyogyne sp. Great Victoria Desert (D.J. Edinger 6212)* | P3 | - | P | Unknown | Unknown | Low |
| *Angianthus micropodioides* | P3 | - | A | Saline sandy soils on edge of rivers, depressions and clay pans. | Nov-Dec or Jan-Feb | Moderate |
| *Babingtonia urbana* | P3 | - | P | Grey sand, lateritic gravel. | Jan-Mar | Low |
| *Banksia pteridifolia subsp. vernalis* | P3 | - | P | White/grey sand over laterite. | Sep-Oct | Low |
| *Beaufortia purpurea* | P3 | - | P | Lateritic or granitic soils on rocky slopes. | Oct-Feb | Low |
| *Byblis gigantea* | P3 | - | P | Sandy-peat swamps. Seasonally wet areas. | Sep-Jan | Low |
| *Carex tereticaulis* | P3 | - | P | Black peaty sand. | Sep-Oct | Low |
| *Conostylis bracteata* | P3 | - | P | Sand, limestone. Consolidated sand dunes | Aug-Sep | Low |
| *Cyathochaeta teretifolia* | P3 | - | P | Grey sand, sandy clay in swamps and creek edges. | Oct-Jan | Low |
| *Dampiera triloba* | P3 | - | P | Damp peat/loam soil. | Aug-Dec | Low |
| *Dicrastylis micrantha* | P3 | - | P | Red sand. Sandplains. | Sep-Dec | Low |
| *Eryngium sp. Subdecumbens (G.J. Keighery 5390)* | P3 | - | A | Clay in seasonal wetlands. | Sep-Nov | Low |
| *Haemodorum loratum* | P3 | - | P | Grey or yellow sand, gravel. | Nov | Low |
| *Halgania corymbosa* | P3 | - | P | Gravelly soils, soils over granite. | Aug-Nov | Low |
| *Hibbertia leptotheca* | P3 | - | P | Brown to white sand with limestone. | Aug-Sep | Low |
| *Hypocalymma quadrangulare* | P3 | - | P | Sandy loam in depressions (limited infroamtion) | Jul-Sep (limited information) | Low |
| *Isopogon autumnalis* | P3 | - | P | Yellow-grey sand. | Feb,Mar,Apr, May or June | Low |
| *Jacksonia gracillima* | P3 | - | P | Sand, often adjacent to winter wet areas | Sep-Dec | Low |
| *Lasiopetalum glutinosum subsp. glutinosum* | P3 | - | P | Brown clay loam on slopes | Sep-Dec | Low |
| *Lasiopetalum membranaceum* | P3 | - | P | Sand over limestone | Sep-Dec | Low |

| | WA | EPBC Act | strategy | | period | occurrence |
|---|---|---|---|---|---|---|
| *Meionectes tenuifolia* | P3 | - | P | Clay loam in seasonally wet areas. | Oct-Dec | Low |
| *Myriophyllum echinatum* | P3 | - | A | Clay in winter-wet flats. | Nov | Low |
| *Platysace ramosissima* | P3 | - | P | Sandy soils. | Oct-Nov | Low |
| *Schoenus benthamii* | P3 | - | P | White, grey ands, sandy clay in winter wet flats and swamps | Oct-Nov | Low |
| *Schoenus pennisetis* | P3 | - | A | Grey or peaty sand in swamps and winter-wet depressions. | Aug-Sep | Low |
| *Stylidium aceratum* | P3 | - | A | Sandy soils in swamp heathland. | Oct-Nov | Low |
| *Stylidium asteroideum* | P3 | - | P | Sand, clay, loam in winter wet areas. | Sep-Nov | Low |
| *Stylidium paludicola* | P3 | - | P | Peaty sand over clay. Winter wet habitats. Marri and Melaleuca woodland, Melaleuca shrubland | Oct-Dec | Low |
| *Styphelia filifolia* | P3 | - | P | Brown over pale yellow sand. | Feb-Apr | Low |
| *Thysanotus anceps* | P3 | - | P | White or grey sand, lateritic gravel, laterite. | Oct-Dec | Low |
| *Verticordia venusta* | P3 | - | P | Yellow sand, sandy gravel. Sandplains. | Sep-Dec or Jan | Low |
| *Aponogeton hexatepalus* | P4 | - | P | Mud. Freshwater: ponds, rivers, claypans. | Jul-Oct | Moderate |
| *Calothamnus accedens* | P4 | - | P | Sandy soils over laterite. | Sep-Jan | Low |
| *Calothamnus graniticus subsp. leptophyllus* | P4 | - | P | Clay over granite, lateritic soils. Hillsides. | Jun-Aug | Low |
| *Cyanothamnus tenuis* | P4 | - | P | Laterite, stony soils, granite. | Aug-Nov | Low |
| *Dodonaea hackettiana* | P4 | - | P | Sand, outcropping limestone. | Jul-Oct | Low |
| *Drosera occidentalis* | P4 | - | P | Flat, brown/white/yellow moist sand/clay/peat, often near swamps. | Oct-Dec/Jan | Low |
| *Eucalyptus caesia subsp. caesia* | P4 | - | P | Loam. Granite outcrops. | May-Sep | Low |
| *Eucalyptus caesia subsp. magna* | P4 | - | P | Loam. Granite outcrops. | May-Sep | Low |
| *Eucalyptus kruseana* | P4 | - | P | Sandy loam. Granite outcrops & hills. | Jun-Sep | Low |
| *Grevillea pimeleoides* | P4 | - | P | Gravelly soils over granite. Rocky hillsides. | May-Nov | Low |
| *Hydrocotyle lemnoides* | P4 | - | A | Floating in swamps. | Aug-Oct | Low |

| | WA | EPBC Act | strategy | | period | occurrence |
|---|---|---|---|---|---|---|
| *Jacksonia sericea* | P4 | - | P | Calcareous and sandy soils on Swan Coastal Plain | Dec-Feb | Low |
| *Lasiopetalum bracteatum* | P4 | - | P | Sandy clay, clay, lateritic gravel along drainage lines, creeks, gullies, granite outcrops. | Aug-Nov | Low |
| *Ornduffia submersa* | P4 | - | A | Sandy clay in inundated wetland/creek. | Aug-Nov | Low |
| *Schoenus griffinianus* | P4 | - | P | White sand | Sep-Oct | Low |
| *Schoenus natans* | P4 | - | A | Aquatic, in winter-wet depressions. | Oct | Low |
| *Stylidium longitubum* | P4 | - | A | Sandy clay, clay. Seasonal wetlands. | Oct-Dec | Low |
| *Stylidium striatum* | P4 | - | P | Brown clay over laterite on hill slopes. | Oct-Nov | Low |
| *Verticordia lindleyi subsp. Lindleyi* | P4 | - | P | Sand and sandy clay in winter wet areas. | May or Nov-Jan | Low |

Note: CR=critically endangered, EN=endangered, VU=vulnerable, P1=Priority 1, P2=Priority 2, P3=Priority 3, P4=Priority 4, P=perennial, PG=perennial geophyte, A=annual.

# Appendix B

Flora Species Inventory

**Flora Species List**
**Perth Racing Golden Gate Strucure Plan Support**



| Family | Status | Species |
|---|---|---|
| Amaranthaceae | | |
| | * | *Amaranthus viridis* |
| | * | *Atriplex prostrata* |
| | | *Suaeda australis* |
| Anacardiaceae | | |
| | * | *Schinus terebinthifolia* |
| Apiaceae | | |
| | | *Apium prostratum subsp. prostratum var. prostratum* |
| Araliaceae | | |
| | * | *Schefflera arboricola* |
| Araucariaceae | | |
| | * | *Araucaria heterophylla* |
| Arecaceae | | |
| | * | *Arecaceae sp.* |
| | * | *Phoenix canariensis* |
| | * | *Syagrus romanzoffiana* |
| | * | *Washingtonia filifera* |
| Asphodelaceae | | |
| | Pl | *Xanthhorrea sp.* |
| Asteraceae | | |
| | * | *Erigeron sp.* |
| | * | *Hypochaeris glabra* |
| | * | *Lactuca serriola* |
| | * | *Ursinia anthemoides* |
| Bignoniaceae | | |
| | * | *Jacaranda mimosifolia* |
| Boraginaceae | | |
| | | *Heliotropium curassavicum* |
| Casuarinaceae | | |
| | | *Casuarina ?cunninghamiana* |
| | | *Casuarina obesa* |
| | Pl | *Casuarina sp.* |
| Cyperaceae | | |
| | | *Bolboschoenus caldwellii* |
| | * | *Cyperus ?tenuiflorus* |
| | * | *Cyperus congestus* |
| | * | *Cyperus polystachyos* |
| | | *Lepidosperma longitudinale* |
| | | *Schoenoplectus tabernaemontani* |
| Fabaceae | | |
| | | *Acacia saligna* |
| | * | *Acacia iteaphylla* |
| | | *Kennendia prostrata* |
| | * | *Tipuana tipu* |
| | * | *Trifolium michelianum* |
| | | *Viminaria juncea* |
| Fabaeae | | |
| | * | *Erythrina indica* |

| | | |
|---|---|---|
| Juncaceae | | |
| | | *Juncus kraussii* |
| Malvaceae | | |
| | * | *Brachychiton populneus* |
| | * | *Malva sp.* |
| Moraceae | | |
| | * | *Ficus macrophylla* |
| Myrtaceae | | |
| | Pl | *Agonis flexuosa* |
| | Pl | *Callistemon sp.* |
| | | *Corymbia calophylla* |
| | * | *Corymbia citriodora* |
| | * | *Corymbia cladocalyx* |
| | * | *Eucalyptus ?leptopoda* |
| | * | *Eucalyptus botryoides* |
| | * | *Eucalyptus camaldulensis* |
| | * | *Eucalyptus cladocalyx* |
| | Pl | *Eucalyptus gomphocephala* |
| | * | *Eucalyptus grandis* |
| | * | *Eucalyptus leucoxylon* |
| | * | *Eucalyptus maculata* |
| | | *Eucalyptus rudis* |
| | * | *Eucalyptus sideroxylon* |
| | * | *Eucalyptus sp.* |
| | | *Melaleuca rhaphiophylla* |
| | * | Myrtaceae sp. |
| Onagraceae | | |
| | * | *Oenothera drummondii* |
| Pinaceae | | |
| | * | *Pinus sp.* |
| Plantaginaceae | | |
| | * | *Plantago lanceolata* |
| Plantanaceae | | |
| | * | *Platanus ×hispanica* |
| Poaceae | | |
| | * | *Avena barbata* |
| | * | *Bambusa sp.* |
| | * | *Briza maxima* |
| | * | *Cenchrus ciliaris* |
| | * | *Cortaderia selloana* |
| | * | *Cynodon dactylon* |
| | * | *Ehrharta calycina* |
| | * | *Ehrharta longiflora* |
| | * | *Ergagrostis curvula* |
| | * | *Melinis repens* |
| | * | *Paspalum dilatatum* |
| | * | *Paspalum vaginatum* |
| | * | *Setaria verticillata* |
| Polygonaceae | | |

| | | |
|---|---|---|
| | * | *Persicaria ?decipiens* |
| | * | *Polygonum aviculare* |
| Rosaceae | | |
| | * | *Rosa sp.* |
| Solanaceae | | |
| | * | *Solanum nigrum* |
| Tamaricaceae | | |
| | * | *Tamarix aphylla* |
| Typhaceae | | |
| | | *Typha sp.* |

*=non-native, Pl=planted

# Appendix C

Conservation Significant Communities Likelihood of Occurrence

**Conservation Significant Communities Likelihood of Occurrence**
**Perth Racing Golden Gateway Structure Plan**



| Code | Community name | TEC/ PEC | Level of significance | | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | | State | EPBC Act | |
| SCP10a | Shrublands on dry clay flats (floristic community type 10a as originally described in Gibson et al. (1994)) | TEC | EN | CR | Low |
| SCP07 | Herb rich saline shrublands in clay pans (floristic community type 7 as originally described in Gibson et al. (1994)) | TEC | VU | CR | Low |
| Tuart woodlands | Tuart (Eucalyptus gomphocephala) woodlands and forests of the Swan Coastal Plain | TEC/ PEC | P3 | CR | Low |
| SCP3a | Corymbia calophylla - Kingia australis woodlands on heavy soils, Swan Coastal Plain (floristic community type 3a as originally described in | TEC | CR | EN | Moderate |
| SCP3c | Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands, Swan Coastal Plain (floristic community type 3c as originally described in in Gibson et al. (1994)) | TEC | CR | EN | Moderate |
| SCP20c | Shrublands and woodlands of the eastern side of the Swan Coastal Plain (floristic community type 20c as originally described in in Gibson et al. (1994)) | TEC | CR | EN | Low |
| SCP20b | Banksia attenuata and/or Eucalyptus marginata woodlands of the eastern side of the Swan Coastal Plain (floristic community type 20b as originally described in Gibson et al. (1994)) | TEC | EN | EN | Low |
| SCP20a | Banksia attenuata woodlands over species rich dense shrublands (floristic community type 20a as originally described in Gibson et al. (1994)) | TEC | EN | EN | Low |
| Muchea Limestone | Shrublands and woodlands on Muchea Limestone of the Swan Coastal Plain | TEC | EN | EN | Low |
| Banksia WL SCP | Banksia Woodlands of the Swan Coastal Plain ecological community | TEC/ PEC | P3 | EN | Low |
| Coastal Saltmarsh | Subtropical and Temperate Coastal Saltmarsh | TEC/ PEC | P3 | VU | High |
| SCP02 | Southern wet shrublands, Swan Coastal Plain (floristic community type 2 as originally described in Gibson et al. (1994) | TEC | EN | - | Low |
| SCP3b | Corymbia calophylla - Eucalyptus marginata woodlands on sandy clay soils of the southern Swan Coastal Plain (floristic community type 3b as originally described in Gibson et al. (1994)) | TEC | VU | - | Moderate |
| SCP22 | Banksia ilicifolia woodlands | PEC | P3 | - | Low |
| SCP21c | Low lying Banksia attenuata woodlands or shrublands | PEC | P3 | - | Low |
| SCP23b | Swan Coastal Plain Banksia attenuata - Banksia menziesii woodlands | PEC | P3 | - | Low |

Note: TEC=threatened ecological community, PEC=priority ecological community, CR=critically endangered, EN=endangered, VU=vulnerable, P3=priority 3

# Appendix D

Conservation Significant Fauna

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| **Birds** | | | | | |
| *Actitis hypoleucos* | Common sandpiper | MI | MI | Edge of sheltered waters salt or fresh, e.g. estuaries, mangrove creeks, rocky coasts, near-coastal saltlakes (including saltwork ponds), river pools, lagoons, claypans, drying swamps, flood waters, dams and sewage ponds. Preferring situations where low perches are available (Johnstone & Storr 1998). | Nil |
| *Anous tenuirostris melanops* | Australian lesser noddy | EN | VU | Very common in blue-water seas around the Abrolhos (endemic to this area, accidental occurrences on lower west coast of Australia) (Johnstone and Storr 1998). | Nil |
| *Apus pacificus* | Pacific swift | MI | MI | Aerial, migratory species that is most often seen over inland plains and sometimes above open areas, foothills or in coastal areas. Sometimes occurs over settled areas, including towns, urban areas and cities (Pizzey & Knight 2012). | Moderate |
| *Botaurus poiciloptilus* | Australasian bittern | EN | EN | In or over water, in tall reedbeds, sedges, rushes, cumbungi, lignum. Also occurs in ricefields, drains in tussocky paddocks and occasionally in saltmarshes and brackish wetlands (TSSC 2019). | Negligible |
| *Cacatua pastinator pastinator* | Muir's corella | CD | - | Wheat and sheep farming country with remnant native forest. Species is restricted to the south-west corner of WA, near Lake Muir (DPaW 2015). | Nil |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Calidris acuminata* | Sharp-tailed sandpiper | VU (MI) | VU (MI) | Occurs in tidal mudflats, saltmarshes and mangroves, as well as, shallow fresh, brackish or saline inland wetlands. It is also known from floodwaters, irrigated pastures and crops, sewage ponds, saltfields (Pizzey & Knight 2012). | Nil |
| *Calidris alba* | Sanderling | MI | MI | Mainly steeply shelving sandy beaches exposed to ocean swell. Also sandy inlets, estuarine sandbanks and near-coastal saltlakes (including saltwork ponds) (Johnstone & Storr 1998). | Nil |
| *Calidris canutus* | Red knot | EN | EN (MI) | Mud and sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds (Pizzey & Knight 2012). | Nil |
| *Calidris ferruginea* | Curlew sandpiper | CR | CR (MI) | Mainly shallows of estuaries and near-coastal saltlakes (including saltwork ponds) and drying near-coastal freshwater lakes and swamps. Also beaches and near-coastal sewage ponds (Johnstone & Storr 1988). | Negligible |
| *Calidris melanotos* | Pectoral sandpiper | MI | MI | Mainly fresh waters (swamps, lagoons, river pools, irrigation channels and sewage ponds); also samphire flats around estuaries and saltlakes (Johnstone & Storr 1998). | Nil |
| *Calidris ruficollis* | Red-necked stint | MI | MI | Tidal mudflats, saltmarshes, sandy or shelly beaches, saline and freshwater wetlands (coastal and inland), saltfields, sewage ponds (Pizzey and Knight 2012). | Moderate |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Calidris subminuta* | Long-toed stint | MI | MI | Mainly freshwater swamps (especially when drying and where vegetation is short), river pools, lagoons and claypans; also brackish pools, sewage ponds and samphire flats around estuaries and saltlakes (Johnstone & Storr 1988). | Nil |
| *Calidris tenuirostris* | Great knot | CR | CR (MI) | Mud or sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds (Johnstone & Storr 1988). | Negligible |
| *Calyptorhynchus banksii naso* | Forest red-tailed black cockatoo | VU | VU | Eucalypt and Corymbia forests, often in hilly interior. More recently also observed in more open agricultural and suburban areas including Perth metropolitan area. Attracted to seeding Corymbia calophylla, Eucalyptus marginata, introduced Melia azedarach and Eucalyptus spp. trees (Johnstone et al. 2013). | High |
| *Charadrius leschenaultii* | Great sand plover | VU | VU (MI) | Wide sandy or shelly beaches, sandpits, tidal mudflats, reefs, sand cays, mangroves, saltmarsh, dune wilderness, bare paddocks, seldom far inland (Pizzey & Knight 2012). | Negligible |
| *Dasyornis longirostris* | Western bristlebird | EN | EN | Dense, low, closed coastal heaths. Open heaths with dense clumps of shrubs, eucalypt thickets and tall swampy heaths. Much reduced by fire, draining for agriculture, but may need fire for optimal status over 50-10+ years. Current range in WA confined to south coast from Albany to Hopetoun (Pizzey and Knight 2012). | Nil |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Diomedea amsterdamensis* | Amsterdam Island albatross | CR | EN (MI) | The Amsterdam albatross is a marine, pelagic seabird. It nests in open patchy vegetation (among tussocks, ferns or shrubs) near exposed ridges or hillocks (Weimerskirch et al. 1985). It sleeps and rests on ocean waters when not breeding (Marchant and Higgins 1990) | Nil |
| *Diomedea epomophora* | Southern royal albatross | VU | VU (MI) | Rare visitor to Western Australian seas; it breeds on subantarctic islands south of New Zealand (Johnstone and Storr 1998). | Nil |
| *Diomedea exulans* | Wandering albatross | VU | VU (MI) | Marine, pelagic and aerial species. It breeds on Macquarie Island and feeds in Australian portions of the Southern Ocean (DoE 2018). | Nil |
| *Elanus scriptus* | Letter-winged kite | P4 | - | Open to sparsely wooded country and grassland near tree-lined streams or watercourses (Johnstone and Storr 1998). | Nil |
| *Falco hypoleucos* | Grey falcon | VU | - | Species occurs in arid and semi-arid Australia, where it inhabits timbered lowland plains. In particular Acacia shrublands and that are crossed by tree-lined water courses. Species has also been observed hunting in treeless areas and frequenting tussock grassland and open woodlands (TSSC 2020). | Nil |
| *Falco peregrinus* | Peregrine falcon | OS | - | Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998). | Moderate |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Hydroprogne caspia* | Caspian tern | MI | MI | Mainly sheltered areas, estuaries (when not laden with silt) and tidal creeks; occasionally near-coastal saltlakes (including saltwork ponds) and brackish pools in lower courses of rivers; rarely fresh waters (DCCEEW 2023). | Negligible |
| *Ixobrychus dubius* | Australian little bittern | P4 | - | Dense vegetation surrounding/within freshwater pools, swamps and lagoons, well screened with trees. Shelters in dense beds of Typha spp., Baumea spp. and tall rushes in freshwater swamps around lakes and along rivers (Johnstone and Storr 1998). | Negligible |
| *Ixobrychus flavicollis australis* | Black bittern | P2 | - | Freshwater pools, swamps and lagoons, well-screened with trees. Occasionally feeding by day but mainly sheltering in dense waterside vegetation (Melaleuca spp., Eucalyptus camaldulensis, Pandanus spp. and long grass) (Johnstone and Storr 1998). | Nil |
| *Leipoa ocellata* | Malleefowl | VU | VU | Scrubs and thickets of Eucalyptus spp., Melaleuca lanceolata and Acacia linophylla; also other dense litter-forming shrublands. Attracted to fallen wheat in stubbles and along roads (Johnstone and Storr 1998). | Nil |
| *Limosa lapponica* | Bar-tailed godwit | MI | MI | Estuarine sand and mudflats and sandy beaches with loads of seaweed; also reef flats and near-coastal saltlakes (including saltwork and sewage ponds) (Johnstone and Storr 1998). | Nil |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Limosa limosa* | Black-tailed godwit | EN<br>MI | EN (MI) | Tidal mudflats, estuaries, sewage ponds, shallow river margins, brackish or saline inland lakes, flooded pastures, airfields (Pizzey & Knight 2012). | Nil |
| *Macronectes giganteus* | Southern giant-petrel | MI | EN (MI) | Breeds on southern subantarctic and antarctic islands. May visit Western Australian waters from February to December (mostly June to September) (Johnstone and Storr 1998). | Nil |
| *Macronectes halli* | Northern giant petrel | MI | VU (MI) | Breeds on subantarctic islands. May visit Western Australian water from February to September (Johnstone and Storr 1998). | Nil |
| *Numenius madagascariensis* | Eastern curlew | CR | CR (MI) | Mainly tidal mudflats; also reef flats, sandy beaches and rarely near-coastal lakes (including saltwork ponds) (Johnstone and Storr 1998). | Nil |
| *Oxyura australis* | Blue-billed duck | P4 | - | Mainly deeper freshwater swamps and lakes; occasionally saltlakes and estuaries freshened by flood waters (Johnstone and Storr 1998). | High |
| *Pachyptila turtur subantarctica* | Fairy prion | - | VU | Breeds on subantarctic islands and is presumed to frequent subtropical waters during non-breeding period (TSSC 2015). | Nil |
| *Pandion haliaetus* | Osprey | MI | MI | Coasts, estuaries, bays, inlets, islands, and surrounding waters; coral atolls, reefs, lagoons, rock cliffs, stacks (Pizzey & Knight 2012). | High |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Phoebetria fusca* | Sooty albatross | EN | VU (MI) | Marine, pelagic species that tolerates a wide range of sea surface temperatures and salinities. breeds on subtropical and subantarctic islands in the Indian and Atlantic Oceans, on vegetated cliffs and steep slopes that are sheltered from prevailing winds, often amongst tussock grass (Pizzey & Knight 2012). | Nil |
| *Platycercus icterotis xanthogenys* | Western rosella (inland) | P4 | - | Open eucalypt woodlands with heath understorey (Pizzey & Knight 2012). | Negligible |
| *Plegadis falcinellus* | Glossy Ibis | MI | MI | Well-vegetated wetlands, wet pasture, ricefields, floodwaters, floodplains, brackish or occasionally saline wetlands, mangroves, mudflats and occasionally dry grassland (Pizzey & Knight 2012). | Moderate |
| *Pluvialis fulva* | Pacific golden plover | MI | MI | Estuaries, mudflats, saltmarshes, mangroves; rocky reefs and stranded seaweed on ocean shores; margins of shallow open inland swamps; sewage ponds, short-grass paddocks, sportsgrounds, airfields, ploughed land (Pizzey & Knight 2012). | Nil |
| *Pluvialis squatarola* | Grey Plover | VU (MI) | VU (MI) | Mudflats, saltmarsh, tidal reefs and estuaries, rarely inland (Pizzey and Knight 2012). | Negligible |
| *Rostratula australis* | Australian painted snipe | EN | EN | Mainly shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans (Marchant and Higgins 1993). | Negligible |
| *Sternula nereis nereis* | Australian fairy tern | VU | VU | Sheltered blue-water seas close to land, estuaries (when free of silt) and near-coastal lakes (Johnstone and Storr 1998). | Negligible |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Thalassarche cauta* | Shy albatross | VU | VU (MI) | Scarce visitor (late May to mid-October) to southwestern and western seas. Breeds on islands off Tasmania and south New Zealand (Johnstone and Storr 1998). | Nil |
| *Thalassarche impavida* | Campbell albatross | VU | VU (MI) | Scarce visitor to south-western and western Australian seas. Breeds on Campbell Island (Pizzey & Knight 2012). | Nil |
| *Thalassarche melanophris* | Black-browed albatross | EN | VU (MI) | Seas of south and west coasts. Visitor to Western Australian mainland from January to early November (mostly May to September). Breeds on southern subantarctic and Antarctic islands (Johnstone and Storr 1998). | Nil |
| *Thalassarche steadi* | White-capped albatross | VU | VU (MI) | Scarce visitor (late May to mid-October) to southwestern and western seas. Breeds on islands off Tasmania and south New Zealand (Johnstone and Storr 1998). | Nil |
| *Thalasseus bergii* | Crested tern | MI | MI | Mainly blue-water seas (especially within 3 km of land), including southern estuaries in summer and autumn (when free of silt); also tidal creeks in north, but not penetrating far into larger estuaries (DCCEEW 2023). | Moderate |
| *Tringa glareola* | Wood sandpiper | MI | MI | Mainly shallow fresh waters (lagoons, swamps, claypans, river pools, dams, bore overflows and sewage ponds); occasionally brackish swamps, rarely saltlakes and estuaries (Pizzey & Knight 2012). | Nil |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Tringa nebularia* | Common greenshank | EN (MI) | EN (MI) | Mudflats, estuaries, saltmarshes, margins of lakes, wetlands, claypans (fresh and saline), commercial saltfields, sewage ponds (Pizzey & Knight 2012). | Nil |
| *Tyto novaehollandiae novaehollandiae* | Australian masked owl | P3 | - | Forests, open woodlands, farmlands with large trees. E.g. river red gums, adjacent cleared country, timbered watercourses, paperbark woodlands and caves (Pizzey & Knight 2012). | Nil |
| *Zanda baudinii* | Baudin's black cockatoo | EN | EN | Mainly eucalypt forests. Attracted to seeding Corymbia calophylla, Banksia spp., Hakea spp., and to fruiting apples and pears (Johnstone and Storr 1998). | Negligible |
| *Zanda latirostris* | Carnaby's black cockatoo | EN | EN | Mainly proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests; also plantations of Pinus spp. Attracted to seeding Banksia spp., Hakea spp., Eucalyptus spp., Corymbia calophylla, Grevillea spp., and Allocasuarina spp. (Johnstone and Storr 1998). | High |
| **Invertebrates** | | | | | |
| *Euoplos inornatus* | Inornate trapdoor spider | P3 | - | Has previously been recorded in jarrah forest, including near clay banks and granite outcrop. Most records are from the Darling scarp/Jarrah Forest Region, with limited records from the Swan Coastal Plain (DBCA 2020). | Nil |
| *Hylaeus globuliferus* | Woollybush bee | P3 | - | Males are territorial and may be found perched on the growing tips of Adenanthos sp., Banksia sp. or Jacksonia sp. Has also been recorded visiting the flowers of Grevillea sp. (PaDIL 2022). | Nil |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Idiosoma sigillatum* | Swan Coastal Plain shield-backed trapdoor spider | P3 | - | Widely distributed in sandy areas on the Swan Coastal Plain and on Rottnest Island (Prince 2003). Species predominantly recorded from remnant banksia woodland vegetation and heath on sandy soils (Rix et. al 2018). | Negligible |
| *Leioproctus contrarius* | a short-tongued bee | P3 | - | Life history and habits are poorly documented/ unknown. It has been recorded only on flowers of Goodeniaceae and possibly Lechenaultia stenosepala (Bamford 2003). | Nil |
| *Leioproctus douglasiellus* | a short-tongued bee | EN | CR | Life history and habits are poorly documented/ unknown. It has been recorded only on the flowers of Goodenia filiformis and Anthotium junciforme (Houston 2000). | Negligible |
| *Neopasiphae simplicior* | a short-tongued bee | EN | CR | This species of native bee has been collected on flowers of Goodenia filiformis, Lobelia tenuior, Angianthus preissianus and Velleia sp. (Houston 2000). | Nil |
| *Synemon gratiosa* | Graceful sun-moth | P4 | - | Coastal heathland on Quindalup dunes where it is restricted to secondary sand dunes due to the abundance of the preferred host plant Lomandra maritima. Banksia woodland on Spearwood and Bassendean dunes, where the second known host plant L. hermaphrodita is widespread (DEC 2011). | Negligible |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Westralunio carteri* | Carter's freshwater mussel | VU | VU | Occurs in greatest abundance in slower flowing streams with stable sediments that are soft enough for burrowing amongst woody debris and exposed tree roots. Also occupies lentic systems including large water supply dams and even on-stream farm dams. Salinity tolerance quite low (Morgan et al. 2011). | Nil |
| **Mammals** | | | | | |
| *Bettongia penicillata ogilbyi* | Woylie | CR | EN | Woodlands and adjacent heaths with a dense understorey of shrubs, particularly Gastrolobium spp. (TSSC 2018). | Nil |
| *Dasyurus geoffroii* | Chuditch | VU | VU | Wide range of habitats from woodlands, dry sclerophyll forests, riparian vegetation, beaches and deserts. Appears to utilise native vegetation along roadsides in the wheatbelt (DEC 2012). | Low |
| *Dasyurus hallucatus* | Northern quoll | EN | EN | Most abundant in rocky eucalypt woodland but occurs in range of vegetation types, mostly within 200 km of the coast (Menkhorst & Knight 2011). | Nil |
| *Falsistrellus mackenziei* | Western false pipistrelle | P4 | - | High rainfall forests dominated by jarrah, karri, marri, and tuart. Occupies hollow logs for breeding and resting (Van Dyck and Strahan 2008). Also known to utilise Banksia woodland on the Swan Coastal Plain (Hosken and O'Shea 1995). | Nil |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Hydromys chrysogaster* | Rakali | P4 | - | Areas with permanent water, fresh, brackish or marine. Likely to occur in all major rivers and most of the larger streams as well as bodies of permanent water in the lower south-west (Christensen et al. 1984). Intact riparian vegetation and associated bank stability is critical to their survival (DWER 2023). | Moderate |
| *Isoodon fusciventer* | Quenda | P4 | - | Dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC 2012) | Moderate |
| *Macrotis lagotis* | Bilby | VU | VU | Open tussock grassland on uplands and hills, mulga woodland/shrubland growing on ridges and rises and hummock grassland (spinifex) growing on sandplains and dunes, drainage systems, salt lake systems and other alluvial areas (DBCA 2017). | Nil |
| *Myrmecobius fasciatus* | Numbat | EN | EN | Generally dominated by Eucalyptus spp. that provide hollow logs and branches for shelter and termites for food (van Dyck & Strahan 2008). | Nil |
| *Notamacropus irma* | Western brush wallaby | P4 | - | Dry sclerophyll forest, Banksia spp. woodlands and shrublands, typically favouring dense low vegetation that provides dense cover (Christensen and Strahan 1983). | Negligible |
| *Phascogale tapoatafa wambenger* | South-western brush-tailed phascogale | CD | - | Dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (Triggs 2003). | Negligible |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Pseudocheirus occidentalis* | Western ringtail possum | CR | CR | On the Swan Coastal Plain in Agonis flexuosa woodlands and Agonis flexuosa/ Eucalyptus gomphocephala forests. Also Eucalyptus marginata forests (DBCA 2017). | Nil |
| **Reptiles** | | | | | |
| *Ctenotus delli* | Dell's skink | P4 | - | Jarrah and marri woodland with a shrub dominated understorey, sheltering in dense vegetation, inside grass trees and beneath rocks, sometimes in burrows (Nevill 2005). | Nil |
| *Ctenotus gemmula* | - | P3 | - | Pale soils supporting heathlands and usually in association with Banksia spp. (Bush et al. 2010) | Nil |
| *Ctenotus ora* | Coastal plains skink | P3 | - | Sandy substrates with low vegetation (including heath) in open Eucalyptus spp. and Corymbia calophylla woodland over Banksia spp. (Kay and Keogh 2012). | Nil |
| *Lerista lineata* | Perth slider | P3 | - | Sandy coastal heath and low scrubland. Banksia spp. woodland, Eucalyptus gomphocephala open woodland over deep sands, and coastal dunes immediately adjacent to the beach (Wilson and Swan 2021). | Nil |
| *Neelaps calonotos* | Black-striped snake | P3 | - | Coastal and near-coastal dunes, sandplains supporting heathlands and Banksia spp. woodlands (Bush et al. 2010). | Negligible |
| *Pseudemydura umbrina* | Western swamp tortoise | CR | CR | Clay based ephemeral swamps (Bush et al. 2010). | Negligible |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Pseudonaja affinis exilis* | Rottnest Island dugite | P4 | - | Subspecies found on Rottnest Island. Found in a wide range of habitats including coastal dunes, heathlands, scrublands, and woodlands, but tend to prefer sandy areas. More urban spaces that have been degraded also make an attractive habitat for these shy reptiles, with golf courses, industrial parks and agricultural country among areas listed as potential home environments (Wilson and Swan 2021). | Nil |
| *Note: CR=critically endangered, EN=endangered, VU=vulnerable, CD=conservation dependent, MI=migratory, OS=other specially protected, P1=Priority 1, P2=Priority 2, P3=Priority 3, P4=Priority 4. Species with a high or moderate likelihood to occur within the site are shaded green.* | | | | | |

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# Appendix E

Black Cockatoo Foraging Plant Species List

**Black Cockatoo Foraging Plants**



| | | Foraging category as assigned by Emerge | | | |
|---|---|---|---|---|---|
| **Species name** | **Common name** | **CBC** | **BBC** | **FRTBC** | **Literature references** |
| *Acacia baileyana* | Cootamundra wattle | Secondary | - | - | Groom 2011 |
| *Acacia pentadenia* | Karri wattle | Secondary | - | - | Groom 2011 |
| *Acacia saligna* | Orange wattle | Secondary | - | - | Groom 2011 |
| *Agonis flexuosa* | Peppermint tree | Secondary | - | - | Groom 2011 |
| *Allocasuarina fraseriana* | Sheoak | Secondary | Secondary | Secondary | Johnstone & Storr 1998; Johnstone *et al.* 2010; Johnstone 2017; DoEE 2017 |
| *Allocasuarina spp.* | | Secondary | - | Secondary | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Anigozanthos flavidus* | Tall kangaroo paw | - | Secondary | - | Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Araucaria heterophylla* | Norfolk island pine | Secondary | - | - | Groom 2011; DoEE 2017 |
| *Banksia ashbyi* | Ashby's banksia | Primary | Secondary | - | Saunders 1980; Groom 2011; DoEE 2017 |
| *Banksia attenuata* | Slender banksia | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia baxteri* | Baxter's banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia carlinoides* | Pink dryandra | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia coccinea* | Scarlet banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia dallanneyi* | Couch honeypot dryandra | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia ericifolia* | Heath-leaved banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia fraseri* | | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia gardneri* | Prostrate banksia | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia grandis* | Bull banksia | Primary | Secondary | - | Saunders 1980; Johnstone & Storr 1998; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia hookeriana* | Hooker's banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia ilicifolia* | Holly banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; Johnstone & Storr 1998; DoEE 2017 |
| *Banksia kippistiana* | | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia leptophylla* | | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia lindleyana* | Porcupine banksia | Primary | Secondary | - | Johnstone *et al.* 2010; DoEE 2017 |

| | | Foraging category as assigned by Emerge | | | |
|---|---|---|---|---|---|
| **Species name** | **Common name** | **CBC** | **BBC** | **FRTBC** | **Literature references** |
| *Banksia littoralis* | Swamp banksia | Primary | Secondary | - | Saunders 1980; Groom 2011Johnstone & Storr 1998; Johnstone *et al.* 2010; DoEE 2017 |
| *Banksia menziesii* | Firewood banksia | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia mucronulata* | Swordfish dryandra | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia nivea* | Honeypot dryandra | Primary | Secondary | - | Saunders 1980; Groom 2011; DoEE 2017 |
| *Banksia nobilis* | Golden dryandra | Primary | Secondary | - | Saunders 1980; Groom 2011; DoEE 2017 |
| *Banksia praemorsa* | Cut-leaf banksia | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia prionotes* | Acorn banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia prolata* | | Primary | Secondary | - | Johnstone *et al.* 2010; DoEE 2017 |
| *Banksia quercifolia* | Oak-leaved banksia | Primary | Secondary | - | Johnstone & Storr 1998; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia sessilis* | Parrot bush | Primary | Secondary | - | Saunders 1980; Johnstone & Storr 1998; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia speciosa* | Showy banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia spp.* | | Primary | Secondary | - | Saunders 1979; DSEWPaC 2012; DoEE 2017 |
| *Banksia squarrosa* | Pingle | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia tricuspis* | Pine banksia | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia undata* | Urchin dryandra | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia verticillata* | Granite banksia | Primary | Secondary | - | Saunders 1980; Groom 2011; DoEE 2017 |
| *Brassica campestris* | Canola | Secondary | - | - | Groom 2011; DoEE 2017 |
| *Callistemon spp.* | | Secondary | Secondary | - | Johnstone *et al.* 2010; DoEE 2017 |
| *Callistemon viminalis* | Captain cook bottlebrush | Secondary | - | - | Groom 2011 |
| *Callitris sp.* | | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Carya illnoinensis* | Pecan | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; Groom 2014; DoEE 2017 |
| *Casuarina cunninghamiana* | River sheoak | Secondary | - | - | Groom 2011 |
| *Citrullus lanatus* | Pie or afghan melon | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |

| | | Foraging category as assigned by Emerge | | | |
|---|---|---|---|---|---|
| **Species name** | **Common name** | **CBC** | **BBC** | **FRTBC** | **Literature references** |
| *Corymbia calophylla* | Marri | Primary | Primary | Primary | Johnstone & Storr 1998; Johnstone & Kirkby 1999; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017; Johnstone 2017; Saunders 1979; Johnstone & Kirkby 2008 |
| *Corymbia citriodora* | Lemon scented gum | Secondary | Secondary | Secondary | Johnstone *et al.* 2010; DSEWPaC 2012; Groom 2011; Johnstone 2017 |
| *Corymbia ficifolia* | Red flowering gum | Secondary | - | - | Groom 2011 |
| *Corymbia haematoxylon* | Mountain marri | Secondary | - | Secondary | Groom 2011; DoEE 2012; DoEE 2017 |
| *Corymbia maculata* | Spotted gum | - | - | - | - |
| *Darwinia citriodora* | Lemon-scented darwinia | Secondary | Secondary | - | Groom 2011; Johnstone *et al.* 2010 |
| *Diospryros sp.* | Sweet persimmon | Secondary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Eremophila glabra* | Tarbush | Secondary | - | - | Groom 2011 |
| *Erodium aureum* | | Secondary | - | - | Groom 2011 |
| *Erodium botrys* | Long storksbill | Secondary | Secondary | - | Groom 2011; Johnstone & Storr 1998; Johnstone *et al.* 2010 |
| *Erodium spp.* | | Secondary | Secondary | - | Johnstone *et al.* 2010; DoEE 2017 |
| *Eucalyptus caesia* | Silver princess | Secondary | - | Secondary | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017; Johnstone 2017 |
| *Eucalyptus camaldulensis* | River red gum | - | - | Secondary | DoEE 2012; DoEE 2017 |
| *Eucalyptus decipiens* | Red heart/moit | - | - | Secondary | Johnstone 2017 |
| *Eucalyptus diversicolor* | Karri | - | - | Primary | Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017; Johnstone & Storr 1998 |
| *Eucalyptus erythrocorys* | Illyarrie | Secondary | - | Secondary | DSEWPaC 2012; DoEE 2017; Johnstone 2017, Johnstone *et al.* 2010 |
| *Eucalyptus gomphocephala* | Tuart | Secondary | - | Secondary | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Eucalyptus grandis* | Flooded gum, rose gum | - | - | Secondary | DoEE 2012; DoEE 2017 |
| *Eucalyptus lehmannii* | Bushy yate | - | - | Secondary | Johnstone 2017 |
| *Eucalyptus leucoxylon* | Yellow gum | Secondary | - | - | Groom 2014 |

| | | Foraging category as assigned by Emerge | | | |
|---|---|---|---|---|---|
| **Species name** | **Common name** | **CBC** | **BBC** | **FRTBC** | **Literature references** |
| *Eucalyptus loxophleba* | York gum | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Eucalyptus marginata* | Jarrah | Primary | Secondary | Primary | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017; Johnstone & Storr 1998; Johnstone & Kirkby 1999; Johnstone 2017 |
| *Eucalyptus patens* | Blackbutt | Primary | - | Primary | Johnstone & Storr 1998; Johnstone & Kirkby 1999; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017; Johnstone 2017; Groom 2011 |
| *Eucalyptus pleurocarpa* | Tallerack | Secondary | - | - | Groom 2011 |
| *Eucalyptus preissiana* | Bell-fruited mallee | Secondary | - | - | Groom 2011 |
| *Eucalyptus robusta* | Swamp mahogany | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Eucalyptus salmonophloia* | Salmon gum | Primary | - | - | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DSEWPaC 2012; DoEE 2017 |
| *Eucalyptus staeri* | Albany blackbutt | - | - | Secondary | Johnstone & Storr 1998 |
| *Eucalyptus todtiana* | Coastal blackbutt | Secondary | - | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; Johnstone & Kirkby 2008 |
| *Eucalyptus wandoo* | Wandoo | Primary | Secondary | Primary | Saunders 1980; Johnstone *et al* . 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Ficus sp.* | Fig | Secondary | - | - | Groom 2011 |
| *Grevillea armigera* | Prickly toothbrushes | Primary | - | - | Groom 2011 |
| *Grevillea bipinnatifida* | Fuschia grevillea | Primary | - | - | Groom 2011 |
| *Grevillea hookeriana* | Red toothbrushes | Primary | - | - | Groom 2011 |
| *Grevillea hookeriana subsp. apic* | Black toothbrushes | Primary | - | - | Groom 2011 |
| *Grevillea paniculata* | Kerosene bush | Primary | - | - | Groom 2011 |
| *Grevillea paradoxa* | Bottlebrush grevillea | Primary | - | - | Groom 2011 |
| *Grevillea petrophiloides* | Pink poker | Primary | - | - | Groom 2011 |
| *Grevillea robusta* | Silky oak | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |

| | | Foraging category as assigned by Emerge | | | |
|---|---|---|---|---|---|
| **Species name** | **Common name** | **CBC** | **BBC** | **FRTBC** | **Literature references** |
| *Grevillea spp.* | | Primary | - | - | Saunders 1979; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Grevillea wilsonii* | Native fuchsia | - | Secondary | - | Johnstone *et al.* 2010 |
| *Hakea auriculata* | | Primary | - | - | Saunders 1980; Groom 2011 |
| *Hakea candolleana* | | Primary | - | - | Groom 2011 |
| *Hakea circumalata* | Coastal hakea | Primary | - | - | Groom 2011 |
| *Hakea commutata* | | Primary | - | - | Groom 2011 |
| *Hakea conchifolia* | Shell-leaved hakea | Primary | - | - | Groom 2011 |
| *Hakea costata* | Ribbed hakea | Primary | - | - | Groom 2011 |
| *Hakea cristata* | Snail hakea | Primary | Secondary | - | Groom 2011; Johnstone *et al.* 2010 |
| *Hakea cucullata* | Snail hakea | Primary | - | - | Groom 2011 |
| *Hakea cyclocarpa* | Ramshorn | Primary | - | - | Saunders 1980; Groom 2011 |
| *Hakea eneabba* | | Primary | - | - | Groom 2011 |
| *Hakea erinacea* | Hedgehog hakea | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hakea falcata* | Sickle hakea | Primary | - | - | Groom 2011 |
| *Hakea flabellifolia* | Fan-leaved hakea | Primary | - | - | Groom 2011 |
| *Hakea gilbertii* | | Primary | - | - | Saunders 1980; Groom 2011 |
| *Hakea incrassata* | Golfball or marble hakea | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hakea lasiantha* | Woolly flowered hakea | Primary | - | - | Johnstone *et al* . 2010; Groom 2011 |
| *Hakea lasianthoides* | | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hakea laurina* | Pin-cushion hakea | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hakea lissocarpha* | Honeybush | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011 |
| *Hakea marginata* | | - | Secondary | - | Johnstone *et al.* 2010 |
| *Hakea megalosperma* | Lesueur hakea | Primary | - | - | Groom 2011 |
| *Hakea multilineata* | Grass leaf hakea | Primary | - | - | Groom 2011 |
| *Hakea neospathulata* | | Primary | - | - | Groom 2011 |
| *Hakea obliqua* | Needles and corks | Primary | - | - | Saunders 1980; Groom 2011 |
| *Hakea oleifolia* | Dungyn | Primary | - | - | Groom 2011 |

| | | Foraging category as assigned by Emerge | | | |
|---|---|---|---|---|---|
| **Species name** | **Common name** | **CBC** | **BBC** | **FRTBC** | **Literature references** |
| *Hakea pandanicarpa subsp. crassifolia* | Thick-leaved hakea | Primary | - | - | Groom 2011 |
| *Hakea petiolaris* | Sea urchin hakea | Primary | - | - | Groom 2011 |
| *Hakea polyanthema* | | Primary | - | - | Groom 2011 |
| *Hakea preissii* | Needle tree | Primary | - | - | Groom 2011 |
| *Hakea prostrata* | Harsh hakea | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011 |
| *Hakea psilorrhyncha* | | Primary | - | - | Groom 2011 |
| *Hakea ruscifolia* | Candle hakea | Primary | Secondary | - | Saunders 1980; Groom 2011; Johnstone *et al.* 2010 |
| *Hakea scoparia* | Kangaroo bush | Primary | - | - | Groom 2011 |
| *Hakea smilacifolia* | | Primary | - | - | Groom 2011 |
| *Hakea spp.* | | Primary | Secondary | - | Saunders 1979; DSEWPaC 2012; DoEE 2017 |
| *Hakea stenocarpa* | Narrow-fruited hakea | Primary | Secondary | - | Johnstone et al. 2010; Groom 2011 |
| *Hakea sulcata* | Furrowed hakea | Primary | - | - | Groom 2011 |
| *Hakea trifurcata* | Two-leaved hakea | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011 |
| *Hakea undulata* | Wavy-leaved hakea | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011 |
| *Hakea varia* | Variable-leaved hakea | Primary | Secondary | - | Saunders 1980; Groom 2011 |
| *Harpephyllum caffrum* | Kaffir plum | - | - | Secondary | Johnstone 2017 |
| *Helianthus annuus* | Sunflower | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hibiscus sp.* | Hibiscus | Secondary | - | - | Groom 2011 |
| *Isopogon scabriusculus* | | Secondary | - | - | Groom 2011 |
| *Jacaranda mimosifolia* | Jacaranda | Secondary | Secondary | - | Johnstone *et al.* 2010; Groom 2011 |
| *Jacksonia furcellata* | Grey stinkwood | Secondary | - | - | Groom 2011 |
| *Kingia australis* | Kingia | - | Secondary | - | Johnstone *et al.* 2010 |
| *Lambertia inermis* | Chittick | Secondary | - | - | Johnstone & Storr 1998; Groom 2011 |
| *Lambertia multiflora* | Many-flowered honeysuckle | Secondary | - | - | Saunders 1980; Groom 2011 |

| | | Foraging category as assigned by Emerge | | | |
|---|---|---|---|---|---|
| **Species name** | **Common name** | **CBC** | **BBC** | **FRTBC** | **Literature references** |
| *Liquidamber styraciflua* | Liquid amber | Primary | - | Secondary | Johnstone *et al.* 2010; Groom 2011; Groom 2014; Personal observation |
| *Lupinus sp.* | Lupin | Secondary | - | - | Saunders 1980; Groom 2011 |
| *Macadamia integrifolia* | Macadamia | Primary | Secondary | - | Johnstone *et al.* 2010; Grooms 2011; Groom 2014 |
| *Malus domestica* | Apple | Secondary | Secondary | - | Johnstone *et al* . 2010; Johnstone & Storr 1998; DSEWPaC 2012; DoEE 2017; Groom 2011 |
| *Melaleuca leuropoma* | | Secondary | - | - | Saunders 1980; Groom 2011 |
| *Melia azedarach* | Cape lilac or white cedar | Secondary | - | Primary | Johnstone *et al.* 2010; Groom 2011 |
| *Mesomeleana spp.* | | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Olea europea* | Olive | - | - | Secondary | Johnstone 2017 |
| *Persoonia longifolia* | Snottygobble | - | - | Secondary | Johnstone & Storr 1998; Johnstone & Kirkby 1999; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Pinus canariensis* | Canary island pine | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Pinus caribea* | Caribbean pine | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Pinus pinaster* | Pinaster or maritime pine | Primary | - | - | Groom 2011 |
| *Pinus radiata* | Radiata pine | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011 |
| *Pinus spp.* | | Primary | Secondary | - | Johnstone & Storr 1998; Saunders 1979; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Protea 'Pink Ice'* | | Secondary | - | - | Groom 2011 |
| *Protea repens* | | Secondary | - | - | Groom 2011 |
| *Protea spp.* | | Secondary | - | - | Johnstone *et al.* 2010 |
| *Prunus amygdalus* | Almond tree | Secondary | - | - | Johnstone & Storr 1998; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Pyrus communis* | European pear | - | Secondary | - | Johnstone & Storr 1998; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Quercus spp.* | Oak | - | Secondary | - | Johnstone *et al.* 2010 |

| Species name | Common name | Foraging category as assigned by Emerge | | | Literature references |
|---|---|---|---|---|---|
| | | CBC | BBC | FRTBC | |
| *Raphanus raphanistrum* | Wild radish | Secondary | - | - | Groom 2011; DoEE 2017 |
| *Reedia spathacea* | | - | Secondary | - | Johnstone *et al.* 2010 |
| *Rumex hypogaeus* | Doublegee | Secondary | - | - | Saunders 1980 |
| *Stenocarpus sinuatus* | | Secondary | - | - | Johnstone *et al.* 2010 |
| *Syzygium smithii* | Lilly pilly | Secondary | - | - | Groom 2014 |
| *Tipuana tipu* | Tipu or rosewood tree | Primary | - | - | Groom 2011, Groom 2014 |
| *Xanthorrhoea preissii* | Grass tree | Secondary | Secondary | - | Groom 2011; Johnstone *et al.* 2010 |
| *Xylomelum occidentale* | Woody pear | Secondary | - | - | Groom 2014 |

CBC=Carnaby's black cockatoo, BBC=Baudin's black cockatoo and FRTBC=Forest red-tailed black cockatoo

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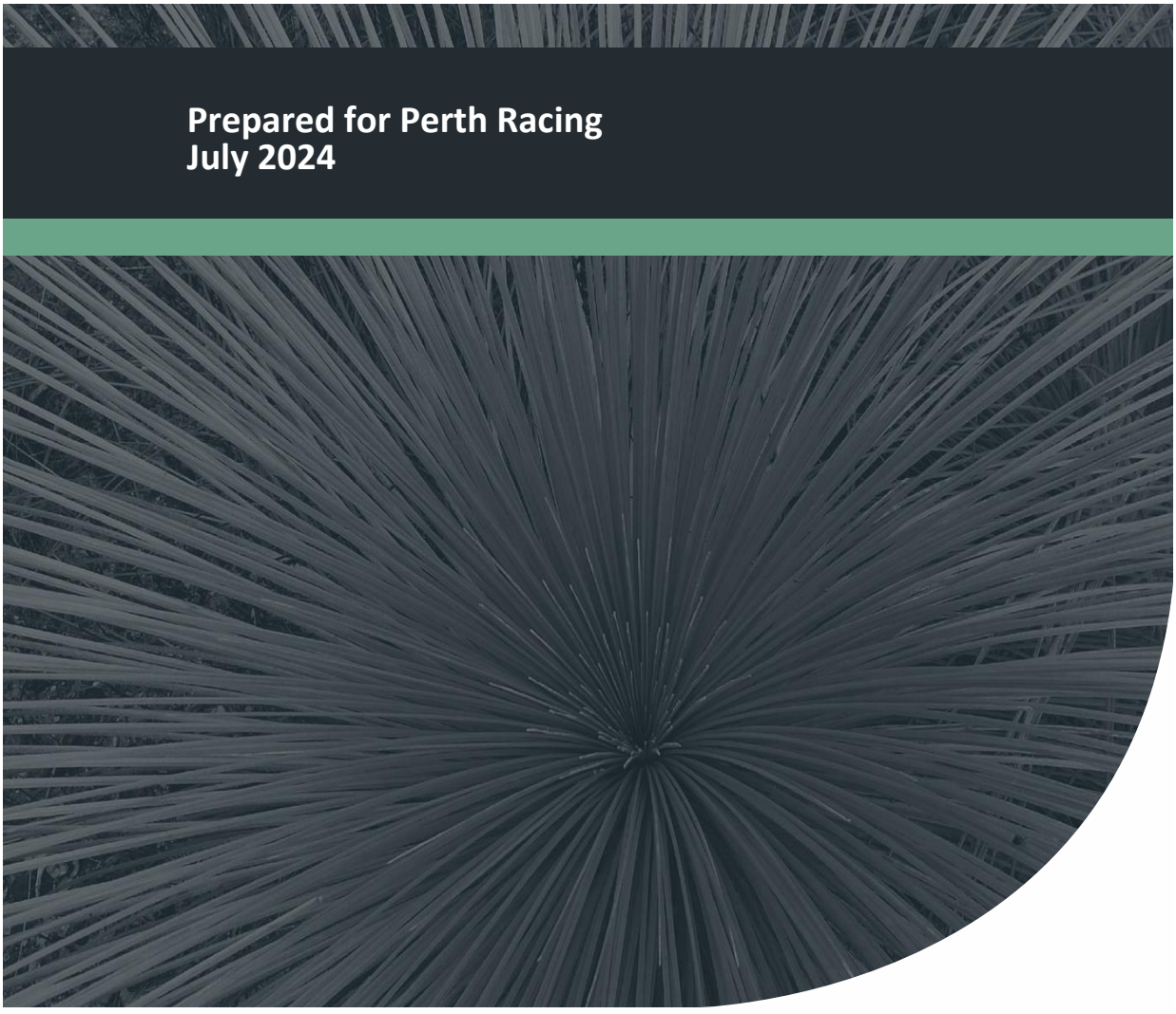
# Appendix E

Local Water Management Strategy (Emerge Associates 2024b)

# Local Water Management Strategy

## Ascot Racecourse Local Structure Plan

Project No: EP23-109(03)



# Document Control

| Doc name: | Local Water Management Strategy<br>Ascot Racecourse Local Structure Plan | | | | |
|---|---|---|---|---|---|
| Doc no.: | EP23-109(03)--001B JM | | | | |
| Version | Date | Author | | Reviewer | |
| 1 | May 2024 | Joyti Mabruk | JM | David Coremans | DPC |
| | For project team review | | | | |
| A | May 2024 | Joyti Mabruk | JM | David Coremans | DPC |
| | For submission to Agencies | | | | |
| B | July 2024 | Joyti Mabruk | JM | David Coremans | DPC |
| | For submission to Agencies | | | | |

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# Executive Summary

Perth Racing (the 'proponent') proposes to progress a local structure plan (LSP) over its landholdings in Ascot. The area is bounded by the Swan River to the North, Grandstand Road to the west and south, Matheson Road and Resolution Drive to the south and residential areas to the east, referred to herein as 'the site'. The structure plan area also includes the existing Ascot Racecourse. The site is located approximately 8.5 km east of Perth central business district (CBD) and is approximately 62 ha in size, within City of Belmont (CoB). The LSP consists of six precincts: Precinct A, Precinct B (largely unchanged form existing), Precinct C, Precinct D, Precinct E, and the racecourse. The layout of LSP and precinct plan is shown on **Figure 1** and provided in **Appendix A**. The site is currently zoned "Urban", "Parks and Recreation", and "Private Recreation" under the Metropolitan Regional Scheme (MRS) (WAPC 2023b). Under the Local Planning Scheme (LPS) No. 15 (WAPC 2023a), the site is zoned as "RC – Place of Public Assembly: Racecourse", Mixed Use", "Parks and Recreation" and "Parks and Recreation: Water Supply Sewerage and Drainage".

This Local Water Management Strategy (LWMS) outlines the water management approach as required for the site by *Better Urban Water Management* (WAPC 2008b) and supports the Ascot Racecourse Structure Plan. It is intended to satisfy the expectations of the Department of Water and Environmental Regulation (DWER) and City of Belmont (CoB). The LWMS also aids in achieving the goals and objectives outlined in the *Kep Katitjin – Gabi Kaadadjan – Waterwise Perth Action Plan 2* (DWER 2023d).

The first step in applying integrated water cycle management in urban catchments is to establish agreed environmental values for receiving environments. In summary, the environmental investigations conducted to date indicate that:

- The site is being used for horse racing, mixed uses (i.e. car park, stables and entertainment/hospitality venues, and commercial). Some portions of the site are only used infrequently (e.g. for parking or events).
- The site is located in an area of moderate to high rainfall, receiving 756.3 mm on average annually with the majority of rainfall received between June and August.
- The majority of the site has a relatively flat topography of 1 mAHD at the northwest (along the Swan River) and 2 mAHD to the south and rising to 7 mAHD to the east of the site.
- The site is within the Swan River Terraces system and displays Guildford formation soils of alluvial and leached yellow sand described as:
    - **Ms2 –** Sandy Silt: Strong brown to mid grey, mottled, blocky, fine sand, hard when dry, variable clay content of alluvial origin
    - **Ms4 –** Sandy Silt: light yellow brown, blocky, mottled some fine to medium sand, soft when moist, variable clay content
    - **S8 –** Sand: very light grey at surface, yellow at depth, fine to medium-grained, sub rounded quartz, moderately well sorted of eolian origin
- The groundwater depth below the surface of Precinct A varies from 1.09 m mBGL to 2.37 mBGL (Douglas Partners 2024).
- The highest groundwater level beneath the site is reported 3.03 mBGL during February 2024 (Galt 2024), located beneath Precinct D.

- Most of the site is considered to have a high to moderate risk of ASS occurring, however some portions of Precinct B, Precinct C and the Racecourse are considered to have a moderate to low risk of ASS occurring within the 3 m of the natural surface.
- The northern portion of the site along the Swan River is identified as an ESA.
- The entirety of the site is classified as a SSA and classified as:
  - a) Estuary catchments on the Swan and Scott Coastal Plains.
  - f) The area is <1 km up-groundwater-gradient and 250 m down-gradient of a significant wetland; or where the groundwater gradient is unknown within 1 km of the significant wetland.
- The following wetlands are located within the site and these are classified as:
  - Multiple Use category wetland (MUW) area (UFI 8424, UFI 8425, UFI 8426).
  - Resource Enhancement wetland (REW) area (UFI 8423).
- The dominant hydrological feature of the site is the Swan River estuary. The northern boundary of the site falls within the Swan Canning Development Control Area (DCA) (CoB 2018) and Swan Canning River Park.
- The floodway of the Swan River is immediately adjacent to but not within the site. The 1% AEP flood elevation of the Swan River adjacent to the site is 2.8 mAHD.
- There are two existing major drainage network systems within or adjacent to the site include:
  - The Central Belmont Main Drain (CBMD), managed by the Water Corporation. This currently receives runoff from Precinct C (via the CoB drainage network) and Precinct E.
  - The CoB local piped drainage network, which exists along Matheson Road, Grandstand Road and the northern portion of Resolution Drive.
- There are three lakes (Irrigation Lake, Lined Lake and Wetland Lake) located within the centre of the racecourse. These are understood to receive runoff from the Grandstand buildings in Precinct B and stables/buildings in Precinct C.
- The groundwater beneath the site is a multi-layered system consisting of the Superficial, Kings Park Formation, Leederville and Yarragadee aquifers.
- Regional groundwater mapping indicates that the groundwater levels across the site are at approximately 0.5 m AHD.
- Local groundwater level monitoring indicates that annual maximum groundwater levels (recorded in August 2022) were measured at 1.26 m AHD and 1.70 m AHD at Bore 1 and Bore 2 respectively. Groundwater levels in adjacent areas included Precinct A levels at 1.09 mBGL to 2.37 mBGL and Precinct D levels of approximately 3.03 mBGL.
- Water quality monitoring indicates that EC, TDS and pH values do not exceed guideline trigger values. However, TN and TP concentrations continually exceed the ANZECC guideline trigger value of 1.2 mg/L and 0.065 mg/L respectively.

The design criteria and the manner in which they are proposed to be achieved are presented in **Table E1**.

*Table E1: Water management criteria and compliance summary*

| Management Aspect | Criteria Number | Criteria Description | Manner in which compliance will be achieved | Responsibility for implementation | Timing of implementation |
|---|---|---|---|---|---|
| Water Conservation | WC1 | For residential dwellings consumption target of 60 kL/person/year scheme water. | Provide advice to Precinct A and Precinct D residents on water conservation measures | Proponent | Point of sale |
| | | | RWTs can be utilised for non-potable uses | Lot owner | Post-house construction |
| | | | Promotion and use of WWG in lots within Precinct D and other open spaces across all precincts | Proponent/Lot owner | Point of sale/Post-house construction |
| | | | Promotion and use of water efficient appliances within Precinct A and Precinct D | Proponent/Lot owner | Point of sale/Post-house construction |
| | | | Mandate water efficient fittings within Precinct A and Precinct D | CoB | Building approval |
| | WC2 | Ensure the efficient use of all water resources. | Use of waterwise landscaping principles in all open spaces and verges | Proponent | Landscape design |
| | | | Open spaces designed to use no more than allocated groundwater | | |
| | | | Minimise water requirements for open spaces and verge maintenance | | |
| | | | Use of water efficient appliances within Precinct A and Precinct D | Lot owner | Post-house construction |
| | | | Use of WWG principles within Precinct A and Precinct D | | |
| | WC3 | Non-potable irrigation water to be sourced from existing groundwater licences held over the area. | The proponent holds a groundwater Licence with an allocation of 347,000 kL per annum which will meet the irrigation requirements of the racecourse. | Proponent | Landscape design |

*Table E1: Water management criteria and compliance summary (Continued)*

| Management Aspect | Criteria Number | Criteria Description | Manner in which compliance will be achieved | Responsibility for implementation | Timing of implementation |
|---|---|---|---|---|---|
| Stormwater Management | SW1 | Retain and treat the first 15 mm of rainfall as close to source as possible | Lots within Precinct D and Precinct E to retain the first 15 mm of rainfall on lot in soakwells/soakage. Lot storage will be the responsibility of the lot owners. | Lot owner/developer | Construction |
| | SW2 | Retain up to 1% AEP rainfall event on-site. | Runoff up to the 1% AEP to be detained within the FSA in Precinct A. Precinct A and a portion of Precinct C will ultimately discharge to the centre of the track. | Proponent | Construction |
| | | | Runoff up to 1% AEP to be managed with the sub-surface storage in Precinct D. | Proponent | Construction |
| | SW3 | Post-development critical 1% AEP peak flows leaving the site to mimic pre-development peak flows. | Runoff up to 1% AEP event to be detained in the detention basin and subsurface storage which will maintain the pre-development peak flow of 0.95 $m^3/s$ from Precinct E and 0.463 $m^3/s$ from Precinct D respectively. | Proponent | Construction |
| | SW4 | Finished floor levels must have a minimum of 300 mm clearance above the 1% AEP TWL in the FSA. | It is anticipated that the FSA and detention basin invert will be set so that the Finished floor levels must have a minimum of 300 mm clearance above the 1% AEP TWL in the basins. | Proponent | Detailed drainage design |
| | SW5 | All lots must have a minimum of 500 mm clearance above the 1% AEP flood level in the Swan River. | The 1% AEP flood level in the Swan River is 2.8 mAHD. The preliminary bulk earthworks concept provided in shows that finished floor level will be at 4.0 mAHD. | Proponent | Detailed drainage design |
| | SW6 | Nutrient concentrations within surface water discharging from the site to the Swan River are to meet regional water quality targets. | BRA will be designed so that after treatment the nutrient concentrations within surface water meet the regional water quality target. | Proponent | Detailed drainage design |
| | SW7 | Reduce nutrient loads by applying appropriate non-structural measures | • Minimise use of fertilisers within POS and road verges.<br>• Street sweeping at regular intervals.<br>• Use of drought tolerant turf species.<br>• Education of residents regarding fertiliser use | Landscape/Maintenance Contactor/Proponent | Landscape Implementation/ Point of Sale |
| | SW8 | Design infiltration areas to avoid creating mosquito habitat | Stormwater infrastructure will be designed to ensure all runoff is infiltrated within 96 hours. | Proponent | Detailed drainage design |

*Table E1: Water management criteria and compliance summary (Continued)*

| Management Aspect | Criteria Number | Criteria Description | Manner in which compliance will be achieved | Responsibility for implementation | Timing of implementation |
|---|---|---|---|---|---|
| Groundwater Management | GW1 | Surface based infiltration should have 300 mm clearance above MGL. | Basin inverts will be set at 300 mm above the MGL, and subsoil drainage will be provided in the POS. | Proponent | Detailed drainage design |
| | GW2 | Finished floor levels should have a clearance to the MGL of at least 1.2 m. | Lots will be set at least 1.2 m above the MGL. | Proponent | Detailed drainage design |

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# Appendices

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Concept plan

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**Appendix E**

Central Belmont Main Drain Water Corporation

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# Abbreviation Tables

*Table A1: Abbreviations – Organisations*

| Organisations | |
|---|---|
| ANZECC | Australian and New Zealand Environment and Conservation Council |
| BoM | Bureau of Meteorology |
| DBCA | Department of Biodiversity, Conservation and Attractions |
| DWER | Department of Water and Environmental Regulation |
| EPA | Environmental Protection Authority |
| CoB | City of Belmont |
| WC | Water Corporation of Western Australia (Water Corp) |

*Table A2: Abbreviations – General terms*

| General terms | |
|---|---|
| AEP | Annual exceedance probability |
| ASS | Acid sulfate soils |
| CCW | Conservation category wetland |
| CEMP | Construction Environmental Management Plan |
| DCA | Development Control Area |
| DMP | Drainage management plan |
| EC | Electrical conductivity |
| FMP | Foreshore management plan |
| LWMS | Local Water Management Strategy |
| MGL | Maximum groundwater level |
| MRS | Metropolitan Region Scheme |
| NWQMS | National Water Quality Management Strategy |
| POS | Public open space |
| SCWQIP | Swan and Canning Water Quality Improvement Plan |
| SRA | Swan River Alluvium |
| TDS | Total dissolved solids |
| TEC | Threatened ecological community |
| TKN | Total Kjeldahl nitrogen |
| TN | Total nitrogen |
| TP | Total phosphorus |
| TSS | Total suspended solids |

| General terms | |
|---|---|
| TWL | Top water level |
| UFI | Unique feature identifier |
| UWMP | Urban Water Management Plan |
| WSUD | Water sensitive urban design |
| WWG | Water wise gardening |

*Table A3: Abbreviations – units of measurement*

| Units of measurement | |
|---|---|
| cm | centimetre |
| ha | hectare |
| m | metre |
| $m^2$ | square metre |
| $m^3$ | cubic metre |
| $m^3$ / s | cubic metres per second |
| mAHD | metres in relation to the Australian height datum |
| mBGL | metres below ground level |
| mm | millimetre |
| mS / cm | millisiemens per centimetre |
| µg/L | micrograms per litre |
| mg / L | milligrams per litre |

*Table A4: Terminology – design rainfall*

| Rainfall event | Annual exceedance probability (AEP) | Approximate equivalent average recurrence interval (ARI) |
|---|---|---|
| Small | 1 exceedance year (EY) event (frequent) | 1 in 1 year ARI event |
| Minor (residential purposes) | 20% AEP event | 1 in 5 year ARI event |
| Minor (commercial purposes) | 10% AEP event | 1 in 10 year ARI event |
| Major | 1% AEP event | 1 in 100 year ARI event |

# 1 Introduction

## 1.1 Background

Perth Racing (the 'proponent') proposes to progress a local structure plan (LSP) over its landholdings in Ascot. The area is bounded by the Swan River to the North, Grandstand Road to the west and south, Matheson Road and Resolution Drive to the south and residential areas to the east, referred to herein as 'the site'. The structure plan area also includes the existing Ascot Racecourse and Perth Racing Administration lot/building on Grandstand Road. The site is located approximately 8.5 km east of Perth central business district (CBD) and is approximately 62 ha in size, within City of Belmont (CoB). The LSP consists of six precincts: Precinct A, Precinct B, Precinct C, Precinct D, Precinct E, and the racecourse. The layout of LSP and precinct plan is shown on **Figure 1** and provided in **Appendix A**.

## 1.2 Town planning context

The site is currently zoned "Urban", "Parks and Recreation", and "Private Recreation" under the Metropolitan Regional Scheme (MRS) (WAPC 2023b). Under the Local Planning Scheme (LPS) No. 15 (WAPC 2023a), the site is zoned as "RC – Place of Public Assembly: Racecourse", Mixed Use", "Parks and Recreation" and "Parks and Recreation: Water Supply Sewerage and Drainage".

## 1.3 Purpose of this report

This Local Water Management Strategy (LWMS) outlines the water management approach as required for the site by *Better Urban Water Management* (WAPC 2008b) and supports the Ascot Racecourse Structure Plan. It is intended to satisfy the expectations of the Department of Water and Environmental Regulation (DWER) and CoB. The LWMS also aids in achieving the goals and objectives outlined in the *Kep Katitjin – Gabi Kaadadjan – Waterwise Perth Action Plan 2* (DWER 2023d).

## 1.4 Policy Framework

There are a number of State Government legislation and policies of relevance to the site. These policies include:

- *Kep Katitjin – Gabi Kaadadjan – Waterwise Perth Action Plan 2* (DWER 2023d)
- *Swan and Canning Rivers Management Act 2006* (Government of WA 2006)
- *Policy 49 – Planning for stormwater management affecting the Swan Canning Development Control Area* (DPaW 2016)
- *Local Planning Scheme No. 15 (City of Belmont)* (WAPC 2023a)
- *State Water Plan* (Government of WA 2007)
- *Draft State Planning Policy 2.9: Planning for Water Guidelines* (DPLH 2021)
- *State Planning Policy 2.10 Swan Canning River System* (WAPC 2006b)
- *Guidance Statement No. 33: Environmental Guidance for Planning and Development* (EPA 2008)
- *Liveable Neighbourhoods* (WAPC 2009a)
- *Planning Bulletin No. 64: Acid Sulfate Soils* (WAPC 2009b)

In addition to the above policies, there are a number of published guidelines and standards available that provide direction regarding the water management characteristics that urban developments should aim to achieve. These are key inputs that relate either directly or indirectly to the site and include:

- *Better Urban Water Management* (WAPC 2008b)
- *Urban Water Management Plans: Guidelines for Preparing Plans and for Complying with Subdivision Conditions* (DoW 2008)
- *National Water Quality Management Strategy (NWQMS)* (ANZECC 2000)
- *Australian Runoff Quality* (Wong et al. 2006)
- *National Water Quality Management Strategy* (ANZECC 2000)
- *Stormwater Management Manual for Western Australia* (DoW 2007)
- *Decision Process for Stormwater Management in Western Australia* (DWER 2017)
- *Australian Rainfall and Runoff* (Ball J et al. 2019)
- *Swan and Canning Water Quality Improvement Plan* (SCWQIP) (SWT 2009)
- *Swan and Canning Rivers Foreshore Assessment and Management Strategy* (SRT 2008)
- *Golden Gateway Structure Plan* (CoB 2019).

## 1.5 Previous Studies

### 1.5.1 Golden Gateway Local Water Management Strategy

The draft Golden Gateway LWMS (Essential Environmental 2018b) was prepared to support the Golden Gateway Structure Plan (CoB 2019) by Essential Environmental. The LWMS was prepared in consideration of *Better Urban Water Management* (WAPC 2008b) and *State Planning Policy 2.9: Water Resources* (WAPC 2006a). The key objectives and design criteria of the draft LWMS (Essential Environmental 2018b) included:

**Water Conservation:**

- Ensure the efficient use of all water resources in the redeveloped urban form and aim to achieve highest value use of fit-for-purpose water.
- Maintain opportunities for future generations by using water more efficiently.

**Stormwater management:**

- The first 15 mm of rainfall is to be retained within all lots through a combination of raingardens, water tanks and soakwell systems.
- Raingardens and tree-pits are to be installed in all new or upgraded streets to provide infiltration of the first 15 mm of rainfall.
- Minor event runoff from events larger than 15mm total depth are to be managed in accordance with serviceability requirements of the City of Belmont.
- Roads and public open spaces are to be designed to cater for the surface overflow for more severe storm events with habitable floors at least 0.3 m above the 1% AEP flood or storage level at any location.
- Habitable floors are to be constructed at least 0.5m above the 1% AEP flood level in the Swan River adjacent to the development area.

- Water quality treatment systems and stormwater management structures should be designed in accordance with the *Stormwater Management Manual for Western Australia* (DoW 2007) and *Australian Runoff Quality: A guide to water sensitive urban design* (Wong et al. 2006).

**Groundwater management:**

- Groundwater management systems are to be designed as free discharging under normal operating conditions.
- Flows from groundwater management systems are to be treated prior to discharge.

## 1.6 LWMS objectives

Whilst the criteria proposed in the Golden Gateway LWMS are relevant to some parts of the Ascot Racecourse structure plan area, it is not representative of all areas and site characteristics and therefore only partially applicable. This LWMS supports the Ascot Racecourse Structure Plan, which proposes an alternate layout (to the Golden Gateway Structure Plan) to some of the land uses surrounding the Ascot Racecourse. The design criteria and objectives proposed in this LWMS are generally based on those proposed in the Golden Gateway LWMS, though with additional consideration for site and Precinct- specific characteristics. This LWMS adopts the following major objectives:

- Protect water quality in the Swan River by providing appropriate water quality treatment at source.
- Mitigate potential flooding within the Structure Plan area and immediate surrounds.
- Take account of existing drainage infrastructure capacity and ensure that sufficient land is set aside to manage stormwater.
- Provide a broad level stormwater management framework to support future urban development.
- Incorporate appropriate best management practices (BMPs) into the drainage systems that address the environmental and stormwater management issues identified.
- Minimise development construction costs, which will result in reduced land costs for future home owners.
- Minimise transport of nutrients/pollutants to groundwater.
- Develop a non-potable water conservation strategy that will accommodate existing groundwater allocation constraints for the area.
- Gain support from DWER, DBCA, CoB and Water Corporation for the proposed method to manage stormwater within the site.

Detailed objectives for water management within the site are further discussed in **Section 4**.

# 2 Proposed Development

A total of approximately 62.0 ha is proposed to be developed as shown on **Figure 1**. The Ascot Racecourse Structure Plan proposes six precincts with different objectives and character, and these include:

- **Precinct A –** Approximately 3.0 ha for retirement living/village and mixed use purposes
- **Precinct B –** Approximately 9.3 ha for the use of public assembly (i.e. entertainment/office purposes)
- **Precinct C –** Approximately 8.0 ha for the use of public assembly (i.e. racecourse/stabling purposes)
- **Precinct D –** Approximately 1.5 ha for residential/childcare purposes
- **Precinct E –** Approximately 4.2 ha for mixed use (i.e. commercial/retail purposes)
- **The Racecourse –** Approximately 36.0 ha of retained 'Place of Public Assembly: Racecourse' uses.

The proposed land uses surrounding Ascot Racecourse will be integrated into the Racecourse Precinct. Management of surface and groundwater will take a water sensitive urban design (WSUD) approach that will integrate the management of water within the Precincts with the Racecourse and immediately surrounding infrastructure.

The WSUD measures that will be adopted within the Structure Plan area will include:

- Bio-retention areas (BRAs) to meet water quality treatment requirements
- Subsurface infiltration cells that will facilitate at-source infiltration
- Flood storage integrated into existing surface water bodies located centrally within the Racecourse
- Flood storage areas (FSAs) to provide flood detention, retention and infiltration as close to source as possible.

The WSUD approaches are further discussed in **Section 6**.The detailed concept plan and preliminary civil drawings are provided in **Appendix A** and **Appendix C**.

# 3 Pre-development Environment

## 3.1 Sources of information

The following sources of information were used to provide a broad regional environmental context for the site:

- *Geological Survey of Western Australia* (Gozzard 2007)
- *Map Viewer Plus* (Landgate 2023)
- *Water Register* (DWER 2024c)
- *Perth Groundwater Map* (DWER 2024a)
- *Weather and Climate Statistics Data* (BoM 2024)
- *Acid Sulfate Soil Mapping* (DWER 2023a)
- *Water Information Reporting* (DWER 2024b).

In addition to the above information, site-specific investigations have been conducted. These have aimed at providing more detail to the existing regional information. These site-specific investigations and information have been available from the following sources:

- *Draft Golden Gateway Structure Plan* (CoB 2019)
- *Draft Golden Gateway LWMS* (Essential Environmental 2018b)
- *Draft Golden Gateway Environmental Report* (Essential Environmental 2018a)
- *Draft Infrastructure Assessment Report : Golden Gateway Precinct* (Cardno 2017)
- *Swan and Canning Water Quality Improvement Plan* (SCWQIP) (SWT 2009)
- *Swan and Canning Rivers Foreshore Assessment and Management Strategy* (SRT 2008).

## 3.2 Land use context

The site has been used as the Ascot Racecourse since 1892 (Landgate 2023). The northeast portion of the site is being used for horse racing and training purposes and the surrounding area is being used for stabling, training and entertainment venues which support the above purposes. Some portions of the site are predominantly cleared (e.g. Precinct A, Precinct E) and are occasionally used for parking or other temporary uses. The Precinct D area is used for commercial purposes, being the current Perth Racing administration building.

## 3.3 Climate

The site experiences a dry Mediterranean climate of hot dry summers and cool wet winters and is located in an area of moderate to high rainfall, receiving 756.3 mm on average annually with the majority of rainfall received between June and August (BoM 2024). The region experiences rainfall for 84.8 days annually (on average).

## 3.4 Topography

The site is mostly flat with a slight downward slope from east to north and northwest, with a few low points. The variance in topography of the Precincts is described further as:

- The Racecourse slopes from Precinct C towards the Swan River with topography approximately 7 m Australian Height Datum (mAHD) to 1m AHD and from 7 mAHD (east) to 3 mAHD (west). There are a few local depressions (i.e., lakes and swale) observed within the centre of the racecourse.
- Precinct A has a generally flat topography of 2 mAHD with a high point of 3 mAHD to the west adjacent to Grandstand Road.
- Precinct B slopes from south to north (4 mAHD to 2 mAHD) and from west to east (3 mAHD to 2 mAHD). Precinct D and E are generally flat with a topography of 3 mAHD and 2 mAHD respectively.
- Parts of Precinct C (existing stables and buildings) drain towards the Racecourse, however most of Precinct C is currently carpark that drains towards Precinct E and the Southern Main Drain.
- Precinct D is generally flat with a topographic level 3 mAHD.
- Precinct E has a gentle slope from east to west. The topography of the precinct ranges from 4 mAHD to the east to 2 mAHD to the west.

The topographic contours of the site are shown on **Figure 2**.

## 3.5 Geotechnical conditions

### 3.5.1 Geology and soils

*The Perth Metropolitan Region 1:50,000 Environmental Geology Series* (Gozzard 1986) *and Sea to scarp - geology, landscape, and land use planning in the southern Swan Coastal Plain* (Gozzard 2011) describes that the site lies in the Swan River Terraces system, being underlain by the Guildford formation of alluvial and leached yellow sand. The regional geological mapping indicates that the site soils include:

- **Ms2 –** Sandy Silt: Strong brown to mid grey, mottled, blocky, fine sand, hard when dry, variable clay content of alluvial origin
- **Ms4 –** Sandy Silt: light yellow brown, blocky, mottled some fine to medium sand, soft when moist, variable clay content
- **S8 –** Sand: very light grey at surface, yellow at depth, fine to medium-grained, sub rounded quartz, moderately well sorted of eolian origin

The regional geological mapping is shown on **Figure 3**.

### 3.5.2 Precinct A geotechnical investigation

A detailed geological investigation has been carried out in January 2024 (Douglas Partners 2024) for Precinct A (see **Appendix B**). This investigation generally confirms the regional geological mapping, and the ground conditions of Precinct A are described as:

- Uncontrolled Fill
  - Granular FILL - SAND, Organic SAND, Gravelly SAND, Silty SAND and Sandy GRAVEL
  - Cohesive FILL - Clayey SAND, Sandy CLAY, CLAY
- Overlying natural soils includes
  - Clayey soils including Clayey SAND and CLAY
  - Sandy soils including SAND and Silty SAND

Douglas Partners (2024) concluded that if unmodified, Precinct A is considered unsuitable for on-site stormwater disposal due to the low permeability soils and shallow groundwater depth. To meet geotechnical requirements, stormwater should be managed by connecting to a suitable outflow (Douglas Partners 2024).

### 3.5.3 Precinct D geotechnical investigation

Galt has undertaken a geotechnical study in March 2024 (Galt 2024) for Precinct D (provided in **Appendix B**) and has described the Precinct D ground conditions as:

- **Surficial Topsoil** (in landscaped areas) up to 0.3 m thick and **Hardstand Fill Layers** (in carparks and access ways); overlying
- **FILL: SAND / SAND (SP)**, fine to medium grained, sub-rounded to sub-angular, yellow / brown / grey layers, includes trace gravel / Sandy GRAVEL layers, trace / with fines, some typically medium dense to dense, extending to depths of about 0.4 m to 0.9 m; overlying
- **In BH03 and BH04 only: Silty SAND / Clayey SAND (SM/SC)** fine to medium grained, sub-rounded to sub-angular, brown / grey, low to medium plasticity fines, some typically medium dense to dense, extending to depths of about 0.7 m to 1.2 m; overlying
- **Sandy CLAY / CLAY (CI)**, medium plasticity, brown / orange / grey, trace sand to sandy, trace gravel in some zones, desiccated, CPT traces indicate presence of occasional sand layers, typically very stiff to hard, extending to the maximum depth investigated of 10 m.

Whilst detailed geotechnical investigations have not been undertaken in each Precinct, it is expected that the soils encountered will be generally consistent with regional geological mapping and the investigations undertaken for Precincts A and D and will consist of generally shallow layers of sand overlying sandy clay of the Guildford formation. Such soils are unlikely to be suitable for onsite infiltration of all stormwater and onsite detention unless modified and stormwater management will need to be supplied with an outlet so that flood storage areas have a way to drain between storm events.

### 3.5.4 Acid sulfate soils

The acid sulfate soil (ASS) risk mapping (DWER 2023b) indicates that most of the site is considered to have a high to moderate risk of ASS occurring within the 3 m of the natural surface. Some portions of Precinct B, Precinct C and the Racecourse are mapped to have a moderate to low risk of ASS occurring within the 3 m of the natural surface.

The ASS risk mapping is shown on **Figure 4**.

## 3.6 Environmental assets

### 3.6.1 Environmentally sensitive area

The northern portion of the site (along the Swan River) is identified as an environmentally sensitive area (ESA). ESAs are shown on **Figure 5**.

### 3.6.2 Sewerage sensitive area

The entirety of the site is classified as a sewage sensitive area (SSA) by the *Government Sewerage Policy* (DPLH 2019). The two classifications of relevance to the site define a SSA as:

- a) Estuary catchments on the Swan and Scott Coastal Plains.
- f) The area is <1 km up-groundwater-gradient and 250 m down-gradient of a significant wetland; or where the groundwater gradient is unknown within 1 km of the significant wetland.

### 3.6.3 Geomorphic wetlands

The *Geomorphic Wetlands of the Swan Coastal Plain* dataset indicates the following wetlands within the site:

- Multiple Use Category Wetland (MUW) area (UFI 8424, UFI 8425, UFI 8426).
- Resource Enhancement Wetland (REW) area (UFI 8423)

The Swan River, situated immediately adjacent to the northern boundary of the site, is recognised as a "Conservation Category Wetland" (CCW) (UFI 1316 - Estuary waterbody) within the *Geomorphic Wetlands of the Swan Coastal Plain* dataset and has additional significant ecological, cultural and heritage values (DEC 2011).

The location of the geomorphic wetlands is shown on **Figure 5.**

## 3.7 Hydrology

### 3.7.1 Surface water

#### 3.7.1.1 Water Resources

The dominant hydrological feature of the site is the Swan River estuary. The estuary is subject to marked seasonality, which controls the salinity of the site, and particularly the foreshore area. This seasonality is a result of the short winter rainfall patterns, a small tidal range and the landform of the estuary (Hodgkin and John 1986).

The northern boundary of the site falls within the Swan Canning Development Control Area (DCA) (CoB 2018) and Swan Canning River Park (shown on **Figure 6**). Any proposed development on land adjacent river within the DCA and/or partly within DCA are subject to assessed and approved by the Department of Biodiversity, Conservation and Attraction (DBCA) under Part 5 of the *Swan and Canning Rivers Management Act 2006* and the *Swan and Canning River Management Regulations 2007* (CoB 2018).

Water management strategies will be needed to ensure protection (i.e. water quality improvement) of the Swan River. The catchments of the Swan Canning River system are the subject of the Swan Canning Water Quality Improvement Plan (SRT 2009) which contains catchment management measures and control actions.

The major event flood levels in the Swan River have been documented in recent studies undertaken on behalf of DWER (DWER 2023c).These flood levels, along with the extent of floodway/floodplain

are shown in the DWER online floodplain mapping tool. This tool indicates that the anticipated 1% AEP flood level adjacent to the site is 2.8 mAHD – noting that this level includes consideration for future climate change. The extent of floodway/floodplain from the Swan River adjacent to the site is shown on **Figure 6**.

#### 3.7.1.2 Lakes

There are three lakes within the racecourse including:

- **Irrigation lake** – located adjacent to the Production Bore 1 (PB01) and has a volume of 6,000 $m^3$ to 7,000 $m^3$. Water is pumped out from PB01 into the lake, and irrigation water is drawn from the Irrigation Lake. During winter the Irrigation Lake overflows into the adjacent Lined Lake. The current irrigation demand for the Racecourse is approximately 3,000 $m^3$/day, there is no shortage of irrigation water supply as the lake has sufficient storage capacity. The top water level (TWL) of the Irrigation Lake is approximately 3.1 mAHD.
- **Lined Lake** – this Lake is sealed with a natural clay liner and fed via a 225 mm overflow pipe from the Irrigation Lake. The Lined Lake overflows into the Wetland Lake. The elevation of the Lined Lake is approximately 2.1 mAHD.
- **Wetland lake** – is the largest of the three lakes and has approximately 2.6 ha of surface area. The Wetland Lake has a TWL of approximately 0.4 mAHD. Two overflow pipes at the northern end of the Wetland Lake allow excess water within the Lake to flow to the Swan River.

Peak water levels within the Lined Lake and Wetland Lake were predicted for a 10% AEP storm event (Evangelisti & Associates 1997). The peak water level for was 2.68 mAHD in the Lined Lake which then discharged to the Wetland Lake. The Wetland Lake discharged to the Swan River after reaching the peak water level of 0.53 mAHD. The lakes are connected by 450 mm RCP pipes. The outfall into the Swan River is directed via two pipes (450 mm RCP and 375 mm RCP). The pipes are fitted with headwall and tidal control gate to mitigate inundation from the Swan River (Evangelisti & Associates 1997).

The location of the lakes and overflow pipes are shown on **Figure 6**.

#### 3.7.1.3 Drainage network systems

The Central Belmont Main Drain (CBMD) is managed by the Water Corporation and is the regional drainage system and has a catchment area of 189 ha and which discharges into the Swan River. Catchment plans for the CBMD indicate that inflow from the site occurs in the southwestern corner of Precinct E, where an open drain connects to the CBMD at node CAN008 as shown in **Appendix E** and **Figure 6**.

The CoB has a local drainage piped network located beneath Hardey Road adjacent to Precinct C and which discharges to the CBMD within Precinct E. A larger local CoB network extends along Matheson Road to the East. This is currently connected to the 900 mm pipe that discharges northwards to the lined lake within the centre of the racecourse.

CoB local drainage pipes also exist beneath Grandstand Road adjacent to Precinct A however there is no current connection between Precinct A and the local drainage network. The same network also extends past/adjacent to Precinct D along the northern end of Resolution Drive, however there is no

current connection from Precinct D to the local pipe network. The pipe network along Resolution Drive includes a 450 mm and 525 mm pipe which are understood to discharges into the CBMD. Whilst the CoB catchment has not been modelled to determine peak flows under differing storm durations, an estimate can be made based on the capacity of the pipes which discharge to the CBMD. The combined capacity of the two existing pipes is estimated to be 0.62 $m^3/s$, and therefore the allowable discharge from Precinct C and Precinct E is estimated to be 0.33 $m^3/s$.

Within the Racecourse an existing swale is being used around the racecourse to convey water from the track into the central Wetland Lake.

The location of the swales within the Racetrack Precinct and outlet to Swan River from the Wetland Lake is shown on **Figure 6**.

### 3.7.2 Groundwater

#### 3.7.2.1 Groundwater Resource

The groundwater beneath the site is a multi-layered system comprised of the following:

**City of Bayswater – Perth Superficial Swan unconfined aquifer**. The Superficial Aquifer is approximately 20 m thick under the Ascot Racecourse, with the base of the aquifer under the racecourse at approximately - 20 mAHD (Davidson, 1995). The aquifer is recharged directly by rainfall and from the Swan River.

**King Park Aquifer**. The Kings Park Aquifer is 155 m thick starting from - 20 mAHD and is recharged laterally from the adjacent northern Mirrabooka Aquifer and Superficial Aquifer. The Kings Park Aquifer comprises 2 members: the Mullaloo Sandstone and Como Sandstone. Only the Mullaloo Sandstone member is present at the Ascot site (Davidson, 1995). The Mullaloo Sandstone member is underlain by the Kardinya Shale confining bed of the Osborne Formation.

The groundwater salinity in the aquifer in 1995 was mapped as 500 mg/L to 1,000 mg/L TDS (Davidson, 1995). However, data in recent years indicates the aquifer salinity levels are increasing due to saltwater intrusion.

**Perth South – Perth Leederville** confined aquifer is below -160 mAHD and is approximately 370 m thick. In the Ascot area the Leederville Aquifer is confined but further to the south and north of Perth it is hydraulically connected to the Superficial Aquifer. The Leederville Aquifer comprises of four formations under the Ascot Racecourse, namely Henley Sandstone, Pinjar Member, Wanneroo Member and the Mariginiup Member.

Groundwater flow is generally westwards through the Leederville Aquifer. Lateral discharge can occur to the Kings Park Aquifer but depends on levels of abstraction in the Leederville Aquifer adjacent to the discharge area.

Generally, groundwater salinity in the Leederville Aquifer can be divided into an upper and a lower zone. The upper zone is generally fresh with salinity ranging from 250 to 1,000 mg/L. Salinity in the lower zone (below -400 mAHD) ranges from 1,000 mg/L to greater than 3,000 mg/L.

Groundwater is abstracted from an artesian production bore (PB1) assigned to the Leederville Aquifer to meet the irrigation demand of the Racecourse and surrounds. The bore is located adjacent the Irrigation Lake at the south corner of the Ascot Racecourse track. The bore is screen in the upper Leederville Formation which extends between -160 mAHD and -400 mAHD.

The allocation status of aquifers is further discussed in **Section 5.1.2**.

### 3.7.2.2 Groundwater levels

Perth Groundwater Map indicates (DWER 2023e) that the regional groundwater level sits at 0.5 m AHD across the site. Therefore, the groundwater clearance from southeast to northwest of the site ranges from 6.5 m to 0.5 m.

There are two groundwater level and quality monitoring bores (Bore1 and Bore2) and one production bore (PB1) within the Racecourse (see **Figure 2**) which are monitored by Perth Racing. Groundwater levels in these are monitored monthly.

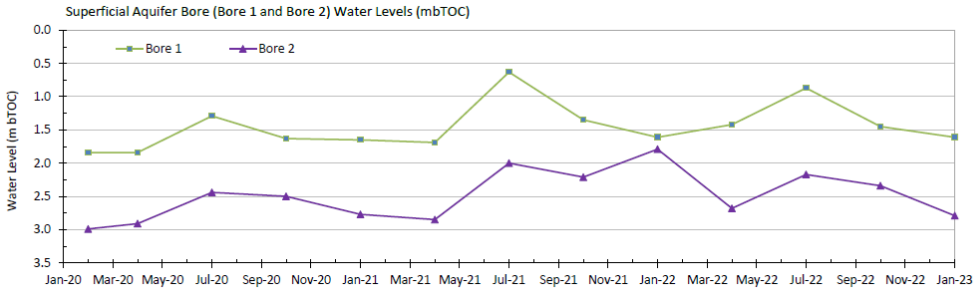



*Plate 1: Groundwater levels within the Superficial Aquifer at Bore1 and Bore2 (JDA 2023)*

**Plate 1** depicts the groundwater levels observed within the Racecourse which clearly indicates the rise and fall of groundwater levels seasonally. The peak groundwater level at Bore 1 and Bore 2 were recorded 1.26 m AHD and 1.70 m AHD respectively, during August 2022.

Monitoring has recently been undertaken within Precinct A. Six monitoring wells were installed for the Precinct A geotechnical investigation. The groundwater depth below the surface of the Precinct A (during January 2024) varied from 1.09 m below ground level (mBGL) to 2.37 mBGL (Douglas Partners 2024).

Monitoring has also recently been undertaken within Precinct D by Galt Geotechnics during the geotechnical investigation. The highest groundwater level beneath Precinct D is reported as 3.03 mBGL during February 2024 (Galt 2024).The various monitoring data/sources have been collated to prepare estimated maximum groundwater contours beneath the site. These have also considered the surface elevation of swales adjacent to the racetrack and the reported TWL of the Wetland Lake. The regional groundwater levels are shown in **Figure 2,** with spot heights recorded at the various locations also provided. It is noted that these do not necessarily represent the annual maximum groundwater levels at all parts of the site given the various timing of measurement of groundwater. Notwithstanding the variability of timing, it is likely that the management of stormwater (and in

particular infiltration) will more likely be influenced by localised soil conditions than seasonal peak groundwater levels in the superficial aquifer.

### 3.7.2.3 Groundwater quality

Water quality monitoring was conducted monthly at PB1 and quarterly at Bore1 (JDA 2023). Water quality parameters those were analysed during the monitoring period include:

**Monitoring Bore (Bore1)**

- EC
- pH
- TDS
- Total phosphorus (TP)
- Filterable Reactive Phosphorus or Phosphorus in Orthophosphate ($PO_4$-P)
- Total Nitrogen (TN)
- Nitrogen in Total Oxidised Nitrogen ($NO_x$-N)
- Nitrogen in Ammonia ($NH_3$-N)
- Total Kjeldahl Nitrogen (TKN)

**Production Bore (PB1)**

- Electrical conductivity (EC)
- pH
- Total Dissolved Solids (TDS)

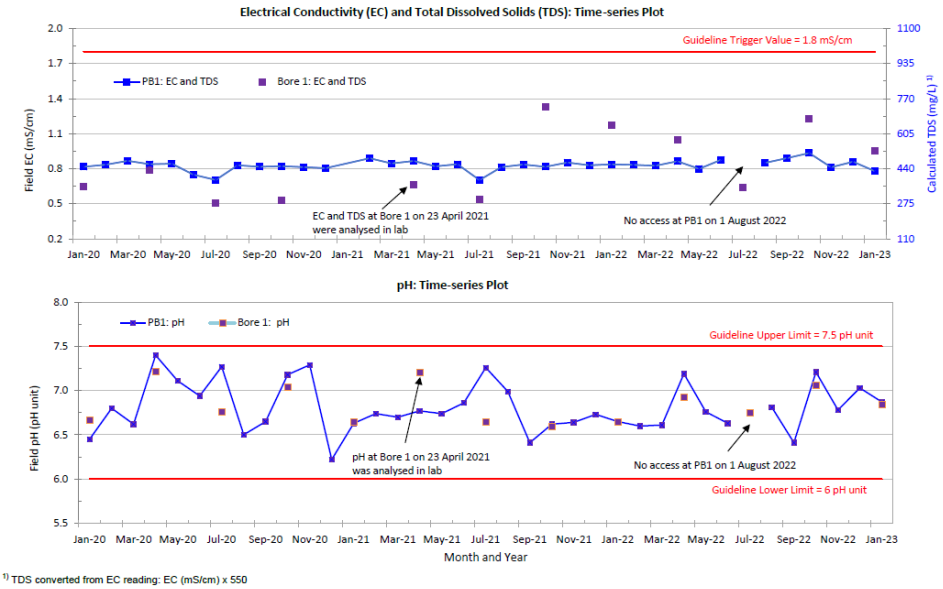



*Plate 2: Water Quality (EC, TDS and pH) Monitoring results* (JDA 2023)

**Plate 2** and **Plate 3** illustrate the water quality of the groundwater within the site is generally consistent over the monitoring periods with typically low variance in parameters tested. EC, TDS and

pH values did not display any exceedances of the trigger values. However, TN and TP regularly exceeded the ANZECC guideline trigger value of 1.2 mg/L and 0.065 mg/L (respectively). It is also noted a large exceedance in TN occurred in August 2022 however this does not appear to be representative of long-term values.




*Plate 3: Water Quality (TN and TP) Monitoring results (JDS 2023)*

## 3.8 Summary of existing environment

In summary, the environmental investigations conducted to date indicate that:

- The site is being used for horse racing, mixed uses (i.e. car park, stables and entertainment/hospitality venues, and commercial). Some portions of the site are only used infrequently (e.g. for parking or events).
- The site is located in an area of moderate to high rainfall, receiving 756.3 mm on average annually with the majority of rainfall received between June and August.
- The majority of the site has a relatively flat topography of 1 mAHD at the northwest (along the Swan River) and 2 mAHD to the south and rising to 7 mAHD to the east of the site.
- The site is within the Swan River Terraces system and displays Guildford formation soils of alluvial and leached yellow sand described as:
  - **Ms2 –** Sandy Silt: Strong brown to mid grey, mottled, blocky, fine sand, hard when dry, variable clay content of alluvial origin
  - **Ms4 –** Sandy Silt: light yellow brown, blocky, mottled some fine to medium sand, soft when moist, variable clay content
  - **S8 –** Sand: very light grey at surface, yellow at depth, fine to medium-grained, sub rounded quartz, moderately well sorted of eolian origin
- The groundwater depth below the surface of Precinct A varies from 1.09 m mBGL to 2.37 mBGL (Douglas Partners 2024).

- The highest groundwater level beneath Precinct D is reported 3.03 mBGL during February 2024 (Galt 2024).
- Most of the site is considered to have a high to moderate risk of ASS occurring, however some portions of Precinct B, Precinct C and the Racecourse are considered to have a moderate to low risk of ASS occurring within the 3 m of the natural surface.
- The northern portion of the site along the Swan River is identified as an ESA.
- The entirety of the site is classified as a SSA and classified as:
  - a) Estuary catchments on the Swan and Scott Coastal Plains.
  - f) The area is <1 km up-groundwater-gradient and 250 m down-gradient of a significant wetland; or where the groundwater gradient is unknown within 1 km of the significant wetland.
- The following wetlands are located within the site and these are classified as:
  - Multiple Use category wetland (MUW) area (UFI 8424, UFI 8425, UFI 8426).
  - Resource Enhancement wetland (REW) area (UFI 8423).
- The dominant hydrological feature of the site is the Swan River estuary. The northern boundary of the site falls within the Swan Canning Development Control Area (DCA) (CoB 2018) and Swan Canning River Park.
- The floodway of the Swan River is immediately adjacent to but not within the site. The 1% AEP flood elevation of the Swan River adjacent to the site is 2.8 mAHD.
- There are two existing major drainage network systems within or adjacent to the site include:
  - The CBMD, managed by the Water Corporation. This currently receives runoff from Precinct C (via the CoB drainage network) and Precinct E.
  - The CoB local piped drainage network, which exists along Mathieson Road, Grandstand Road and the northern portion of Resolution Drive.
- There are three lakes (Irrigation Lake, Lined Lake and Wetland Lake) located within the centre of the Racecourse. These are understood to receive runoff from the grandstand buildings in Precinct B and stables/buildings in Precinct C.
- Allowable discharge to the CBMD from the local drainage network is 0.95 $m^3/s$ based on Water Corporation modelling.
- The groundwater beneath the site is a multi-layered system consisting of the Superficial, Kings Park Formation, Leederville and Yarragadee aquifers.
- Regional groundwater mapping indicates that the groundwater levels across the site are at approximately 0.5 m AHD.
- Local groundwater level monitoring indicates that annual maximum groundwater levels (recorded in August 2022) were measured at 1.26 m AHD and 1.70 m AHD at Bore 1 and Bore 2 respectively. Groundwater levels in adjacent areas included Precinct A levels at 1.09 mBGL to 2.37 mBGL and Precinct D levels of approximately 3.03 mBGL.
- Water quality monitoring indicates that EC, TDS and pH values do not exceed guideline trigger values. However, TN and TP concentrations continually exceed the ANZECC guideline trigger value of 1.2 mg/L and 0.065 mg/L respectively.

# 4 Design Criteria and Objectives

This section outlines the objectives and design criteria that this LWMS and future management plans must achieve. The water management strategy includes water conservation, groundwater management and stormwater management.

## 4.1 Integrated water cycle management

*Better Urban Water Management* (WAPC 2008a) endorses the promotion of integrated water cycle management and application of WSUD principles to provide improvements in the management of stormwater, and to increase the efficient use of other existing water supplies.

The key principles of integrated water cycle management include:

- Considering all water sources, including wastewater, stormwater and groundwater
- Integrating water and land use planning
- Allocating and using water sustainably and equitably
- Integrating water use with natural water processes
- Adopting a whole catchment integration of natural resource use and management.

Integrated water cycle management addresses not only physical and environmental aspects of water resource use and planning, but also integrates other social and economic concerns. Water management design objectives should therefore seek to deliver better outcomes in terms of:

- Potable water consumption
- Stormwater quality management
- Groundwater management.

The first step in applying integrated water cycle management in urban catchments is to establish agreed environmental values for receiving environments. The existing environmental context of the site has been discussed in **Section 3** of this document. Guidance regarding environmental values and criteria is provided by a number of national and state policies/guidelines and site-specific studies undertaken in and around the site. These were detailed in **Section 1.4** and **Section 1.5** respectively.

## 4.2 Water conservation

This LWMS proposes the following water conservation criteria:

**Criteria WC1** For residential dwellings, consumption target of 60 kL/person/year.

**Criteria WC2** Ensure the efficient use of all water resources

**Criteria WC3** Non-potable irrigation water to be sourced from existing groundwater licences held over the area.

The manner in which this objective will be achieved is further detailed in **Section 5**.

## 4.3 Stormwater management

The principle behind stormwater management at the site is to mimic the pre-development hydrological conditions and utilise existing infrastructure where sensible to do so, as described in **Section 3.7**. This principle and the guidance documents discussed in **Section 1.4** and **Section 1.5** and have guided the stormwater management criteria.

**Criteria SW1** Retain and treat the first 15 mm of rainfall as close to source as possible and within site.

**Criteria SW2** Detain up to 1% AEP rainfall event on-site.

**Criteria SW3** Post-development critical 1% AEP peak flows leaving the site to mimic pre-development peak flows.

**Criteria SW4** Finished floor levels must have a minimum of 300 mm clearance above the 1 % AEP TWL in the FSA.

**Criteria SW5** All lots must have a minimum of 500 mm clearance above the 1 % AEP flood level in the Swan River.

**Criteria SW6** Nutrient concentrations within surface water discharging from the site to the Swan River are to meet regional water quality targets.

**Criteria SW7** Reduce nutrient loads by applying appropriate non-structural measures.

**Criteria SW8** Design infiltration areas to avoid creating mosquito habitat.

The manner in which these objectives will be achieved is further detailed in **Section 6**.

## 4.4 Groundwater management

The principle behind the groundwater management strategy is to maintain the existing groundwater hydrology. The groundwater management criteria for the site include:

**Criteria GW1** Surface based infiltration structures should have 300 mm clearance above the MGL.

**Criteria GW2** Habitable floor levels should have a clearance to the MGL of at least 1.2 m.

The manner in which the groundwater management objectives will be achieved is further detailed in **Section 7**.

# 5 Water Conservation Strategy

## 5.1 Fit for purpose water use

Conservation of water through fit-for-purpose use and best management practices is encouraged so that scheme water is not wasted. Fit-for-purpose describes the use of water that is of a quality suitable for the required use of the water. Fit-for-purpose principles have been utilised in the water conservation strategy for the site and will achieve **Criteria WC1**.

### 5.1.1 Scheme water supply

Scheme water will be supplied by the Water Corporation Integrated Water Supply System. Scheme water is proposed to be used for all potable uses. Scheme water will also service some external uses, where fit-for-purpose alternatives are not available.

### 5.1.2 Groundwater

As discussed in **Section 3.7.2.1**, the site is located beneath a multi-layered system comprising of the Superficial Swan, Kings Park Formation, Leederville and Yarragadee aquifers.

The proponent holds a groundwater allocation from the Perth South Leederville confined aquifer for the following:

- GWL 178519 - 347,000 kL

This licence will be used to meet the irrigation requirements for the Racecourse Precinct, Precinct A, Precinct B and part of Precincts C and E.

The above-mentioned measure will achieve **Criteria WC3**.

### 5.1.3 Rainwater tanks

Rainwater tanks (RWTs) can be used within private lots to harvest roof runoff. This water is considered non-potable but can be used to supplement non-potable water uses.

## 5.2 Lot scale water conservation measures

This LWMS proposes that the water conservation measures to be adopted would include RWTs, waterwise principles for lot scale gardens and within estate landscaping (WWG) and water efficient fixtures and appliances (WEFA) to ensure that the residential portion of the development minimises the use of water. These are summarised in the following sections.

### 5.2.1 Rainwater tanks

The use of RWTs will not be mandated, and the stormwater quantity management strategy does not rely on their use. They are therefore only considered to be a water conservation measure. Given that rainwater tanks will not be mandated or supplied by the proponent, it has been assumed that these would be implemented by 7.5% of households within Precinct D. Whilst they may be considered for

Precinct A they are not proposed to be taken up in other Precincts. The assumed uptake rate has been based on data obtained from the Australian Bureau of Statistics (ABS 2013). It is assumed (for the purposes of the water balance analysis) that all rainwater tanks have a capacity of 3 kL.

### 5.2.2 Water efficient fixtures and appliances

Water conservation strategy for the site proposes the use of WEFA. Water efficient fittings will be mandated through the building licence, while uptake of water efficient appliances can be encouraged by State and Local Government rebates in addition to education from the proponent at point of sale. WEFA are relevant to Precinct A and Precinct D. It is assumed that water efficient appliances will be implemented by 40% of households within Precinct A and Precinct D, which has been based on data obtained from the Australian Bureau of Statistics (ABS 2013, 2014).

### 5.2.3 Waterwise gardens

Landscape packages will not be provided as a part of the land sale contract. Lot scale waterwise gardening principles (WWG) are only relevant for Precinct D. These will be achieved by promoting Waterwise gardening principles (WWG) (WC 2003) at the time of sale of land within Precinct D. It is assumed that 75% of households in Precinct D will implement WWG principles within lot gardens (ABS 2013). WWG principles include:

- Soil to be improved with soil conditioner certified to Australian Standard (AS) 4454 to a minimum depth of 150 mm where turf is to be planted and a minimum depth of 300 mm for garden beds.
- The irrigation system shall be designed and installed according to best water efficient practices:
  - The controller must be 'hydrozoned'.
  - Emitters must disperse coarse droplets or be subterranean.
- Garden beds to be mulched to 75mm with a product certified to AS4454.
- Increasing community awareness of water conservation by promoting Waterwise practices, fixtures and fittings at the point of sale.

WWG principles will also be considered for Precinct A and Precinct E, however it is anticipated that these areas will have minimal irrigated landscaping to which this would apply. The current approach to irrigation within the Racecourse Precinct, Precinct B and Precinct C adopts a range of water conservation measures (including non-irrigated area and retention of existing trees/vegetation) to ensure that Perth Racing operates within the available groundwater allocation. This approach is not proposed to be significantly modified.

The above measures will assist in achieving **Criteria WC1** and **WC2**.

## 5.3 Water use analysis

### 5.3.1 Lot scale water use analysis

A water use analysis has been undertaken for Precinct D to estimate the expected individual residential lot water use to demonstrate the effectiveness of the water conservation strategy. The water use analysis has been based on the rates and calculation methodology presented in the Water

Corporation (2011) spreadsheet *AltWaterSupply_Water_Use_Model.xls*. This spreadsheet has been adapted to model the effects of using the water conservation measures proposed, and key assumptions include:

- Lot area has been based on a conceptual lot layout (see **Appendix A**).
- Average residency of 2.6 people per single lot dwelling. This value has been calculated from data provided by ABS for new housing developments in Perth (ABS 2022).
- Assumed up-take rates include:
  - 100% uptake of water efficient fittings
  - 40% uptake of water efficient appliances
  - 7.5% uptake of RWTs
  - 55% uptake of WWG principles.

The results of the water balance indicate that if households in Precinct A and Precinct D adopt the proposed water conservation measures (e.g. efficient fittings, RWT, WWG principals) at typical uptake rates they will use an average of 33.0 kL/year/person. This achieves the water target of no more than 60 kL/year/person of scheme water and satisfies **Criteria WC1**.

## 5.4 Wastewater management

The wastewater generated from the site will be managed by connecting the development to the Water Corporation deep sewer network.

## 5.5 Water conservation management criteria compliance

A summary of the proposed water conservation management criteria and how these are addressed is provided within **Table 1.**

*Table 1: Water conservation management criteria compliance*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| WC1 | Residential consumption target of 60 kL/person/year scheme water. | Provide advice to residents in Precinct A and Precinct D on water conservation measures |
| | | RWTs can be utilised for non-potable uses within Precinct D |
| | | Promotion and use of WWG in lots within Precinct D |
| | | Promotion and use of water efficient appliances to Precinct A and Precinct D |
| | | Mandate water efficient fittings within Precinct A and Precinct D |
| WC2 | Ensure the efficient use of all water resources. | Use of waterwise landscaping principles in open spaces |
| | | Open spaces designed to use no more than allocated groundwater |
| | | Minimise water requirements for open space and verge maintenance |
| | | Use of water efficient appliances within Precinct A and Precinct D |
| | | Use of WWG principles in lots in Precinct D |

*Table 2: Water conservation management criteria compliance (Continued)*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| WC3 | Non-potable irrigation water to be sourced from existing groundwater licences held over the area. | The proponent holds a groundwater Licence with an allocation of 347,000 kL per annum which will meet the irrigation requirements of the Racecourse and surrounding Precincts. |

# 6 Stormwater Management

The principle behind the stormwater management strategy for the site is to maintain the existing hydrology by detaining, retaining and treating runoff from the small rainfall event (i.e. first 15 mm) as close to source as possible and detaining/retaining the major event (1% AEP) on site prior to discharge to either the centre of the Racecourse (i.e. self-retained) or to the CBMD the pre-development outflow rates. Due to the existing soil conditions (See **Section 3.5**), the site is not well suited for structural controls utilising infiltration of stormwater unless modified. However, given that fill will be utilised to ensure that habitable floor levels are above the 1% AEP flood elevation of the Swan River, final elevations will be approximately 4 mAHD. Where fill is used to achieve this there will be sufficient clearance to MGL and permeability of soils to adopt WSUD measures which utilise infiltration.

WSUD measures proposed will vary across the Precincts and will include:

- BRAs to achieve water quality treatment (Precincts A, C, D and E)
- FSAs to detain runoff prior to discharge to the adjacent road network system
- Subsurface infiltration cells that will facilitate at-source infiltration (Precinct D)
- Flood storage integrated into existing surface water bodies located centrally within the Racecourse (for Precinct A and C)
- FSAs to provide flood detention and infiltration as close to source as possible (Precinct E).

The overall approach to precinct drainage is shown on **Figure 7**.

The WSUD measures that will be implemented as a part of the development are described in the following sections. Precinct B has been assumed to be self-retained and a portion of Precinct C (already connected to the Lakes in the centre of the track) has been assumed to be the same as it is now. Surface runoff modelling undertaken using XPSWMM has been used to inform the design of stormwater infrastructure as detailed in the following sections. Assumptions used to represent the post-development environment are provided in the modelling assumptions report in **Appendix D**.

## 6.1 Lot scale drainage measures

Lots within Precinct D and Precinct E will retain the first 15 mm rainfall event runoff within soakwells/soakage which will need a capacity of 150 $m^3$/ha. Lot storage is the responsibility of the lot owner and will be assessed as part of the building approval process prior to construction.

The use of soakwells/soakage areas will assist in achieving **Criteria SW1**.

## 6.2 Development drainage measures

### 6.2.1 Bio-retention areas

Runoff from the first 15 mm of rainfall will be captured and retained within a vegetated BRA located in open spaces. The BRA is assumed to have a depth of 500 mm with 1:3 side slopes. Treatment of

runoff will be provided through interaction with vegetation and adsorption to sand particles through infiltration prior to reaching groundwater.

The BRA will be underlain by material with an appropriate PRI (nominally a PRI of 20 at 150 mm or equivalent). It is acceptable for this to be achieved with a thicker layer of lower PRI soil (e.g. 300 mm of PRI 10). This will be finalised prior to detailed design. The location of the BRA will either be in a drainage reserve, an open space or they may be within the centre of the Racecourse as a separate treatment area (separate from the existing Lakes). The sizing and spatial requirements of BRAs will be confirmed in the detailed designs.

The use of BRA will assist in achieving **Criteria SW1, SW6,** and **SW8**.

### 6.2.2 Flood detention/storage

An FSA will be utilised to detain runoff above the first 15 mm and up to the 1% AEP rainfall event. To achieve this, the invert of the FSA will have sufficient clearance above groundwater 300 mm. FSAs are assumed to be 1.2 m depth with 1:6 side slope and will be integrated into POS or drainage reserve, and will overflow to the Water Corporation drainage network. The sizes and spatial requirements for the FSA will be confirmed in the detailed designs and development stages.

The use of an FSA will assist in achieving **Criteria SW1, SW2, SW4,** and **SW6.**

### 6.2.3 Subsurface storage

Surface runoff generated by lots, stables and hardstand/carpark areas will be directed into sub-surface storage. Precinct D will have an independent drainage pipe network within individual precincts which convey flows to downstream sub-surface retention structures.

These structures have been sized to accommodate up to the 1% AEP rainfall event and have been designed as a 1 m deep structure. The detailed configurations could be modified to suit site constraints. These will either be location beneath road reserve/verge or beneath an open space and will require an overflow connection to the local (CoB) drainage network to ensure that they can dry out. The sizes and spatial requirements for the subsurface storages are provided in **Table 2** and illustrated in **Figure 7A**: Precinct A Stormwater Management Plan

*Figure 7B: Precinct C Stormwater Management Plan*

Figure .

The use of the sub-surface storage will assist in achieving **Criteria SW1, SW2,** and **SW6.**

### 6.2.4 Lake storage

Precinct A and Precinct C (stables) will first direct runoff to a bio-retention areas, however overflow from these will be catered for in the Wetland Lake. In a 1% AEP storm event an additional 78 mm of depth will occur within the Wetland Lake from both Precincts.

As indicated in **Section 3.7.1.2**, the Wetland Lake is connected/discharges to the Swan River via a 375 mm and 450 mm culvert. These are not proposed to be modified. The combined nominal flow capacity of the 375 mm and 450 mm pipes is approximately 0.4 $m^3/s$. The inlet, length, grade, etc of

these pipes is not proposed to be modified and therefore the current overflow regime from the site to the Swan River will remain unchanged.

The use of the Wetland Lake storage will assist in achieving **Criteria SW1, SW2, SW3,** and **SW6.**

## 6.3 Precinct based drainage approach

### 6.3.1 Precinct A

There is no current connection point for drainage to be exported from site to the local CoB network. Runoff will therefore need to be managed within Precinct A and the Racecourse. Precinct A will require a single BRA that will address treatment of water quality; this will be located within Precinct A as close to source as possible. The BRA should have the following characteristics:

- Base will be vegetated with reeds/rushes as per a biofilter
- 1:3 side slopes
- Depth of 300 – 500 mm pending final design
- Volume of the BRA will need to achieve 194 $m^3$
- Nominal surface area of 450 $m^2$.

In addition to the volume achieved by the BRA, in a major (1% AEP) storm event a further 1,345$m^3$ of flood retention storage will be required. The proposed earthwork level of Precinct A (4.0 mAHD) means that it is possible to direct runoff exceeding BRA capacity to the Wetland Lake in the centre of the Racecourse. This approach will add approximately 52 mm to the central 2.6 ha Wetland Lake.

The volumes of storage required and locations of storage across the Precincts is summarised in **Table 2**. The approach to water management in Precinct A is shown in **Figure 7A**.

### 6.3.2 Precinct B and Racecourse

As indicate previously, there are no substantial changes proposed to Precinct B. Precinct B currently manages surface runoff within the precinct and adjacent Racecourse, largely via at source infiltration, swales around the perimeter of the track surface and the existing lake system Precinct B and the Racecourse are proposed to be retained largely as is.

As indicated in **Section 3**, the Wetland Lake currently has a piped overflow connection to the Swan River. This overflow pipe(s) reportedly rarely overflow and can be controlled via a structure at the outlet (which also prevents tidal influence on the Wetland Lake). The Wetland Lake has a 2.6 ha surface area, and therefore can provide significant volume of stormwater retention in the event of a major storm event. There are no new connections proposed to the Swan River and there are no changes proposed to the management approach currently taken for the Wetland Lake and the current piped outlets.

### 6.3.3 Precinct C

Precinct C is the existing stables area, adjacent carparks and future stables areas along the south and east of the Structure Plan area. The existing buildings currently either infiltrate runoff at source or

discharge to the Lined Lake in the centre of the Racecourse. This approach is proposed to be retained.

Surface runoff generated by hardstand/carpark areas of Precinct C will be directed and discharged towards Precinct E via the existing connections to the CoB drainage network along Matheson Road or via the existing pipe connection in the southwest of the Structure Planning area to the existing connection to the CBMD (Water Corporation drainage system) within Precinct E.

The drainage requirements for the southern (carpark) portion of Precinct C are therefore detailed with those proposed for Precinct E.

For the two currently undeveloped portions of Precinct C (future stables along the south and east of the Structure Plan area), the post-development drainage system will collect the runoff from these areas and direct them to the centre of the Racecourse. Initial treatment will be provided by a BRA which accommodates 418 $m^3$, with a nominal surface area of 924 $m^2$.

Runoff exceeding the capacity of the BRA (which will be 684 $m^3$) will be directed to the Wetland Lake. The direction of major event stormwater runoff to the Wetland Lake will add 26 mm to the top water level of the Wetland Lake.

The volumes required to be treated and for flood mitigation for Precinct C are summarised in **Table 2**. The approach to water management in Precinct A is shown in **Figure 7B**.

### 6.3.4 Precinct D

As indicated in **Section 6.1**, private lots and the childcare building within Precinct D are assumed to retain the first 15 mm within the lot boundary, most likely within soakwells, which should be appropriate given that some measure of imported fill will be required to meet clearance above regional flood levels. Based on the density of lots proposed in Precinct and lack of open space, this precinct will need 42 $m^3$ of subsurface storage to accommodate and detain the 1% AEP storm event to ensure that the post development peak flow rates will mimic the pre -development conditions. This is assumed to be located adjacent to Resolution Drive as shown in **Figure 7C**. The outflow from this Precinct will likely be predominantly overland flow once the first 15 mm of storage has reached capacity, however a low flow to ensure that these can adequately drain between storm events is recommended.

The volumes required to be treated and for flood mitigation for Precinct D are summarised in **Table 2**.

### 6.3.5 Precinct E

Surface runoff from across Precinct E (inclusive of Precinct C hardstand/carpark) will be conveyed via the drainage network firstly to a BRA for water quality treatment and then this will overflow to an FSA (detention drainage structure) at the south western corner of Precinct E for detention of the 1% AEP storm event. Overflow from Precinct E basin will discharge into the CBMD (Water Corporation drainage system) at existing flow rates. The Water Corporation surface runoff modelling of the CBMD indicates that the local drainage network contributes 0.95 $m^3/s$ at node CNA008. This is understood to be contributed to by existing 450 mm and 525 mm pipes beneath Resolution Drive and therefore it is assumed that 0.62 $m^3/s$ is taken up by the existing pipe network, and approximately 0.33 $m^3/s$ of

capacity is available to convey runoff from Precinct C, Precinct E and upstream contributing catchments.

The volumes required to be treated and for flood mitigation for Precinct E are summarised in **Table 2**. The approach to water management in Precinct E is shown in **Figure 7D**.

### 6.3.6 Precinct drainage summary

The requirements for water quality treatment within the Precincts is summarised in **Table 2**.

*Table 2: Precinct drainage summary*

| Precinct | First 15 mm requirement ($m^3$) | Location of first 15 mm | 1% AEP flood mitigation requirement ($m^3$) | Location of 1% AEP flood mitigation requirement | 1% AEP outflow from site |
|---|---|---|---|---|---|
| Precinct A | 194 | BRA located within Precinct A | 1,345 | Wetland Lake, centre of Racecourse | 0 |
| Precinct B | No change to existing | Precinct B | No change to existing | Precinct B | Self-retained |
| Precinct C (Stables) | 418 | BRA located in the centre of the Racecourse | 684 | Wetland Lake in centre of Racecourse | 0 |
| Precinct C (carpark) | Combined with Precinct E volumes | BRA in Precinct E | Combined with Precinct E volumes | FSA in Precinct E | |
| Precinct D | 28 | Subsurface storage cells beneath road reserve/drainage reserve | 42 | Subsurface storage cells beneath road reserve/drainage reserve | 0.402 $m^3/s$ to local drainage network/road pavement |
| Precinct E | 365 | Southwest corner of Precinct E, adjacent to FSA | 930 | South west corner of Precinct E | 0.32 $m^3/s$ to CBMD |

There will be no new connections to the Swan River or to the CBMD, and the existing flow regimes at these outlet points will be maintained. Specifically with regard to overflow from the Wetland Lake which occurs via gravity, the peak flow rates that the existing 375 mm and 450 mm pipes are capable of achieving (approximately 0.4 $m^3/s$) will not change given that the inlet, length, grade and outlet of these pipes is not proposed to be modified.

Precinct D will require a connection to the local drainage network, however the outflow rate will be nominal, and has not been accounted for when sizing the subsurface storage cells within Precinct D. The direction of runoff from Precinct A and a portion of Precinct C to the centre of the Racecourse will require a BRA with a surface area of 1,105 $m^2$ (for Precinct C) and will add a total of 78 mm depth to the top water levels within the Wetland Lake.

The precinct areas and a summary of the approach to surface water management are shown on **Figure 7**.

### 6.3.7 Non-structural measures

A number of non-structural measures will be implemented to help reduce nutrient loads within stormwater runoff. These measures include:

- Minimising fertiliser use to establish and maintain vegetation within POS and road verges.
- Street sweeping at regular intervals.
- Ongoing management of nutrient application to Precinct B and the Racecourse.
- Precinct A to adopt a similar nutrient application management regime as that currently applied to Precinct B.
- Minimising the use of turf within open spaces.
- Active management of equine waste within Precinct C and the Racecourse. This includes manual collection and remove of manure from site.
- Education of residents regarding fertiliser use and nutrient absorbing vegetation species within lots.

The above measures will assist in achieving **Criteria SW7**.

### 6.3.8 Earthwork levels

Finished floor levels of the entire development will be set at minimum of 4.0 mAHD (See **Appendix C**) which will assist in achieving **Criteria SW5**.

## 6.4 Stormwater criteria compliance

A summary of the proposed stormwater design criteria and how these are addressed is provided in **Table 3**.

*Table 3: Stormwater management criteria compliance*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| SW1 | Retain and treat the first 15 mm of rainfall as close to source as possible | Lots within Precinct D and Precinct E to retain the first 15 mm of rainfall on lot in soakwells/soakage. Lot storage will be the responsibility of the lot owners. |
| SW2 | Retain up to 1% AEP rainfall event on-site. | Runoff up to the 1% AEP to be detained within the FSA in Precinct A. Precinct A and a portion of Precinct C will ultimately discharge to the centre of the track. |
| | | Runoff up to 1% AEP to be managed with the sub-surface storage in Precinct D. |
| SW3 | Post-development critical 1% AEP peak flows leaving the site to mimic pre-development peak flows. | Runoff up to 1% AEP event to be detained in the detention basin and subsurface storage which will maintain the pre-development peak flow of 0.32 $m^3/s$ from Precinct E and 0.463 $m^3/s$ from Precinct D respectively. |
| SW4 | Finished floor levels must have a minimum of 300 mm clearance above the 1% AEP TWL in the FSA. | It is anticipated that the FSA and detention basin invert will be set so that the habitable floor levels must have a |

| | | |
|---|---|---|
| | | minimum of 300 mm clearance above the 1% AEP TWL in the basins. |
| SW5 | All lots must have a minimum of 500 mm clearance above the 1% AEP flood level in the Swan River. | The 1% AEP flood level in the Swan River is 2.8 mAHD. The preliminary bulk earthworks concept provided in shows that finished floor level will be at 4.0 mAHD. |
| SW6 | Nutrient concentrations within surface water discharging from the site to the Swan River are to meet regional water quality targets. | BRA will be designed so that after treatment the long term nutrient concentrations within surface water meet the regional water quality targets. |

*Table 4: Stormwater management criteria compliance (Continued)*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| SW7 | Reduce nutrient loads by applying appropriate non-structural measures | • Minimise use of fertilisers within open space and road verges.<br>• Street sweeping at regular intervals.<br>• Use of drought tolerant turf species.<br>• Education of residents regarding fertiliser use |
| SW8 | Design infiltration areas to avoid creating mosquito habitat | Stormwater infrastructure will be designed to ensure all runoff is infiltrated within 96 hours. |

# 7 Groundwater Management

## 7.1 Groundwater management approach

The principle behind groundwater management is to maintain the existing hydrology across the site, provide appropriate protection from groundwater inundation, and maintain or improve existing groundwater quality.

## 7.2 Groundwater level management

The regional groundwater map (DWER 2023e), localised measurement of groundwater and the surface contours of the site (see **Section 3.4** and **Figure 2**) indicate that there is sufficient clearance to groundwater beneath the site to facilitate infiltration of stormwater runoff, on the basis that fill is being imported to raise finished levels to 4.0 mAHD.

Whilst the underlying parent soils have demonstrated generally low permeability, the earthworks approach will require import of fill to 4.0 mAHD to achieve clearance above the 1% AEP flood level in the Swan River for Precinct A, Precinct D and Precinct E. Therefore, stormwater will be encouraged to infiltrate at source wherever possible to minimise stormwater runoff and to adopt an at-source approach to management of runoff where possible. This will occur within soakwells, permeable portions of lots and BRAs which will have at least 300 mm of clearance above the MGL. The above-mentioned measure will assist in achieving **Criteria GW1**.

For Precinct C (stables) runoff will be directed to the centre of the racetrack. The stables facilities do not require a specific separation from groundwater, and in order to accommodate equine uses the land between buildings/facilities should be as flat as possible. The most appropriate response is therefore to accommodate stormwater quality treatment and flood retention within the centre of the racetrack. Given the low permeability of soils in the centre of the racetrack, the BRA is unlikely to achieve separation from groundwater or the low permeability soil layer. This is however considered acceptable as it is consistent with the presence of the three Lakes currently within the centre of the racetrack.

The control of groundwater by subsoil drainage is not proposed due to requirements to provide adequate clearance above the 1% AEP flood levels and the proximity of the Swan River. Rather, groundwater separation requirements will be achieved by the use of imported fill as described above. The earthworks strategy provided in **Appendix C** shows that all habitable floor levels will be greater than 1.2 m above the MGL. The above-mentioned measure will assist in achieving **Criteria GW2**.

As previously discussed, there are no changes proposed to the form of development within Precinct B or to the Racecourse. These areas are currently managed by the swales aligned with the existing racetrack which control soil moisture conditions in these areas, and which discharge to the Wetland Lake. This approach will be retained in the post-development environment.

## 7.3 Groundwater quality management

Whilst not specified in a design criterion, the main objective for groundwater quality management is to maintain or improve the existing groundwater quality. This can be achieved by reducing the total nutrient load into the groundwater that originates from the site. Groundwater that originates from the site is surface runoff that has infiltrated into the soil profile. Therefore, improving groundwater quality can be achieved by treatment of the surface runoff prior to infiltrating to groundwater.

The reduction of nutrient load to the groundwater will be achieved by:

- Retention of existing trees within open spaces wherever possible.
- Directing stormwater to a vegetated (with native wetland species) BRA.
- The BRA will be underlain by material with an appropriate PRI (nominally a PRI of 20 at 150 mm or equivalent). It is acceptable for this to be achieved with a thicker layer of lower PRI soil (e.g. 300 mm of PRI 10).
- Minimise fertiliser use to establish and maintain vegetation within open space areas and road verges.
- Ongoing management of nutrient application to Precinct B and the Racecourse.
- Precinct A to adopt a similar nutrient application management regime as that currently applied to Precinct B.
- The use of turf will be minimised, however where adopted a drought tolerant turf species that require minimal water, and nutrients will be used.
- Roll-on turf will be used within the open space areas and road verges, to prevent the high nutrient input requirement during establishment of the turf.
- Garden beds should not be immediately adjacent to BRAs to reduce nutrient transportation into these infiltration areas.
- Active management of equine waste within Precinct C and the Racecourse. This includes manual collection and remove of manure from site.

The above measures will improve the quality of water prior to it infiltrating into the underlying groundwater.

## 7.4 Groundwater criteria compliance summary

A summary of the proposed groundwater quantity design criteria and how these are addressed within the site is provided in **Table 4**.

*Table 4: Groundwater criteria compliance summary*

| Criteria number | Criteria description | Manner in which compliances will be achieved |
|---|---|---|
| GW1 | Surface based infiltration should have 300 mm clearance above MGL. | Basin inverts will be set at 300 mm above the MGL, the exception being the BRA in the centre of the racetrack. |
| GW2 | Finished floor levels should have a clearance to the MGL of at least 1.2 m. | Lots will be set at least 1.2 m above the MGL. |

# 8 Subdivision and Urban Water Management Plans

The requirements to undertake preparation of more detailed water management plans to support subdivision is generally imposed as a condition of subdivision. This will be most relevant to Precinct D. Other precincts may be developed under a Development Approval and therefore water management will likely be documented within a Stormwater Management Plan (SMP). The development of future UWMP/SMPs should follow *Urban Water Management Plans: Guidelines for preparing plans and for Complying with Subdivision Conditions* (DoW 2008).

While strategies have been provided within this LWMS that address planning for water management within the site, it is a logical progression that future subdivision designs and the supportive UWMP/SMP will clarify details not provided within the LWMS. The main areas that will require further clarification within future UWMP/SMPs may include (pending which precinct is being addressed):

- Extent of land uses within Precincts
- Connection to local and Main Drainage networks
- Surface runoff modelling
- Implementation of water conservation strategies
- Non-structural water quality improvement measures
- Management and maintenance requirements
- Construction period management strategy.

These are further detailed in the following sections. As stated above, ongoing (post-development) monitoring of groundwater will be detailed in the UWMP/SPM, however in this LWMS is outlined broadly in **Section 9**.

## 8.1 Extent of land uses within Precincts

It is expected that the layout and extent of land uses within Precincts may evolve over time. Future water planning documents will need to be updated to align with the most up to date spatial plans for each Precinct. Changes to the spatial plans will likely have an implication on the size of stormwater infrastructure and possibly their location, and should be revised and clarified in future UWMP/SMPs.

## 8.2 Connection to local and Main Drainage networks

This LWMS has made assumptions regarding connectivity to the CoB local drainage network and to the Water Corporation's CBMD. These are assumptions are made based on the information available at the time of preparing this LWMS and may need to be revised pending feedback from these agencies. This could result in updates to surface runoff modelling (see **Section 8.3**).

## 8.3 Surface runoff modelling

It is acknowledged that the water management strategies documented in this LWMS are based upon broad-scale assumptions and to some extent regional data. These assumptions are considered

adequate for development of this LWMS and are of an appropriate level of detail. However, verification of proposed subdivision drainage designs will be undertaken once the specific basin designs and extent of inclusion of finer scale WSUD elements are confirmed.

It is expected that future UWMP/SMPs will update surface runoff modelling as appropriate, and this may result in evolution of the spatial layout of the structure plan/future subdivisions or detailed civil design approach.

## 8.4 Implementation of water conservation strategies

The non-potable water needs from the Precincts are to be accommodated from the existing groundwater allocation and therefore, track water usage is a significant consideration. Notwithstanding licensed volumes available, there is minimal new open space areas proposed within the Precincts that would demand significant additional groundwater allocation, and it is therefore anticipated that non-potable water needs can be met by the existing licence held by Perth Racing.

A number of potential measures to conserve water have been presented within this LWMS. These water conservation strategies will be incorporated into design and the on-going maintenance of the Precinct A, B and C open spaces and where relevant. Landscape concept design measures that will be incorporated into the water conservation strategy will be further detailed within the future UWMP/SMPs produced for the development.

The manner in which the developer intends to promote water conservation measures discussed in this LWMS to future lot owners will also be discussed within the future UWMP/SMPs.

## 8.5 Non-structural water quality improvement measures

Guidance for the development and implementation of non-structural water quality improvement measures is provided within the *Stormwater Management Manual for Western Australia* (DWER 2022). Some measures will be more appropriately implemented by CoB for local roads, such as street sweeping, however many can be implemented relatively easily within the design and maintenance of the subdivision and the open space areas. It is expected that any privately managed development areas (e.g. Precinct A, Precinct B and Precinct C) will be managed by Perth Racing or another appropriate management body, and that the management of areas exposed to equine uses (Precinct C and the Racecourse) will continue to adopt contemporary best practice nutrient management.

Future UWMP/SMPs will provide an implementation plan/timing/responsibility for measures such as street sweeping, public education (through measures such as signage that may be implemented to raise awareness), etc.

## 8.6 Management and maintenance requirements

The management measures to be implemented to address surface water quality (such as the use of vegetation within WSUD assets) will require ongoing maintenance. It is therefore expected that the future UWMP/SMPs will detail management and maintenance procedures that will set out required maintenance actions (e.g. gross pollutant removal), timing (e.g. how often it will occur), locations (e.g. exactly where it will occur) and responsibilities (e.g. who will be responsible for carrying out the

actions). Given that approval from the CoB will be sought for the proposed measures, it is anticipated that consultation will be undertaken and referral to guiding policies and documents will be made.

## 8.7 Construction period management strategy

It is anticipated that the construction stage will require some management of various aspects (e.g. soil erosion, sedimentation of downstream water bodies, dust, surface runoff, noise, traffic etc.). The management measures undertaken for construction management will be addressed either in the future UWMP/SMPs or a separate Construction Management Plan (CMP).

# 9 Monitoring

## 9.1 Post-development monitoring

The post-development monitoring of water quality should be undertaken within groundwater immediately upstream and downstream of BRAs within Precinct A, Precinct C and Precinct E. It should also be undertaken at the outlet to or adjacent to the subsurface detention system in Precinct D. This should be undertaken via shallow groundwater bores installed immediately upstream and immediately downstream based on local groundwater flow direction, based on information available at the time (or in the case of Precinct D it could be at the outlet from the subsurface storage cells).

The monitoring should also consider and be generally consistent in the approach with the monitoring undertaken to comply with conditions of Groundwater Licence GWL 178519.

The WSUD measures (BRAs) should also be monitored to ensure their continued effectiveness. This should occur at the outlets from BRAs prior to their discharge to the Wetland Lake. It is noted that this may be difficult to achieve as it will require a rainfall event > 15 mm and to be timed to occur when overflow is occurring or alternatively auto samplers could be employed.

Monitoring of the outlet to the Swan River from the Wetland Lake is not proposed to be undertaken given the infrequent nature of overflow from the Lake to the River. Further, the Lake intersects shallow groundwater and any discharge from the pipes to the River is likely to be influenced by local groundwater quality.

### 9.1.1 Trigger values

The water quality targets from the *National Water Quality Management Strategy* (ANZECC and ARMCANZ 2000) and the trigger criteria are acknowledged as long term targets for the site, being 1.2 mg/L for TN and 0.065 mg/L for TP. However, it is also recognised that recent site monitoring undertaken (and reported in **Section 3**) shows repeated exceedances of the NWQMS default trigger criteria. Therefore, short term trigger values are proposed based on the approximate average nutrient concentrations measured in groundwater, and these are shown in **Table 5**.

*Table 5: Post-development trigger values*

| Analyte | pH | EC (uS/cm) | TN (mg/L) | TP (mg/L) |
|---|---|---|---|---|
| Value | 6-7.5 | 1800 | 3.0 | 0.15 |

Monitoring should be undertaken on a quarterly basis and should include:

- pH
- Conductivity
- Dissolved oxygen
- Temperature
- Nutrients (TN, TP)
- Nutrient Species (Ammonium, $NH_4$, Oxides of nitrogen, $NO_x$ ortho-phosphorous (ORP))

### 9.1.2 Condition monitoring

It is proposed that the overall condition of the Precincts will be monitored on a bi-annual basis. This monitoring will be implemented after the completion of the civil and landscaping works and will continue for a period of two years.

A visual assessment will be undertaken to monitor the overall condition of the Precincts, with the aim to ascertain that the maintenance activities are achieving the overall management objectives for the development. The parameters that will be monitored include:

- Gross pollutants
- Terrestrial weeds
- Irrigation
- Vegetation density
- Paths, benches, walkways and other infrastructure.

The management and maintenance objectives will be detailed within future UWMPs along with details of the corresponding monitoring program.

### 9.1.3 Contingency Action Plan

If the results from the initial monitoring occasion indicate that nutrient concentrations exceed the nominated (short term) trigger values, a number of contingency measures may be employed.

The first action that should be undertaken if groundwater trigger criteria are exceeded is to repeat the monitoring to remove the potential for sampling error. If the repeat monitoring still shows results which breach the trigger value, the next action will be to compare the upstream (incoming) nutrient concentrations with the outgoing (downstream) nutrient concentrations. If the downstream nutrient concentrations are >50% higher than the upstream nutrient concentrations, the following actions should be undertaken:

- Review open space nutrient application practices to identify source if possible.
- Conduct surveillance of Precincts and drainage infrastructure to determine any other potential and obvious nutrient inputs.
- Remove source if possible (i.e. fertiliser input, etc.).
- Remove sediment–bound nutrients by removing basin sediments.
- Manual removal of plant material from BRAs to facilitate further nutrient uptake.

If the downstream nutrient concentrations are found to be generally consistent with the upstream concentrations the next action will be to conduct a site – specific comparison of long-term background data presented in this LWMS. There is some amount of variability (temporally) in nutrient concentrations experienced across the site, and this is the reason for the proposed short and long term trigger values. The comparison of measured values to trigger values and historical monitoring data should then be used as a management tool to determine if the trigger values should be revised.

Following the implementation of the above contingency measures the groundwater quality will be re – sampled. If the results of the analysis still show water quality characteristics which breach the trigger values an additional set of upstream/downstream monitoring bores may be installed. The

additional bores would be sampled as per the ongoing sampling regime already being undertaken for the first two bores. If the additional locations demonstrate results consistent with the initial monitoring, an assessment will be undertaken as to whether the results are representative of a broader site management concern, and whether any additional contingency actions need to be implemented onsite.

## 9.2 Reporting

A post-development monitoring report will be prepared on conclusion of the two-year monitoring period and will be provided to CoB on request. This will be undertaken per Precinct once development within the Precinct has occurred. Interim results (spreadsheet) can be provided to either CoB, DWER or DBCA on request during the monitoring program.

# 10 Implementation

## 10.1 Roles and responsibility

The LWMS provides a framework that the proponent can utilise to assist in establishing stormwater management methods that have been based upon site-specific investigations, are consistent with relevant State and Local Government policies and have been endorsed by DWER, DBCA and CoB. The responsibility for working within the framework established within the LWMS rests initially with the proponent, although it is anticipated that a future UWMP/SMP will be developed in consideration of other relevant policies and documents. A summary of roles and responsibilities relevant to the current and future planning stages and ongoing management of the site is summarised in **Table 6**.

*Table 6: Roles and responsibilities for various planning stages*

| Stakeholder | Perth Racing | City of Belmont | Water Corporation | DWER | DBCA | WAPC |
|---|---|---|---|---|---|---|
| LWMS preparation | √ | | | | | |
| LWMS review and advice | | √ | √ | √ | √ | |
| LWMS approval | | | | √ | | √ |
| UWMP/SMP & civil design preparation | √ | | | | | |
| UWMP/SMP review and approval | | √ | | | | |
| Precinct implementation | √ | | | | | |
| Post development Precinct management | √ | | | | | |
| Public roads/open space ongoing management | √ | √ | | | | |

## 10.2 Funding

The proponent will fund all subdivision, civil and landscape works within the public realm (roads and open spaces) and within Precincts that are being privately managed (Precinct A, Precinct B and Precinct C). Development of individual lots will be the responsibility of the lot owner at the lot-scale development application stage.

## 10.3 Review

It is not anticipated that this LWMS will be reviewed unless the Ascot Racecourse Structure plan undergoes significant change post-lodgement of the LWMS. If the proposed layout of the

development is substantially modified, the surface runoff modelling undertaken for this LWMS may need to be reviewed and the criteria revised to ensure that all are still appropriate.

The next stage of water management for most of the Precincts is UWMP preparation to support subdivision (relevant to Precinct D) or SMP preparation to support Development Approval (relevant to all other precincts). The UWMP/SMP is largely an extension of the LWMS, as it should provide detail to the designs proposed within this LWMS and will demonstrate compliance with the criteria proposed in **Section 4**. Regardless of whether a UWMP or SMP is prepared, these should be prepared as per *Better Urban Water Management*.

The next stage of development following the UWMP is single lot development. It is recognised that certain elements of the LWMS and the UWMP will not be implemented until this late stage, and that there is little or no statutory control that can be applied to ensure the implementation of any remaining measures. While the remaining measures are unlikely to be enforced at this stage their implementation could be encouraged by the CoB through policy (or modification of these where necessary), building licence or awareness programs (such as the Water Corporation Waterwise program).

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## 11.1 General references

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## 11.2 Online references

The online resources that have been utilised in the preparation of this report are referenced in **Section 11.1**, with access date information provided in **Table R1**.

*Table R1 Access dates for online references*

| Reference | Date accessed | Website or dataset name |
|---|---|---|
| (ABS 2013) | 19/4/2024 | ABS: Water Use and Conservation Data |
| (ABS 2014) | 19/4/2024 | ABS: Energy Use and Conservation Data |
| (DWER 2023a) | 12/04/2024 | Acid Sulfate Soil Risk Map |
| (BoM 2024) | 12/04/2024 | Climate Data |
| (Landgate 2023) | 31/01/2024 | Landgate Map Viewer Plus |
| (WAPC 2023a) | 11/12/2023 | Local Planning Scheme No. 15 Map |
| (DWER 2024a) | 12/04/2024 | Perth Groundwater Map |
| (DWER 2024b) | 12/04/2024 | Water Information Reporting |
| (DWER 2024c) | 12/04/2024 | Water Register |
| (DWER 2023c) | 26/04/2024 | FPM Floodplain Area (DWER-020) |

# Figures

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*Figure 5: Environmental Assets*

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*Figure 7C: Precinct D Stormwater Management Plan*

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**Figure 1: Site Location**

| | |
|---|---|
| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(03)--F23**

| | |
|---|---|
| Drawn: | WJC |
| Date: | 26/04/2024 |
| Checked: | JM |
| Approved: | DPC |
| Date: | 17/05/2024 |

N

0 100 200 300
Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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©Landgate (2024). Nearmap Imagery date: 05/02/2024

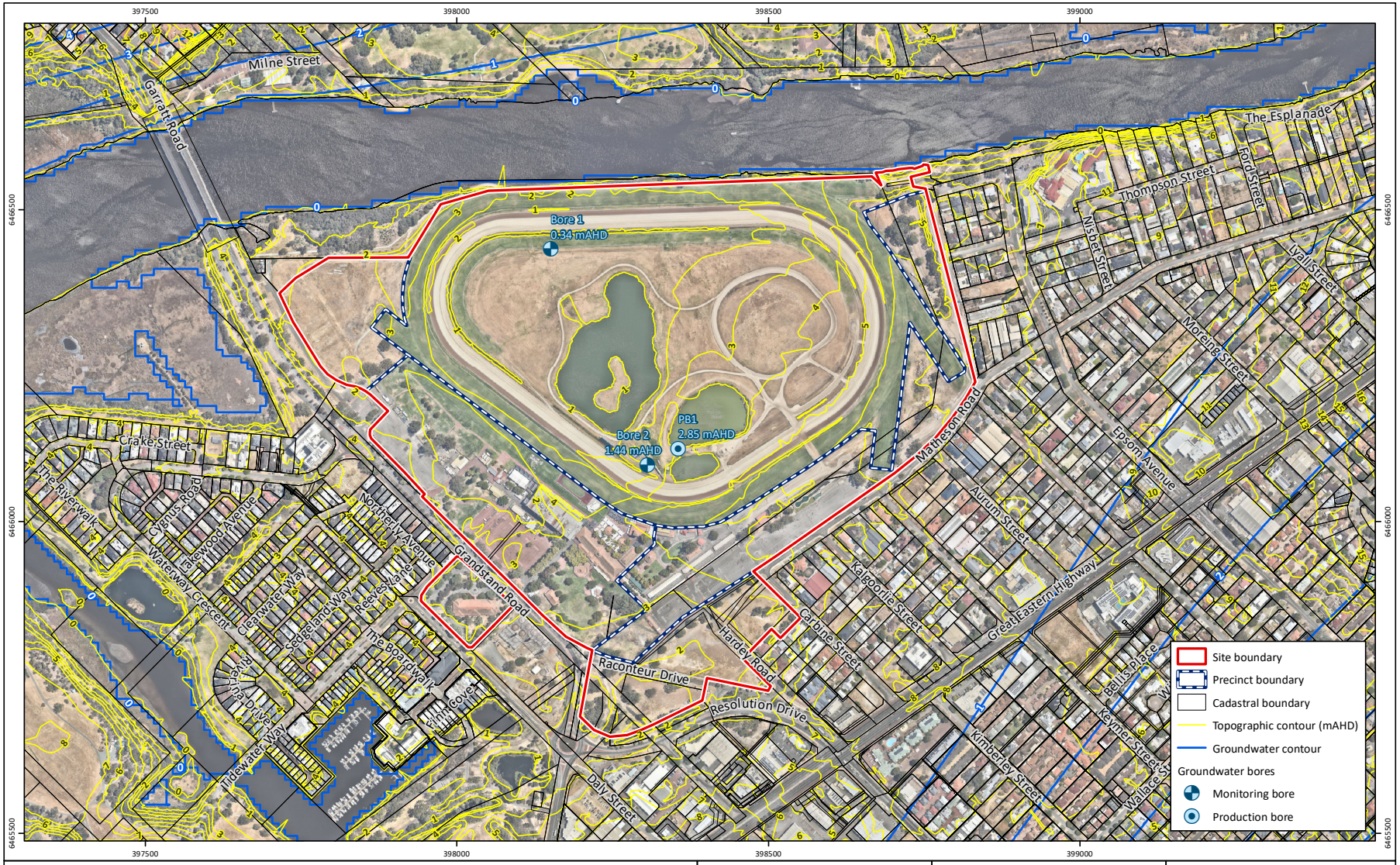



**Figure 2:** **Topographic and Groundwater Contours**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan

**Client:** Perth Racing

**Plan Number:**
**EP23-109(03)--F24**
Drawn: WJC
Date: 26/04/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

N

0 100 200 300
Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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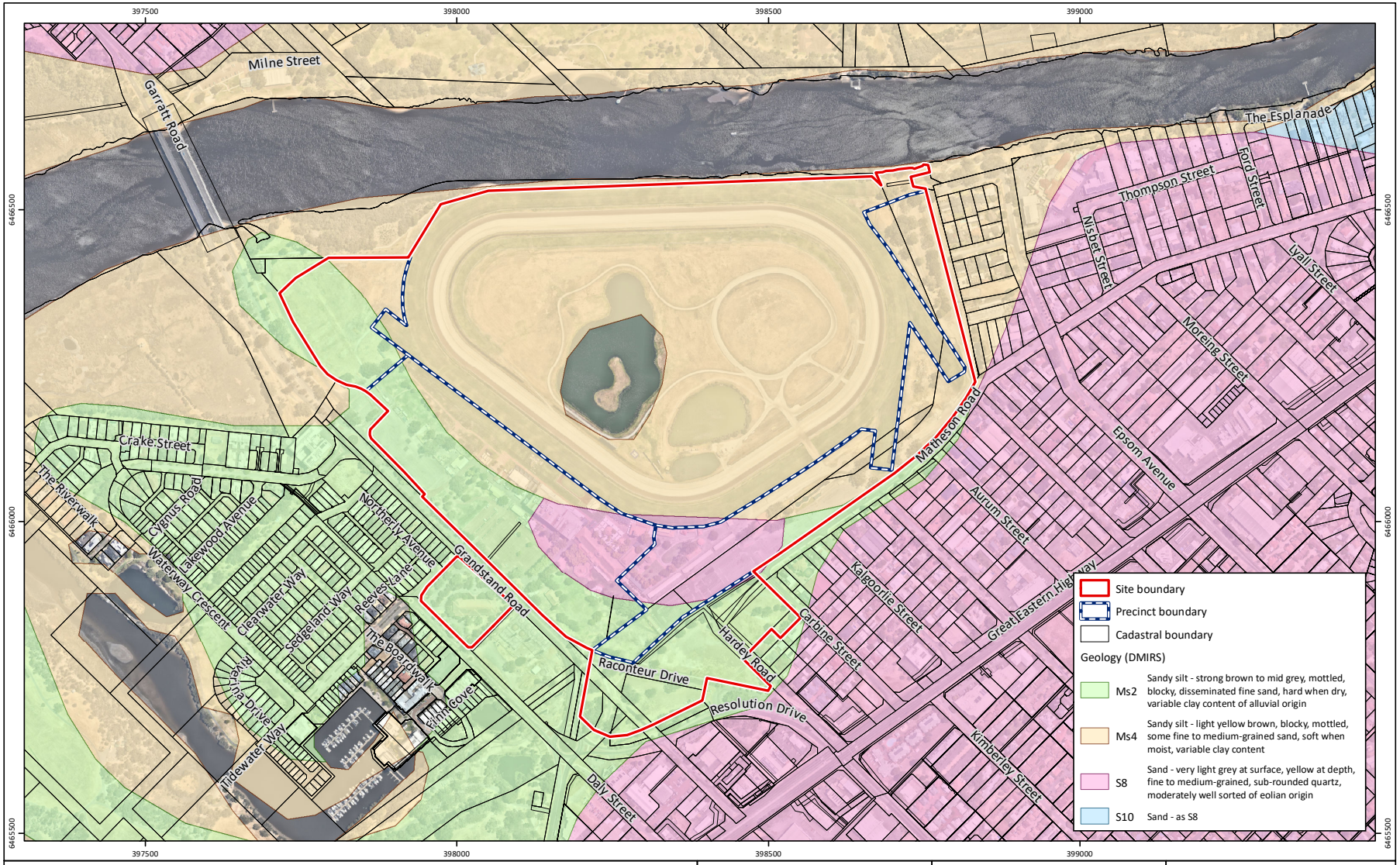



**Figure 3: Geological Mapping**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan
**Client:** Perth Racing

**Plan Number:** EP23-109(03)--F25
Drawn: WJC
Date: 26/04/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

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0 100 200 300
Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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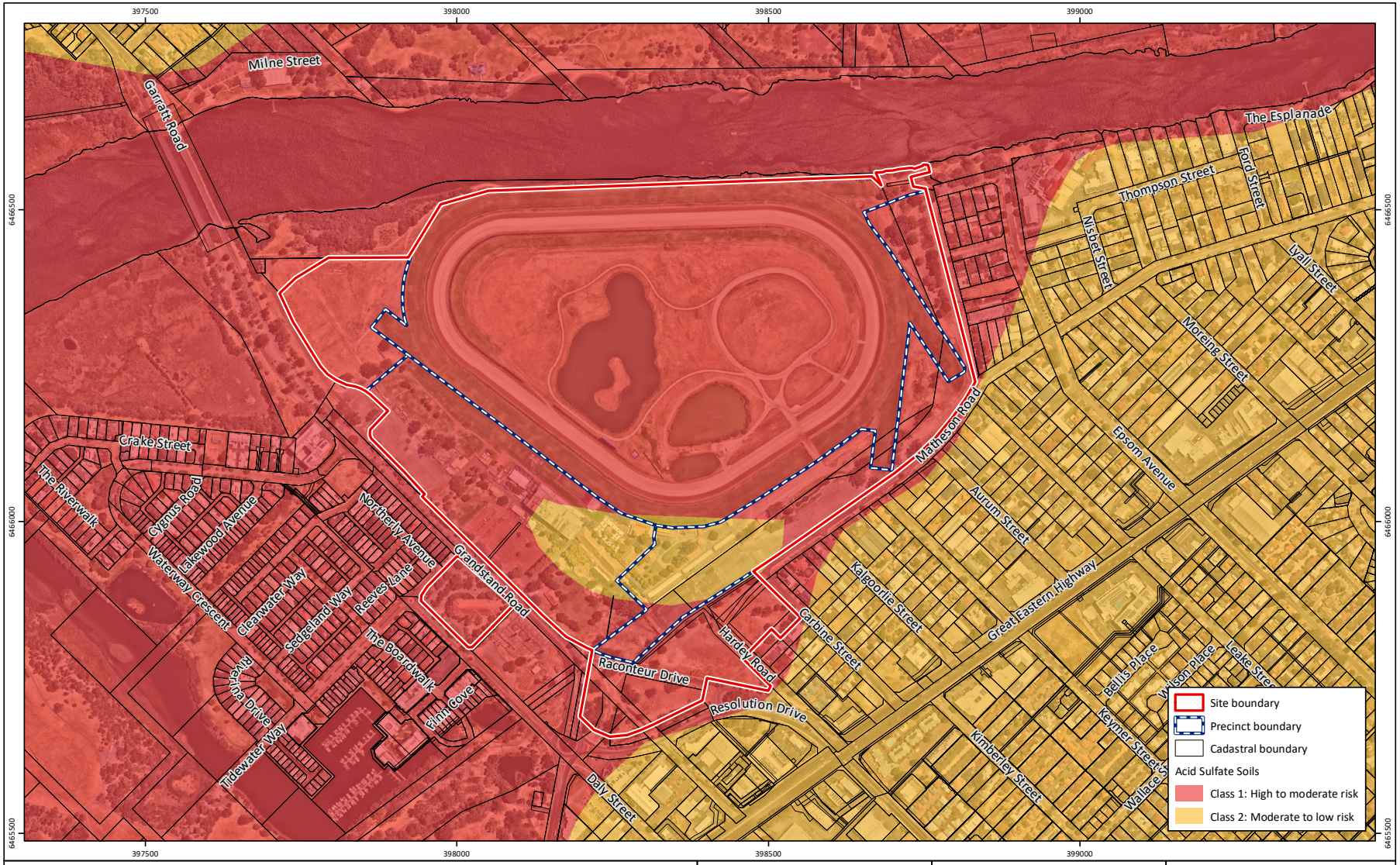



**Figure 4: Acid Sulfate Soil Mapping**

| | |
|---|---|
| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

| | |
|---|---|
| **Plan Number:** | **EP23-109(03)--F26** |
| Drawn: | WJC |
| Date: | 26/04/2024 |
| Checked: | JM |
| Approved: | DPC |
| Date: | 17/05/2024 |

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Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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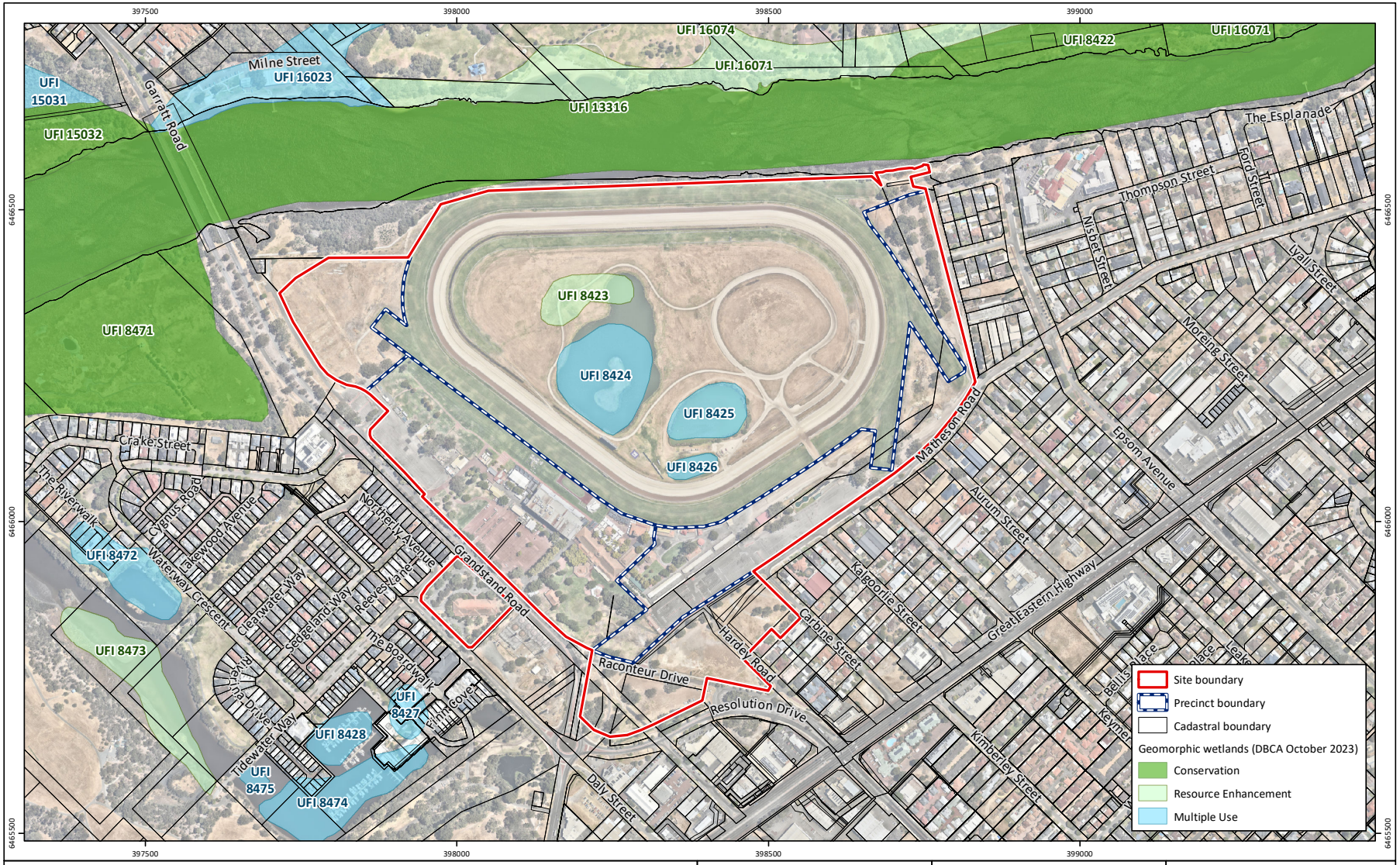



**Figure 5: Environmental Assets**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan
**Client:** Perth Racing

**Plan Number:** EP23-109(03)--F27
Drawn: WJC
Date: 26/04/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

N

0 100 200 300
Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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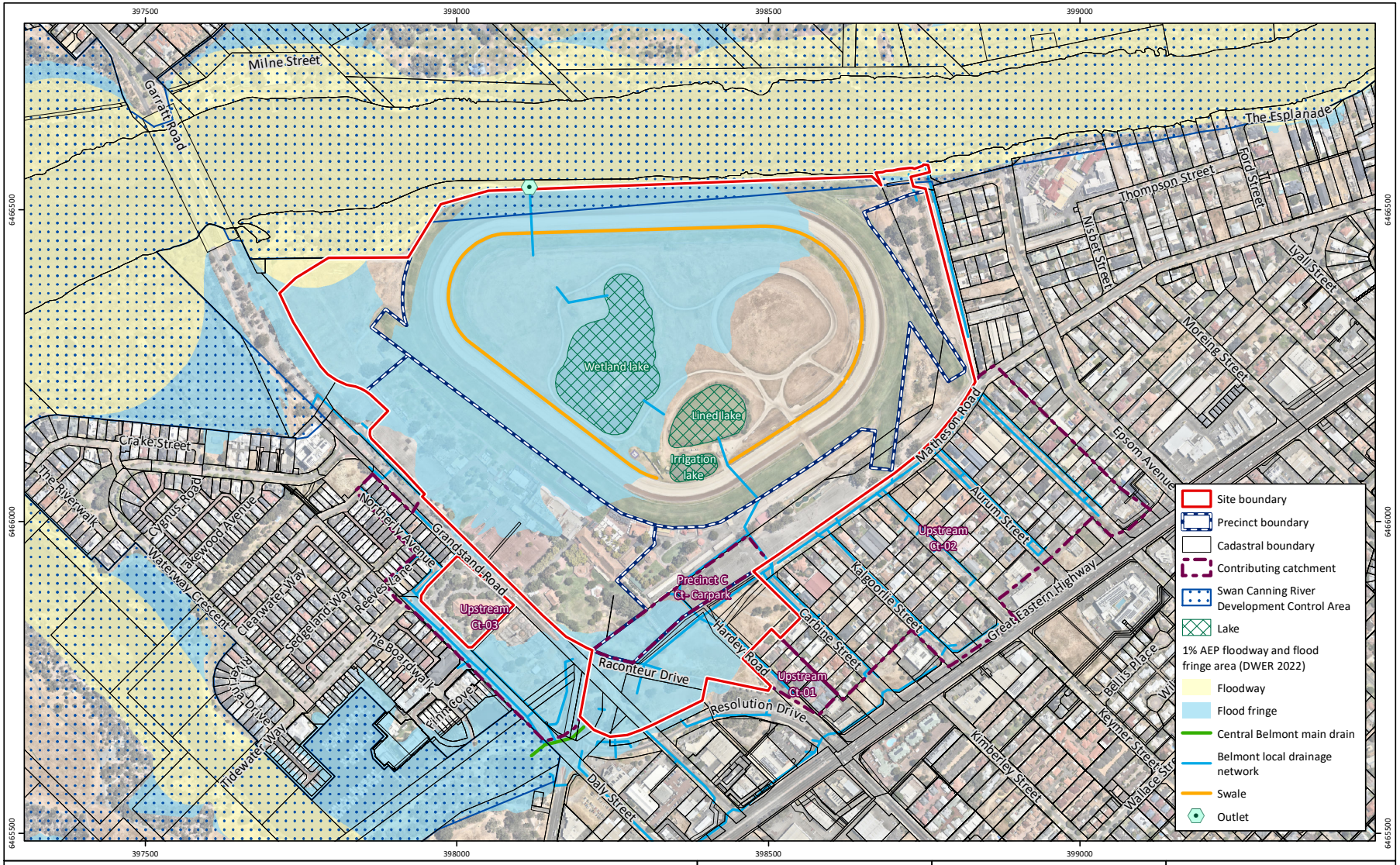



**Figure 6: Hydrological Features**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan
**Client:** Perth Racing

**Plan Number:** EP23-109(03)--F28
Drawn: WJC
Date: 26/04/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

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Metres
Scale: 1:8,000@A4
GDA2020 MGA Zone 50

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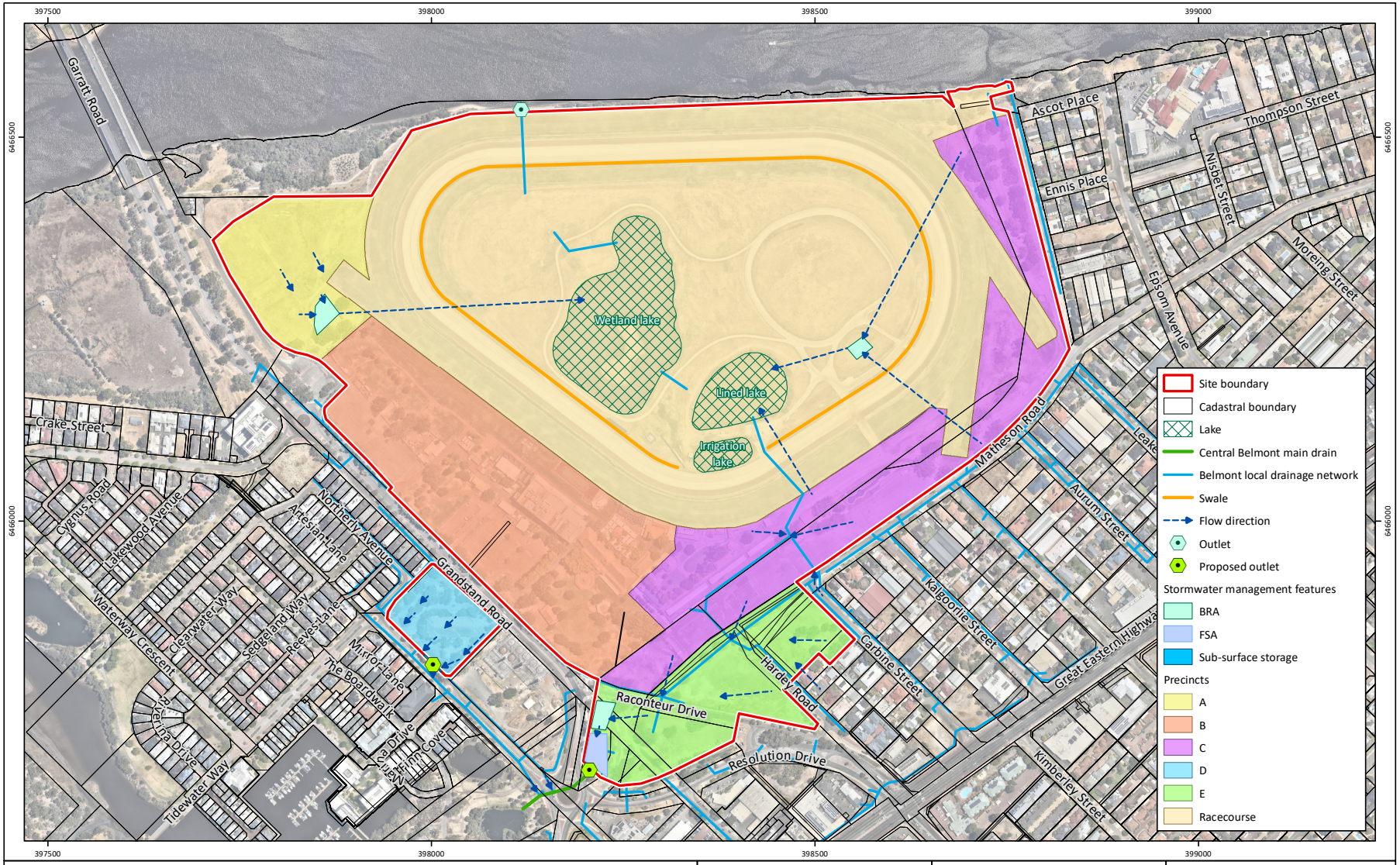



**Figure 7: Ascot LSP Precinct Plan**

| | |
|---|---|
| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:** EP23-109(03)--F29

| | |
|---|---|
| Drawn: | WJC |
| Date: | 01/05/2024 |
| Checked: | JM |
| Approved: | DPC |
| Date: | 17/05/2024 |

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Metres
Scale: 1:6,500@A4
GDA2020 MGA Zone 50

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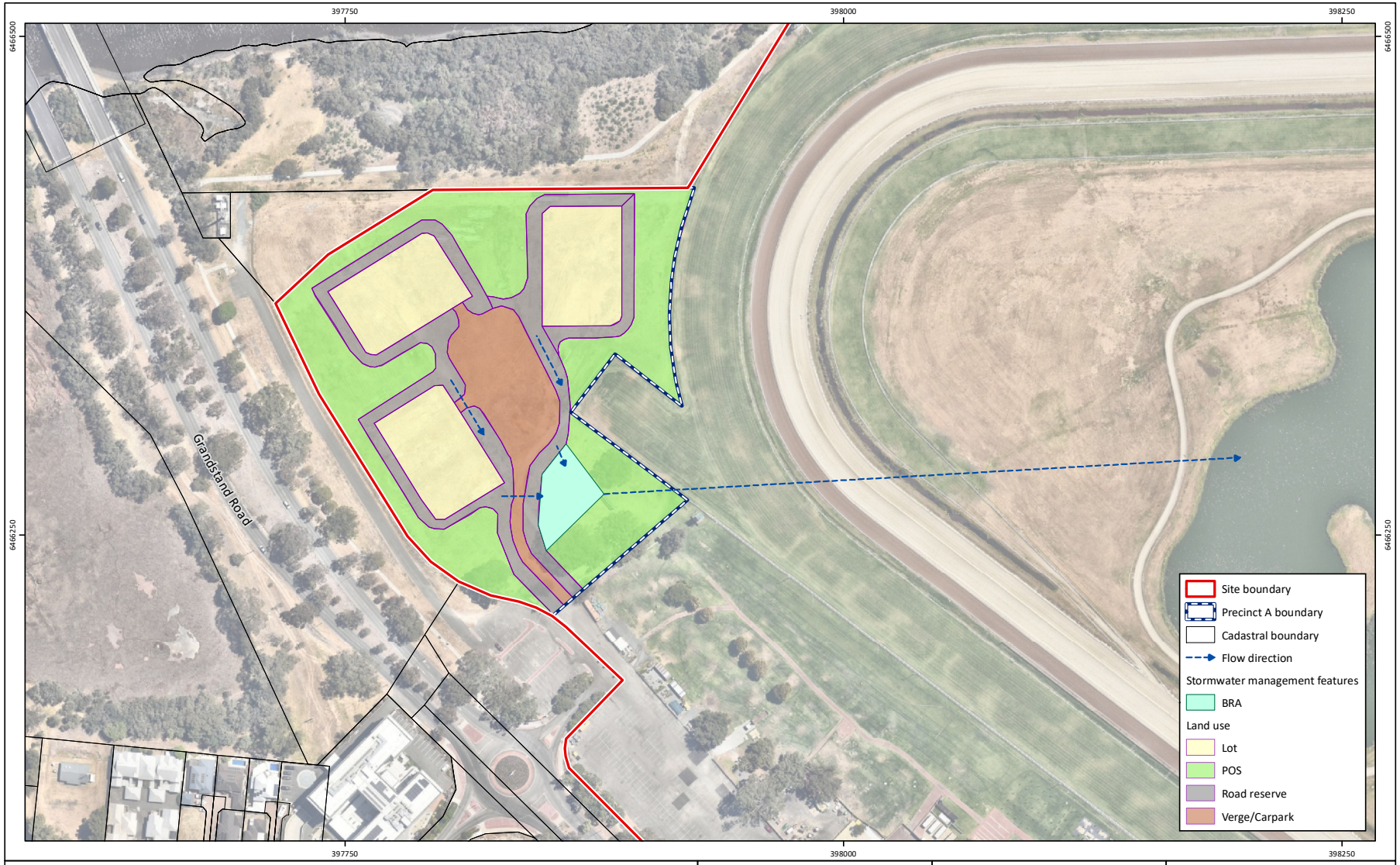



**Figure 7A: Precinct A Stormwater Management Plan**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan
**Client:** Perth Racing

**Plan Number:**
**EP23-109(03)--F32**
Drawn: WJC
Date: 01/05/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

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Metres
Scale: 1:2,500@A4
GDA2020 MGA Zone 50

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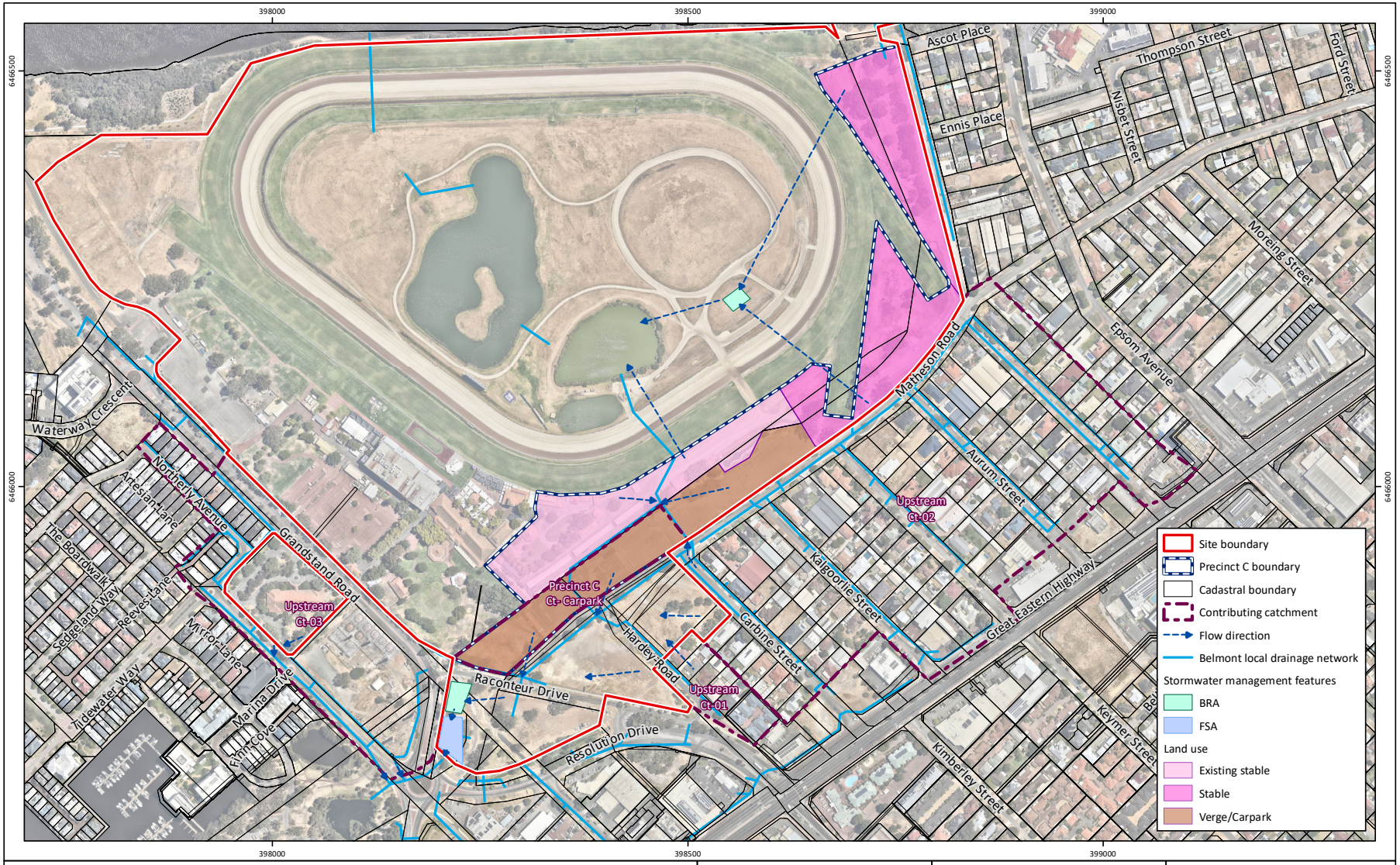



**Figure 7B: Precinct C Stormwater Management Plan**

**Project:** Local Water Management Plan
Golden Gateway Local Structure Plan
**Client:** Perth Racing

**Plan Number:** EP23-109(03)--F33
Drawn: WJC
Date: 01/05/2024
Checked: JM
Approved: DPC
Date: 17/05/2024

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0 100 200
Metres
Scale: 1:6,000@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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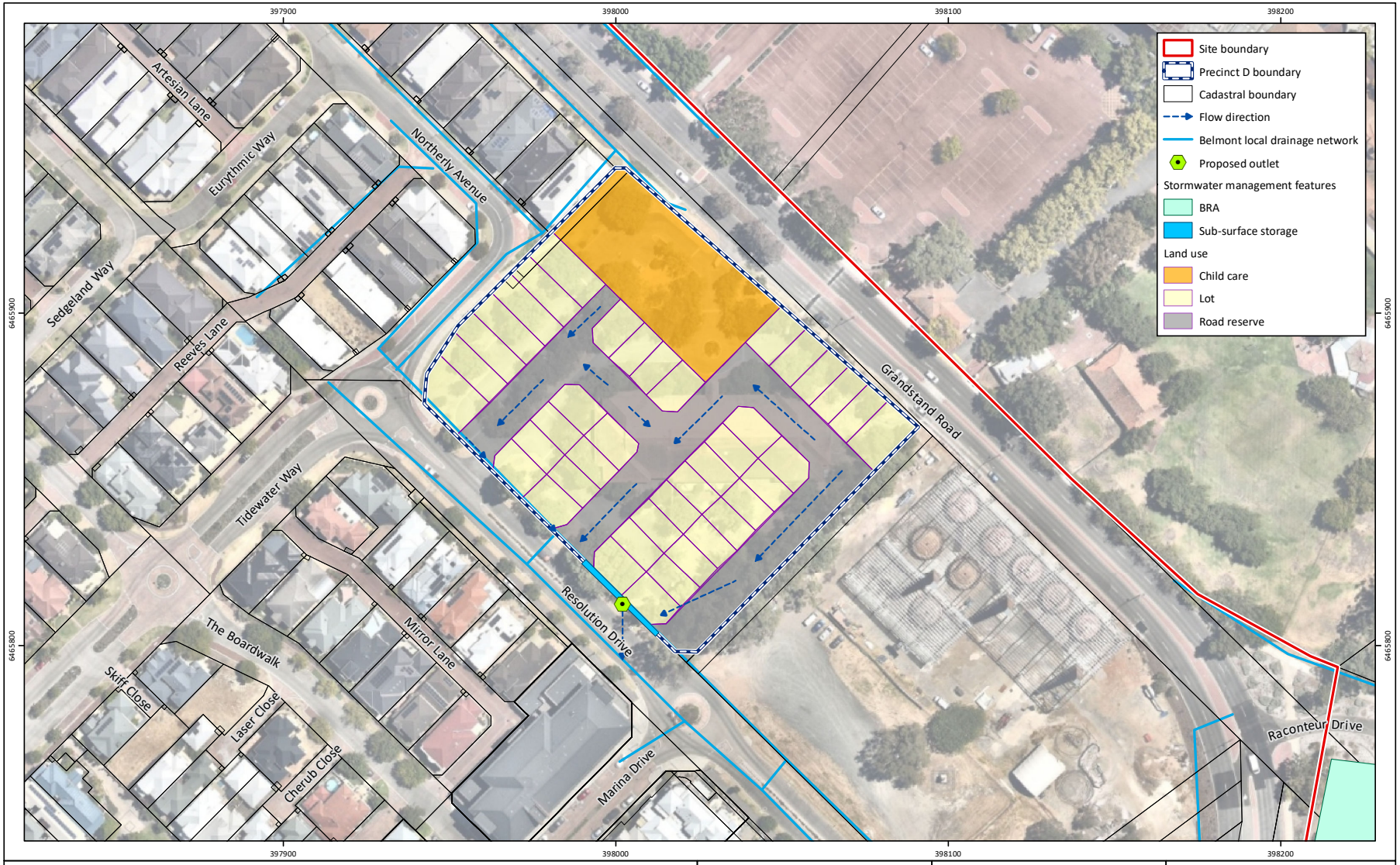



**Figure 7C: Precinct D Stormwater Management Plan**

| | |
|---|---|
| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(03)--F34**

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| Date: | 01/05/2024 |
| Checked: | JM |
| Approved: | DPC |
| Date: | 17/05/2024 |

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GDA2020 MGA Zone 50

emerge ASSOCIATES

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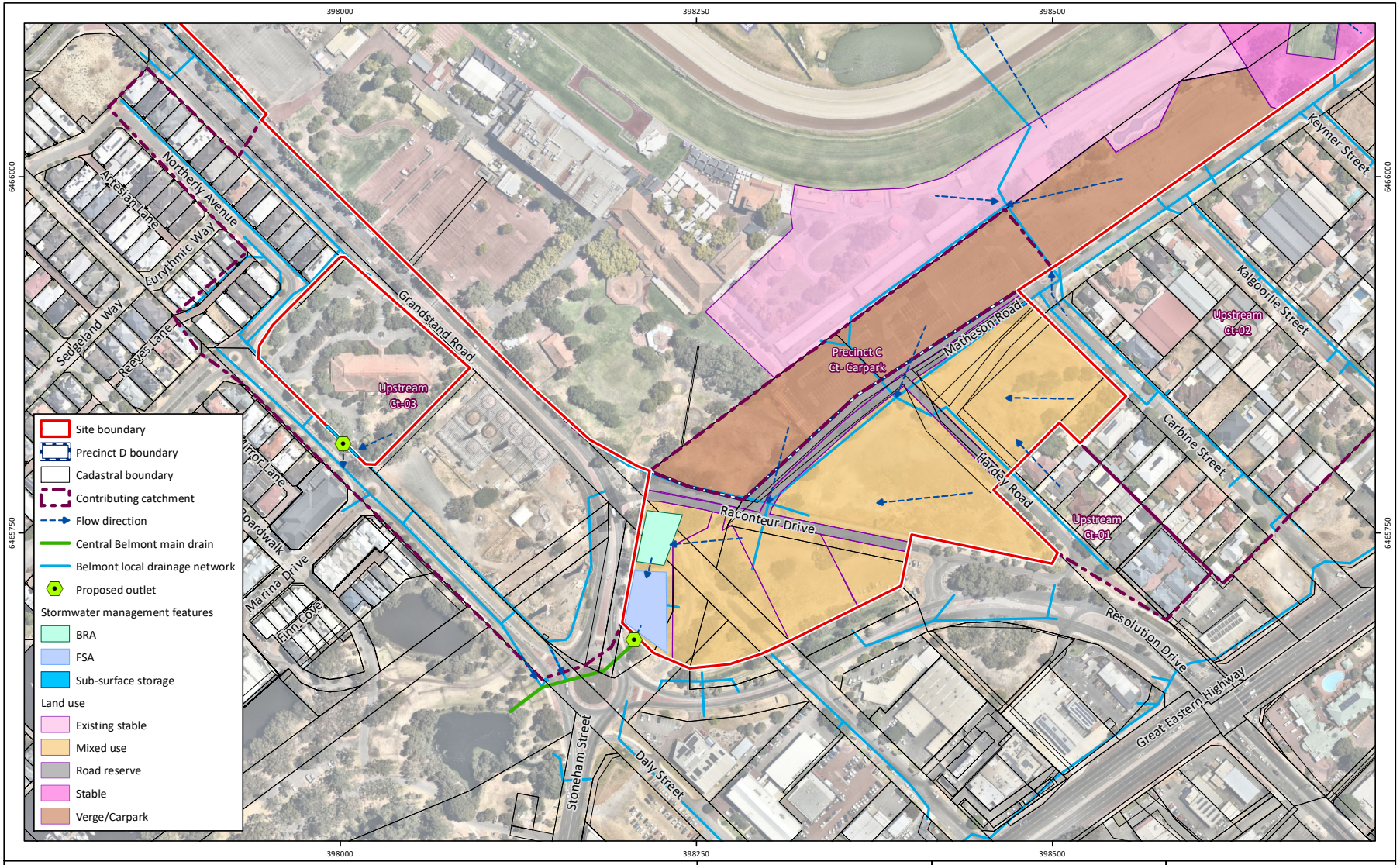



**Figure 7D: Precinct E Stormwater Management Plan**

| | |
|---|---|
| **Project:** | Local Water Management Plan<br>Golden Gateway Local Structure Plan |
| **Client:** | Perth Racing |

**Plan Number:**
**EP23-109(03)--F35**

| | |
|---|---|
| Drawn: | WJC |
| Date: | 01/05/2024 |
| Checked: | JM |
| Approved: | DPC |
| Date: | 17/05/2024 |

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GDA2020 MGA Zone 50

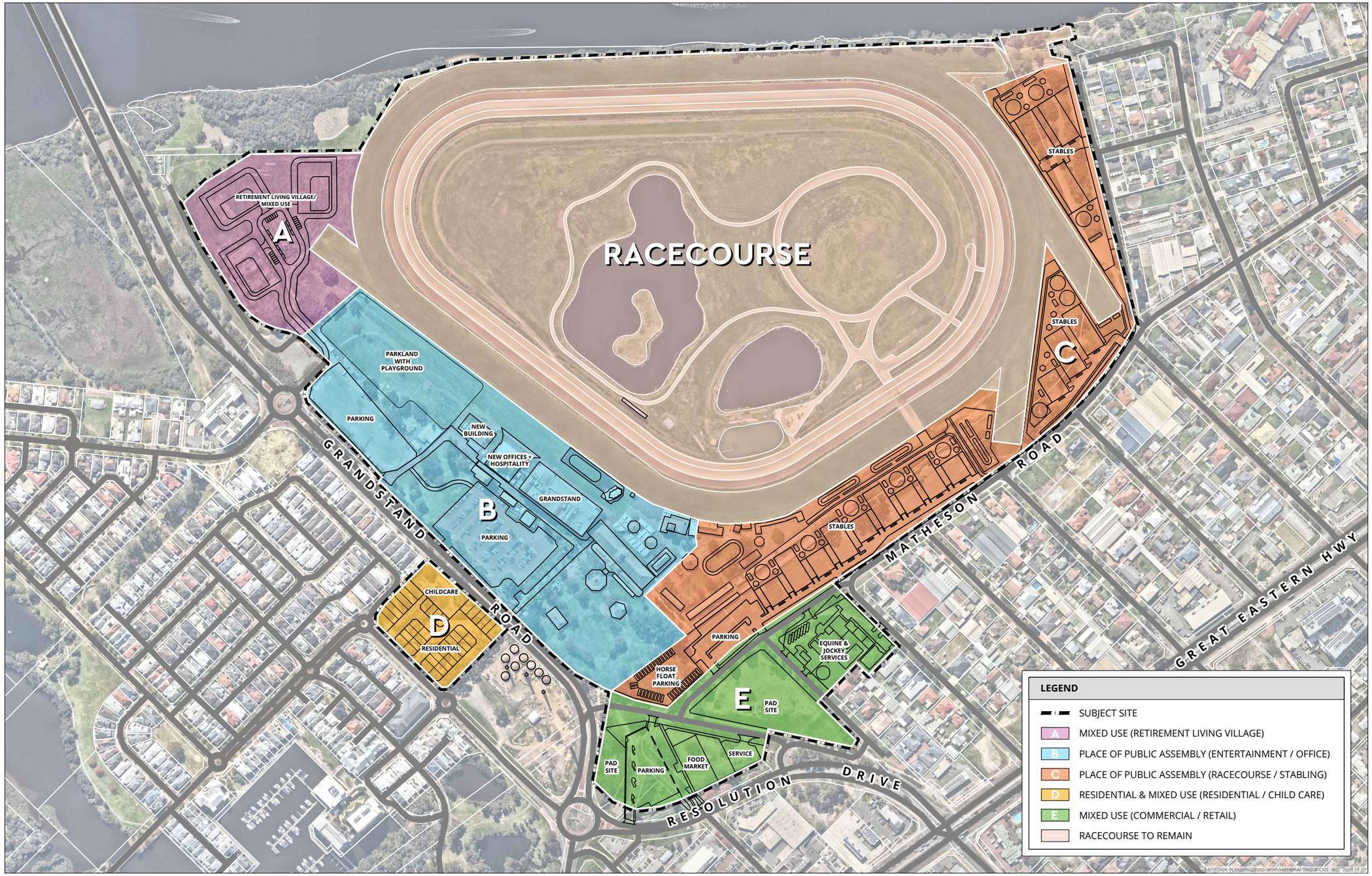
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# Appendix A

Concept plan

*ROWE Group Design (2023)*




**DRAFT MASTER PLAN CONCEPT**
VARIOUS LOTS - ASCOT RACECOURSE
ASCOT

DRAFT

N

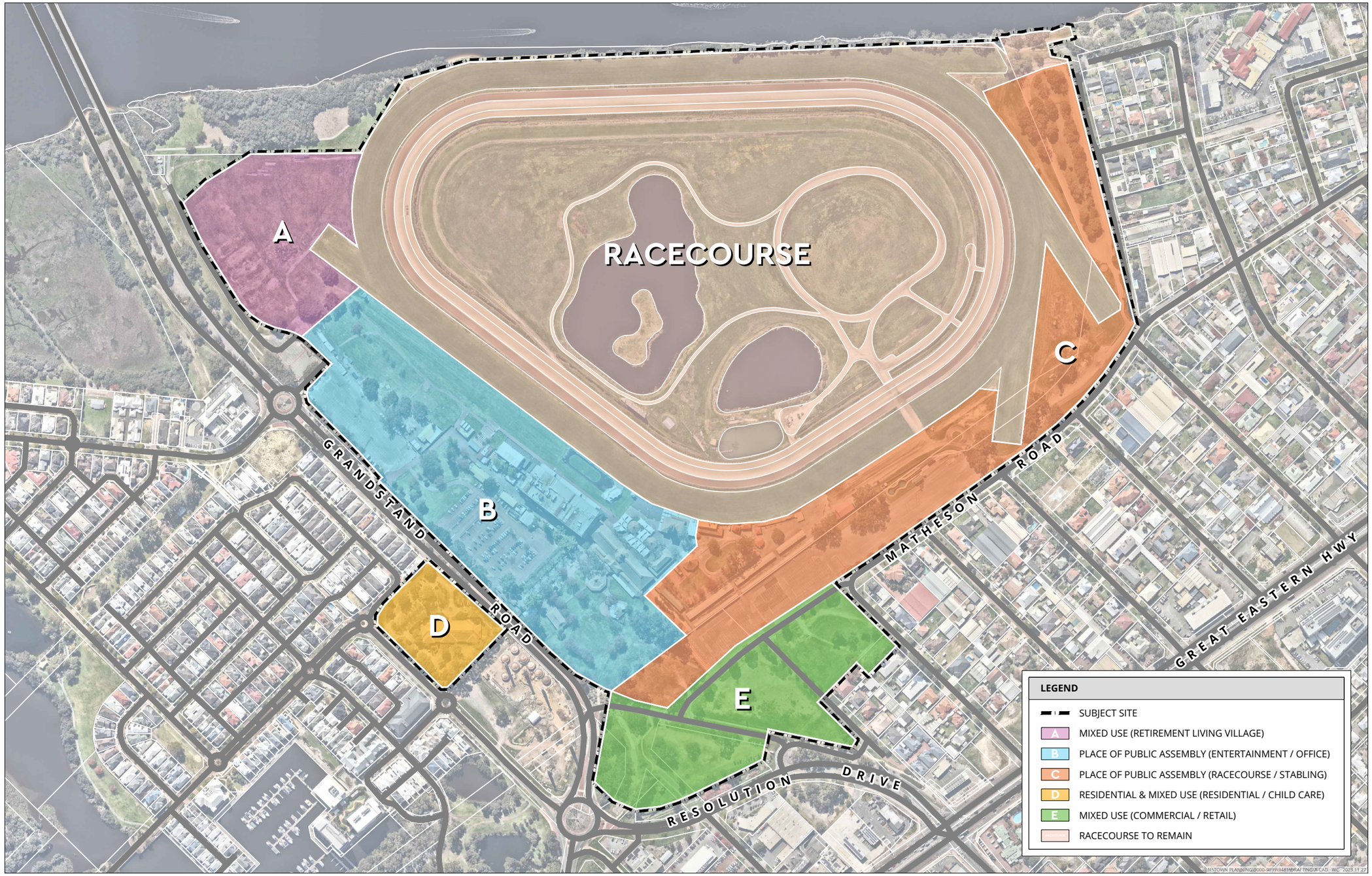
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**9481-CON-01-C**

DRAWN: WC
DATE CREATED: 2023.11.27
PROJECTION: MGA50 GDA94
CADASTRE: LANDGATE
AERIAL: NEARMAP 20230831

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ROWE GROUP DESIGN




**STRUCTURE PLAN PRECINCTS**
VARIOUS LOTS - ASCOT RACECOURSE
ASCOT

**DRAFT**

N

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SCALE @ A3: 1:4000

**9481-FIG-02-B**

DRAWN: WC
DATE CREATED: 2023.11.27
PROJECTION: MGA50 GDA94
CADASTRE: LANDGATE
AERIAL: NEARMAP 20230831

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ROWE GROUP DESIGN

# Appendix B

Geotechnical Reports

*Precinct A – Douglas Partners 2024*

*Precinct D – Galt 2024*

Douglas PARTNERS

GROUNDED EXPERTISE

# Report on Preliminary Geotechnical Investigation

## Proposed Residential Development

## Part of Lot 9002 Grandstand Road, Ascot WA

## Prepared for Perth Racing

**Project 219164.03**

**25 January 2024**

Douglas Partners Pty Ltd
ABN 75 053 980 117
douglaspartners.com.au
**36 O'Malley Street, Osborne Park,** WA 6017
**(08) 9204 3511**

## Document History Details

| | |
|---|---|
| **Project No.** | 219164.03 |
| **Document Title** | Report on Preliminary Geotechnical Investigation |
| **Site Address** | Part of Lot 9002 Grandstand Road, Ascot WA |
| **Report Prepared For** | Perth Racing |
| **Filename** | 219164.03.R.001.Rev0 |

## Status and Review

| Status | Prepared by | Reviewed by | Date issued |
|---|---|---|---|
| Revision 0 | Venkat Vallurapalli/Brendan Divilly | Frederic Verheyde | 25 January 2024 |

## Distribution of Copies

| Status | Issued to |
|---|---|
| Revision 0 | Perth Racing |

The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

| Signature | Date |
|---|---|
| **Author** | 25 January 2024 |
| **Reviewer** | 25 January 2024 |

FS604853

Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

Douglas PARTNERS | GROUNDED EXPERTISE

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**Appendix A:** About This Report

**Appendix B:** Test Location Plan

Test Pit and Borehole Logs

CPT Results

**Appendix C:** Geotechnical Laboratory Test Certificates

FS604853

Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

# Report on Preliminary Geotechnical Investigation
# Proposed Residential Development
# Part of Lot 9002 Grandstand Road, Ascot WA

## 1. Introduction

This report presents the results of a preliminary geotechnical investigation undertaken for a proposed residential development across Part of Lot 9002 Grandstand Road, Ascot WA. The investigation was commissioned by Mr. James Oldring of Perth Racing in a signed order to proceed dated 8 August 2023 and was undertaken in accordance with Douglas' proposal dated 8 May 2023.

It is understood that Perth Racing is evaluating the feasibility of developing the northwest portion of Lot 9002 for possible residential use (the 'site').

The objective of the investigation is to assess the subsurface soil and groundwater conditions at across the site to provide preliminary comments on:

- The geotechnical suitability of the site for the proposed development.
- Geotechnical opportunities and constraints relevant to the proposed development.
- Areas of foundation risk including the presence of aggressive soils and strategies to address identified risks.
- Site preparation, including the possible reuse of existing soil as controlled fill.
- Excavation conditions.
- The likely site classification in accordance with the requirements of AS 2870-2011.
- Appropriate earthquake design factor for the site, in accordance with AS 1170.4-2007.
- Suitable foundation systems, including preliminary design parameters.
- Preliminary design parameters for the design of retaining structures and batter slopes.
- Depth to groundwater at the time of the investigation.
- Recommendations on additional geotechnical investigation at detailed design phase or to address specific ground conditions encountered.

The investigation included eight cone penetration tests, 16 test pits and one borehole excavated and drilled as a part of detailed site investigation (for contamination), and laboratory testing of selected samples. The details of the field work are presented in this report, together with comments and recommendations on the items listed above.

The investigation was conducted concurrently with a detailed site investigation (for contamination), which has been reported under separate cover (219164.01.R.001.Rev0). The detailed site investigation (for contamination) report should be read in conjunction with this report.

## 2. Site Description

The site comprises an irregular shaped area, approximately 36.2 ha in size, that covers a part of Lot 9002 Grandstand Road, within the Ascot Racecourse.

At the time of the field work, the majority of the site was vacant and vegetated with short grass. A few mature trees, about 5 m to 10 m in height, occupied the southern part of the site. A parking lot and small loading area were located at the south-western corner of the site. Some fly-tipped rubbish, including fences and posts, were observed at several locations across the site.

According to publicly available LiDAR data (DEM derived to 5 m), the topography across Lot 9002 is relatively flat with existing surface levels ranging from approximately RL 2 m relative to the Australian Height Datum (AHD) in the western part of the site to RL 3.5 in the north-eastern corner of the site.

The Perth 1: 50 000 Environmental Geology sheet indicates that shallow sub surface conditions beneath the western two thirds of the site comprise sandy silt of the Guildford Formation, and beneath the north-eastern corner and eastern corner of the site comprise alluvium.

The Perth Groundwater Atlas (2004) indicates that in May 2003, the groundwater level beneath the site was less than RL 1 m, or between approximately 1.0 m and 2.5 m below the existing surface level. The Atlas also indicates that the groundwater flow direction beneath the site in May 2003 was approximately northwest towards the Swan River.

The published acid sulfate soil risk mapping indicates that the site is located within an area which is mapped as "*high to moderate risk of acid sulfate soils occurring within 3 m of natural soil surface*".

## 3. Field Work Methods

Field work for the investigation was carried out between 11 October and 9 November 2023 and comprised:

- The excavation of 16 test pits.
- The drilling of one borehole.
- Perth sand penetrometer (PSP) or Dynamic cone penetrometer (DCP) testing adjacent to each test pit or borehole location.
- The performance of cone penetration tests at 8 locations (CPT24 to CPT31A). A total of 14 CPTs were undertaken after repeating CPTs at some locations in attempt to achieve greater testing depth following shallow refusal in uncontrolled fill.

The test pits (locations 7 to 22) were excavated using a 5-tonne excavator, equipped with 450 mm toothed bucket, and the borehole (location 23) was drilled using a 250 mm diameter power auger attached to the same excavator. The ground conditions at each test pit and borehole were logged in accordance with Australian Standard (AS 1726, 2017) by a geo-environmental engineer from Douglas. Soil samples were recovered from selected locations for subsequent laboratory testing.

Dynamic cone penetrometer (DCP) and Perth sand penetrometer (PSP) tests were undertaken adjacent to the test pit and borehole locations in accordance with Australian Standards (AS 1289.6.3.3, 1997; AS 1289.6.3.2, 1997) to assess the in-situ density of the shallow soils.

The CPTs use a 36 mm diameter instrumented cone with a following 130 mm long friction sleeve attached to rods of the same diameter, pushed continuously at a rate of 20 mm/sec into the soil by hydraulic thrust from a truck rig. Strain gauges in the cone and sleeve measure resistance to penetration and friction along the sleeve during penetration. This data is recorded on a computer and analysed to assess the type, properties and condition of the materials penetrated. The CPT's were pushed to termination depths of up to 20.2 m. Upon withdrawing the CPT probe, each test hole was dipped in an attempt to measure groundwater levels. CPTs were repeated at several test locations to attempt achieving greater testing depth following shallow CPT refusal on inferred hard foreign inclusions in the uncontrolled fill.

Test locations were determined using a handheld GPS and site features and are marked on Drawing 1, Appendix B. Surface elevations were recorded using a differential GPS with a reported accuracy of 0.1 m.

## 4. Field Work Results

### 4.1 Ground Conditions

The logs of the ground conditions and results of the field testing are presented in Appendix B, together with notes defining descriptive terms and classification methods, in Appendix A.

- **Uncontrolled FILL**
    - **Granular FILL - SAND, Organic SAND, Gravelly SAND, Silty SAND and Sandy GRAVEL (SP, SP-SM, SM and GP-GM)** – generally sandy fill (or gravelly material associated with pavement layers at location 23), uncontrolled (apart from the pavement layers), from surface to depths of between 0.6 m and 3.6 m depth, encountered at all locations. A layer of organic sandy fill layer was observed between 1.4 m and 1.8 m depth at location TP8. The sandy fill was generally loose to medium.
    - **Cohesive FILL - Clayey SAND, Sandy CLAY, CLAY (SM, SC, CI and CL-CI)** – generally stiff to very stiff, either underlying the aforementioned sandy fill material or interbedded within layers of sandy fill, encountered at test pit locations 9, 20, 21, 23, and CPT locations 24, 24A, 29 and 29A.

  A considerable amount of foreign inclusions such as fragments of brick, glass, timber, geo-fabric, concrete, plastic, rubber, scrap metal, terracotta pipes, redundant cables and PACMs were observed at all test pit locations, except location 22. A layer of asphalt was encountered at 0.95 m depth at TP9. The fill materials across the site are uncontrolled.

  It is noted that the fill extended below groundwater level at many locations.

Overlying natural soils including:

- **Clayey soils including Clayey SAND and CLAY** – ranging between very soft to soft and stiff to very stiff, encountered under the fill materials at CPTs 25, 30 and 31A to depths between 4.2 m and 14.9 m.
- **Sandy soils including SAND and Silty SAND** – underlying and interbedded within the above clayey soils at CPTs 25, 30 and 31A. The sand was generally very loose and loose to medium dense to depths between 10.5 m and 14.9 m, becoming medium dense and dense below.

### 4.2 Groundwater

Groundwater level observations between 18 September and 9 November 2023 are summarised in Table 1 and are shown on the logs in Appendix B.

The test holes were immediately backfilled following sampling, which precluded longer-term monitoring of groundwater levels. Six monitoring wells (MW01 to MW06) were installed as part of the preliminary environmental investigation (reported separately) and groundwater observations available from these wells at the time of report writing have been included in Table 1.

**Table 1: Summary of Groundwater Levels**

| Location | Date of Measurement | Ground Surface Level [1] (m AHD) | Groundwater Depth (m) | Groundwater Level [2] (RL m AHD) |
|---|---|---|---|---|
| MW01 | 18 September 2023 | 1.9 | 1.30 | 0.6 |
| MW02 | | 2.0 | 1.46 | 0.5 |
| MW03 | | 3.2 | 2.37 | 0.8 |
| MW04 | | 2.4 | 1.59 | 0.8 |
| MW05 | | 2.5 | 1.21 | 1.3 |
| MW06 | | 2.2 | 1.09 | 1.1 |
| TP7 | 9 November 2023 | 2.9 | 2.30 | 0.6 |
| TP9 | | 2.1 | 2.10 | 0.0 |
| TP12 | | 2.1 | 2.10 | 0.0 |
| TP13 | | 2.8 | 2.50 | 0.3 |
| TP15 | | 2.2 | 2.40 | -0.2 |
| TP16 | | 2.6 | 2.50 | -0.1 |
| TP17 | | 2.2 | 2.10 | 0.1 |
| TP19 | | 2.2 | 1.80 | 0..4 |
| TP20 | | 2.0 | 2.10 | -0.1 |
| TP21 | | 2.1 | 1.80 | 0.3 |
| TP22 | | 2.3 | 1.80 | 0.5 |
| BH23 | | 2.4 | 1.70 | 0.7 |
| CPT25 | 11 October 2023 | 3.4 | 3.00 | 0.4 |
| CPT28 | | 1.9 | 1.30 | 0.6 |
| CPT29A | | 2.3 | 2.20 | 0.1 |
| CPT30 | | 3.2 | 2.80 | 0.4 |
| CPT31A | | 2.1 | 2.00 | 0.1 |

Notes for Table 1: [1]: Surface level measured using a differential GPS.
[2]: Groundwater Level = Surface Level – Groundwater Depth.

It should be noted that groundwater levels are affected by climatic conditions and land usage and will therefore vary with time. In addition, owing to the proximity of the Swan River, the groundwater levels are expected to be impacted by the tidal river conditions and river flood levels.

## 5. Laboratory Testing

A geotechnical laboratory testing programme was carried out by a NATA accredited laboratory and comprised:

- the particle size distributions on seven samples;
- the Atterberg Limits and linear shrinkage on three samples; and
- the organic content on four samples.

Results of the laboratory testing are summarised in Tables 2. The test certificates are presented in Appendix C.

**Table 2: Results of Laboratory Testing for Soil Identification**

| Location | Depth (m) | Fines (%) | Sand (%) | Gravel (%) | LL (%) | PL (%) | PI (%) | LS (%) | OC (%) | Material |
|---|---|---|---|---|---|---|---|---|---|---|
| TP8 | 1.5 | 9 | 61 | 30 | - | - | - | - | 6.8 | FILL / Organic SAND SP-SM, with gravel and silt |
| TP13 | 1.5 | 4 | 95 | 1 | - | - | - | - | 1.6 | FILL / SAND SP, trace gravel and silt |
| TP19 | 2.5 | 5 | 83 | 12 | - | - | - | - | 1.5 | FILL / SAND SP, trace gravel and silt |
| TP21 | 2.0 | 40 | 51 | 9 | 37 | 24 | 13 | 8.5 | - | Sandy CLAY CI, medium plasticity, trace gravel |
| TP22 | 2.0 | 7 | 93 | 0 | NO | NP | NP | - | - | SAND SP-SM, with silt |
| TP23 | 2.0 | 45 | 48 | 7 | 44 | 22 | 22 | 9.5 | - | FILL / Sandy CLAY CI, medium plasticity, trace gravel |
| TP23 | 2.5 | 12 | 87 | 1 | - | - | - | - | 1.2 | FILL / SAND SP-SM, with silt, trace gravel |

Notes: Fines = Finer than 75 µm.
Sand = Between 2.36 mm and 75 µm.
Gravel = Larger than 2.36 mm.
LL – liquid limit PL – plastic limit PI – plasticity index LS – linear shrinkage
OC – organic content NO – not obtainable NP – non plastic

## 6. Proposed Development

At the time of preparing this report, the details for the proposed development were not yet available. Notwithstanding, it is understood that the proposed development is likely to be residential and, given the location, is presumed would likely be multistorey and possibly include a basement level.

## 7. Comments

### 7.1 Site Suitability

The investigation indicates that the site is generally underlain by uncontrolled fill overlying very soft to stiff clayey materials and very loose sandy soils becoming medium dense and dense with depth as described in Section 4.1 above.

From a geotechnical standpoint, there are several significant geotechnical constraints that will adversely impact on any development of the site including;

- Deep uncontrolled fill, unsuitable to support shallow foundations, and will impact on construction activities associated with deep piled foundations.
- Deep very soft and very loose natural soils under the uncontrolled fill, unsuitable to support shallow foundations.
- Shallow groundwater which will make earthworks across the site any possible remediation works of the above difficult. It should be noted that the abovementioned uncontrolled fill and soft soils both extend below groundwater.

Owing to the significant geotechnical constraints, any possible development will likely require a piled foundation solution into the medium dense and dense sandy soils, encountered below depths of approximately 10 m to 15 m. Additional geotechnical investigation will be required to confirm the foundation design and suitable pile design parameters. Also, noting that any proposed additional loading of the ground (for instance from the placement of fill to raise site levels, if proposed) would generate further consolidation of the soft soils underlying the site and cold result in some possible significant ground settlement. Therefore, surcharging areas (by placing temporary fill prior to construction of any structure) outside the proposed building envelopes might also be required during the site preparation to manage the risk of differential settlements between proposed buildings and adjacent ground, following their construction.

### 7.2 Site Classification

The shallow ground conditions beneath the site comprise uncontrolled fill materials and deep loose and soft soil deposits. Based on the results of the investigation and in accordance with Australian Standard (AS 2870, 2011), a site classification of 'Class P' applies to the site, owing to the presence of the uncontrolled fill and deep loose and soft soil.

### 7.3 Site Seismic Classification

Owing to the uncontrolled fill and deep very loose and very soft soil deposits across the site, an earthquake design soil sub-class of Ee is considered appropriate for this site in accordance with Australian Standard (AS 1170.4, 2007). The Hazard Factor (Z) for the site is 0.09, according to Australian Standard (AS 1170.4, 2007). Due to the deep loose soil below the water table, the site also has a significant potential for liquefaction. An assessment on the liquefaction potential of the site should be considered during any detailed investigation, when more details can be collected on the extent of deep loose soils.

### 7.4 Excavation Conditions

The encountered ground conditions generally comprise uncontrolled fill, with some large foreign inclusions within the fill, extending below groundwater. Conventional earthmoving equipment (such as large excavators, say at least 20 t) should be generally suitable for shallow excavations in the surficial uncontrolled fill. Shallow groundwater is likely to impact excavations across the site.

The majority of the uncontrolled fill encountered during this preliminary investigation is considered to be geotechnically unsuitable for re-use as structural fill in its current condition. Any further consideration to reuse the uncontrolled fill would require some specific geotechnical provisions, such as screening and disposing its unsuitable components. Separating the re-useable granular components (e.g. the sandy fill) from its cohesive components (e.g. clayey fill) might also prove to be practically difficult. Owing to the significant variability of uncontrolled fill materials across the site, any re-use potential from a geotechnical standpoint should be confirmed on-site by a geotechnical engineer. Some environmental considerations (i.e. contamination) are also anticipated to be required. Overall, at this stage of the study, the reuse of the encountered uncontrolled fill should be considered to be associated with some significant constraints that might preclude such reuse.

### 7.5 Slope Stability

During construction, it is recommended that temporary batter slopes across the site are maintained flatter than 2:1 (H:V) if not retained. This batter angle is valid provided no surcharge loads (including live loads such as vehicles and machinery) apply at the top of the slope. In uncontrolled fill materials, a safe batter angler not steeper than 3:1 (H:V) is recommended for design for slopes not greater than 3 m in height, however, owing to variability of the uncontrolled fill materials, this value should be adjusted during construction based on the encountered conditions.

The design of unpropped flexible or rigid walls should be undertaken using a triangular pressure distribution and the earth pressure parameters given in Table 4. In addition to the soil pressure, wall design should also allow for external loads such as buildings, live loads and hydrostatic pressure. Owing to the likely significant settlements associated with the uncontrolled fill and deep soft soils, the requirement to adopt a piles foundation system to support proposed retaining walls is anticipated.

**Table 4: Preliminary Soil Parameters for Earth Retaining Design**

| Soil Type and Density | Soil Unit Weight Above Water<br>$\gamma$<br>(kN/m$^3$) | Submerged Soil Unit Weight<br>$\gamma'$<br>(kN/m$^3$) | Drained Angle of Friction<br>$\Phi'$<br>(°) | Undrained Shear Strength<br>Cu<br>(kPa) | Coefficient of Earth Pressure – Active<br>$K_a$ | Coefficient of Earth Pressure – Passive<br>$K_p$ | Coefficient of Earth Pressure – at Rest<br>$K_o$ |
|---|---|---|---|---|---|---|---|
| Uncontrolled Fill Materials | 16 | 6 | 28 | - | 0.36 | 2.7 | 0.5 |

It should be noted that the passive earth pressure coefficient (second last column of Table 4) is an ultimate value and does not incorporate a factor of safety. Because the stress-strain relationship curve for lateral loading is not linear, relatively large strains are required to mobilise full passive pressure, but only relatively small strains are required to mobilise half the passive pressure, therefore it would be prudent to incorporate a factor of safety of at least 2 for uncontrolled fill materials, to derive design values from the ultimate values.

## 7.6 Foundation Options

Shallow footings are not considered suitable across this site, owing to the significant thickness of uncontrolled fill and deep loose and soft soils.

### 7.6.1 Piles

It is anticipated that a piled foundation system, with deep bored piles that penetrate the deep loose and soft soils into the medium dense and dense sandy soils at depth, would likely be required for any foundations on-site.

Bored piles will require temporary or permanent casing throughout the uncontrolled fill materials, noting that possible obstructions within the uncontrolled might cause some difficulties when driving the casing or drilling the pile hole. This pile type will involve soil excavation to target founding level and hence would produce spoil that needs to be handled and disposed of in a suitable manner, which will need to also be considered from an environmental standpoint.

Installation through the uncontrolled fill materials could be affected by the possible presence of large, hard inclusions and the design of the pile installation methodology should take this possibility into consideration.

The settlement of the uncontrolled fill will exert negative skin friction on the piles, which the piles will need to be designed to accommodate or be constructed in sleeves.

Additional deep geotechnical boreholes will be required across the site to inform on the pile design.

### 7.6.1 Controlled Modulus Columns

Controlled modulus columns could be installed as an alternative to conventional pile foundations, allowing shallow footings to be used whilst controlling settlements to acceptable limits.

Installation of controlled modulus columns involves displacing a column of material using a reverse flight auger, densifying the soil around the auger, and backfilling the resulting hole with cement ground under moderate pressure to create a 'hard' inclusion in the ground. The columns are typically 250 mm to 500 mm in diameter. Column spacings of columns typically 1.8 m to 2.5 m but would need input from a specialist ground improvement contractor. Columns can be installed to depths of up to 50 m, so could penetrate to the base of the uncontrolled fill and deep loose and soft soils. However, if large hard inclusions such as concrete slabs or beams, are encountered then the auger may experience refusal, as the CPTs did at several locations during the preliminary geotechnical investigation.

A load transfer platform, such as a granular, well compacted fill layer, possibly reinforced with geogrid or geotextile, would be needed to transfer loads from shallow foundations to the columns.

One main benefit of this ground improvement option (compared to piling) would be to minimise differential settlement across the site and notably between buildings and surrounding grounds. However, it would likely be limited to low level development (say 2 to 3 level buildings), and this option is anticipated to likely be prohibitively expensive, with likely significant mobilisation and installation costs. The advice of a specialist ground improvement contractor, such as Menard Oceania, is suggested to be sought to further assess the suitability of this ground improvement to the proposed development.

### 7.7 Pavement Construction

The uncontrolled fill across the site does not form a suitable subgrade material for pavement in its current condition. Depending on the expected loading of proposed pavement, the requirement for some over-excavation of uncontrolled fill is likely. Construction should involve the use of a geo-composite layer (such as Global Synthetics' Combigrid) across the base of the over-excavation, overlain by a 500 mm thick layer of compacted crushed limestone, placement of a layer of geogrid (such as Global Synthetics' Secugrid), and a further 500 mm of compacted sand fill. The base of the constructed floating pavement footprint should be at least 2 m wider on each side than the total pavement width (4 m wider in total) to account for a suitable batter and transfer of load. Standard flexible pavements could then be constructed on the 1 m thick raft of stiffened subgrade. Placement of the initial base layer of composite geogrid may be difficult across areas of exposed uncontrolled fill. As such, depending on the site conditions, a 300 mm thick capping layer of clean fill may be required.

Regardless of the above site preparation, some settlement of the pavement should be expected over its service life and should be considered in the selection of the pavement surfacing. The use of pavers should be considered as such surfacing treatment would deform without cracking. Alternatively, a bituminous seal should be preferred over say an asphalt, owing to greater flexibility and to decrease maintenance and repair requirements, noting however that seals are less resistant than asphalt to shearing forces from tyres of turning heavy vehicles. The use a specialised asphalt, such as a stone mastic asphalt, could also be considered, noting it would be less resistant to the risk of cracking than a seal. Some allowance for regular maintenance and repairs should be allowed during the serviceability of the pavement.

### 7.8 Stormwater Drainage

Owing to the occurrence of low permeability soils and groundwater at shallow depth, the site is considered unsuitable for on-site stormwater disposal. It is suggested that stormwater is controlled using positive drainage or a subsoil drainage network, connected to a suitable outflow.

### 7.9 Additional Geotechnical Investigation

Additional geotechnical investigation across the site, by way of deep geotechnical boreholes (as a minimum), further CPT and additional laboratory testing, should be undertaken to help refine the ground model, provide pile design parameters, confirm suitable bearing strata for piles, and assess the soil aggressivity and exposure classification for piles. It is recommended that the detailed investigation programme be developed once some details of the proposed development

are known, if possible, in order to target specific geotechnical issues associated with the development.

The investigation covered in this report should be considered preliminary and as noted in selected sections of the report, additional detailed geotechnical testing at a greater testing frequency is anticipated once the project design has progressed.

## 8. References

AS 1170.4. (2007). *Structural Design Actions, Part 4: Earthquake Actions in Australia.* Reconfirmed 2018. Incorporating Amendments 1 & 2: Standards Australia.

AS 1289.6.3.2. (1997). *Methods for testing soils for engineering purposes - Soil strength and consolidation tests - Determination of the penetration resistance of a soil - 9kg dynamic cone penetrometer test.* Reconfirmed 2013: Standards Australia.

AS 1289.6.3.3. (1997). *Methods for testing soils for engineering purposes - Soil strength and consolidation tests - Determination of the penetration resistance of a soil - Perth sand penetrometer test.* Reconfimed 2013: Standards Australia.

AS 1726. (2017). *Geotechnical Site Investigations.* Standards Australia.

AS 2159. (2009). *Piling - Design and Installation.* Standards Australia.

AS 2870. (2011). *Residential Slabs and Footings.* Standards Australia.

## 9. Limitations

Douglas Partners (DP) has prepared this report for this project at Part of Lot 9002 Grandstand Road, Ascot WA in accordance with DP's proposal dated 8 May 2023 and acceptance received from Mr James Oldring in a signed services order dated 8 August 2023. The work was carried out under DP's Engagement Terms. This report is provided for the exclusive use of Perth Racing for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the geotechnical components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

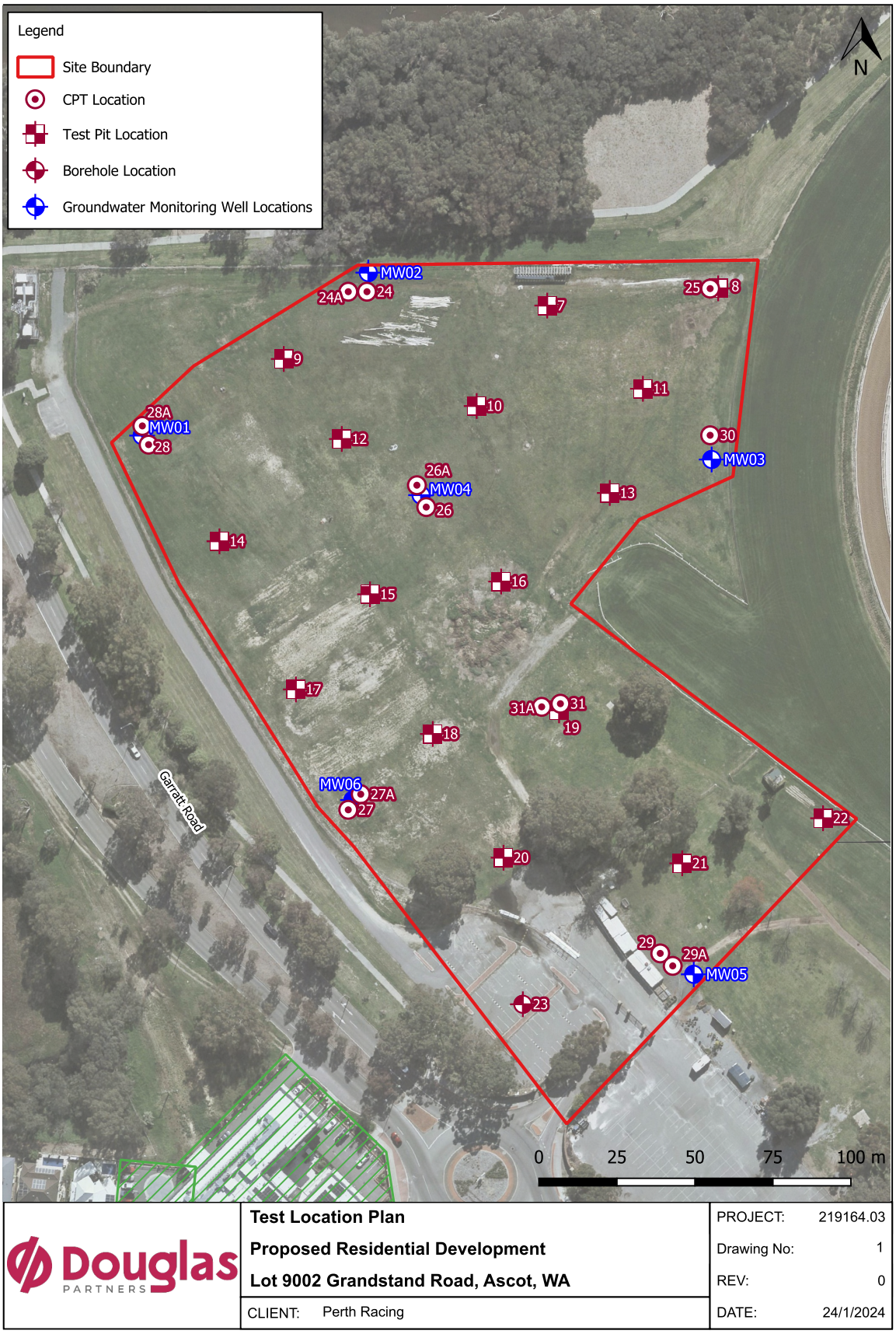
The scope of work for this investigation/report did not include the assessment of surface or sub-surface materials or groundwater for contaminants, within or adjacent to the site. Should evidence of fill of unknown origin be noted in the report, and in particular the presence of building demolition materials, it should be recognised that there may be some risk that such fill may contain contaminants and hazardous building materials.

**Appendix B**

Test Location Plan

Test Pit and Borehole Logs

CPT Results


Legend
Site Boundary
CPT Location
Test Pit Location
Borehole Location
Groundwater Monitoring Well Locations
N
MW02
24A
24
25
8
7
9
11
10
28A
MW01
28
12
30
MW03
26A
MW04
26
13
14
16
15
17
31A
31
19
18
MW06
27A
27
Garratt Road
22
20
21
29
29A
MW05
23
0
25
50
75
100 m
Douglas
PARTNERS
Test Location Plan
Proposed Residential Development
Lot 9002 Grandstand Road, Ascot, WA
CLIENT: Perth Racing
PROJECT: 219164.03
Drawing No: 1
REV: 0
DATE: 24/1/2024

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 1.9 AHD
**COORDINATE:** E:397722.0, N:6466365.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 01
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) / DENSITY.(*) | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | TESTING AND REMARKS: RESULTS AND REMARKS | BACKFILL | WELL PIPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ground Water Measured at 1.3 m 18/09/23 | 1.9 | 0.00 | FILL / SAND (SP-SM), with silt, trace rootlets: grey-brown; fine to medium; poorly graded. | | FILL | | M | | ASS | 0.50 | 0.50 | | | Bentonite Concrete; Gravel backfill; 50mm Class 18 | 50mm Class 18 |
| | | 0.40 | FILL / SAND (SP-SM), with silt, trace rootlets: grey - brown; fine to medium. | | FILL | | | | ASS | 1.00 | 1.00 | | | | |
| | | 1.00 | | | | | | | ASS | 1.50 | 1.50 | | | | |
| | | 2.00 | | | | | | | ASS | 2.00 | 2.00 | | | | |
| | | 2.10 | SAND (SP), trace silt: grey; fine to medium. | | ALV | | W | | ASS | 2.50 | 2.50 | | | | |
| | | 3.00 | | | | | | | ASS | 3.00 | 3.00 | | | | |
| | | 3.60 | Clayey SAND (CL-CI): grey; fine to medium; low to medium plasticity clay. | | ALV | | | | ASS | 3.50 | 3.50 | | | | |
| | | 4.00 | Borehole discontinued at 4.00m depth. Target Depth Reached. | | | | | | ASS | 4.00 | 4.00 | | | | |

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log

**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

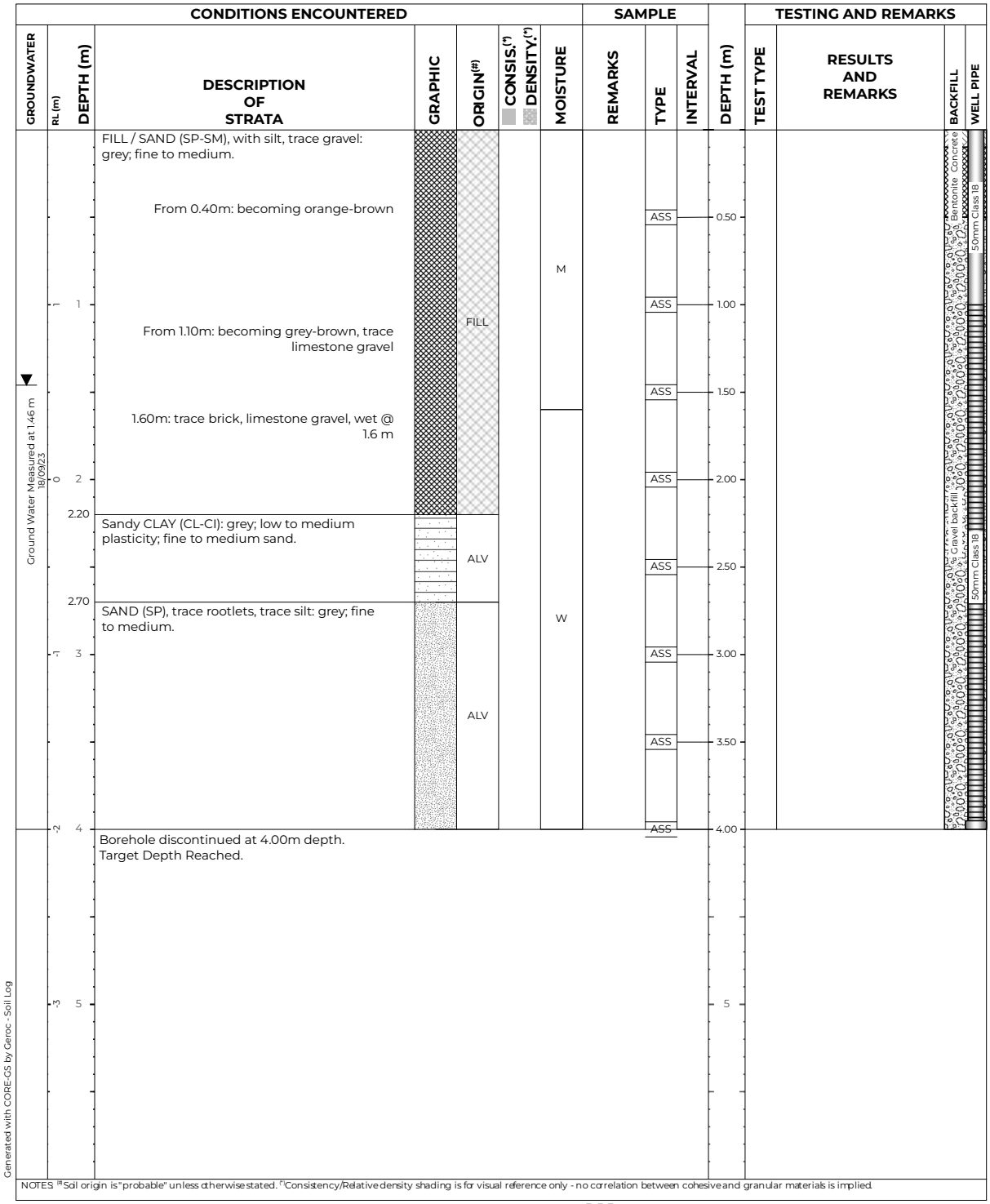
Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.0 AHD
**COORDINATE:** E:397795.0, N:6466418.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 02
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1




**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 3.2 AHD
**COORDINATE:** E:397905.0, N:6466358.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 03
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS | BACKFILL | WELL PIPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | | FILL / SAND (SP), trace silt: orange; fine to medium. From 0.30m: becoming grey, trace clay, limestone gravel | | FILL | | | | | | 1 | | | 0.5m Bentonite Concrete; Gravel backfill; 50mm Class 18 | 50mm Class 18 |
| | 1.60 | 2 | FILL / Clayey SAND (SC), trace gravel: grey; fine to medium; low to medium plasticity clay. | | FILL | | | | | | 2 | | | | |
| Ground Water Measured at 2.37 m 18/09/23 | 2.20 | | FILL / SAND (SP), trace silt: orange - grey; fine to medium. 2.80m: trace brick | | FILL | | | | | | | | | | |
| | 3.00 | | FILL / Clayey SAND (SC): grey; fine to medium; low to medium plasticity clay. 3.30m-3.50m: with bitumen layer | | FILL | | | | | | 3 | | | | |
| | 3.60 | | FILL / CLAY (CL-CI), trace sand: grey - green; low to medium plasticity. | | FILL | | | | | | | | | | |
| | | 4 | Borehole discontinued at 4.00m depth. Target Depth Reached. | | | | | | | | 4 | | | | |
| | | 5 | | | | | | | | | 5 | | | | |

NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log

**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

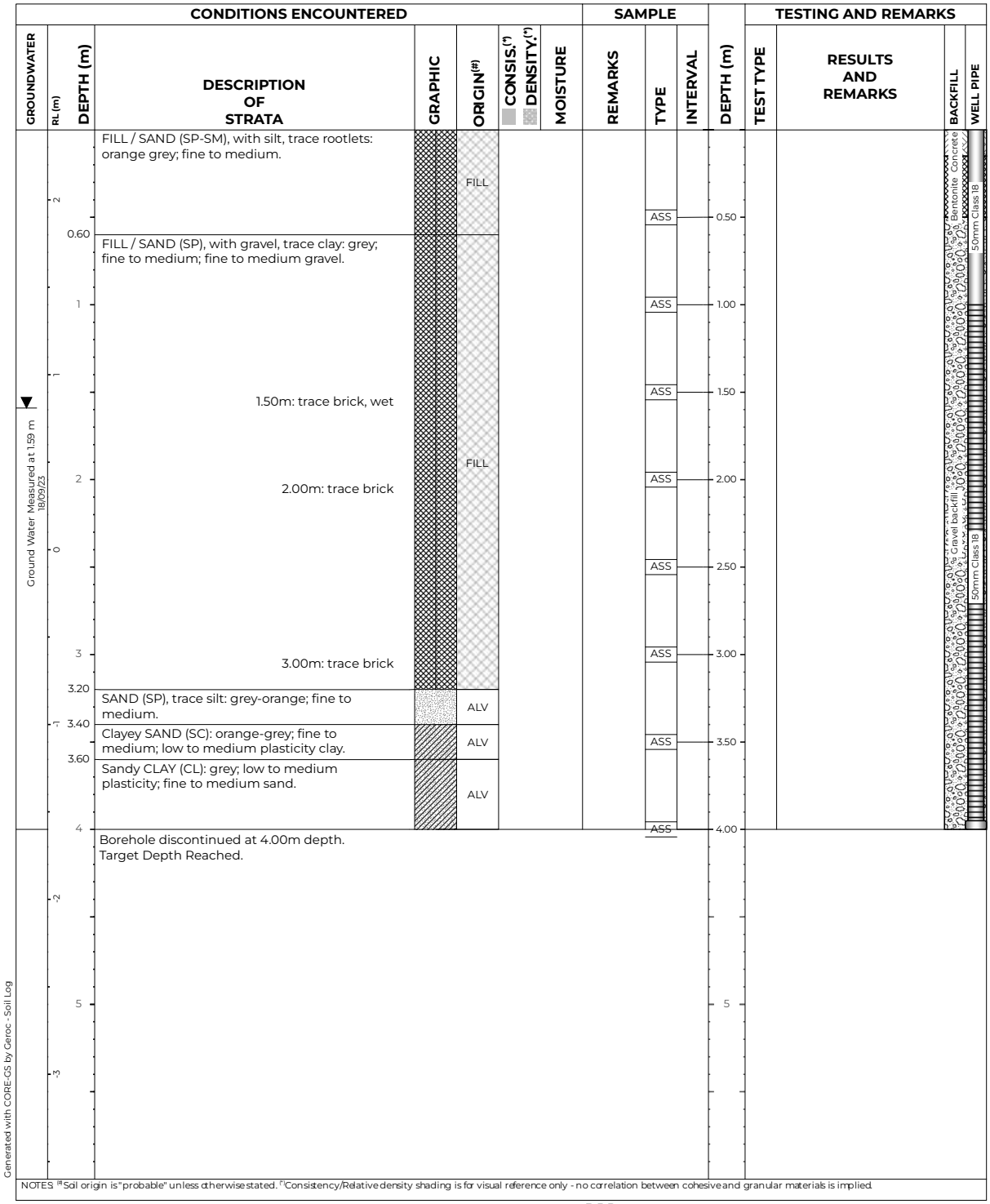
Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.4 AHD
**COORDINATE:** E:397812.0, N:6466346.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 04
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1




NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

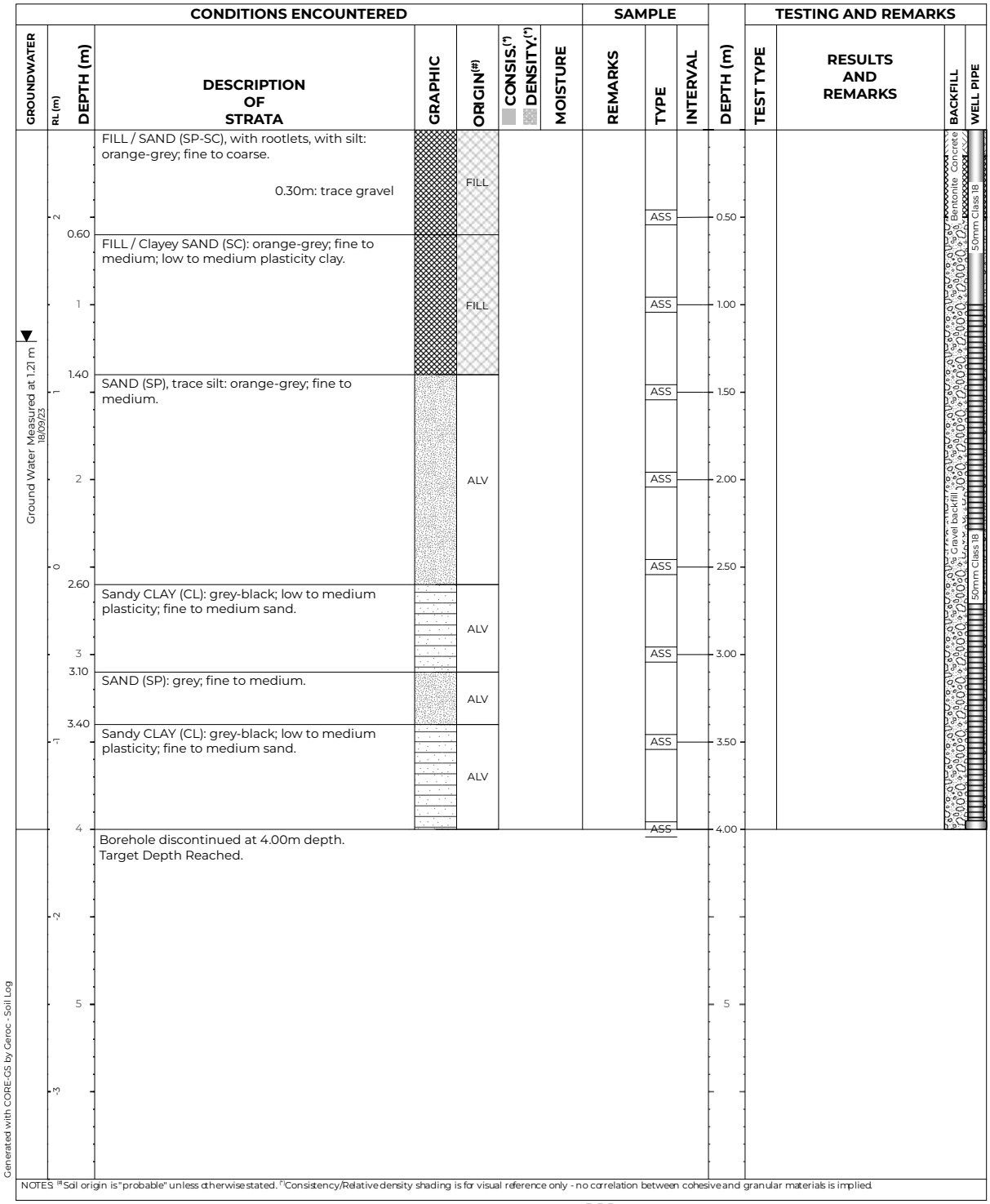
Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.5 AHD
**COORDINATE:** E:397900.0, N:6466193.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 05
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1




Generated with CORE-GS by Geroc - Soil Log

**PLANT:** Geoprobe 7822DT
**OPERATOR:** DPP
**LOGGED:** VV
**METHOD:** Direct Push Probing
**CASING:** Nil
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397790.0, N:6466249.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** MW 06
**PROJECT No:** 219164.01
**DATE:** 11/09/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | TESTING AND REMARKS: RESULTS AND REMARKS | BACKFILL | WELL PIPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ground Water Measured at 1.09 m 18/09/23 | 2 | 0.40 | FILL / SAND (SP) : Sand, with rootlets, trace silt: orange-grey; fine to medium. | | FILL | | | | | | | | | 0.5 Bentonite Concrete | 50mm Class 18 |
| | | | FILL / SAND (SP), with gravel: grey-brown; fine to medium. | | | | | | ASS | | 0.50 | | | | |
| | 1 | | From 0.80m: becoming grey, no gravel | | | | | | | | 1 | | | | |
| | | | From 1.10m: becoming orange-grey | | FILL | | | | | | | | | | |
| | 0 | 2.20 | From 1.80m: becoming grey and trace brick | | | | | | | | 2 | | | 0.5 Gravel backfill | 50mm Class 18 |
| | | | FILL / Clayey SAND (CL): grey; fine to medium; low to medium plasticity clay; may be natural. | | FILL | | | | | | | | | | |
| | | 2.60 | SAND (SP): grey; fine to medium. | | ALV | | | | | | 3 | | | | |
| | -1 | 3.10 | Sandy CLAY (CL): dark grey; low to medium plasticity; fine to medium sand. | | ALV | | | | | | | | | | |
| | | 4 | Borehole discontinued at 4.00m depth. Target Depth Reached. | | | | | | | | 4 | | | | |
| | -3 | | | | | | | | | | 5 | | | | |

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log

**PLANT:** Geoprobe 7822DT
**METHOD:** Direct Push Probing
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.

**OPERATOR:** DPP

**LOGGED:** VV
**CASING:** Nil

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

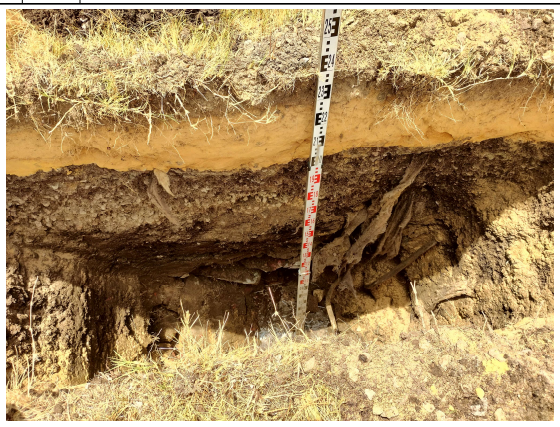
**SURFACE LEVEL:** 2.9 AHD
**COORDINATE:** E:397852.9, N:6466410.7
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP07
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. From 0.17m: becoming orange. 0.54m: trace geo-fabric | | FILL | MD to VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | 0.60 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. 0.84m: trace geo-fabric | | FILL | | | | ES | | 0.40 | PID | <1ppm |
| | | 0.90 | FILL / GRAVEL (GP-GM) : Gravel, with mulch, with sand: dark brown and dark grey-brown; with silt. | | FILL | | | | ES | | 0.50 | | |
| | | 1.40 | FILL / SAND (SP-SM), with silt: dark grey; fine to medium. 1.50m: trace PACM fragment. From 1.60m-2.60m: with fragments of bricks, concrete and metal roofing sheetings | | FILL | ND | M | ASB9, ASB10, AF/FA | ES | | 1.00 | PID | <1ppm |
| | | | | | | | | | D | | 1.50 | PID | <1ppm |
| | | | | | | | | | ES | | 1.60 | | |
| | | | | | | | | | ES | | 2.00 | PID | <1ppm |
| | | | | | | | | | ES | | 2.10 | | |
| | | | | | | | W | | ES | | 2.50 | PID | <1ppm |
| | | | Test Pit discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | 2.60 | | |

DCP9/150 — 5 — 10 — 15

09/11/23





NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log with Photo

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.3 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 3.6 AHD
**COORDINATE:** E:397905.7, N:6466414.7
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP08
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 3 / 0 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | | VD | | | ES | | 0.10 | PID | <1 ppm |
| | | From 0.43m: becoming pale grey, trace gravel | | FILL | | | | ES | | 0.50<br>0.60 | PID | <1 ppm |
| | 1 | From 1.20m: becoming grey | | | | M | | ES | | 1.00<br>1.10 | PID | <1 ppm |
| | 1.40 / 2 | FILL / organic SAND (SP-SM), with silt, with gravel: dark grey-brown; fine to medium; trace fragments of brick and concrete. | | FILL | ND | | AF/FA<br>ASB 8 | D<br>ES<br>MAT | | 1.50<br>1.60 | PID | <1 ppm |
| | | 1.55m-2.00m: with fragments of brick, concrete and PVC | | | | | | | | | | |
| | 1.80 / 2 | FILL / SAND (SP), trace gravel, fragments of brick and concrete, trace silt: dark grey; fine to medium. | | FILL | | | | D<br>ES | | 2.00<br>2.10 | PID | <1 ppm |
| | | 2.20m: trace metal sheet, PVC | | | | | | | | | | |
| | | 2.40m: trace rubber pipe, metal bar | | | | | | ES | | 2.50<br>2.60 | PID | <1 ppm |
| | | Test Pit discontinued at 2.70m depth. (Test Pit terminated due to slow digging). | | | | | | | | | | |

PSP/150: 5, 10, 15, Refusal 20





NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.1 AHD
**COORDINATE:** E:397768.9, N:6466392.5
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP09
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | FILL | D to VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | 0.45 | FILL / Clayey SAND (SC): orange-brown; fine to medium; low to medium plasticity clay. | | FILL | | | | D<br>ES | | 0.50<br>0.60 | PID | <1ppm |
| | | 0.95<br>0.98 | FILL / ASPHALTIC CONCRETE: black, 7 mm sized nominal aggregate. | | | | | | | | | | |
| | 1 | | FILL / Silty SAND (SM): brown; fine to medium. From 1.15m: becoming grey-brown<br>From 1.20m: with fragments of brick, concrete slab of 0.4 m in thickness, geo-fabric, metal bar and terracotta pipe<br>1.40m: trace metal sheet | | FILL | ND | M | | ES | | 1.00<br>1.10<br>1.50<br>1.60 | PID | <1ppm |
| 09/11/23 | 0 | 2 | 1.90m-2.10m: trace pockets of Clayey SAND SC | | | | W | | ES | | 2.00<br>2.10 | PID | <1ppm |
| | | | Test Pit discontinued at 2.30m depth. (Collapsing conditions). | | | | | | | | | | |

PSP/150: 5, 10, 15; REFUSAL 25 25





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NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.1 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.4 AHD
**COORDINATE:** E:397829.1, N:6466375.7
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP10
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | DEPTH (m) / RL (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 0 | FILL / SAND (SP-SM), with silt, trace rootlets: bands of grey, orange-brown and pale grey; fine to medium. | | FILL | MD to D | | DUP 2 | ES | | 0.10 | PID | <1ppm |
| | 0.80 | 0.70m: trace geo-fabric | | | | | | ES | | 0.50 | PID | <1ppm |
| | 1 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | | | | ES | | 0.60 | | |
| | 1.20 | FILL / SAND (SP), trace rootlets, trace silt: grey -brown; fine to medium. | | FILL | ND | | | ES | | 1.00 | PID | <1ppm |
| | | From 1.40m-1.80m: with fragments of brick and concrete | | | | | | | | 1.10 | | |
| | 2 | From 1.80m: becoming dark grey, trace fragments of brick and concrete | | | | | | ES | | 1.50 | PID | <1ppm |
| | | | | | | | | | | 1.60 | | |
| | | | | | | | | ES | | 2.00 | PID | <1ppm |
| | | | | | | | | | | 2.10 | | |
| | | Test Pit discontinued at 2.15m depth. (Test Pit terminated due to slow digging). | | | | | | | | | | |

PSP/hr 5 10 15





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NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

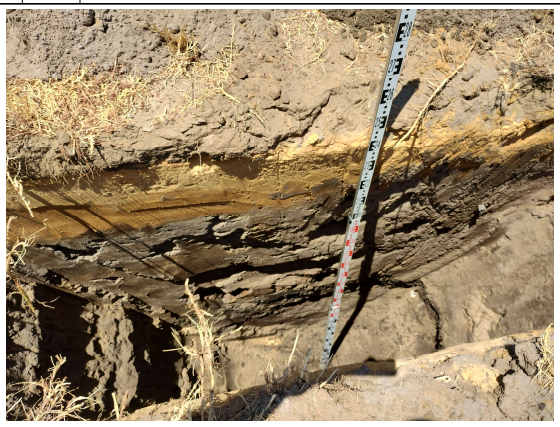
# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 3.1 AHD
**COORDINATE:** E:397881.2, N:6466387.1
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP11
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 3 | FILL / SAND (SP-SM), with silt: grey and orange-brown; fine to medium. | | | VD | D to M | | ES | | 0.10 | PSP/150 | 5 10 15 REFUSAL 25 25 |
| | | From 0.35m: becoming grey | | | | | | ES | | 0.50<br>0.60 | | |
| | 1 | | | | | | DUP 3 | D<br>ES | | 1.00<br>1.10 | | |
| | 2 | | | FILL | ND | M | | | | | | |
| | | From 1.60m: becoming dark grey, trace fragments of brick | | | | | | D<br>ES | | 1.60<br>1.70 | | |
| | | From 1.70m-2.40m: with fragments of brick and concrete | | | | | | | | | | |
| | 2 | 1.80m: piece of concrete boulder (1 m x 0.5 m) observed | | | | | | ES | | 2.00<br>2.10 | | |
| | 1 | 2.10m: trace plastic bottle, glass bottle, concrete rubble | | | | | | | | | | |
| | | 2.30m: trace fragments of wooden plank and timer | | | | | | D | | 2.30 | | |
| | | Test Pit discontinued at 2.40m depth.<br>(Test Pit terminated due to slow digging). | | | | | | | | | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

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# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.1 AHD
**COORDINATE:** E:397785.4, N:6466366.6
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP12
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | | FILL / SAND (SP-SM), with silt, trace gravel and rootlets: grey; fine to medium. | | | | | | ES | | 0.10 | PID | <1ppm |
| | | | From 0.20m: becoming yellow-brown | | FILL | D to VD | D to M | | | | | | |
| | | | | | | | | | ES | | 0.50 | PID | <1ppm |
| | | | | | | | | | | | 0.60 | | |
| | | 0.85 | | | | | | | | | | | |
| | | 0.90 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | | | | | | | | |
| | 1 | | | | | | | | D | | 1.00 | PID | <1ppm |
| | | | FILL / SAND (SP), trace fragments of brick, scrap metal, timber and rubber cable, trace silt: dark grey-brown; fine to medium. | | | | | AF/FA, ASB 6, ASB 7 | ES | | 1.10 | | |
| | | | 1.30m-1.80m: with fragments of plastic waste, insulation material, terracotta pipes and concrete, trace PACM fragments | | FILL | ND | M | | ES | | 1.50 | PID | <1ppm |
| | | | | | | | | | | | 1.60 | | |
| | | | From 1.90m: becoming green-grey, trace pockets of CLAY CL-CI | | | | | | B | | 2.00 | PID | <1ppm |
| ▼ 09/11/23 | 0 | 2 | | | | | W | | ES | | 2.10 | | |
| | | | Test Pit discontinued at 2.30m depth. (Collapsing conditions). | | | | | | | | | | |

PSP/Nail: 5, 10, 15, 25





NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log with Photo

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.1 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.8 AHD
**COORDINATE:** E:397872.7, N:6466350.7
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP13
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 0.75 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium; 10% non-plastic fines.<br>From 0.15m: becoming orange<br>0.70m: trace geo-fabric | | FILL | D to VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | | | | | | | D | | 0.50 | PID | <1ppm |
| | | | | | | | | ES | | 0.60 | PSP/150 | 5 10 15 25 |
| | 1.30 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand.<br>1.20m: trace geo-fabric | | FILL | | | | ES | | 1.00<br>1.10 | PID | <1ppm |
| | | FILL / SAND (SP), trace gravel, fragments of brick and concrete, trace silt: dark grey; fine to medium.<br>1.50m-2.40m: with fragments of bricks and concrete slab | | FILL | ND | M | | D | | 1.50 | PID | <1ppm |
| | | | | | | | | ES | | 1.60 | | |
| | | | | | | | | ES | | 2.00<br>2.10 | PID | <1ppm |
| 09/11/23 | | | | | | W | | ES | | 2.50<br>2.60 | PID | <1ppm |
| | 0 | Test Pit discontinued at 2.70m depth. (Collapsing conditions). | | | | | | | | | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log with Photo

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.5 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397745.6, N:6466334.5
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP14
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) / DENSITY.(*) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 2 / 0.25 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | FILL | D to VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | FILL / Silty SAND (SM): brown and grey-brown; weakly to moderately cemented. | | | | | | | | | DCP9/150 | 29 30 |
| | | | | | | | | D | | 0.50 | PID | <1ppm |
| | | | | | | | | ES | | 0.60 | | |
| | | 0.65m: trace fragments of brick and glass | | | | | | | | | | |
| | | 0.72m-2.00m: with framgnes of brick, metal sheet and insulation material | | | | | | | | | | |
| | 1 | 0.92m: trace fragments of plastic waste, glass and limestone boulders | | | | | | ES | | 1.00 | PID | <1ppm |
| | | | | | | | | | | 1.10 | | |
| | | | | FILL | ND | M | | ES | | 1.50 | PID | <1ppm |
| | | | | | | | | | | 1.60 | | |
| | 2 / 0 | 2.00m: becoming gren-grey, trace fragments of timber, brick and concrete blocks, with pockets of Clayey SAND SC | | | | | | ES | | 2.00 | PID | <1ppm |
| | | | | | | | | | | 2.10 | | |
| | | From 2.20m: with fragments of brick and scrap metal | | | | | | D | | 2.40 | | |
| | | Test Pit discontinued at 2.50m depth. (Test Pit terminated due to slow digging). | | | | | | | | | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log with Photo

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397794.3, N:6466319.4
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP15
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(†) DENSITY.(†) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 0 | FILL / SAND (SP-SM), with silt, trace gravel and rootlets: orange-brown; fine to medium. | | FILL | VD | D to M | | ES | | 0.10 | PID | <1ppm |
| | | From 0.24m: becoming grey | | | | | | | | | DCP9/150 | |
| | | From 0.42m: becoming pale grey | | | | | | D | | 0.50 | PID | <1ppm |
| | | | | | | | | ES | | 0.60 | | |
| | 0.75 | FILL / Sandy GRAVEL (GP-GM), with silt: dark brown and grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | ND | | | | | | | |
| | 0.95 | FILL / SAND (SP), with fragments of brick and concrete, trace silt: grey; fine to medium. | | FILL | ND | M | | D | | 1.00 | PID | <1ppm |
| | | | | | | | | ES | | 1.10 | | |
| | | 1.20m: trace fragments of timber, terracotta pipe and scrap metal | | | | | | | | | | |
| | | 1.50m: trace redundant cable | | | | | | ES | | 1.50 | PID | <1ppm |
| | | | | | | | | | | 1.60 | | |
| | | From 1.80m: becoming orange-brown | | | | | | | | | | |
| | 2 | 2.00m: trace PACM pipe | | | | | AF/FA, ASB 5 | ES | | 2.00 | PID | <1ppm |
| | | 2.10m: trace fragments of timber | | | | | | | | 2.10 | | |
| 08/11/23 | | From 2.40m: becoming dark grey | | | | W | | ES | | 2.50 | | |
| | | | | | | | | | | 2.60 | | |
| | | Test Pit discontinued at 2.70m depth. (Test Pit flooded with water seepage). | | | | | | | | | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (†)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log with Photo

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.4 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.4 AHD
**COORDINATE:** E:397837.5, N:6466321.2
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP16
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 0.34 | FILL / SAND (SP-SM), with silt, trace gravel and rootlets: grey; fine to medium. | | FILL | | | | ES | | 0.10 | PID | <1ppm |
| | | | FILL / Sandy (GP-GM), with silt: grey; fine to medium sand. | | FILL | ND | D to M | | ES | | 0.50<br>0.60 | PID | <1ppm |
| | | 0.84 | 0.80m: trace fragments of plastic waste<br>FILL / SAND (SP), with fragments of brick and concrete, trace silt: grey; fine to medium. | | | | | | | | | | |
| | 1 | | | | FILL | MD to D | M | | ES | | 1.00<br>1.10 | PID | <1ppm |
| | | | 1.50m: trace fragments of plastic waste | | | | | | D<br>ES | | 1.50<br>1.60 | PID | <1ppm |
| | 0 | | 2.00m: trace metal plate (0.5 m x 0.5 m)<br>2.10m: with limestone boulders | | | ND | | | ES | | 2.00<br>2.10 | PID | <1ppm |
| ▼ 08/11/23 | | | | | | | W | | D<br>ES | | 2.50<br>2.60 | PID | <1ppm |
| | | | Test Pit discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | | | |

DCP9/150: 5, 10, 15





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log with Photo

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.5 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

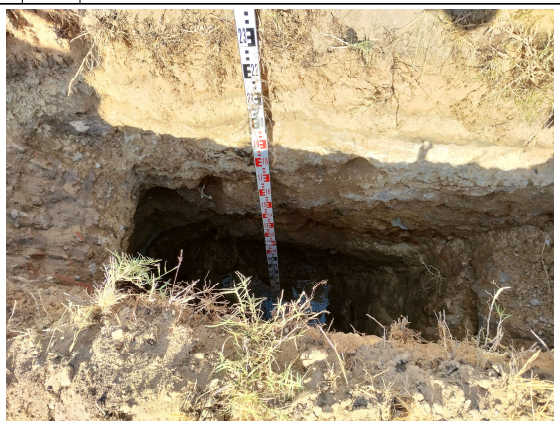
# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397775.7, N:6466289.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP17
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | DEPTH (m) / RL (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 0.15 / 2 | FILL / SAND (SP-SM), with silt, trace rootlets: orange - grey; fine to medium. | | FILL | | | | ES | | 0.10 | PID | <1ppm |
| | | FILL / Sandy GRAVEL (GP-GM), with fragments of concrete, with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | L to VD | D to M | | | | | DCP9/150 | 5 10 15 25 |
| | 0.90 / 1 | FILL / SAND (SP), with fragments of brick and concrete, trace silt: grey; fine to medium. | | | | | | ES | | 0.50 | PID | <1ppm |
| | | | | | | | | | | 0.60 | | |
| | | 1.10m: trace fragments of plastic waste | | | | | | ES | | 1.00 | PID | <1ppm |
| | | | | | | | | | | 1.10 | | |
| | | 1.60m: trace metal sheets | | FILL | ND | M | ASB 3 | ES | | 1.50 | PID | <1ppm |
| | | | | | | | | | | 1.60 | | |
| ▼ 08/11/23 | 0 / 2 | 1.90m: piece of concrete block observed | | | | | ASB 4 | ES | | 2.00 | PID | <1ppm |
| | | | | | | W | | | | 2.10 | | |
| | | Test Pit discontinued at 2.50m depth. (Collapsing conditions). | | | | | | | | | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.1 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

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# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397816.0, N:6466272.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP18
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(†) DENSITY.(†) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 2 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium; weakly cemented. | | FILL | | D to M | | ES | | 0.10 | PID | <1ppm |
| | 0.26 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand. | | FILL | ND | | | | | | | |
| | 0.45 | FILL / SAND (SP), with fragments of brick and concrete, with clay: grey; fine to medium. | | | | | ASB 1 | ES | | 0.50<br>0.60 | PID | <1ppm |
| | | 0.50m-1.50m: with fragments of tile and brick, trace PACM fragments | | | | | | | | | | |
| | | 0.75m: trace metal bar | | | MD to VD | | | | | | DCP 9/150 | 5 10 15 |
| | 1 | 1.00m: trace fragments of redundant cables, glass, geo-fabric and limestone blocks | | FILL | | M | | D<br>ES | | 1.00<br>1.10 | PID | <1ppm |
| | | From 1.20m: with limestone boulders | | | ND | | | | | | | |
| | | | | | | | | ES | | 1.40<br>1.50 | PID | <1ppm |
| | | Test Pit discontinued at 1.50m depth. (Test Pit terminated due to slow digging). | | | | | | | | | | |
| | 2 | | | | | | | | | 2 | | |





NOTES: (#)Soil origin is "probable" unless otherwise stated. (†)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
No free groundwater observed.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.2 AHD
**COORDINATE:** E:397856.8, N:6466280.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP19
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | RL (m) / DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 2 / 0.20 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | FILL | | | DUP 1 | ES | | 0.10 | PID | <1ppm |
| | | FILL / Sandy GRAVEL (GP-GM), with silt: orange-brown; medium to coarse; fine to medium sand; Gravel is crushed limestone. | | FILL | ND | D | | D | | 0.50 | PID | <1ppm |
| | | | | | | | | ES | | 0.60 | | |
| | 0.70 | FILL / SAND (SP-SM), with silt, trace gravel: grey-brown; fine to medium. | | | | | | | | | | |
| | | 0.75m: trace concrete slab, fragments of brick and terracotta pipes | | | | | | | | | | |
| | 1 | From 0.90m: with fragments of brick | | | MD | | | ES | | 1.00 | PID | <1ppm |
| | | From 1.20m: becoming grey, trace fragments of timber | | FILL | | M | | | | 1.10 | PSP | 150 |
| | | From 1.60m: becoming grey-brown | | | | | | ES | | 1.50 | PID | <1ppm |
| 09/11/23 | 1.90 | | | | | | | | | 1.60 | | |
| | 2 / 0 | FILL / SAND (SP), trace roots, trace silt: dark grey; fine to medium. | | FILL | ND | W | | ES | | 2.00 | PID | <1ppm |
| | | 2.40m: trace fragments of sea shells | | | | | | | | 2.10 | | |
| | | | | | | | | D | | 2.50 | PID | <1ppm |
| | | | | | | | | ES | | 2.60 | | |
| | | Test Pit discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | | | |





NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log with Photo

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 1.8 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.0 AHD
**COORDINATE:** E:397838.6, N:6466231.5
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP20
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| CONDITIONS ENCOUNTERED | | | | | | | | SAMPLE | | | TESTING AND REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER | DEPTH (m) / RL (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | TYPE | INTERVAL | DEPTH (m) | TEST TYPE | RESULTS AND REMARKS |
| | 0.05 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | FILL | | D to M | | ES | | 0.10 | PID | <1ppm |
| | 0.34 | FILL / Sandy GRAVEL (GP-GM), with silt: yellow-brown; medium to coarse; fine to medium sand. | | | | | | | | | | |
| | | FILL / SAND (SP-SM), with silt, trace gravel: grey and orange-brown; fine to medium. 0.50m: with fragments of brick and concrete | | | MD to VD | | | ES | | 0.50 0.60 | PID | <1ppm |
| | 1 | 0.80m: trace fragments of rubber waste and scrap metal | | FILL | | | | D ES | | 1.00 1.10 | PID | <1ppm |
| | | From 1.20m: becoming dark grey, with fragments of brick 1.30m-2.10m: with hydrocarbon odour 1.50m: with pockets of Clayey SAND SC | | | | M | | D ES | | 1.50 1.60 | PID | 9.4ppm |
| | 1.80 | FILL / Clayey SAND (SC): dark grey; fine to medium; low to medium plasticity clay. | | | ND | | | | | | | |
| 08/11/23 | 2 | From 2.10m: becoming green-grey | | FILL | | W | | ES | | 2.00 2.10 | PID | 1.4ppm |
| | | | | | | | | ES | | 2.50 2.60 | PID | 1.1ppm |
| | | Test Pit discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | | | |

PSP/hr





NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log with Photo

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 2.1 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

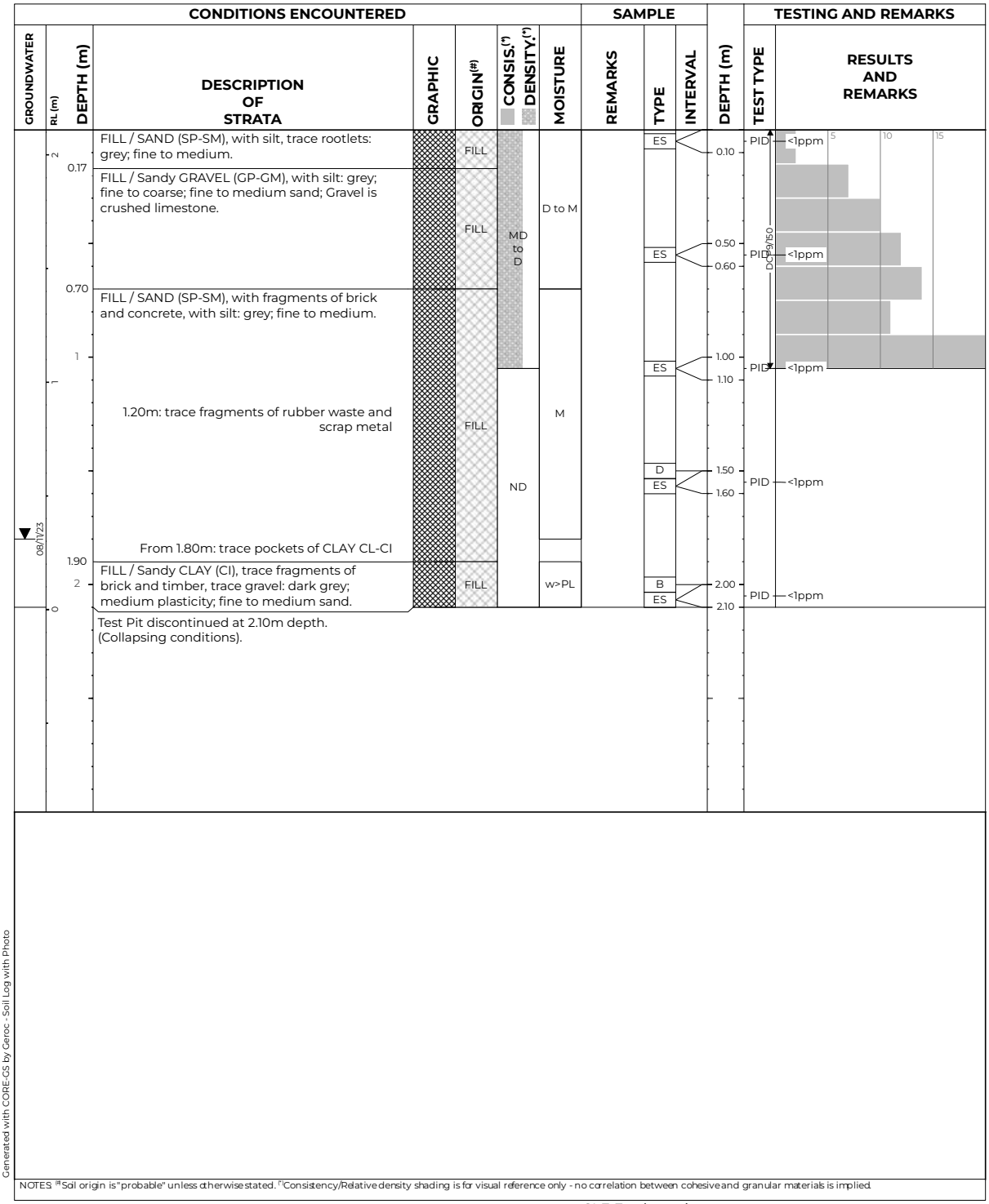
Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.1 AHD
**COORDINATE:** E:397896.5, N:6466231.5
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP21
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1




NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 1.8 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# TEST PIT LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.3 AHD
**COORDINATE:** E:397941.6, N:6466244.9
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP22
**PROJECT No:** 219164.01
**DATE:** 09/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN[#] | CONSIS.[^] / DENSITY.[^] | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 0 | FILL / SAND (SP-SM), with silt, trace rootlets: grey; fine to medium. | | | | D to M | | ES | 0.10 | 0.10 | PID | <1ppm |
| | | | From 0.22m: becoming orange | | | | | | | | | | |
| | | | From 0.40m: becoming brown | | FILL | MD | | | ES | 0.50–0.60 | 0.50 | PID | <1ppm |
| | | | From 0.70m: becoming dark grey-brown | | | | M | | | | | PSP/hr | 5 10 15 |
| | 1 | 1 | | | | | | | ES | 1.00–1.10 | 1.00 | PID | <1ppm |
| | | 1.40 | SAND (SP-SM), with silt: pale yellow-brown; fine to medium. | | | | | | ES | 1.50–1.60 | 1.50 | PID | <1ppm |
| ▼ 09/11/23 | | | From 1.70m: becoming orange-grey | | possibly ALV | ND | | | | | | | |
| | 2 | | | | | | W | | B | 2.00 | 2.00 | PID | <1ppm |
| | | | | | | | | | ES | 2.10 | | | |
| | 0 | | Test Pit discontinued at 2.20m depth. (Collapsing conditions). | | | | | | | | | | |





NOTES: [#]Soil origin is "probable" unless otherwise stated. [^]Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log with Photo

**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 1.8 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

# BOREHOLE LOG

**CLIENT:** Perth Racing
**PROJECT:** Proposed Residential Development
**LOCATION:** 71 Grandstand Road, Ascot, WA 6104

**SURFACE LEVEL:** 2.4 AHD
**COORDINATE:** E:397844.9, N:6466181.0
**DATUM/GRID:** MGA2020 Zone 50
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** TP23
**PROJECT No:** 219164.01
**DATE:** 08/11/23
**SHEET:** 1 of 1

| GROUNDWATER | RL (m) | DEPTH (m) | DESCRIPTION OF STRATA | GRAPHIC | ORIGIN(#) | CONSIS.(*) DENSITY.(*) | MOISTURE | REMARKS | SAMPLE TYPE | SAMPLE INTERVAL | DEPTH (m) | TESTING AND REMARKS: TEST TYPE | RESULTS AND REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.05 | ASPHALT: black, 7 mm sized nominal aggregate. | | FILL | | | | | | | | |
| | | 0.15 | FILL / Sandy GRAVEL (GP-GM), with silt: grey; medium to coarse, angular to sub-angular; fine to medium sand; BASECOURSE, gravel is crushed rock. | | FILL | ND | D | | | | | | |
| | | 0.30 | FILL / Sandy GRAVEL (GP-GM), with silt: red-brown; medium to coarse, angular to sub-angular; fine to medium sand; SUB-BASE, gravel is granitic and lateritic. | | FILL | | M | | ES | | 0.50<br>0.60 | PID | <1ppm |
| | | 0.65 | FILL / Silty SAND (SM), trace gravel: brown; fine to medium; with pockets of Clayey SAND SC. 0.90m: trace fragments of brick | | FILL | MD to D | | | | | | | |
| | 2 | 1 | FILL / Clayey SAND (SC): orange-grey; fine to medium; low to medium plasticity clay. | | FILL | | M | | D<br>ES | | 1.00<br>1.10 | PID | <1ppm |
| | 1 | 1.40 | FILL / SAND (SP), trace silt: grey; fine to medium; trace pockets of Clayey SAND SC. 1.80m: trace fragments of brick | | FILL | | | | ES | | 1.50<br>1.60 | PID | <1ppm |
| 08/11/23 | | 1.90 | FILL / Sandy CLAY (CI), trace gravel: dark grey; medium plasticity; fine to medium sand. | | FILL | ND | W | | D<br>ES | | 2.00<br>2.10 | PID | <1ppm |
| | 0 | 2.20 | FILL / SAND (SP-SM), with silt: dark grey; fine to medium. | | FILL | | | | D<br>ES | | 2.50<br>2.60 | PID | <1ppm |
| | | | Borehole discontinued at 2.60m depth. (Collapsing conditions). | | | | | | | | | | |

DCP9/150: 5, 10, 15





NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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**PLANT:** 5T excavator with 450 mm toothed bucket
**OPERATOR:** SLE Earthmoving
**LOGGED:** VV
**METHOD:**
**CASING:** Nil

**REMARKS:** Surface lvel surveyed using a differential GPS with a reported accuracy of +/- 0.1 m.
Groundwater encountered at 1.7 m depth.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

## Appendix C

Geotechnical Laboratory Test Certificates

WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

## TEST REPORT - ASTM D2974-14 (Test Method C)

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18256-18262_1_ORG |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18256-18262 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | Various See Below | *Date Tested:* | 15/11/2023 |

## TEST RESULTS - Organic Content

**Sampling Method:** Sampled by Client, Tested as Received

**Testing Completed By:** WGLS-LC

**Furnace Temperature (°C):** 440

| Sample Number | Sample Identification | Ash Content (%) | Organic Content (%) |
|---|---|---|---|
| WG23.18256 | TP13/1.5 | 98.4 | 1.6 |
| WG23.18257 | TP8/1.5 m | 93.2 | 6.8 |
| WG23.18258 | TP19/2.5 | 98.5 | 1.5 |
| WG23.18262 | BH23/2.5 m | 98.8 | 1.2 |

***Comments:***

**Approved Signatory:** Coneill

**Name:** Cody O'Neill

**Date:** 16/November/2023

NATA WORLD RECOGNISED ACCREDITATION

**Accreditation No. 20599**

**Accredited for compliance with ISO/IEC 17025 - Testing**

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SOIL | AGGREGATE | CONCRETE | CRUSHING

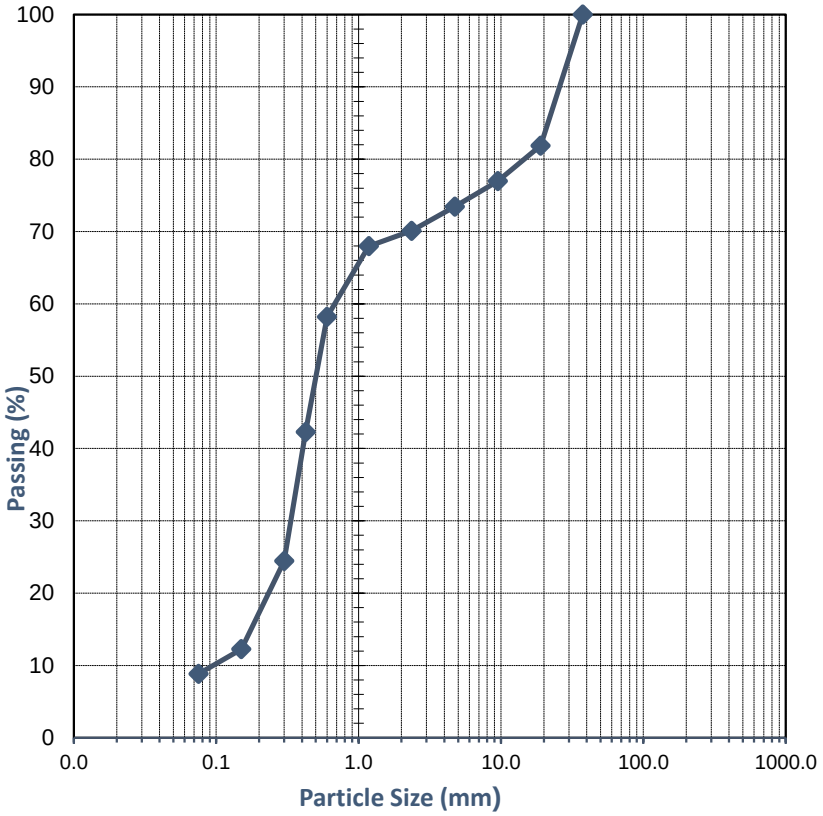
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18257_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18257 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP8/1.5 m | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | 100 |
| 19.0 | 82 |
| 9.5 | 77 |
| 4.75 | 73 |
| 2.36 | 70 |
| 1.18 | 68 |
| 0.600 | 58 |
| 0.425 | 42 |
| 0.300 | 24 |
| 0.150 | 12 |
| 0.075 | 9 |




*Comments:*

**Approved Signatory:**

**Name:** Cody O'Neill

**Date:** 17/November/2023

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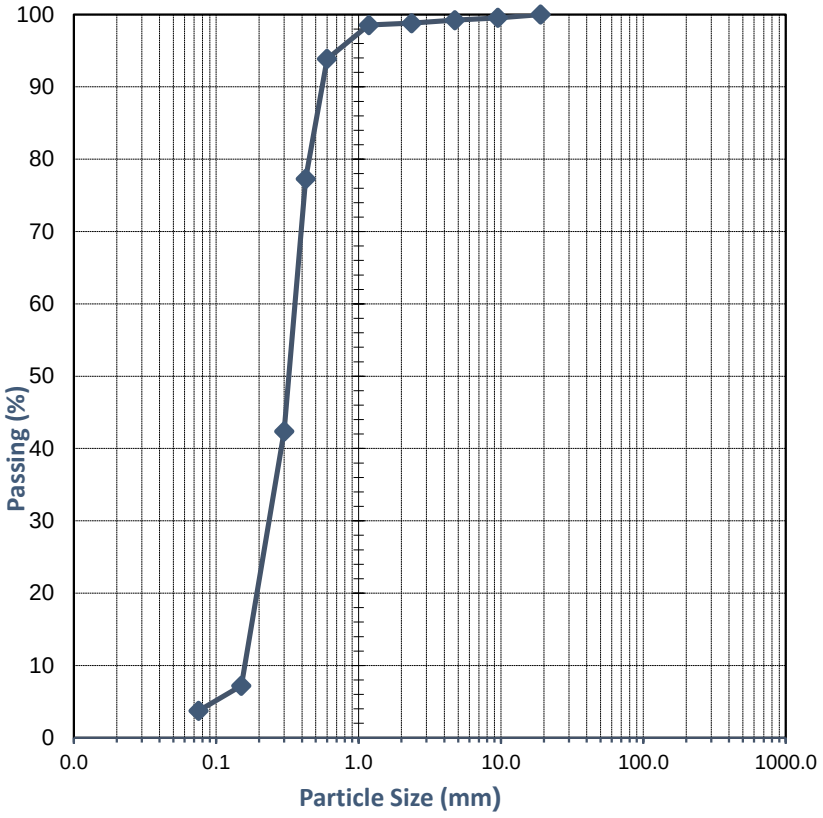
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18256_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18256 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP13/1.5 | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | 100 |
| 9.5 | 100 |
| 4.75 | 99 |
| 2.36 | 99 |
| 1.18 | 99 |
| 0.600 | 94 |
| 0.425 | 77 |
| 0.300 | 42 |
| 0.150 | 7 |
| 0.075 | 4 |




*Comments:*

**Approved Signatory:**

**Name:** Cody O'Neill

**Date:** 17/November/2023

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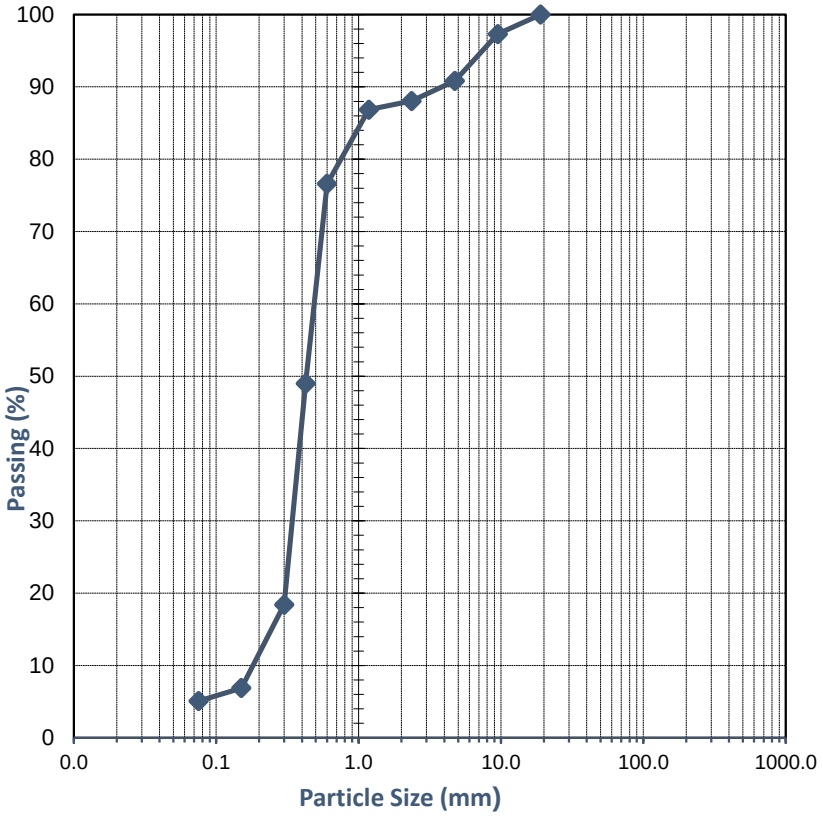
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18258_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18258 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP19/2.5 | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | 100 |
| 9.5 | 97 |
| 4.75 | 91 |
| 2.36 | 88 |
| 1.18 | 87 |
| 0.600 | 77 |
| 0.425 | 49 |
| 0.300 | 18 |
| 0.150 | 7 |
| 0.075 | 5 |




*Comments:*

**Approved Signatory:**

**Name:** Cody O'Neill

**Date:** 17/November/2023

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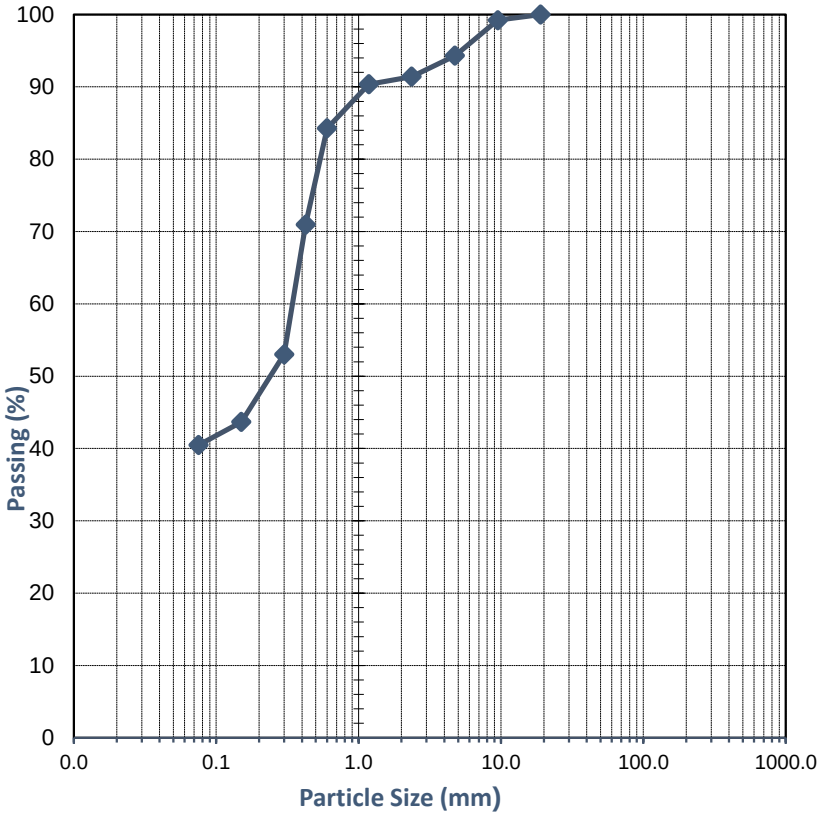
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18259_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18259 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP21/2.0 m | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | 100 |
| 9.5 | 99 |
| 4.75 | 94 |
| 2.36 | 91 |
| 1.18 | 90 |
| 0.600 | 84 |
| 0.425 | 71 |
| 0.300 | 53 |
| 0.150 | 44 |
| 0.075 | 40 |




*Comments:*

**Approved Signatory:** Cody O'Neill

**Name:** Cody O'Neill

**Date:** 17/November/2023

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**TEST REPORT - AS 1289.3.1.1, 3.2.1, 3.3.1 & 3.4.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18259_1_PI |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18259 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP21/2.0 m | *Date Tested:* | 17/11/2023 |

## TEST RESULTS - Consistency Limits (Casagrande)

| | |
|---|---|
| **Sampling Method:** | **Sampled by Client, Tested as Received** |
| **History of Sample:** | **Oven Dried <50°C** |
| **Method of Preparation:** | **Dry Sieved** |

| | | |
|---|---|---|
| **AS 1289.3.1.1** | **Liquid Limit (%)** | **37** |
| **AS 1289.3.2.1** | **Plastic Limit (%)** | **24** |
| **AS 1289.3.3.1** | **Plasticity Index (%)** | **13** |
| **AS 1289.3.4.1** | **Linear Shrinkage (%)** | **8.5** |
| **AS 1289.3.4.1** | **Length of Mould (mm)** | **250** |
| **AS 1289.3.4.1** | **Condition of Dry Specimen:** | **Curled** |

***Comments:***

**Approved Signatory:**

**Name:** Madhav Basnet
**Date:** 20/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

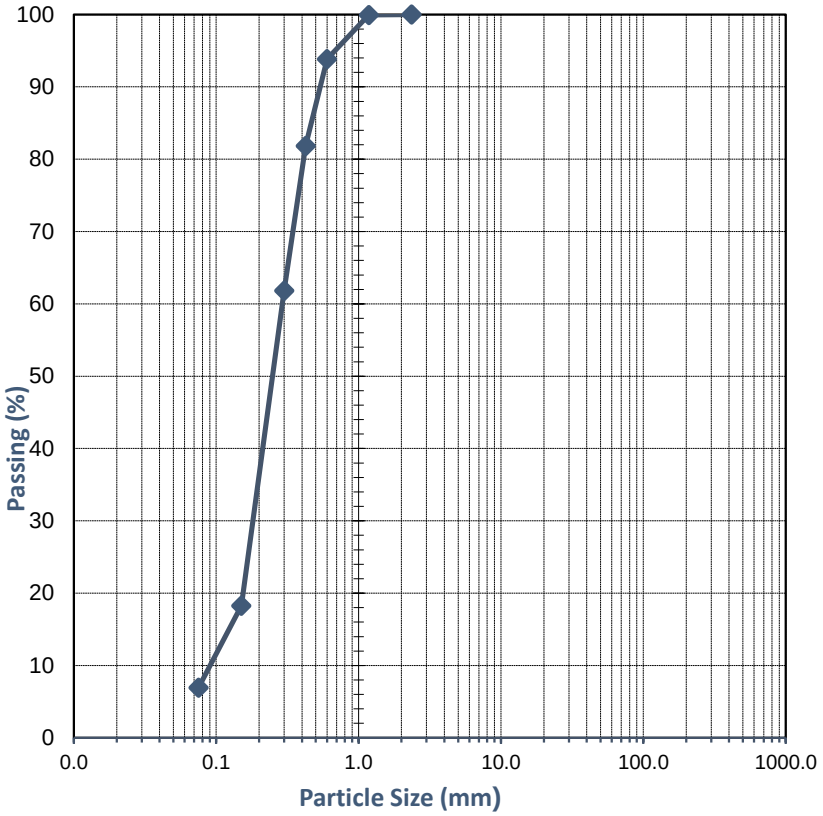
## TEST REPORT - AS 1289.3.6.1

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18260_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18260 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/2023 |
| *Sample Identification:* | TP22/2.0 | *Date Tested:* | 22/11 - 23/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | |
| 9.5 | |
| 4.75 | |
| 2.36 | 100 |
| 1.18 | 100 |
| 0.600 | 94 |
| 0.425 | 82 |
| 0.300 | 62 |
| 0.150 | 18 |
| 0.075 | 7 |




*Comments:*

**Approved Signatory:**

**Name:** Natasha Bielawski

**Date:** 23/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

**TEST REPORT - AS 1289.3.1.1, 3.2.1, 3.3.1 & 3.4.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18260_1_PI |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18260 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | TP22/2.0 | *Date Tested:* | 23/11/2023 |

## TEST RESULTS - Consistency Limits (Casagrande)

| | |
|---|---|
| **Sampling Method:** | **Sampled by Client, Tested as Received** |
| **History of Sample:** | **Oven Dried <50°C** |
| **Method of Preparation:** | **Dry Sieved** |

| | | |
|---|---|---|
| **AS 1289.3.1.1** | **Liquid Limit (%)** | **Not Obtainable** |
| **AS 1289.3.2.1** | **Plastic Limit (%)** | **Non-Plastic** |
| **AS 1289.3.3.1** | **Plasticity Index (%)** | **Non-Plastic** |
| **AS 1289.3.4.1** | **Linear Shrinkage (%)** | **0.0** |
| **AS 1289.3.4.1** | **Length of Mould (mm)** | **250** |
| **AS 1289.3.4.1** | **Condition of Dry Specimen:** | **-** |

***Comments:***

**Approved Signatory:**

**Name:** Matthew Lichon
**Date:** 24/November/2023

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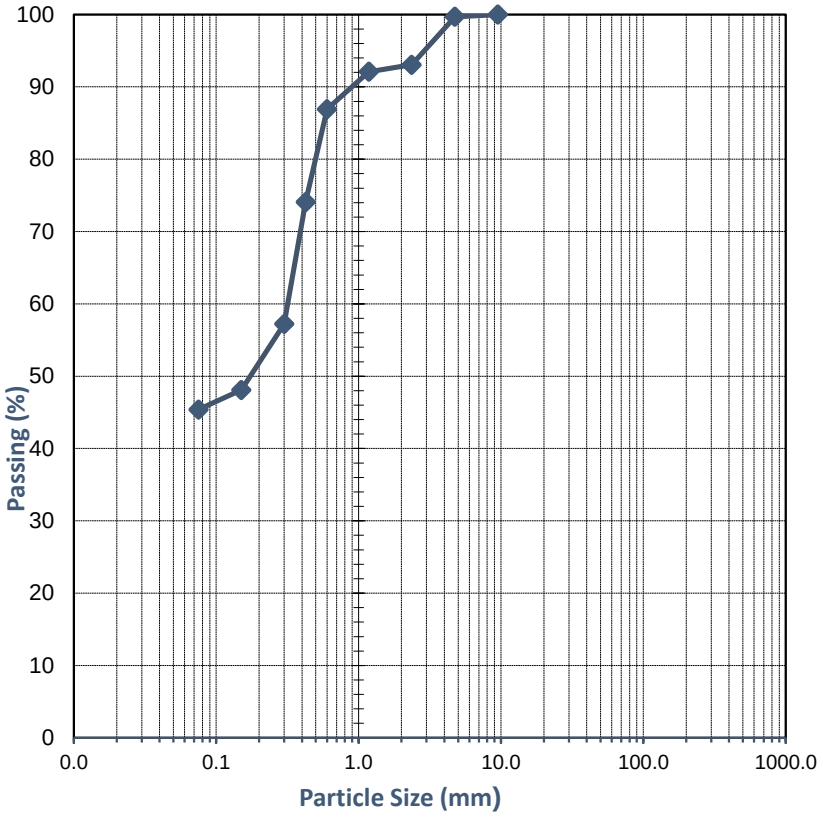
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18261_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18261 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | BH23/2.0 m | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | |
| 9.5 | 100 |
| 4.75 | 100 |
| 2.36 | 93 |
| 1.18 | 92 |
| 0.600 | 87 |
| 0.425 | 74 |
| 0.300 | 57 |
| 0.150 | 48 |
| 0.075 | 45 |




*Comments:*

**Approved Signatory:**

**Name:** Cody O'Neill

**Date:** 17/November/2023

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SOIL | AGGREGATE | CONCRETE | CRUSHING

**TEST REPORT - AS 1289.3.1.1, 3.2.1, 3.3.1 & 3.4.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18261_1_PI |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18261 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | BH23/2.0 m | *Date Tested:* | 17/11/2023 |

## TEST RESULTS - Consistency Limits (Casagrande)

| | |
|---|---|
| **Sampling Method:** | **Sampled by Client, Tested as Received** |
| **History of Sample:** | **Oven Dried <50°C** |
| **Method of Preparation:** | **Dry Sieved** |

| | | |
|---|---|---|
| **AS 1289.3.1.1** | **Liquid Limit (%)** | **44** |
| **AS 1289.3.2.1** | **Plastic Limit (%)** | **22** |
| **AS 1289.3.3.1** | **Plasticity Index (%)** | **22** |
| **AS 1289.3.4.1** | **Linear Shrinkage (%)** | **9.5** |
| **AS 1289.3.4.1** | **Length of Mould (mm)** | **250** |
| **AS 1289.3.4.1** | **Condition of Dry Specimen:** | **Curled** |

***Comments:***

**Approved Signatory:**

**Name:** Madhav Basnet

**Date:** 20/November/2023

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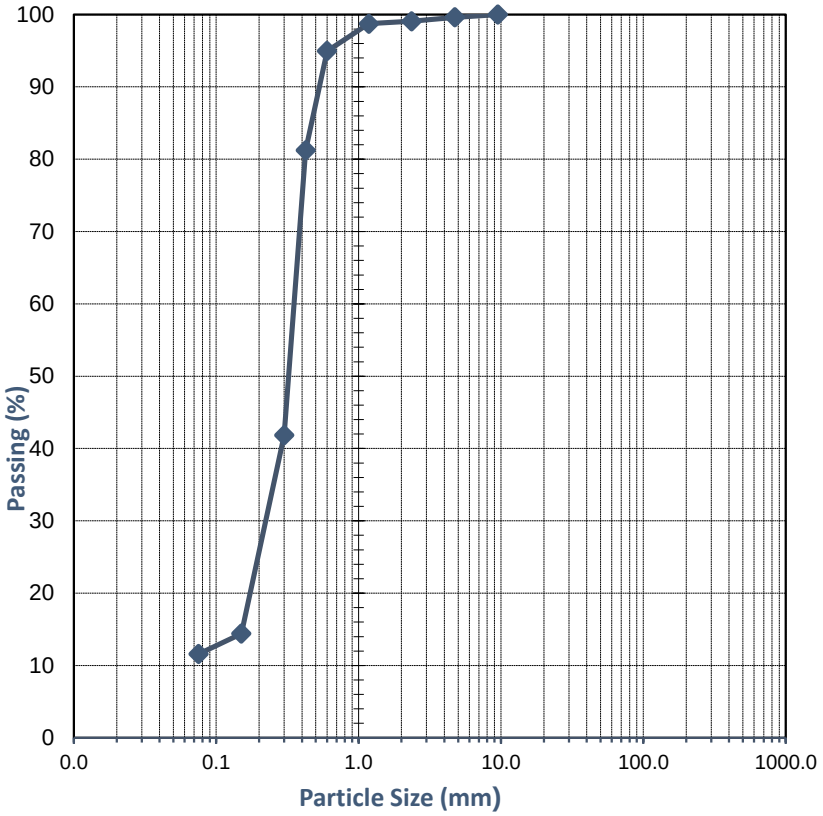
**TEST REPORT - AS 1289.3.6.1**

| | | | |
|---|---|---|---|
| *Client:* | Perth Racing | *Ticket No.* | S11610 |
| *Client Address:* | - | *Report No.* | WG23.18262_1_PSD |
| *Project:* | Proposed Residential Development | *Sample No.* | WG23.18262 |
| *Location:* | Lot 9002 Grandstand Rd, Ascot | *Date Sampled:* | 08/11 - 09/11/23 |
| *Sample Identification:* | BH23/2.5 m | *Date Tested:* | 16/11 - 17/11/2023 |

## TEST RESULTS - Particle Size Distribution of Soil

**Sampling Method:** Sampled by Client, Tested as Received

| Sieve Size (mm) | Percent Passing Sieve (%) |
|---|---|
| 150.0 | |
| 100.0 | |
| 75.0 | |
| 37.5 | |
| 19.0 | |
| 9.5 | 100 |
| 4.75 | 100 |
| 2.36 | 99 |
| 1.18 | 99 |
| 0.600 | 95 |
| 0.425 | 81 |
| 0.300 | 42 |
| 0.150 | 14 |
| 0.075 | 12 |




*Comments:*

**Approved Signatory:**

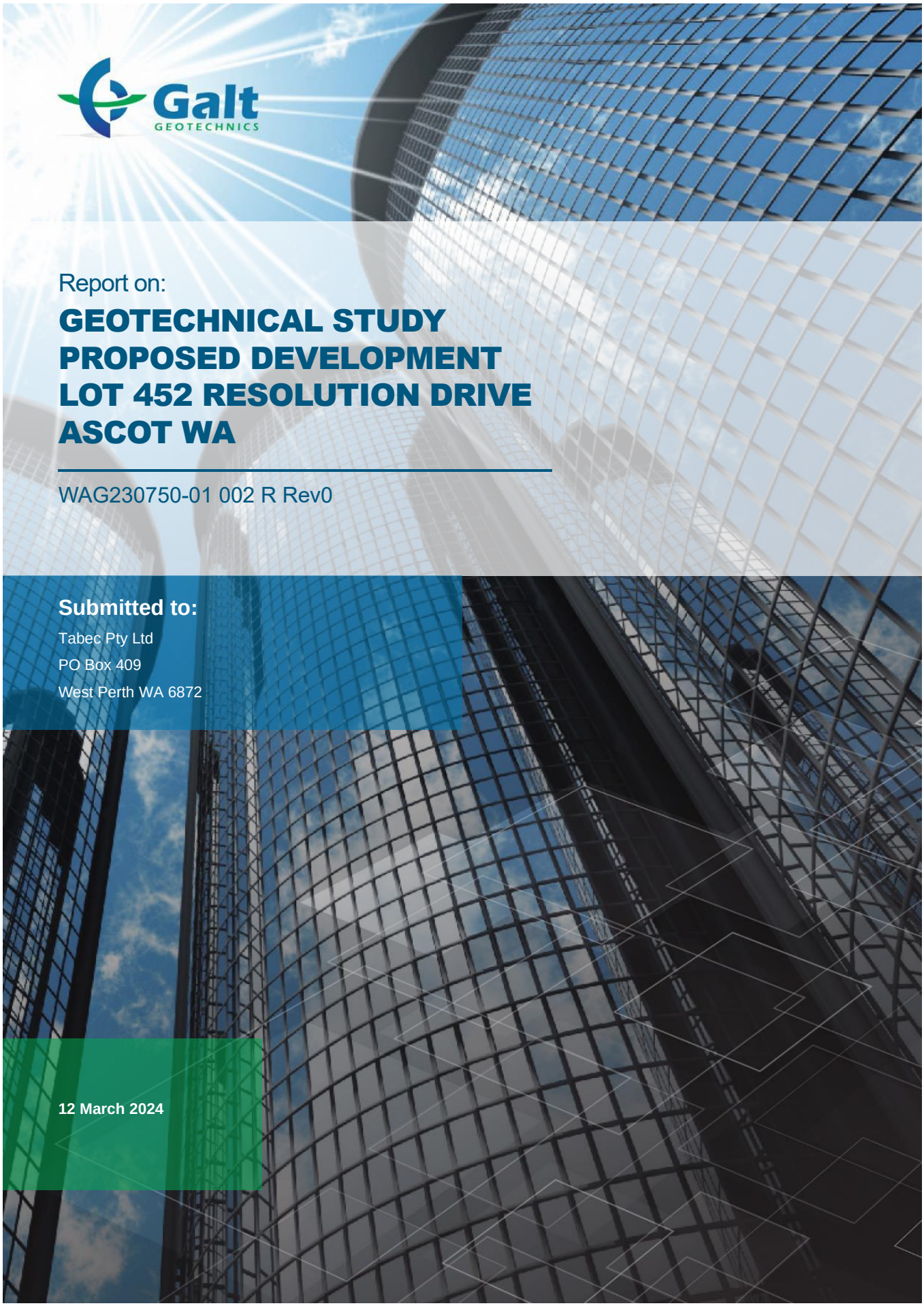
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**Date:** 17/November/2023

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Galt GEOTECHNICS

Report on:

# GEOTECHNICAL STUDY PROPOSED DEVELOPMENT LOT 452 RESOLUTION DRIVE ASCOT WA

WAG230750-01 002 R Rev0

**Submitted to:**

Tabec Pty Ltd
PO Box 409
West Perth WA 6872

**12 March 2024**

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Attached Table 2: Summary of Chemical Test Results and Exposure Classification 10

Figure 1: Site and Location Plan

Appendix A: Site Photographs
Appendix B: Cone Penetration Test Results
Appendix C: Machine Borehole and Monitoring Well Logs
Appendix D: Laboratory Test Results

Standard Geotechnical Definitions, Recommendations, Requirements and Limitations

# 1. INTRODUCTION

This report presents the outcomes of Galt Geotechnics' (Galt's) geotechnical study for the proposed development at Lot 452 Resolution Drive, Ascot ("the site").

This report is to be read in conjunction with the appended "Geotechnical Definitions, Recommendations, Requirements and Limitations". 'Clause GDR1', etc. refer to this Appendix, found at the back of this report.

# 2. KEY FINDINGS

## Site Description

*Table 1: Summary of Site*

| Item | Comment |
|---|---|
| Site Extent | Refer Figure 1. |
| Site Area | About 1.14 Ha. |
| Current Site Surface Levels[1] | About RL 3 m AHD. |
| Vegetation | Mature trees, shrubs and lawn in landscaped areas covering a large portion of the site. |
| Existing Infrastructure | Single Storey building (used by Perth Racing Security Services) with surrounding accessways, car parking and landscaped areas. |
| Site History[2] | **Prior to 1953**: two residences in northern portion of site. Remainder of site relatively clear.<br>**1953 to 1985**: Relatively unchanged. Undeveloped portion of site used as laydown area, car park area, and to stockpile materials at different times.<br>**1989**: Existing Perth Racing Security Services development (as described above) is present<br>**1989 to Present**: Site relatively unchanged. |

***NOTES:*** ***1.*** *Site level based on correspondence with client.*

***2.*** *Site history based on aerial imagery (Landgate).*

# 3. PROPOSED DEVELOPMENT

*Table 2: Summary of Proposed Development*

| Item | Comment |
|---|---|
| Proposed Development | Unknown, assumed subdivision for commercial/residential purposes. |
| Proposed Finished Level | Assumed within about 1 m of current ground levels. |
| Cut/Fill | Assumed ± 1 m with up to 5 m excavation to connect development to existing sewer. |
| Assumed Foundation Type | Shallow Footings. |
| Assumed Retaining Walls | Gravity walls up to 1 m in height. |
| Assumed Stormwater Disposal | Off site into council network. |
| Assumed Sewage Disposal | Off site via reticulated sewer. |

***NOTES:*** ***1.*** *FFL – finished floor level*

***2.*** *Proposed development details based on supplied information.*

# 4. PROJECT OBJECTIVES

The objectives of the study were to:

- Assess the geotechnical suitability of the site for the proposed development;

- Geotechnical opportunities and constraints relevant to the proposed development;
- Areas of foundation risk including the presence of aggressive soils and strategies to address identified risks;
- Site preparation including possible reuse of existing soil as controlled fill;
- Excavation conditions;
- The likely site classification;
- Suitable foundation systems including preliminary design parameters;
- Preliminary design parameters for the design of retaining structures and batter slopes;
- Depth to groundwater at time of investigation; and
- Recommendations on additional geotechnical investigation at detailed design phase or to address specific ground conditions encountered.

# 5. FIELDWORK

Fieldwork was carried out in the presence of a representative from Galt between the 8 and 14 February 2024 and comprised:

*Table 3: Summary of Field Data*

| Type | Results Appendix | Summary | GDR Clause | Equipment Used | No. Tests | Depth Range (m) |
|---|---|---|---|---|---|---|
| Site Plan | Figure 1 | - | - | Hand held GPS[1] | - | - |
| Photographs | A | - | - | - | - | - |
| Cone Penetration Tests (CPTs) | B | Section 8 | GDR3.2 | 14-tonne truck | 5 | 1.6 to 10.1 |
| Machine Auger Boreholes (BH) | C | Section 8 | GDR3.3 | AMS Power Probe | 4 | 0.7 to 6.5 |
| Monitoring Well (MW) | C | Section 8 | GDR3.3 | AMS Power Probe | 1 | 6.0 |

***NOTES:*** ***1.*** *Hand held GPS is accurate to ±5 m.*

# 6. LABORATORY TESTING

Laboratory test certificates are presented in Appendix D, and summarised in Attached Tables 1 and 2.

# 7. SITE CONDITIONS

## 7.1. Geology

*Table 4: Summary of Geology Mapping*

| Map Sheet | Map Scale | Mapped Soils | Typical Site Findings |
|---|---|---|---|
| Perth | 50K | Guildford Formation, described as: *"SANDY SILT - strong brown to mid grey, mottled, blocky, disseminated fine sand, hard when dry, variable clay content of alluvial origin."* | **Thin topsoil** (landscaped areas) **and pavement materials** (car parks / access ways) **over FILL: SAND / SAND** to about 0.4 m to 0.9 m depth, **over Sandy CLAY / CLAY**. |

## 7.2. Groundwater

*Table 5: Summary of Groundwater Levels*

| Item | Date | Depth Range (m) | Elevation Range (m AHD) | Comment |
|---|---|---|---|---|
| Perth Groundwater Atlas | 1997 | - | 3.0 | Historical maximum |
| Department of Water and Environmental Regulation (DWER) Flood Mapping | - | - | 2.7 to 2.9 (DWER mapped 1% AEP flood event level) | Portion of site along southern and south western site boundaries, and the northern side of Grandstand road are mapped as being part of flood fringe by DWER. **Advice on development within the defined flood event (DFE) floodplain is provided by DWER on a case by case basis. DWER recommends a minimum building floor level of 0.50 metres above this level (RL 3.4 m AHD).** |
| Site observations in MW01 | February 2024 | 3.03 | - | Based on highest recorded water levels in monitoring well. |
| Site observations in CPT test probes | February 2024 | 1.90 to 2.80 | - | CPT probes may not have had sufficient time to recharge to hydrostatic levels. |
| Recommended Design | - | - | 2.7 to 2.9 | Groundwater likely to perch on clay soils at site. Proposed development must be designed for DWER DFE flood event. |

***NOTES:*** ***1.*** *Depths for site observations based on the site surface level at the time of investigation.*

# 8. GROUND MODEL

The encountered subsurface conditions are summarised as comprising:

- **Surficial Topsoil (in landscaped areas)** up to 0.3 m thick **and Hardstand Fill Layers** (in carparks and access ways); **overlying**
- **FILL: SAND / SAND (SP)**, fine to medium grained, sub-rounded to sub-angular, yellow / brown / grey layers, includes trace gravel / Sandy GRAVEL layers, trace / with fines, some typically medium dense to dense, extending to depths of about 0.4 m to 0.9 m; overlying
- **In BH03 and BH04 only: Silty SAND / Clayey SAND (SM/SC)** fine to medium grained, sub-rounded to sub-angular, brown / grey, low to medium plasticity fines, some typically medium dense to dense, extending to depths of about 0.7 m to 1.2 m; overlying
- **Sandy CLAY / CLAY (CI)**, medium plasticity, brown / orange / grey, trace sand to sandy, trace gravel in some zones, desiccated, CPT traces indicate presence of occasional sand layers, typically very stiff to hard, extending to the maximum depth investigated of 10 m.

Geotechnical design parameters for the generalised subsurface units described above are presented in Table 6.

*Table 6: Geotechnical Model Units and Design Parameters*

| Unit Name | $\gamma_{bulk}$ (kN/m$^3$) | $\phi'$ (°) | c' (kPa) | $S_u$ (kPa) | $E_v$ (MPa) | $\nu$ | $k_0$ | Wall Friction=0 | | Wall Friction=0.5$\phi$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | $k_a$ | $k_p$ | $k_a$ | $k_p$ |
| Compacted Approved FILL | 18 | 36 | - | - | 50 | 0.25 | 0.41 | 0.26 | 3.85 | 0.22 | 6.54 |
| SAND / Silty SAND / Clayey SAND | 18 | 35 | - | - | 25 | 0.3 | 0.43 | 0.27 | 3.69 | 0.24 | 6.08 |
| Sandy CLAY / CLAY | 18 | 21 | 0 to 5 | 150 | 30 | 0.45 | Earth pressure coefficients can be calculated for undrained or drained conditions as outlined in GDR11.2.2 using Firm parameters (undrained) or Fines Content >35% & PI 40% (drained). | | | | |

***NOTES:***

1. *These units are a generalization of results from individual tests, which should be referred to for more information.*
2. *Conditions at CPT locations below depth of soil sample recovery are inferred (refer to clause GDR3.2)*
3. *Surficial topsoil and hardstand layers are not included as discrete units.*
4. *Compacted approved fill is as described in Table 7.*
5. *For all earth pressure coefficients (retaining wall design) refer to clause GDR11.2 for more detail and interpretation. Unit weights for retaining structure design should be as per GDR11.2 or 1 kN/m$^3$ greater than the values in the table above.*

*$\gamma_{bulk}$ – bulk unit weight*
*$\phi'$ – effective friction angle*
*$S_u$ – undrained shear strength*
*c'– effective cohesion*
*$E_v$ – vertical elastic modulus*
*$\nu$ – Poisson's Ratio*
*$k_a$ – coefficient of active earth pressure (Coulomb – AS4678-2002, Appendix E)*
*$k_p$ – coefficient of passive earth pressure (Coulomb – AS4678-2002, Appendix E)*
*$k_0$ – coefficient of at-rest earth pressure (Jaky)*

# 9. GEOTECHNICAL ASSESSMENT

## 9.1. Summary

*Table 7: Summary of Geotechnical Assessment*

| Type | Clause | Parameter | Comment |
|---|---|---|---|
| Site Suitability | - | - | We consider the site to be geotechnically suitable for the proposed subdivision development. Standard site preparation measures will apply. However, groundwater could impact construction if it occurs during winter. Flood levels will impact site levels (refer Table 5). |
| Construction Methodology and Suitability | - | - | Shallow footings in accordance with AS2870-2011 will be suitable for this site. Mass retaining will be suitable for retaining however, must be designed for potential flooding of the site. Stormwater disposal via infiltration is **not** suitable. |
| Site Classification (AS2870) | GDR5 | S | Where **no less than 0.7 m of sand** (including insitu silty sand and clayey sand layers encountered in BH03 and BH04) is present **over in situ CLAY / Sandy CLAY.** |
| Site Subsoil Class (AS1170.4) | - | Ce | Base of superficial formation mapped to be about 25 m below ground. |
| Site Preparation | GDR6 | - | **GDR6.2.1 Common Measures** followed by **GDR6.2.4 Clayey Sites** followed by **GDR6.2.5 Sand Topping Layer.** |
| Approved Fill | GDR8 | - | **Approved Fill** for this site is to comprise **Permeable Sand**.<br>Only relatively thin surficial layers of sand at the site (excluding topsoil) are suitable as approved fill. If additional fill is required, imported **Permeable Sand** will be needed.<br>Although not classed as 'approved fill', where clay is encountered in trench excavations, this material could possibly be reused to backfill the same portion of the trench (excluding any special fill materials required around buried elements). However, this material will be difficult to work and moisture condition to near optimum (particularly if removed from below the groundwater table). |
| Compaction Control | GDR7 | - | A PSP may be used for compaction control on **Permeable Sand.** Deemed to comply values for 'Tamala' sand in GDR7.4 are applicable.<br>Where filling with clay is done (in trenches, etc), compaction control must be done with the NDG as outlined in GDR7.3 Nuclear Density Gauge. |
| Shallow Footings | GDR9 | $q_{all}$ = 100 kPa to 250 kPa | Design tables for shallow footings are presented in Section 9.2. Estimated settlements are not considered excessive. 70% of the settlement is expected to occur during construction. |
| Earth Pressure Coefficients | GDR11 | Table 6 | Earth pressure coefficients are presented in Table 6. |
| Unsaturated Hydraulic Conductivity | GDR13 | - | On site disposal of stormwater unlikely to be suitable due to shallow depth to clay and potential for flooding adjacent the site. Off site disposal of stormwater likely to be required. |
| Pavement Subgrade CBR | GDR16 | CBR = 10% | Subgrade to comprise compacted **Approved Fill no less than 0.6 m thick.** |
| Soil Aggressivity | GDR17 | - | Refer Section 9.3 |
| Batters | GDR12 | **Temporary:**<br>Sand: 1V:2H<br>Clay: 1V:1H<br>**Permanent:**<br>1V:3H | Batter angles apply to soil units (refer Table 6) above the water table, as per GDR12.3. Dewatering and possibly retention (i.e. shoring) required below the groundwater table. |
| Excavations | GDR12.1 | 20 Ton Excavator | Potential for obstructions (buried concrete, Soakwells etc…), cemented soils and surficial pavement layers must be considered when selecting earthmoving plant. |

**NOTES:**
1. $q_{all}$ – allowable bearing pressure (maximum for all footings, refer to footing tables for further details)

## 9.2. Shallow Footings

*Table 8: Isolated Pad Footing Allowable Bearing Pressures and Estimated Settlements*

| $d_e$ (m) | b (m) | $q_{all}$ (kPa) | s (mm) |
|---|---|---|---|
| 0.5 | 0.5 | 120 | < 5 |
| 0.5 | 1.0 | 130 | < 5 |
| 1.0 | 1.0 | 240 | 5 - 10 |
| 1.0 | 2.0 | 250 | 10 - 15 |
| 1.0 | 3.0 | 250 | 20 - 25 |

**NOTES:**
1. $d_e$ – minimum embedment depth (below finished ground level or floor slab)
2. b – Footing breadth (footings assumed approximately square)
3. $q_{all}$ – allowable bearing pressure (peak). Limited to keep estimated settlements less than 25 mm. Higher $q_{all}$ may be possible if higher settlements can be tolerated – refer queries to us.
4. s – estimated settlement (excludes shrink/swell from site class)
5. Refer to GDR9
6. Groundwater assumed to be at ground level.

*Table 9: Isolated Strip Footing Allowable Bearing Pressures and Estimated Settlements*

| $d_e$ (m) | b (m) | $q_{all}$ (kPa) | s (mm) |
|---|---|---|---|
| 0.5 | 0.5 | 100 | < 5 |
| 0.5 | 1.0 | 130 | 5 - 10 |
| 1.0 | 1.0 | 190 | 10 - 15 |
| 1.0 | 2.0 | 250 | 20 - 25 |

**NOTES:**
1. $d_e$ – minimum embedment depth (below finished ground level or floor slab)
2. b – Footing breadth (footings assumed long relative to breadth)
3. $q_{all}$ – allowable bearing pressure (peak). Limited to keep estimated settlements less than 25 mm. Higher $q_{all}$ may be possible if higher settlements can be tolerated – refer queries to us.
4. s – estimated settlement (excludes shrink/swell from site class)
5. Refer to GDR9
6. Groundwater assumed to be at ground level.

## 9.3. Soil Aggressivity

Results of aggressivity testing on clay samples is summarised in Attached Table 2. The results indicate the clay is 'non aggressive' to concrete and steel (in accordance with AS2159-2009) with a AS3600-2009 classification of 'A1'.

Based on regional experience, we anticipate the sand will have the same aggressivity classifications as the underlying clay where above the groundwater. However, for concrete in sand below the water table, an AS2159-2009 'mild' classification, and AS3600-2009 'A2' classification is appropriate.

Groundwater was not tested.

# 10. CLOSURE

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Owen Woodland CPEng
*Geotechnical Engineer*

Tyrone Mardesic CPEng
*Geotechnical Engineer*

https://galtgeo.sharepoint.com/sites/wag230750/shared documents/01 tabec si/03 correspondence/wag230750-01 002 r rev0.docx

*Attached Table 1: Summary of Geotechnical Index Test Results*

| Test Name | Sample Depth (m) | Soil Class (AS1726 2017) | Fines (%) | Sand (%) | Gravel (%) | LL (%) | PI (%) | LS (%) |
|---|---|---|---|---|---|---|---|---|
| BH03 | 1.5 - 2.2 | CLAY (CI) | 89 | 11 | 0 | 46 | 28 | 12.5 |
| BH04 | 1.0 - 1.3 | Sandy CLAY (CI) | 54 | 43 | 3 | 34 | 20 | 8.5 |

***Notes***

1. *Particle size distribution (by mass)*
   *Gravel: 2.36 mm – 63 mm* *Sand: 0.075 mm – 2.36 mm* *Fines: <0.075 mm*
2. *Atterberg Limits*
   *LL: Liquid limit* *PI: Plasticity index* *LS: Linear shrinkage*
   *NO: Not obtainable* *NP: Non-plastic*

*Attached Table 2: Summary of Chemical Test Results and Exposure Classification*

| Location | Sample Depth (m) | Soil Description | Soil Condition | pH | $SO_4$ (ppm) | Cl (ppm) | AS2159 Steel EC | AS2159 Concrete EC | AS3600 Concrete EC |
|---|---|---|---|---|---|---|---|---|---|
| BH03 | 1.5 - 2.2 | CLAY (CI) | B | 8.8 | 100 | 210 | Non-Aggressive | Non-Aggressive | A1 |
| BH04 | 1.0 - 1.3 | Sandy CLAY (CI) | B | 7.5 | 170 | 94 | Non-Aggressive | Non-Aggressive | A1 |

***NOTES:***

1. *Soil condition*
   *A – high permeability soils (sands and gravels) which are below water table.* *B – Low permeability soils (silts and clays) and all soils above water table*
2. *Sulfate expressed as $SO_4$*
3. *Cl – Chloride*
4. *ER – Electrical Resistivity*
5. *EC – Exposure Classification*
5. *Exposure Classification for AS2159-2009 (for steel and concrete piles)*
   *[Exposure Classification for AS3600-2009 (for buried concrete structures)]*

| *Non-aggressive [A1]* | *Mild [A2]* | *Moderate [B1]* | *Severe [B2]* | *Very Severe [C2]* |
|---|---|---|---|---|

# Figures







**Legend**

- Site Boundary
- Borehole
- Cone Penetration Test

N

0 10 20 30 40 50
Meters

***NOTES***
*Aerial Imagery and Cadastre sourced from Landgate/SLIP*




| | |
|---|---|
| SCALE | 1:750 (A3) |
| DRAWN | CED |
| DATE DRAWN | 13/2/2024 |
| CHECKED | _ |
| DATE CHECKED | _ |
| PROJECTION | GDA 1994 MGA Zone 50 |

Galt Geotechnics Pty Ltd
ACN : 138 490 865
Tel : +61 (0)8 6272-0200
Address : 50 Edward Street
Osborne Park WA 6017

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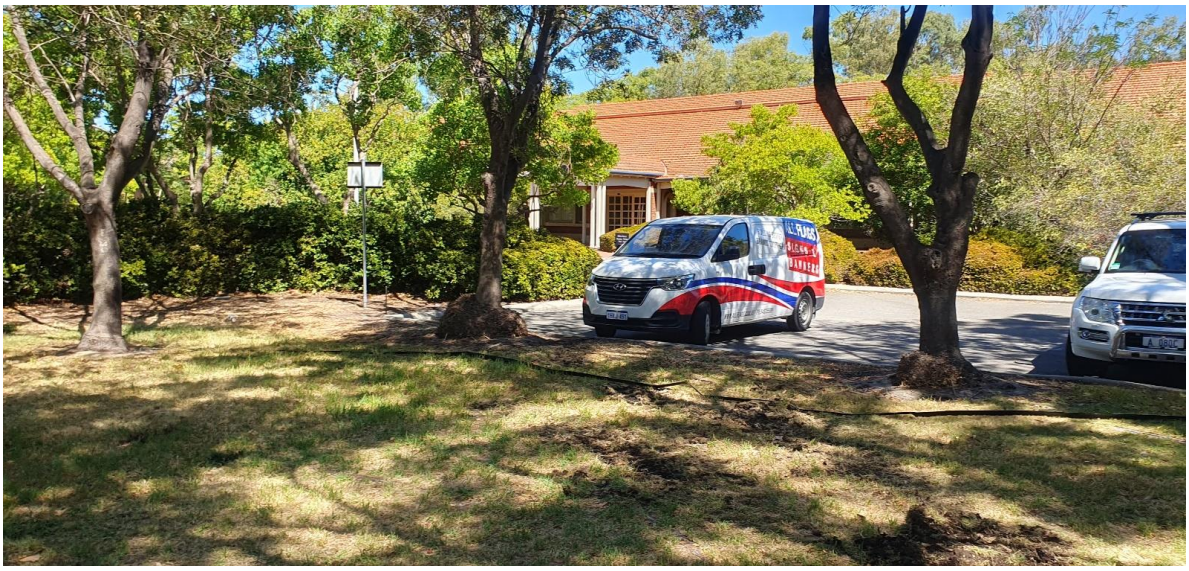
| | |
|---|---|
| CLIENT | **TABEC CIVIL ENGINEERING CONSULTANTS** |
| PROJECT | PROPOSED DEVELOPMENT |
| LOCATION | LOT 452 RESOLUTION DRIVE ASCOT |
| TITLE | SITE & LOCATION PLAN |
| Job No | WAG230750-01 |
| Fig No | FIGURE 1 |
| Rev | **A** |

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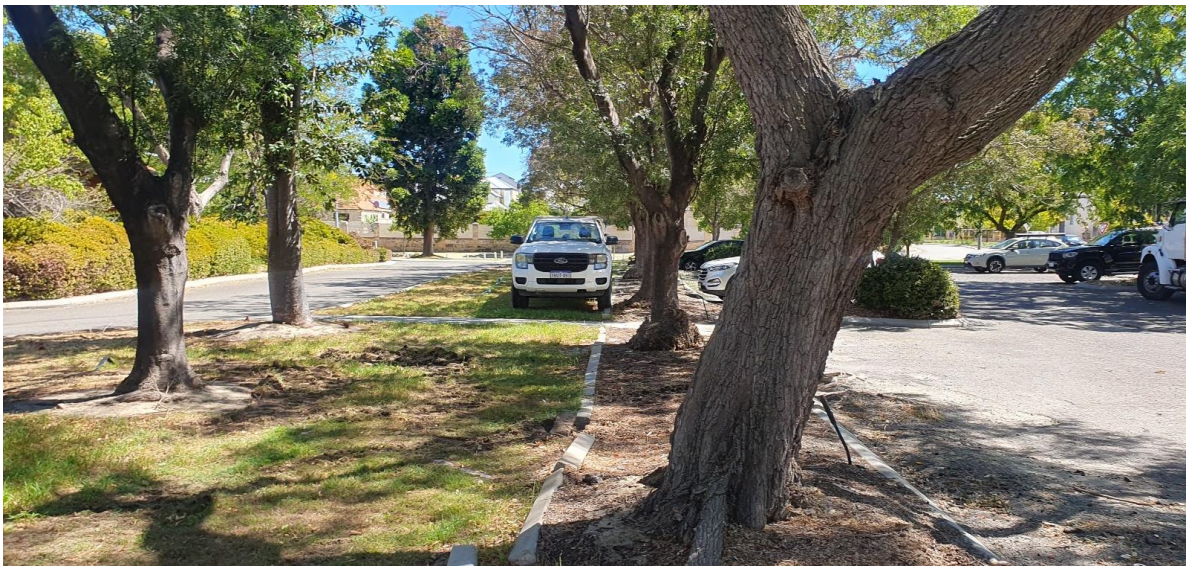

Appendices

# Appendix A: Site Photographs

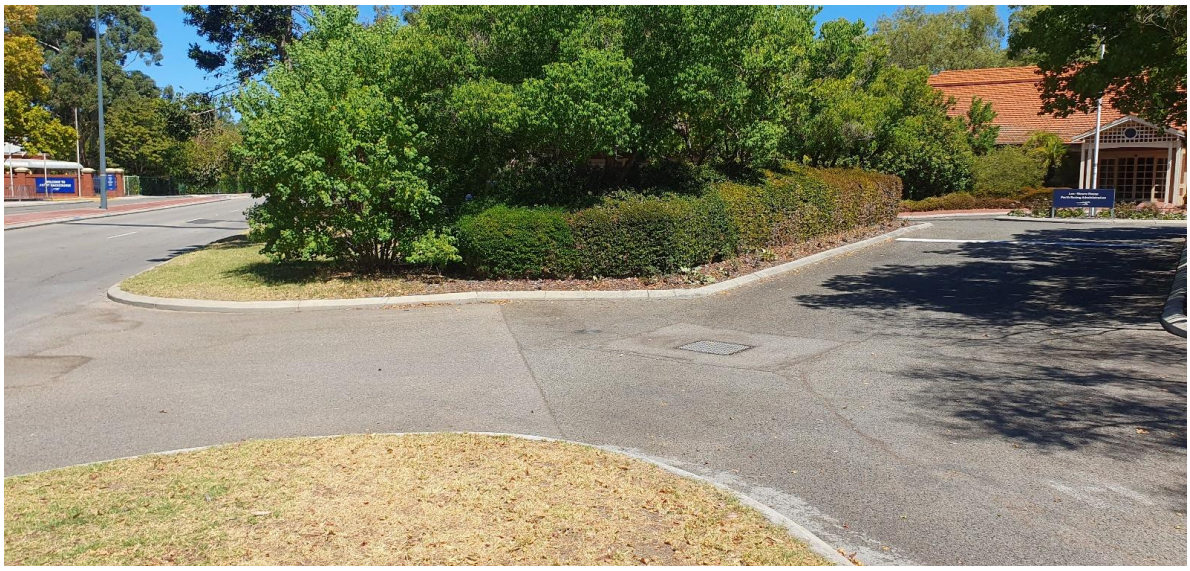
*Photograph 1: Near CPT02 facing south*



*Photograph 2: Near CPT02 facing south west*



*Photograph 3: Site photo from near northern portion of site*



# Appendix C: Machine Borehole and Monitoring Well Logs

# EXPLANATORY NOTES TO BE READ WITH BOREHOLE AND TEST PIT REPORTS

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## METHOD OF DRILLING OR EXCAVATION

| | | | | | |
|---|---|---|---|---|---|
| AC | Air Core | E | Excavator | PQ3 | PQ3 Core Barrel |
| AD/T | Auger Drilling with TC-Bit | EH | Excavator with Hammer | PT | Push Tube |
| AD/V | Auger Drilling with V-Bit | HA | Hand Auger | R | Ripper |
| AT | Air Track | HE | Hand Excavation | RR | Rock Roller |
| B | Bulldozer Blade | HQ3 | HQ3 Core Barrel | SON | Sonic Rig |
| BH | Backhoe Bucket | N | Natural Exposure | SPT | Driven SPT |
| CT | Cable Tool | NMLC | NMLC Core Barrel | WB | Washbore |
| DT | Diatube | PP | Push Probe | X | Existing Excavation |

## SUPPORT

| | |
|---|---|
| T | Timbering |

## PENETRATION EFFORT (RELATIVE TO THE EQUIPMENT USED)

| | | | | | |
|---|---|---|---|---|---|
| VE | Very Easy | E | Easy | F | Firm |
| H | Hard | VH | Very Hard | | |

## WATER

| | | | |
|---|---|---|---|
| ► | Water Inflow | ▼ | Water Level |
| ◄ | Water Loss (complete) | | |
| ◁ | Water Loss (partial) | | |

## SAMPLING AND TESTING

| | | | |
|---|---|---|---|
| B | Bulk Disturbed Sample | P | Piston Sample |
| BLK | Block Sample | PBT | Plate Bearing Test |
| C | Core Sample | U | Undisturbed Push-in Sample |
| CBR | CBR Mould Sample | | U50: 50 mm diameter |
| D | Small Disturbed Sample | SPT | Standard Penetration Test |
| ES | Environmental Soil Sample | | Example: 3, 4, 5 N=9 |
| EW | Environmental Water Sample | | 3,4,5: Blows per 150 mm |
| G | Gas Sample | | N=9: Blows per 300 mm after |
| HP | Hand Penetrometer | | 150 mm seating interval |
| LB | Large Bulk Disturbed Sample | VS | Vane Shear; P = Peak |
| M | Mazier Type Sample | | R = Remoulded (kPa) |
| MC | Moisture Content Sample | W | Water Sample |

## ROCK CORE RECOVERY

TCR = Total Core Recovery (%) $= \frac{CRL}{TCL} \times 100$

RQD = Rock Quality Designation (%) $= \frac{ALC>100}{TCL} \times 100$

| | |
|---|---|
| TCL | Length of Core Run |
| CRL | Length of Core Recovered |
| ALC>100 | Total Length of Axial Lengths of Core Greater than 100 mm Long |

# METHOD OF SOIL DESCRIPTION
# BOREHOLE AND TEST PIT REPORTS

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## GRAPHIC LOG & SOIL CLASSIFICATION SYMBOLS

| Graphic | USCS | Soil Name |
|---|---|---|
| | | FILL (various types) |
| | | COBBLES / BOULDERS |
| | GP | GRAVEL (poorly graded) |
| | GW | GRAVEL (well graded) |
| | GC | Clayey GRAVEL |
| | GM | Silty GRAVEL |
| | SP | SAND (poorly graded) |
| | SW | SAND (well graded) |
| | SC | Clayey SAND |

| Graphic | USCS | Soil Name |
|---|---|---|
| | SM | Silty SAND |
| | ML | SILT (low liquid limit) |
| | MH | SILT (high liquid limit) |
| | CL | CLAY (low plasticity) |
| | CI | CLAY (medium plasticity) |
| | CH | CLAY (high plasticity) |
| | OL | Organic SILT (low liquid limit) |
| | OH | Organic SILT (high liquid limit) |
| | Pt | PEAT |

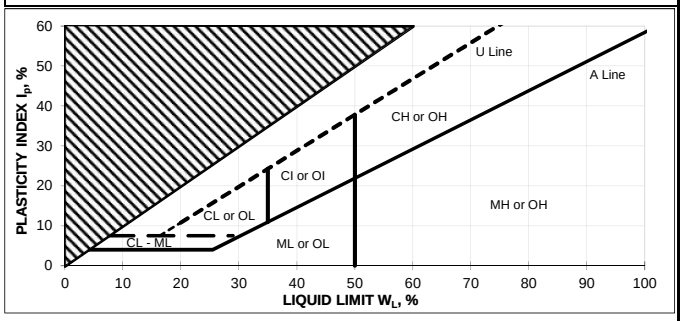
NOTE: Dual classification given for soils with a fines content between 5% and 12%.

## SOIL CLASSIFICATION AND INFERRED STRATIGRAPHY

Soil descriptions are based on AS1726-2017. Material properties are assessed in the field by visual/tactile methods in combination with field and laboratory testing techniques (where used).
NOTE: AS 1726-2017 defines a fine grained soil where the total dry mass of fine fractions (<0.075 mm particle size) exceeds 35%.

| PARTICLE SIZE | | |
|---|---|---|
| **Soil Name** | | **Particle Size (mm)** |
| BOULDERS | | >200 |
| COBBLES | | 63 to 200 |
| GRAVEL | Coarse | 19 to 63 |
| | Medium | 6.7 to 19 |
| | Fine | 2.3 to 6.7 |
| SAND | Coarse | 0.6 to 2.36 |
| | Medium | 0.21 to 0.6 |
| | Fine | 0.075 to 0.21 |
| FINES | SILT | 0.002 to 0.075 |
| | CLAY | <0.002 |

**PLASTICITY - MODIFIED CASAGRANDE CHART - AS1726-2017**




| RESISTANCE TO EXCAVATION | | |
|---|---|---|
| **Symbol** | **Term** | **Description** |
| VE | Very easy | All resistances are relative to the selected method of excavation |
| E | Easy | |
| F | Firm | |
| H | Hard | |
| VH | Very hard | |

| MOISTURE CONDITION | |
|---|---|
| **Symbol** | **Term** |
| D | Dry |
| M | Moist |
| W | Wet |

| CEMENTATION | |
|---|---|
| **Cementation** | **Description** |
| Weakly cemented | Soil may be easily disaggregated by hand in air or water |
| Moderately cemented | Effort is required to disaggregate the soil by hand in air or water |

| CONSISTENCY | | |
|---|---|---|
| **Symbol** | **Term** | **Undrained Shear Strength (kPa)** |
| VS | Very Soft | 0 to 12 |
| S | Soft | 12 to 25 |
| F | Firm | 25 to 50 |
| St | Stiff | 50 to 100 |
| VSt | Very Stiff | 100 to 200 |
| H | Hard | >200 |

| ORGANIC SOILS | |
|---|---|
| **Material** | **Organic Content % of dry mass** |
| Inorganic soil | <2% |
| Organic soil | 2% to 25% |
| Peat | >25% |

| DENSITY | | |
|---|---|---|
| **Symbol** | **Term** | **Density Index (%)** |
| VL | Very Loose | <15 |
| L | Loose | 15 to 35 |
| MD | Medium Dense | 35 to 65 |
| D | Dense | 65 to 85 |
| VD | Very Dense | >85 |

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Galt Form PMP17
December 2017

Galt

# REPORT OF BOREHOLE: BH01/MW01

| | | | | | |
|---|---|---|---|---|---|
| Job No | : WAG230750-01 | Easting | : 0.00 | Sheet | : 1 OF 1 |
| Client | : Tabec | Northing | : 0.00 | Logged | : MDS |
| Project | : Proposed Development | UTM | : | Logged Date | : 08/02/2024 |
| Location | : Lot 452 Resolution Drive, Ascot | Drill Rig | : AMS Super Rig | Checked | : TM |
| Contractor | : Galt Geotechnics | Inclination | : -90 deg | Checked Date | : 25/02/2024 |

**General comments: Monitoring Well Installed at this location**

| Drilling Method | Depth (m) | Water | Classification Code | Soil Origin | Graphic Log | Consistency/Density | Moisture | Material Description | Structural and Additional Observations | Well Diagram |
|---|---|---|---|---|---|---|---|---|---|---|
| 90mm Solid Auger | 0.3 | | SP | Natural | | | D | Natural SAND: dark brown and black, fine to coarse grained, with low plasticity clay, (trace organics present in upper 200mm). | (trace organics present in upper 200mm) | Backfill (Drill Spoil) |
| | 0.45 | | SP | Natural | | MD-D | | Natural SAND: pale yellow, fine to coarse grained, trace low plasticity clay. | | 50mm PVC Solid<br>Bentonite (Sealed above Slotted PVC) |
| | 0.9 | | SP | Natural | | | | Natural SAND: dark brown and black, fine to coarse grained, trace low plasticity clay. | | |
| | 1 | | Cl | Natural | | VSt-H | | Natural Sandy CLAY: medium plasticity, brown and pale orange, fine grained sand, inorganic, clay is highly desiccated. | Clay is highly desiccated | |
| | 2 | | | | | | | | | |
| | 2.3 | | SC | Natural | | | | Natural Clayey SAND: low plasticity clay, brown and dark brown, fine to coarse grained, trace fine to medium sized gravel. | | Filter Pack (Gravel Filter Medium Installed) |
| | 2.5 | | Cl | Natural | | VSt-H | | Natural CLAY: medium plasticity, brown and pale orange, trace fine to medium grained sand, inorganic, clay is desiccated at shallower depths. | Clay is desiccated at shallower depths | |
| | 3 | ▼ | | | | | | | | 50mm PVC Slotted |
| | 4 | | | | | | | | | |
| | 5 | | | | | | | | | |
| | 6 | | | | | | | **BH01/MW01 Terminated at 6m (Target Depth GW @3.03m)** | | |
| | 7 | | | | | | | | | |
| | 8 | | | | | | | | | |



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# REPORT OF BOREHOLE: BH02

| | | | | | |
|---|---|---|---|---|---|
| Job No | : WAG230750-01 | Easting | : 0.00 | Sheet | : 1 OF 1 |
| Client | : Tabec | Northing | : 0.00 | Logged | : MDS |
| Project | : Proposed Development | UTM | : | Logged Date | : 08/02/2024 |
| Location | : Lot 452 Resolution Drive, Ascot | Drill Rig | : AMS Super Rig | Checked | : TM |
| Contractor | : Galt Geotechnics | Inclination | : -90 deg | Checked Date | : 25/02/2024 |

| Drilling Method | DCP graph | Water | Depth (m) | Soil Origin | Graphic Log | Classification Code | Material Description | Moisture | Consistency/Density | Remarks | Sample |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 90mm Solid Auger | | | | Natura | | SP | Natural SAND: dark grey and black, fine to coarse grained, trace low plasticity clay, (trace organics present in upper 200mm). | M-D | MD-D | | |
| | | | 1 | | | | **BH02 refusal at 0.7m (Refusal on Desiccated Clay Groundwater not encountered)** | | | | |
| | | | 2 | | | | | | | | |
| | | | 3 | | | | | | | | |
| | | | 4 | | | | | | | | |
| | | | 5 | | | | | | | | |
| | | | 6 | | | | | | | | |
| | | | 7 | | | | | | | | |
| | | | 8 | | | | | | | | |

Page 1 of 1

Galt

# REPORT OF BOREHOLE: BH03

| | | | | | |
|---|---|---|---|---|---|
| Job No | : WAG230750-01 | Easting | : 0.00 | Sheet | : 1 OF 1 |
| Client | : Tabec | Northing | : 0.00 | Logged | : PA |
| Project | : Proposed Development | UTM | : | Logged Date | : 14/02/2024 |
| Location | : Lot 452 Resolution Drive, Ascot | Drill Rig | : AMS Super Rig | Checked | : TM |
| Contractor | : Galt Geotechnics | Inclination | : -90 deg | Checked Date | : 25/02/2024 |

| Drilling Method | Depth (m) | Soil Origin | Graphic Log | Classification Code | Material Description | Moisture | Consistency/Density | Remarks | Sample |
|---|---|---|---|---|---|---|---|---|---|
| 90mm Solid Auger | 0.1 | Topsoil | | SP | Topsoil SAND: dark grey, fine to medium grained, trace medium plasticity clay, with roots / organics. | D | | | |
| | 0.25 | Fill | | SP | Fill SAND: brown, medium dense to dense, fine to medium grained, trace low plasticity clay. | | MD-D | | |
| | 0.4 | Fill | | GP | Fill Sandy GRAVEL: grey, medium dense to dense, fine to medium sized, fine to medium grained sand, trace low to medium plasticity clay. | | | | |
| | 0.7 | Natural | | SM | Natural Silty SAND: grey brown, fine to medium grained. | | | | |
| | | Natural | | Cl | Natural CLAY: medium plasticity, grey, with fine to medium grained sand, inorganic, trace organics, clay is desiccated at shallow depths. | | VSt-H | | |
| | 1 | | | | | | | | |
| | 1.5 | Natural | | Cl | As above, brown, trace organics. | | | | |
| | 2 | | | | | | | | |
| | 3 | | | | | | | | |
| | 4 | Natural | | Cl | As above. | M | | | |
| | 5 | | | | | | | | |
| | 6 | | | | **BH03 Terminated at 6m (Target depth. Groundwater not encountered)** | | | | |
| | 7 | | | | | | | | |
| | 8 | | | | | | | | |



Page 1 of 1

Galt

# REPORT OF BOREHOLE: BH04

| | | | | | |
|---|---|---|---|---|---|
| Job No | : WAG230750-01 | Easting | : 0.00 | Sheet | : 1 OF 1 |
| Client | : Tabec | Northing | : 0.00 | Logged | : PA |
| Project | : Proposed Development | UTM | : | Logged Date | : 14/02/2024 |
| Location | : Lot 452 Resolution Drive, Ascot | Drill Rig | : AMS Super Rig | Checked | : TM |
| Contractor | : Galt Geotechnics | Inclination | : -90 deg | Checked Date | : 25/02/2024 |

| Drilling Method | DCP graph | Water | Depth (m) | Soil Origin | Graphic Log | Classification Code | Material Description | Moisture | Consistency/Density | Remarks | Sample |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 90mm Solid Auger | | | 0.25 | Topsoil | | SP | Topsoil SAND: grey, fine to medium grained, trace medium plasticity clay, trace / with organics. | D | | | |
| | | | 0.5 | Fill | | SP | Fill SAND: brown, fine to medium grained, trace low plasticity clay. | | | | |
| | | | 1 | Natural | | SC | Natural Clayey SAND: medium plasticity clay, brown, fine to medium grained. | | | | |
| | | | 1.2 | Natural | | CI | Natural Sandy CLAY: medium plasticity, brown mottled red, fine to medium grained sand, trace fine to medium sized gravel, inorganic, clay is desiccated. | | VSt-H | | |
| | | | 1.5 | Natural | | CI | Natural CLAY: medium plasticity, brown, with fine to medium grained sand, inorganic, clay is desiccated at shallow depths. | | | | |
| | | | 3 | Natural | | CI | As above. | M | | | |
| | | | 4.5 | Natural | | CI | As above. | W | | | |
| | | | | | | | **BH04 Terminated at 6.5m (Target depth. Groundwater possibly at 4.5 m depth)** | | | | |

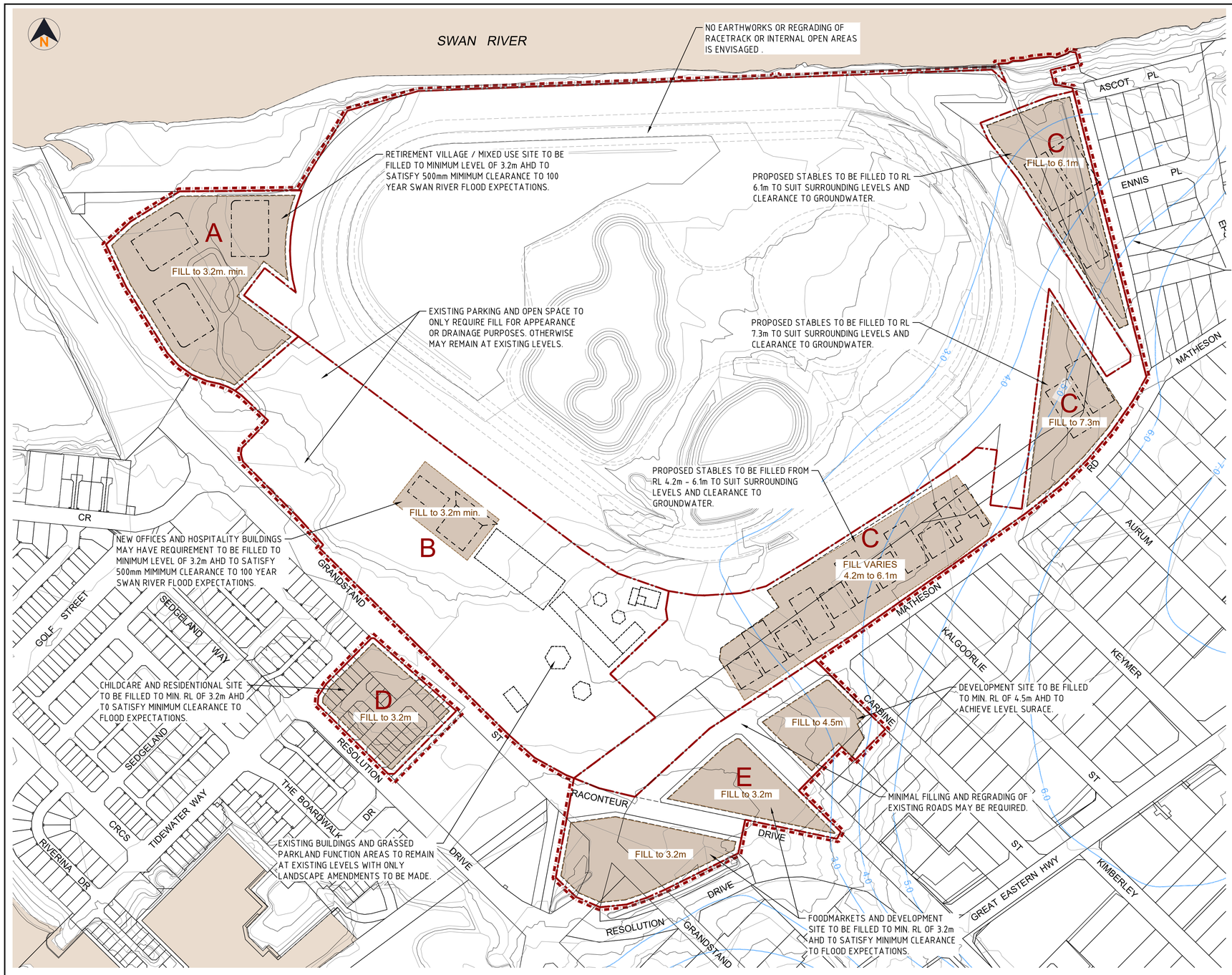


Page 1 of 1

# Appendix C

Preliminary Civil Drawing

Tabec 2024




WAPC No.

A1

| No. | DATE | DRAWN | APPROVED | AMENDMENT |
|---|---|---|---|---|
| C | 21.06.24 | PK | JZ | MINIMUM FILL LEVELS AMENDED IN LINE WITH THE LWMS |
| B | 18.06.24 | PK | JZ | PRELIMINARY ISSUE FOR INFORMATION ONLY |
| A | 24.01.24 | PK | JZ | PRELIMINARY ISSUE FOR REVIEW |

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COLOUR
This drawing is required to be printed in full colour. Failure to do so may result in loss of information.

CLIENT: PERTH RACING

| DESIGNED | CHECKED | APPROVED |
|---|---|---|
| PK | JZ | |
| DRAWN | CHECKED | DATE |
| PK | JZ | |

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PROJECT: ASCOT RACECOURSE - LOCAL STRUCTURE PLAN

TITLE: EARTHWORKS CONCEPT PLAN

DRAWING NUMBER: 2541-00-100

ISSUE: C

Plotted By: jkeenan Plot Date: 21/06/24 - 14:47 Cad File: C:\JOBS\Admin\TB-JOBS\2541 - Ascot Racecourse LSP_JOY\CAD\CAD\2541-100\2541-100.dwg

# Appendix D

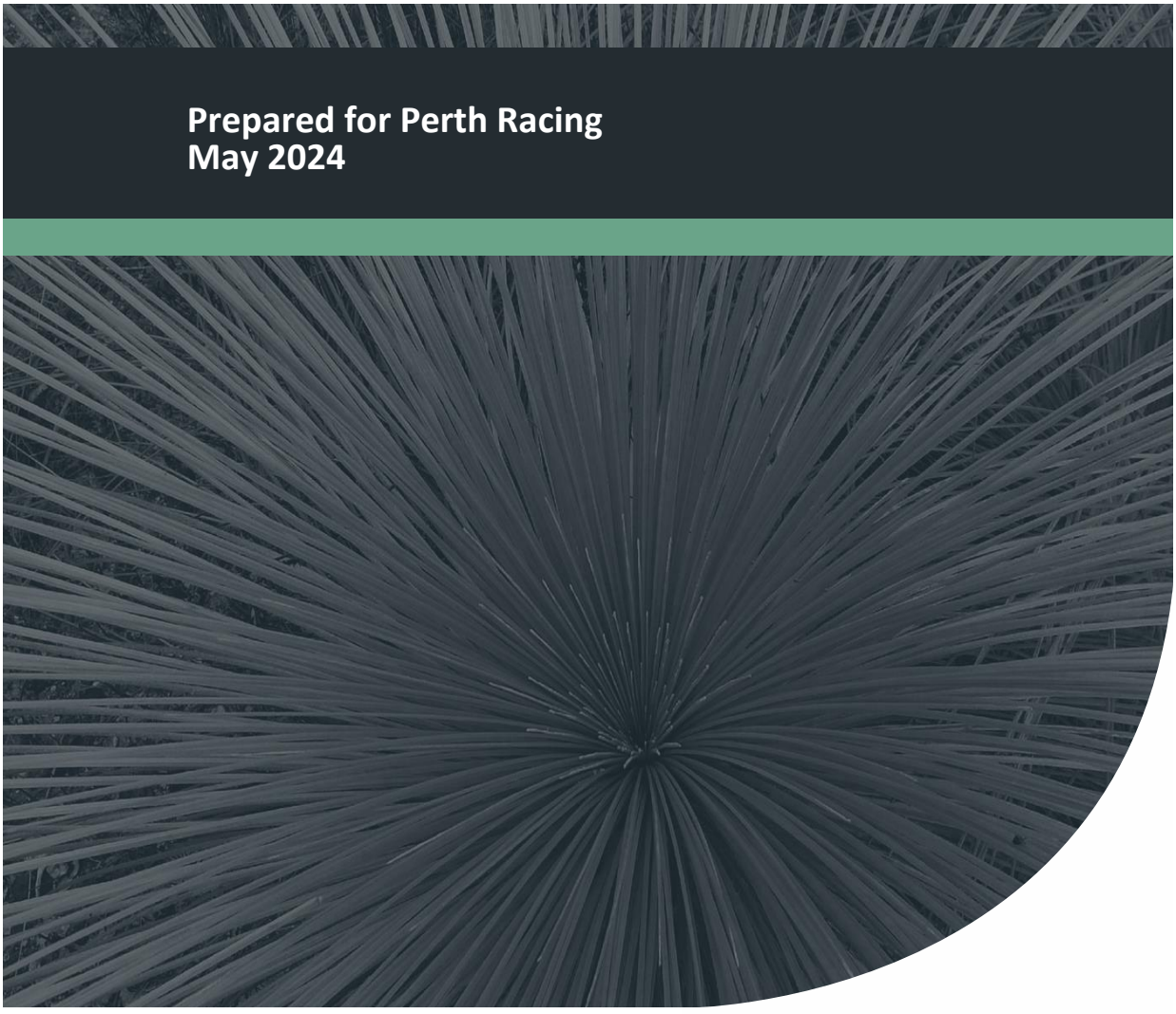
Modelling Assumption Report

Emerge Associates 2024

# Modelling Assumptions Report

## Golden Gateway Local Structure Plan

Project No: EP23-109(03)



# Document Control

| Doc name: | Modelling Assumptions Report<br>Golden Gateway Local Structure Plan | | | | |
|---|---|---|---|---|---|
| Doc no.: | EP23-109(03)--008 JM | | | | |
| Version | Date | Author | | Reviewer | |
| 1 | May 2024 | Joyti Mabruk | JM | David Coremans | DPC |
| | Appendix to the LWMS | | | | |

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# 1 Background

Perth Racing (the 'proponent') proposed to progress a local structure plan (LSP) over its landholdings in Ascot. The area is bounded by the Swan River to the North, Grandstand Road to the west and south, Matheson Road and Resolution Drive to the south and residential areas to the east, referred to herein as 'the site'. The structure plan area also includes the Ascot Racecourse area. The site is located approximately 8.5 km east of Perth central business district (CBD) and is approximately 62 ha in size, within City of Belmont (CoB). The LSP consists of six precincts: Precinct A, Precinct B, Precinct C, Precinct D, Precinct E, and the racecourse.

# 2 Methodology

XPSWMM hydrologic and hydraulic modelling software (v21.3) was used to calculate the surface water runoff volumes within the road reserves and lots associated with the development of Ascot Racecourse.

The hydrologic component of the software uses the Laurenson non-linear runoff-routing method to simulate runoff from design storm events. Key assumptions regarding the hydrologic model include:

- Runoff is proportional to slope, area, infiltration and percentage of imperviousness of a catchment.
- Sub-catchment areas and slopes are determined from surveyed topographical data and earthworks plans.
- Infiltration rates and percentage imperviousness have been selected based on experience with model preparation for similar soil conditions.

Runoff from each sub-catchment is routed through the catchment using the hydraulic component of XPSWMM. Generally, assumptions associated with the hydraulic component of the model include:

- Virtual links (i.e. purely for model construction, not equivalent to flow path onsite) between nodes within a sub-catchment are given the length of 10 m and slope of 0.05 to minimise the lag time of conveying the water from a sub-catchment node to a 'storage' node, a 'dummy intermediate' node or a conduit/link.
- Links between sub-catchment storages act as conveyance channels (e.g. sheet flow within roads in a 1% annual exceedance probability (AEP)). These links are given lengths and slopes that are representative of the site conditions and actual pathway lengths between catchments.
- All channels are designed with a width of 5 m, roughness of 0.014 (Manning's n) and are trapezoidal in shape. This allows for easy conveyance and represents concrete pipes and road surfaces within the model.
- Where relevant median swales, bio-retention areas (BRAs), and flood storage areas (FSAs) are modelled as nodal-reservoirs with infiltration depth-rating curves to account for differential infiltration rates with changing depth.

## 2.1 Rainfall

The ensemble temporal patterns obtained from the Australian Rainfall and Runoff (AR&R) Data Hub (AR&R 2019) were used for the rainfall analysis.

Durations ranging between 15 min and 72 hours were tested, with the peak flood elevation being assessed as the determining result.

Following the process suggested by AR&R (Ball J et al. 2019), the highest mean duration was selected as the critical duration. AR&R also recommends that when it is not practical to run the entire ensemble array, the ensemble that produces the result closest to the mean (for the critical duration) should be adopted and provided in **Table 1**.

*Table 1: Critical Duration Analysis*

| Catchment | Critical Duration (20% AEP) | Critical Duration (10% AEP) | Critical Duration (1% AEP) |
|---|---|---|---|
| Precinct A | 3 hour duration ensemble 4 | 3 hour duration ensemble 1 | 3 hour duration ensemble 1 |
| Precinct C | 30 min duration ensemble 6 | 30 min duration ensemble 7 | 30 min duration ensemble 8 |
| Precinct D | 1 hour duration ensemble 1 | 30 min duration ensemble 5 | 30 min duration ensemble 1 |
| Precinct E | 45 min duration ensemble 6 | 30 min duration ensemble 5 | 30 min duration ensemble 8 |

# 3 Pre-development model

The catchment parameters determined for Precinct D within the LWMS for the initial loss – continuous loss model have been adopted to account for catchment losses. The pre-development loss parameters used are given in **Table 2**.

*Table 2: Pre-development loss parameters*

| Land type | Initial loss (mm) | Continual loss (mm) | Roughness |
|---|---|---|---|
| Existing residential/Carpark | 15 | 0.1 | 0.014 |

Catchment analysis for pre-development scenario was based on topographic contour data, site visit and aerial photography. Pre-development catchment area within Precinct D is 1.145 ha.

# 4 Post-development model

An initial loss continuing loss model was adopted to account for post-development catchment losses. The post-development catchment area, land types and loss values were based on the structure plan design, typical infiltration rates for the soils which occur onsite and based on project team experience. Post-development catchment areas and land types within the site were informed by sub-division plan provided by LPD surveyors. **Table 3** summarises the loss parameters used within the post-development model.

*Table 3: Post-development loss parameters*

| Land type | Initial loss (mm) | Continual loss (mm) | Roughness |
|---|---|---|---|
| Road Surface | 1 | 0.1 | 0.02 |
| Road Verge | 9 | 1.5 | 0.05 |
| Fully Impervious | 1 | 0.1 | 0.02 |
| Roof | 1 | 0.1 | 0.02 |
| Lot IMP | 1 | 0.1 | 0.02 |
| Gardens | 25 | 2 | 0.05 |
| POS | 25 | 2 | 0.05 |
| Precinct E Lots | 15 | 0.1 | 0.014 |

A summary of post-development catchment information is provided in **Table 4** with the catchment plan and basin location shown in Figure 08 of the LWMS.

*Table 4: Post-development catchment areas (ha)*

| Road reserve | Lots | Road Reserve | POS | Fully Impermeable | Child Care |
|---|---|---|---|---|---|
| Precinct A | 0.714 | 0.606 | 1.360 | 0.330 | - |
| Precinct C | - | 5.903 | - | - | - |
| Precinct D | 0.526 | 0.421 | - | - | 0.199 |
| Precinct E | 3.622 | 0.365 | 0.219 | - | - |

The following assumptions were incorporated into the model:

- Precinct A
  - Lots will have 100% roof areas and road reserve contains 5% pervious verge and 95% impervious bitumen areas.
  - POS will be 100% pervious.
  - There is no current connection point for drainage to be exported from Precinct A.
  - 1 single basin/Flood storage area (FSA) for both treatment and flood mitigation.
  - Base of the FSA will need to be vegetated with reeds/rushes as per a biofilter.
  - FSA will have 1:6 side slopes and maximum depth 1.2m in a 1% AEP – to avoid the need for fencing or access control.

- A hydraulic conductivity of 1m/day is assumed.

- Precinct C
  - The existing portion of Precinct C already connected to the centre of the track (existing buildings and stables) and no change has been assumed.
  - Rest of the Precinct C were modelled as two separate catchments i.e., carpark and stables which are 95% impervious and 5% pervious.
  - 1m deep sub-surface storage has been designed to accommodate 1% AEP event.
  - A hydraulic conductivity of 1m/day is assumed.
  - The storage configuration could be changed/modified to suit site layout/constraints.
  - The carpark in Precinct C that discharges to the southwest will discharge to Precinct E.

- Precinct D
  - Lots will have 50% roof areas, 45% paved areas and 5% pervious garden areas, the childcare has roof areas and Road reserve contains 20% pervious verge and 80% impervious bitumen areas.
  - 1m deep sub-surface storage has been designed to accommodate and detain upto 1% AEP events that will mimic pre-development flow of 0.4.
  - A hydraulic conductivity of 1m/day is assumed.
  - The storage configuration could be changed/modified to suit site layout/constraints.

- Precinct E
  - The carpark in Precinct C discharges to Precinct E.
  - Outflow of pre-development Water Corporation (WC) drain is 0.95 $m^3/s$ as per WC modelling.
  - All lots of Precinct E retain 15mm of rainfall.
  - Runoff above 15 mm rainfall up to the 1% AEP will be managed by a detention basin which will mimic pre-development 1% AEP peak flow of 0.463 $m^3/s$.
  - The basin will have 1:6 side slopes and maximum depth 1.2m in a 1% AEP – to avoid the need for fencing or access control.
  - A hydraulic conductivity of 1m/day is assumed.

# 5 References

## 5.1 General references

The references listed below have been considered as part of preparing this document.

Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M and Testoni I (Editors) 2019, *Australian Rainfall and Runoff: A Guide to Flood Estimation*, Commonwealth of Australia (Geoscience Australia).

## 5.2 Online references

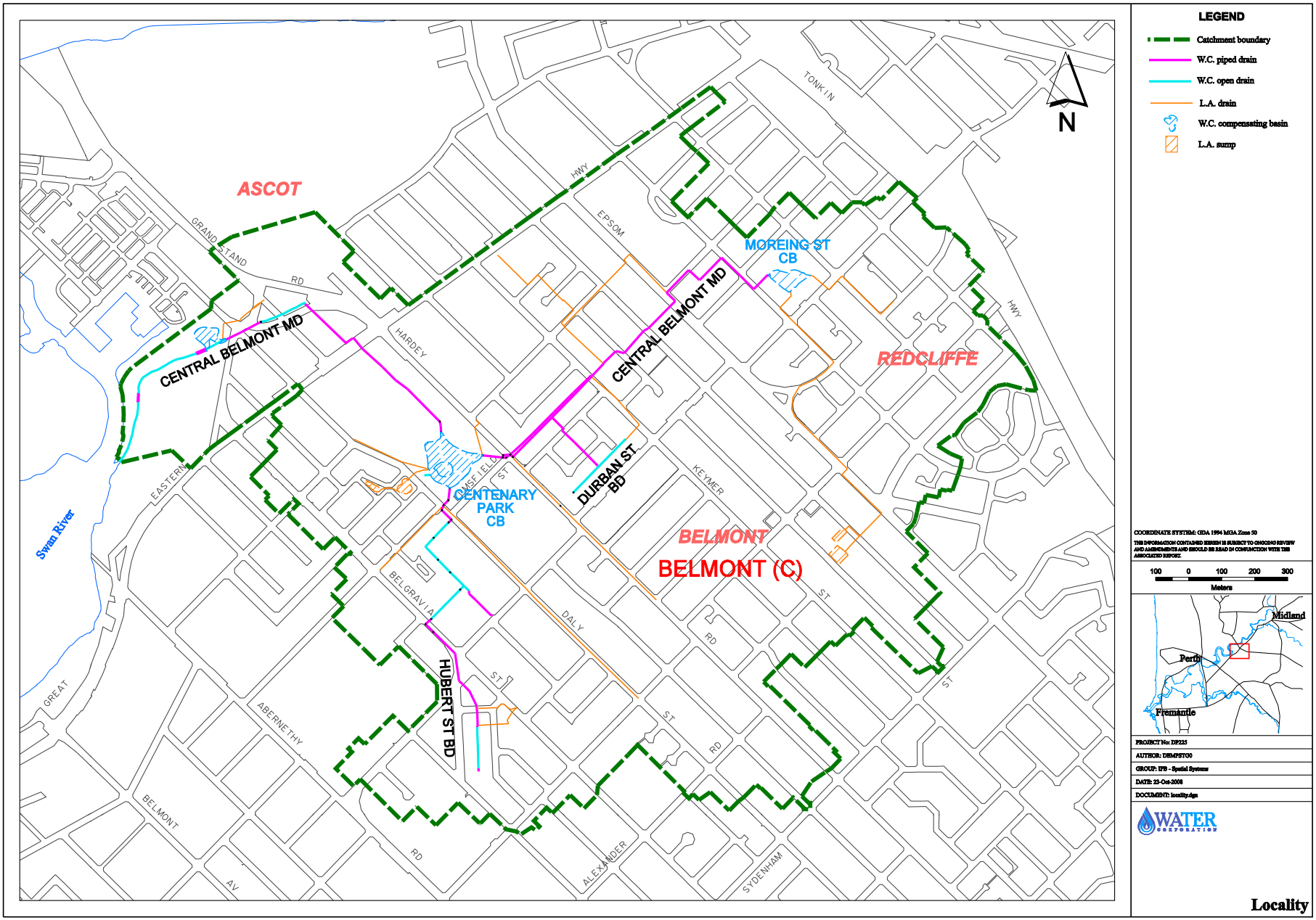
Australian Rainfall and Runoff (AR&R) 2021, ARR Data Hub, viewed 1 December 2021, Available from: <https://data.arr-software.org/>.

Bureau of Meteorology (BoM) 2021a, Climate Data Online, viewed 1 December 2021, Available from, <http://www.bom.gov.au/water/designRainfalls/revised-ifd/>.

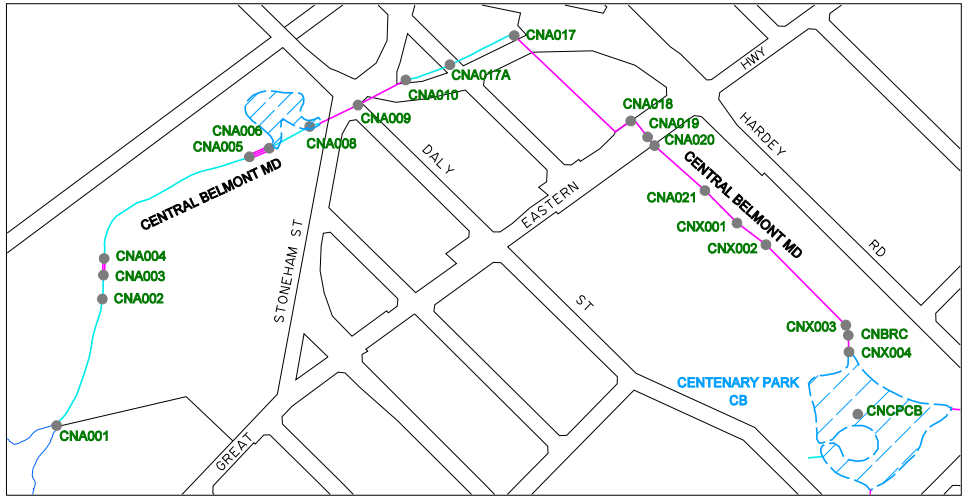
Bureau of Meteorology (BoM) 2021b, Design Rainfall Data System (2016), viewed 1 December 2021, Available from, <http://www.bom.gov.au/water/designRainfalls/revised-ifd/>.

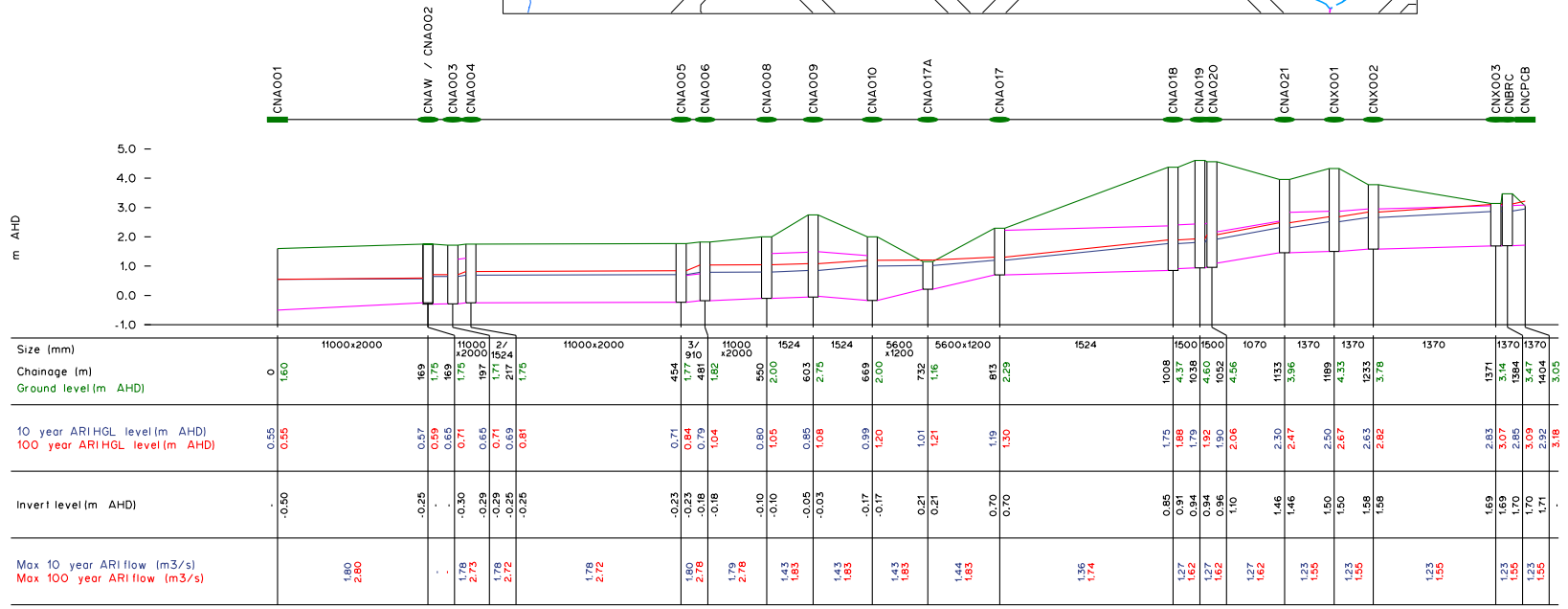
# Appendix E

Central Belmont Main Drain Water Corporation


ASCOT
REDCLIFFE
BELMONT
BELMONT (C)
CENTRAL BELMONT MD
CENTRAL BELMONT MD
MOREING ST CB
CENTENARY PARK CB
DURBAN ST BD
HUBERT ST BD
Swan River
GRAND STAND RD
HARDEY
EPSOM
TONKIN HWY
HWY
EASTERN
KEYMER
ST
BELGRAVIA
DALY
RD
GREAT
ABERNETHY
BELMONT
AV
ALEXANDER
SYDENHAM
N
LEGEND
Catchment boundary
W.C. piped drain
W.C. open drain
L.A. drain
W.C. compensating basin
L.A. sump
COORDINATE SYSTEM: GDA 1994 MGA Zone 50
100 0 100 200 300
Meters
Midland
Perth
Fremantle
PROJECT No: DP225
AUTHOR: DEMPSTOO
GROUP: IPD - Spatial Systems
DATE: 23-Oct-2008
DOCUMENT: locality4gs
WATER CORPORATION
Locality
Figure 1.1

THE INFORMATION CONTAINED HEREIN IS SUBJECT TO ONGOING REVIEW AND AMENDMENTS AND SHOULD BE READ IN CONJUNCTION WITH THE ASSOCIATED REPORT.




AUTHOR: DEMPSTER DESIGN FILE: Central Belmont MD.dgn

CENTRAL BELMONT MAIN DRAIN LONGITUDINAL SECTION

Hgls and Flows Existing Scheme (1 of 2)

Figure C1.1

WATER CORPORATION

PROJECT N°: DP225 DATE: 05/01/2009 COORDINATE SYSTEM: MGA94 - Zone 50

# ATTACHMENT 7

Engineering Servicing Report


TABEC
Civil Engineering Consultants
ASCOT RACECOURSE
Engineering Infrastructure Report
June 2024

**CLIENT:** **PERTH RACING C/O DAVISON ADVISORY**

**PROJECT:** **ASCOT RACECOURSE – LOT 9002 GRANDSTAND ROAD, ASCOT**

**TITLE:** **ENGINEERING INFRASTRUCTURE REPORT**

| **DOCUMENT REVIEW** | | | | |
|---|---|---|---|---|
| Revision | Date Issued | Written By | Reviewed By | Approved By |
| REV A | 5/06/2024 | J. ZIELINSKI | B. SMITH | B. SMITH |
| REV 0 | 4/07/2024 | J. ZIELINSKI | B. SMITH | B. SMITH |
| | | | | |

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# 1 INTRODUCTION

This report has been prepared by TABEC Pty Ltd to provide broad servicing and infrastructure advice for the Ascot Racecourse and surrounding sites located at Lot 9002 Grandstand Road, Ascot.

The report provides civil engineering advice on the capability and future requirements of the development plan area to support the proposed residential and commercial land uses and the civil engineering influences on the development form. This report has been based on the civil engineering aspects, including earthworks, roads, drainage, wastewater and utility services required to support the development.

The investigation and preparation of the report are based on preliminary advice from the various service Authorities, desktop reviews and site investigations where appropriate. The report is supported by additional consultants and their inputs which are listed in the references. The information is current as of June 2024 and is subject to change as development proceeds around the subject land.

Figure 1 illustrates the location of the site, identified on the aerial image.




Figure 1 – Site Location and Aerial Image (2024 MNG Access)

## 2 THE STUDY AREA

The Ascot Racecourse is situated within the City of Belmont and is located in the proximity of Grandstand Road, Resolution Drive, Matheson Road, Ennis Place and the Swan River. The existing racecourse and its surrounding facilities are currently operational.

The subject site has been split into five precincts to assist with differentiating the various proposed uses across the lots. TABEC's understanding of these five precincts has been included below:

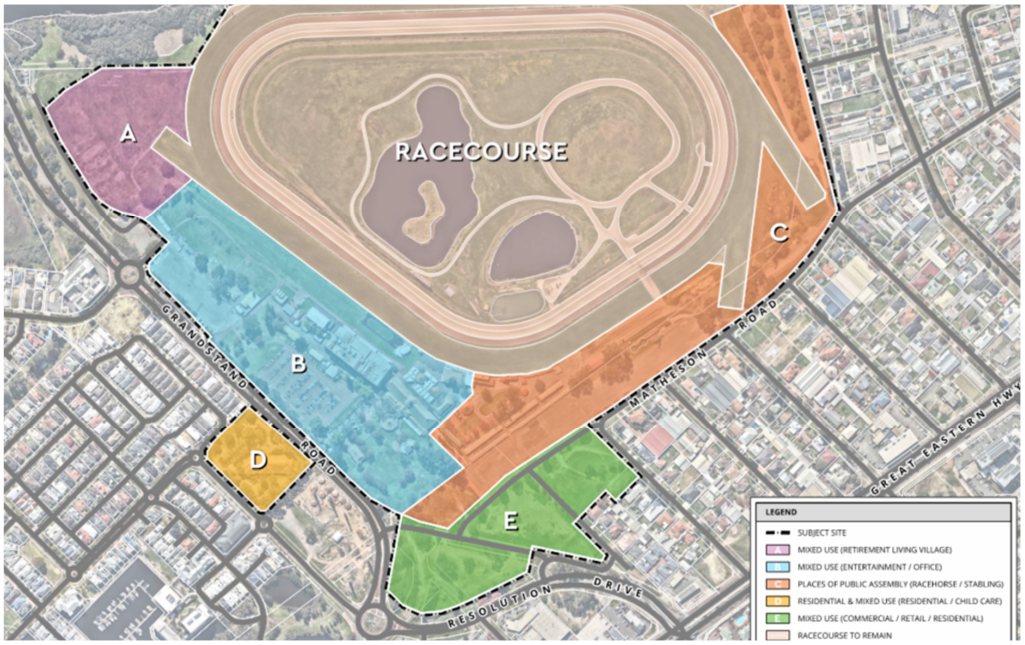



Figure 2 - Preliminary Structure Plan (Rowe Group Design)

| | |
|---|---|
| Precinct A | • Retirement Living Village/Mixed Use – Apartments and a café (300m2)<br>• 3 buildings, which will cater for a total of 330-390 dwellings. |
| Precinct B | • Racecourse Administration Office and Entertainment (No change to current zoning)<br>• Office space – 680m2 NLA<br>• Upper floor will be hospitality venue – 1000m2 in size |
| Precinct C | • Racecourse and on-course stabling facility (No change to current zoning)<br>• Existing Racecourse to remain<br>• 3 new on-course stabling complexes providing ~400 stables |
| Precinct D | • Childcare and residential (R60)<br>• Childcare site – 2100m3 for 70-90 children.<br>• Residential development will yield ~41 lots |
| Precinct E | • Approx 3,400m² retail floorspace<br>• Approx 7000m² of non-retail commercial floorspace<br>• Equine welfare centre |

Whilst Precincts A, B and C are adjacent to the racecourse, Precinct D (Lot 452) and Precinct E are located outside of the racecourse lot 9002. Precinct D is surrounded by existing residential land use, and to the southeast, interfaces to the heritage-listed Ascot Kilns.

Precinct E is currently fragmented and consists of multiple lots and road reserve corridors. The Resolution Drive and Grandstand Rd road reserves within the subject site are not currently being utilised as public access streets, however, the existing reserve along the south boundary of the site and Lot 51 is a drainage reserve and is to remain, hence being excluded from the assembly development proposal.




Figure 3 - Precinct E Land Assembly (Rowe Group)

## 2.1 Landform / Topography

In reviewing the available Water Corporation contour information, the Ascot Racecourse Course (Lot 9002) has its lowest elevation of approximately 2mAHD at the northwest area of the site (Precinct A), which is adjacent to the Swan River and foreshore reserve. The Ascot Racecourse lot grades up to its highest elevation of approximately 7.5mAHD at the east corner of the site (Precinct C) adjacent to Matheson Road. The existing levels of Precinct C grade from this high point, down to approximately 3mAHD at the west interface near Raconteur Drive.

The existing internal surface levels of Precinct B within Lot 9002 range between 4mAHD at the south, to 2mAHD near Precinct A. Whilst no survey data is available for the adjacent road reserves, Precinct B is anticipated to be higher than the adjacent road levels at Grandstand Road, which then grades down to approximately 2mAHD towards to track.

The centre of the racetrack of Lot 9002 is generally lower than the surrounding racecourse site, with the levels and aerial imagery showing localized depressions with multiple lakes. Drawings from Evangelisti & Associates Engineering Drawings, dated 1997, show the depths of existing drainage Lake 1 (Wetland) and Lake 2 (Lined) being RL 1.0m and RL -0.75m respectively, with the top of lake water level ranging from RL 0.4m and 2.1m. The third existing lake does not serve a drainage purpose but serves as a source of irrigation water, with this overtopping into the drainage lakes at a top of water level of 3.1mAHD.

The Swan River Foreshore Reserve is located along the northern boundary of Lot 9002, and the levels steeply grade away from the track edge from approximately 3mAHD to 0mAHD at the northern boundary.

In reviewing contour information available from Water Corporation at Lot 452 Grandstand Road (Precinct D), the existing levels increase from 3.0mAHD to approximately 4.0mAHD closer to the centre of the lot at the existing building location, with the surrounding road reserve levels ranging between 2.5mAHD and 3mAHD. This site currently has existing mature trees and shrubs located across the Lot.

Fragmented areas of Precinct E have approximate levels grading from 4mAHD near the east at Raconteur Drive entry, down to approximately 2mAHD at the west. The site is generally flat with some trees and vegetation, however, there is an existing swale within the reserve south of the site along Resolution Drive with its swale base closer to 1.0mAHD. The perimeter of this swale is currently fenced onsite.

Contours of the site have been included below in Figure 4.

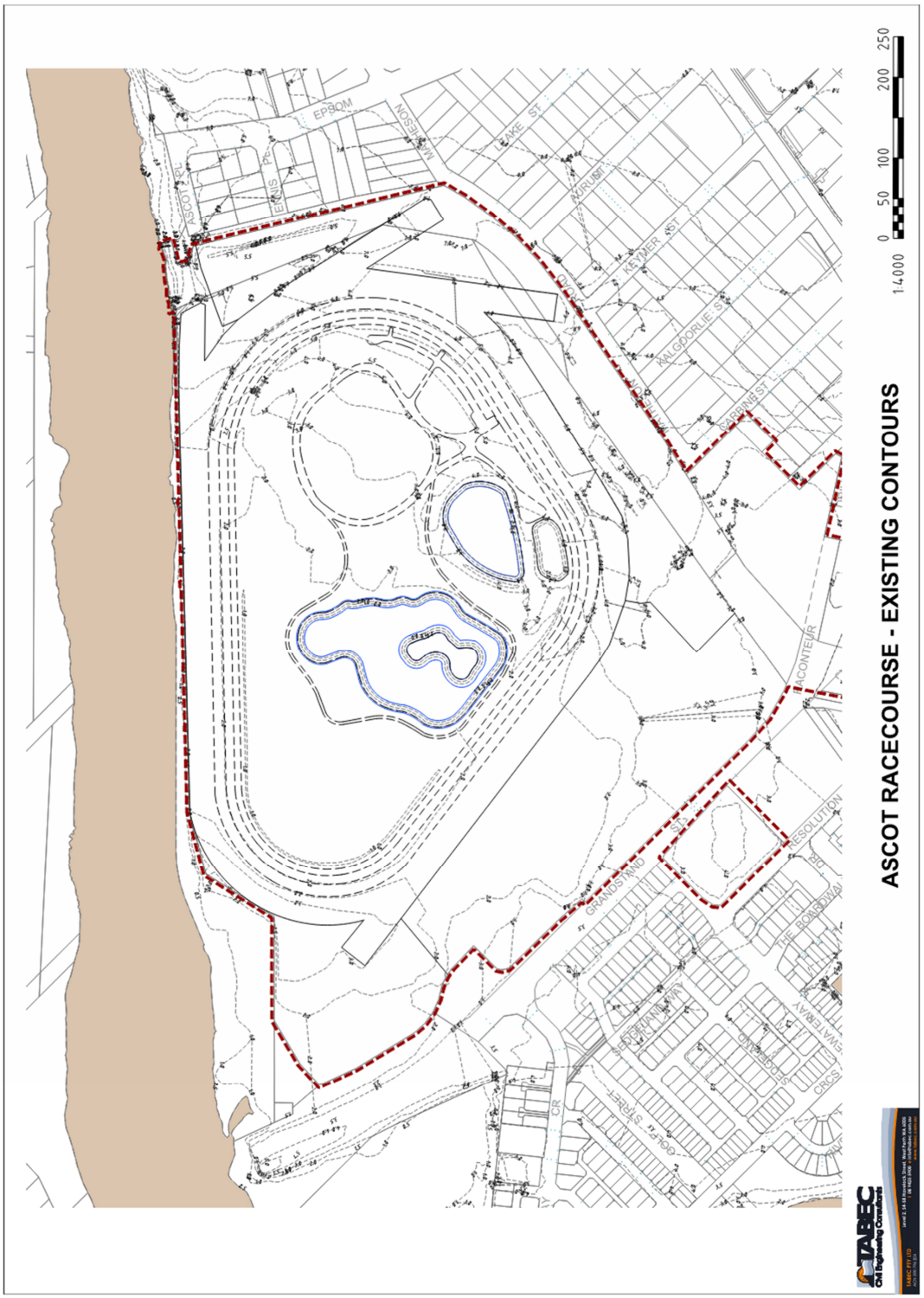



Figure 4 – Existing ground contours (TABEC 2024)

## 2.2 Ground Conditions and Ground Water

Geology mapping for the area has been identified as Pinjarra System, with poorly drained coastal plains and variable alluvial and aeolian soils.

Generally, the historical maximum groundwater contours are published by the Department of Water and Environment Regulation (DWER). The Golden Gateway Local Structure Plan Draft document (Essential Environmental 2018) shows maximum groundwater level (MGL) contours ranging from approximately 5mAHD located at the southeast area of the site, and generally fall to approximately 0.5mAHD along the Swan River and northwest of the site.

It is anticipated that there may be insufficient clearance above the published groundwater contours to development levels, and additional fill may be required to satisfy minimum groundwater clearance of 1.2m above MGL at Precinct A, Precinct D and Precinct E for residential and commercial purposes. This would be subject to further investigation on final development requirements and land uses.

Flood levels due to the Swan River have been previously investigated by DWER, with online floodplain mapping indicating flood levels in proximity to the Swan River at 2.8mAHD. All lots must have a minimum 500mm elevation above this Swan River flood level and a minimum of 300mm clearance above the 1% AEP top of water level of drainage basins.

Further geotechnical investigations have been undertaken across Precinct A, C and Precinct D to better understand the subsurface soil and groundwater conditions across the various sites, with this summarised below.

Precinct A

Douglas Partners carried out a site geotechnical investigation at Precinct A in January 2024 (Report reference 219164.03). From the field works, the subsurface conditions of this site were found to comprise uncontrolled fill, made up of sandy gravel material, loose sands, and clay, with the inclusion of foreign unsuitable materials such as brick, glass, scrap metals, concrete, rubber, pipes, and potential asbestos containing materials. In some locations, this uncontrolled fill extended below the groundwater level.

Natural materials found at the site underneath the uncontrolled fill, ranged from clayey sand, between depths of 4.2m to 14.9m, and sandy soils between 10.5m and 14.9m. Both materials ranged from very soft or loose, to dense and stiff.

Given the shallow ground conditions at Precinct A consisting of uncontrolled fill and deep loose and soft soils, the current site classification is Class P. Douglas Partners have therefore suggested shallow footings are not suitable and have anticipated a piled foundation system into deeper insitu soils would be necessary.

Groundwater levels at various locations within Precinct A have been measured over September, October and November 2023. From the assessment, the groundwater level ranged from -0.2m AHD (November) at the centre of the site, to 1.3m AHD (September) located at the site's southern boundary. The groundwater fluctuated inconsistently throughout the site, and these findings are not a clear representation of the maximum groundwater level.

Precinct B

Whilst no geotechnical investigation has been undertaken for Precinct B, the underlying material is anticipated to be consistent with those underlying ground conditions found at Precinct A and Precinct C. Based on adjacent geotechnical investigations at nearby Precincts, it could be anticipated that silty sand,

clay and clayey sands existing beneath surface level. Further geotechnical assessment will be required to ensure adequate treatment of ground conditions before further development within Precinct B, and to check conditions relating to uncontrolled fill, which is evident at Precinct A and Precinct C.

Precinct C

Douglas Partners carried out a site geotechnical assessment at Precinct C in December 2023 (Report reference 219164.02) for the proposed stables at Ascot Racecourse.

From the investigation, ground conditions differ depending on the test location within the site. Generally, uncontrolled fill was uncovered at most test locations with this depth ranging between 0.25m and 2.5m. Some test locations also observed unsuitable foreign materials such as plastic wrap, concrete and brick fragments. Sand and silty-sand can be uncovered below the uncontrolled fill to a depth of 2.5m, along with clayey sand and clay.

The uncontrolled material across Precinct C has led Douglas Partners to suggest piled foundations, with the site Classification currently Class P. Details of piled foundations can be found within the geotechnical report.

Notwithstanding, the site can be re-classified to Class S, provided that the site preparation is undertaken with the geotechnical recommendations. Areas of over-excavation to achieve Class S may uncover groundwater, and therefore dewatering may be required for earthworks and site preparation.

Groundwater levels at Precinct C have been measured onsite in September 2023, with the depth of groundwater fluctuating at each location. From the assessment, the groundwater level ranged considerably from 0.4m AHD (MW51) at the site near Aurum Street, to 5.6m AHD (BH39) located approximately 100m from the MW51 test pit, and therefore does not provide a clear and consistent overview of the groundwater throughout this area.

Precinct D

Galt Geotechnics carried out a site geotechnical assessment at Precinct D Lot 452 Resolution Drive, in March 2024 (REF WAG230750-01 002 R1) for the proposed residential and commercial development site.

The subsurface soil profile from the testing found sand fill to a depth of 0.4m to 0.9m depth, over sandy clay and clay material. At boreholes BH03, and BH04, layers of silty sand and clayey sand up to 0.7m thick extending to 1.2m depths were also found.

The site classification is considered Class S, where no less than 0.7m of sand and clayey sand layers are present over insitu clay and sandy clay.

Groundwater at the site in February 2024 was found to be approximately 1.9m to 3.03m depth below surface. Galt has suggested there is perched ground water between 2.7mAHD and 2.9mAHD. Whilst that the design level be 0.5m above DWER flood level events, which is a finished level of 3.4m AHD, adequate clearance would still need to be managed to groundwater.

Precinct E

No geotechnical investigation has been undertaken within Precinct E to confirm underlying soil conditions; however, it is anticipated ground conditions would be consistent with the natural material from the geotechnical investigations, and geological mapping.

## 2.3 Acid Sulfate Soils

The Ascot Racecourse and surrounding land are mapped as having a known high risk of encountering potential acid sulfate soils. As indicated in Figure 5, there is a reference to higher-risk areas in red within the site at depths within 3m of the surface. No acid sulfate soils were discovered during geotechnical testing at Precincts A, Precinct C, or Precinct D.

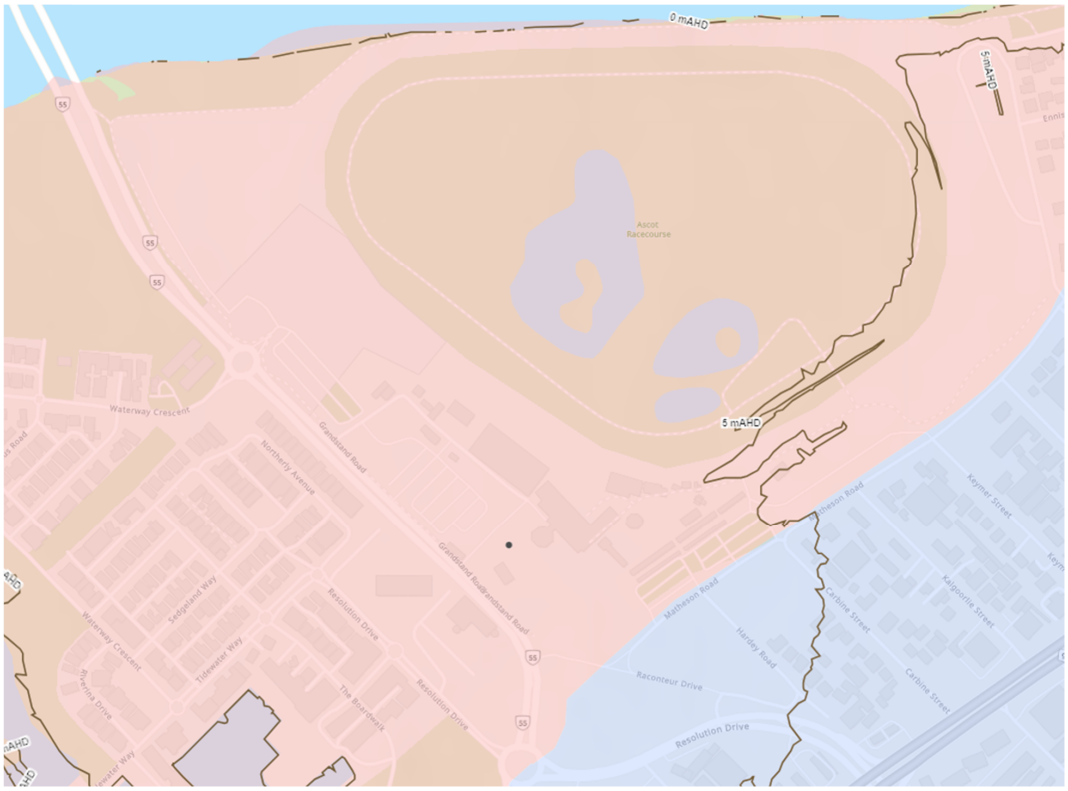



Figure 5 – MNG Access - Acid Sulfate Soils Risk Mapping (2024)

# 3 SITEWORKS

Siteworks for the development generally comprise the clearing of existing vegetation, stripping of topsoil and pavement, and the earth working of the existing ground surface to facilitate a required form of development.

The siteworks at Precinct A will be subject to the footing requirements due to the existing loose soils and uncontrolled fill beneath the surface. Due to groundwater conditions, remediation works may be difficult, therefore a pile foundation system has been suggested within the geotechnical report which may remove the requirement to remove underlaying uncontrolled fill. However, due to the settlement that may occur due to the soft and loose materials, it is anticipated that surcharging of the site may be necessary to reduce differential ground settlement, which could be carried out through temporary fill.

To achieve Class S at Precinct C, which will allow light-loaded structures to be constructed with shallow footings, site preparation will include 0.15m topsoil stripping and grubbing of existing vegetation, and over-excavation earthworks to achieve a minimum of 0.8m of sand separation above reactive clayey soils.

It is also important that there are no loose underlying soils to a depth not less than 1.5m below the foundation level to avoid settlement of the development.

## 3.1 Demolition and Remediation

Precinct A is free from structures and therefore demolition works are not anticipated to be required.

Depending on the final scope for Precinct B, Precinct C and Precinct E, demolition of existing car parking pavement and redundant asphalt roads within these areas may be required.

The demolition of the existing buildings, pavements and associated infrastructure within Precinct D will be required to enable the proposed residential and commercial development at this location. Whilst no asbestos was detected in any of the geotechnical samples at Precinct D, it should be noted that the adjacent northern road reserve, Northerly Ave, has been identified as remediated for restricted use, which may suggest potential asbestos-impacted fill below the surface.

# 4 EARTHWORKS

The preliminary earthwork pad levels have been reviewed by TABEC to demonstrate how the proposed development levels may be accommodated, given constraints due to groundwater, flooding and interface levels. Generally, earthworking of all proposed precincts will be required, whether this is in the form of remediation works due to subsurface soils or import fill to lift the development levels. Each precinct site will require site preparation, potential demolition, and stripping of existing pavements, vegetation and topsoil, after which the exposed ground will be proof compacted.

Due to existing groundwater hydrology and flood levels, which are discussed further in the LWMS prepared by Emerge (EP23-109, May 2024), the report recommends:

- Surface-based infiltration structures have a minimum 300mm clearance above the maximum groundwater level (MGL)
- Habitable floor levels should have a clearance to a maximum groundwater level (MGL) of at least 1.2m
- Finished floor levels must have a minimum 300mm clearance above the 1% AEP event, top of water level at storage basins.
- All lots to have a minimum of 500mm clearance above the 1% AEP flood level in the Swan River.

These drainage requirements and minimum flood elevation requirements will likely govern the finished floor-level requirements of the five Precincts. TABEC concept earthworks levels have been provided in Figure 6, with these levels to be refined during detailed design.

Precinct A

It is anticipated that the existing surface levels of Precinct A will be lifted to accommodate clearance to flooding, with the minimum finished levels at this location being approximately 3.2mAHD. With existing surface levels surrounding Precinct A being in the order of 2mAHD, the development will require further consideration on how the additional ~1-2m level difference may be accommodated and whether retaining walls are required, or if there is sufficient area to enable battering. Precinct A has a road reserve on the western boundary, and foreshore on the northern boundary, so any batter encroachment into these lots will require further discussion and approval with the relevant authorities.

Precinct B

As existing levels within Precinct B currently look to be conveying overland drainage towards the racecourse, any changes in levels are only anticipated to be those to lift new offices and hospitality levels. In Figure 6, TABEC has nominated the future building floor level at RL3.2 to satisfy flood levels.

Precinct C

Finished development levels at Precinct C will vary as it will be subject to tying into the existing road network at Raconteur Drive, Matheson Road, Ennis Place and the existing levels at the racecourse. Given the purposes of Precinct C, steep grades and level differences/retaining will likely need to be designed out to serve its purposes as on-course stabling and to facilitate horse movements.

It is anticipated that the future stable finish levels will be at approximately 4m AHD at the west and grade up to 6m AHD to the east in the proximity of Keymer Road, which is consistent with the grade of Matheson Road. These levels also tie in with the existing levels of the internal racecourse.

The private internal access road between the proposed stables and Matheson Road will be marginally lower than the stables floor levels by approximately 200mm, and grade consistently with the stable level steps.

The proposed stables to the east near Leake Street will need to be a minimum of 6.9m AHD, which will allow for internal sewer servicing of the site, and also provide clearance to groundwater levels. To tie in with the existing road reserve on Matheson Road, it is expected that these stables and the internal road will grade to approximately 7.4m AHD to the east.

The northeast development area of Precinct C adjacent to an existing reserve, will match in with existing interface levels. To satisfy sewer servicing and flood levels, it is anticipated that the level of this area of Precinct C will be approximately 6.1m AHD.

Precinct D

It is anticipated that additional sand fill will be required for Precinct D ensure sufficient separation for flood levels, and ground water levels. Precinct D will need to satisfy as a minimum habitable floor level of 3.2mAHD, however, the geotechnical investigation by GALT (February 2024) has identified perched ground water between 2.7mAHD and 2.9mAHD. Emerge Associates have recommended 1.2m clearance above maximum ground water level (MGL) to finish floor level which may increase the habitable floor level higher than the flooding requirements to approximately 4.0m AHD.

Further review of these finish levels will be required on further investigation of the maximum ground water, and drainage and subsoil drainage design which would ultimately determine the finish development levels.

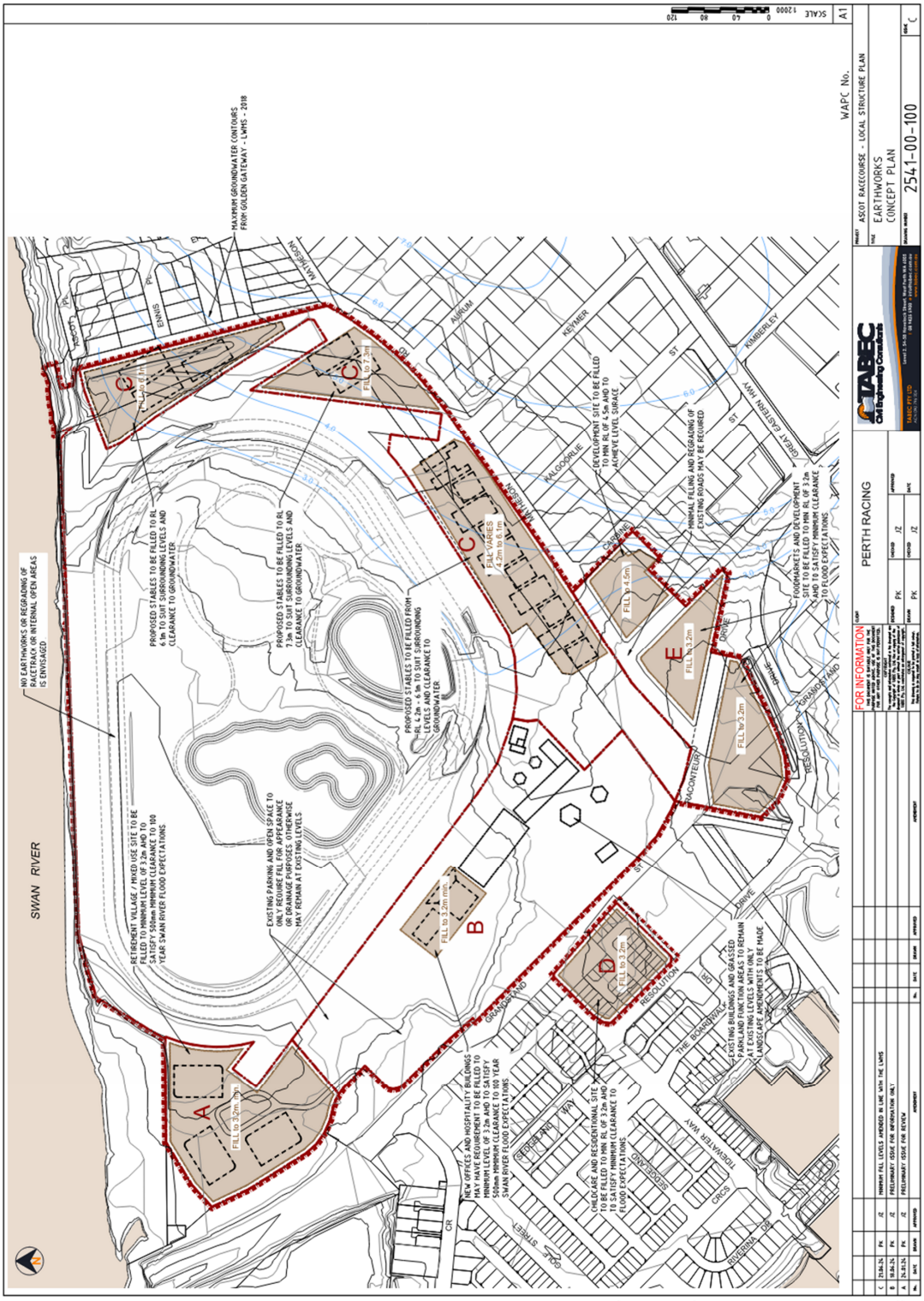



Figure 6 – TABEC Concept Earthwork levels for precincts (June 2024)

# 5 ROADS AND TRAFFIC

## 5.1 Existing Road Network

Surrounding Lot 9002 and Precincts A, B and C, are existing roads that are suitable to provide future access for these proposed developments. Lot 9002 is surrounded by Grandstand Road (Distributor A), Raconteur Drive (Access Road) and Matheson Road (Access Road). The Main Roads WA (MRWA) road database shown in Figure 7, indicates that Grandstand Road is operated and maintained by the MRWA with a speed limit of 60km/hr, with the other access roads being controlled by the City of Belmont. Whilst the east boundary of the site is located against a road reserve, no road currently exists with this being a sand/limestone track.

The existing roundabout at Grandstand Road and Waterway Cres currently provides access to Precincts A and B, and the existing car parks. There is also gated access from Grandstand Drive into Precinct B car parks at three other locations before reaching the Raconteur Drive intersection.

Matheson Road will remain as it currently is, and serve as the primary access for Precinct C, however, access to the northeast stables will be solely from Ennis Place as the only sealed road entry to this location.

Lot 100, located in Precinct E, currently has multiple private roads through this site. Raconteur Drive off Grandstand Road can provide vehicle access through to Resolution Drive, however this does have vehicle gates to restrict access at both boundaries. The intersection of Grandstand Road and Raconteur Drive is currently a left in, left out, however, does allow a right turn in from vehicles travelling north via a split in the median island. Two other existing roads within Lot 100 are fenced to reduce unauthorised access, with these being extensions of Matheson Road and Hardey Road.

Precinct D is located between Grandstand Road and Resolution Drive (Local Distributor), with access to the existing admin building being located at both Grandstand Road as a left in, left out, or via Resolution Drive. The existing median island on Grandstand Road restricts those vehicles travelling south from turning onto the car park.




Figure 7 – Main Roads WA GIS Road Hierarchy (MRWA 2024)

The land assembly at Precinct E as per Figure 3, will require further consideration for access to future commercial development. Resolution Drive has a raised centre median between the roundabout to Great Eastern Highway which currently restricts vehicle movements. This section of Resolution Drive is a Distributor A road and is controlled by Main Roads WA, with direct development access onto this road requiring MRWA approval.

## 6 STORMWATER DRAINAGE

Details of the stormwater and drainage strategy, flooding, and water treatments have been detailed within the LWMS prepared by Emerge Associates (EP23-109, 2024).

There are predominantly two significant drainage systems to convey stormwater within the LSP area to the Swan River. The first is the Central Belmont Main Drain which is managed by Water Corporation, and the second is the local drainage system located near Matheson Road, which conveys water from the surrounding road reserves into the lake system at the centre of the race course via a 900mm pipe.

The lakes system is interconnected, with flows discharging from this into the Swan River via a 450mm and 375mm concrete pipe at peak water level within the wetland lake of 0.53mAHD (Evangelisti & Associate 1997). The outlet is controlled to restrict tidal influence on the internal lake systems.

Whilst Grandstand Road has a pit and pipe network consisting of 450mm and 525mm concrete pipes, Precinct A does not currently have access to a stormwater connection, and as part of future development, it would be anticipated that drainage from this site would need to be treated and captured within Precinct A and the racecourse. Infiltration rates at Precinct A are low due to existing soils, however, with the increased level of the site and import fill to achieve flood level requirements, this may allow for some storage and bio-retention swale to infiltrate at source.

Precinct B currently captures and infiltrates water at source, with overland flow being graded towards the existing track. There was no evidence of Precinct B overflowing into the existing road reserve at Grandstand Road.

Consistent with the current drainage design onsite, the proposed stables and car park at Precinct C are anticipated to be a combination of infiltration at source where levels and soil conditions allow, and discharge to the lake system. The geotechnical assessment (Douglas Partners 2024) suggests this site is unsuitable for on-site stormwater disposal due to the shallow clay which may be impervious for drainage purposes. It could be expected that this clayey sub-surface will pond, and water will move laterally on this surface. Further investigation is required as part of the detailed design on the infiltration opportunities and discharge locations, and requirements for bio-retention swales to treat stormwater. The proposed car parks to the southwest of Precinct C are likely to flow towards the Water Corporation drainage system in Precinct E due to the low levels of the area being unable to convey stormwater to the lakes.

Precinct E, adjacent to Water Corporation's Belmont Main Drain, is anticipated to be treated via bio-retention swale before overflowing to a proposed detention basin storage for the 1% AEP event. Overflow from this basin will be into the Water Corporation's drainage system. (Emerge Associates 2024)

Whilst Precinct D has an existing 525mm and 300mm drainage pipe network along Resolution Drive, it is anticipated that there will be stormwater storage and infiltration at the site, with a 1% AEP event discharging into the local drainage network on Resolution Drive. Further investigation will be required during design to determine the final location for stormwater detention before entering Resolution Drive, as no POS has been identified for Precinct D.

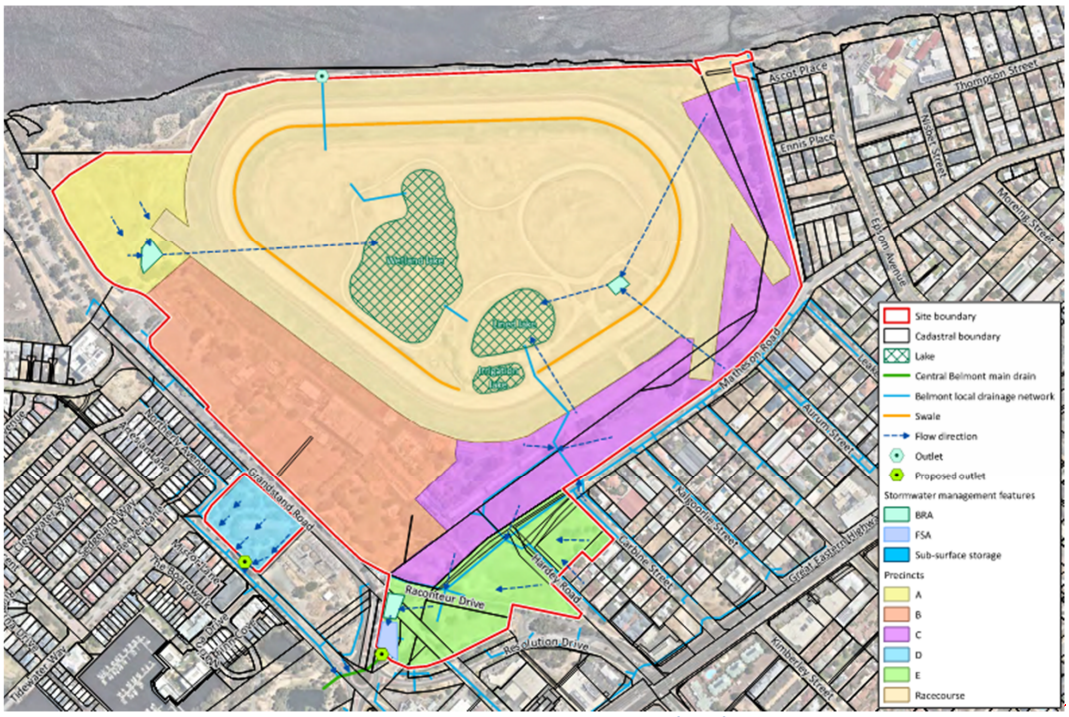



Figure 8 – Emerge Associates - Concept Drainage Catchments and Lake System (2024)

## 7 WASTEWATER

Water Corporation planning information was requested for the five precincts at Ascot Racecourse.

Precinct A

Precinct A is located off the existing Grandstand Service Road in proximity to the Waterway Cres roundabout. Whilst there is an existing sewer in proximity to Precinct A located at Waterway Cres, it is anticipated that this existing pipe network will not have sufficient cover below finish ground levels to extend from its current location, across Grandstand Road, and into the development. Therefore, alternative options have needed to be considered for wastewater servicing.

The first possible option would be to convey wastewater away from Precinct A and the future aged care site to the existing wastewater pump station to the east located on Ascot Place. This would require a private pump station within Precinct A, and approximately 950m of DN100 pressure main through the Ascot Racecourse lot adjacent to the Swan River and into a new gravity pipe system which would then discharge into the pump station. Given the pressure main would be crossing lot boundaries between Precinct A, and Ascot Racecourse, this would need to be reviewed further with Water Corporation to ensure the proposal is acceptable, and that the relevant easements/agreements are in place to protect these new sewer assets.

Alternatively, there is an opportunity to extend the 225mm sewer up Grandstand Road from the Marina Drive/Resolution Drive roundabout. This existing sewer is at RL-2.09m, and therefore should have sufficient depth to be extended and still service Precinct A if the development is earthworked higher closer to approximately 4m AHD. The connection to this wastewater catchment would trigger downstream upgrades due to capacity issues, with the existing 225mm sewer on Great Eastern Highway requiring an upgrade to a 300mm sewer as per Figure 10.




Figure 9 – Existing Gravity Wastewater Reticulation Services (Water Corporation)

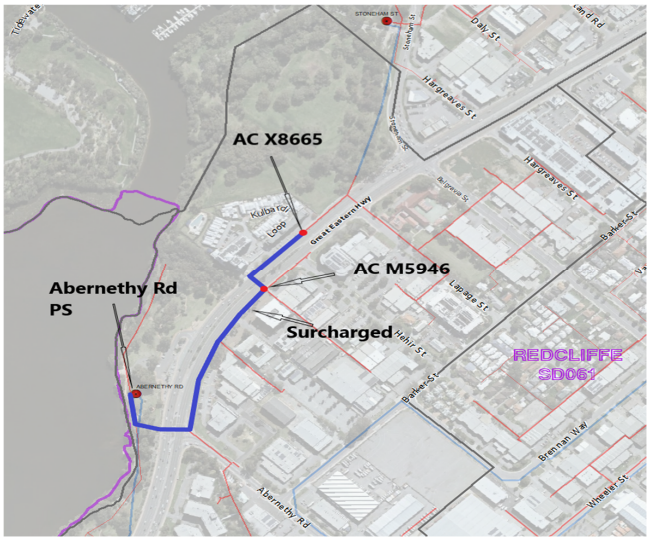



Figure 10 – Existing Gravity Wastewater Reticulation Services (Water Corporation)

Precinct B

In reviewing existing internal sewer plumbing for Lot 9002 (Ascot Racecourse), there is an existing sewer connection located at Raconteur Drive, at Access Chamber T3030. The sewer connection at this location currently services Precinct B, and a portion of the proposed Precinct C area. Whilst these two precincts are currently connected to the sewer at Raconteur Drive, Water Corporation has advised that there is no record of this connection, and the wastewater flows from this precinct have not been included in their planning assumptions. If wastewater flows from Precincts B and C are substantially increasing, further discussions are likely required to identify the increased flow of wastewater anticipated from the new developments.

According to the sewer flimsy as-cons acquired from Building and Energy Western Australia, the private sewer pipework from Precinct B to the existing Water Corporation main is located partially through Precinct E, Lots 13, and Lot 100 as per Figure 12. At the time of this report, all three lots are owned by the same entity. If the Precinct E land assembly proceeds and/or ownership of any of these lots is transferred, it may be necessary to divert the internal plumbing out of Lot 100 or Lot 13. In this instance, the Water Corporation sewer main may need to be extended to provide a sewer service connection that does not traverse other private lots.

Precinct C

Precinct C for the proposed on-course stabling facilities, will cover the outer edge of the Ascot Racecourse, from Raconteur Drive through to Ascot Place near the existing waste water pump station site. Due to this distance, multiple sewer connections will be required to adequately service the site as shown on Figure 11, with the service boundaries being subject to detailed design and finish levels.

Subject to Water Corporation's acceptance of private sewer crossing lot boundaries with the same ownership and final levels, the west portion of Precinct C (C1) between Kalgoorlie Street and Raconteur Drive will likely be conveyed to the west to the existing internal sewer. This is due to the existing levels of the site and Matheson Road, which generally grade lower as the site gets closer to Raconteur Drive.

There is an existing sewer connection available from Kalgoorlie Street with a connection invert level of 3.48m AHD, which is anticipated to service C2 with sufficient cover to finish levels.

New sewer lot connections will be required for both C3 and C4 areas within Precinct C, with the sewer invert levels into the site anticipated to be in the order of 3.30m AHD and 2.3m AHD respectively. The existing levels within C3 grade from approximately 6.5m to 7.2m AHD at the eastern boundary of C3. The C4 area has an existing surface level of approximately 5.6m AHD, which will likely require sand structural fill to approximately 6.1mAHD to be serviced with sewer.




Figure 11 – Existing Gravity Wastewater Reticulation Services (Water Corporation)

Precinct D

There is an existing sewer main located on the southern corner of Precinct D, located near the intersection of Marina Drive and Resolution Drive. Water Corporation has advised that a sewer connection to this existing 225mm PVC main is possible for the proposed residential development. The levels of this existing main are at an invert level -2.09mAHD and has sufficient depth to service the site.

The existing sewer junction to Lot 452 is anticipated to service the existing building within the lot, and will likely require removal as part of the development of Precinct D.

Precinct E

There is an existing 225mm PVC sewer south of Precinct E, located along Resolution Drive which ranges from approximately -0.02m AHD to 0.49m AHD at access chamber T3030 located at Raconteur Drive Link. The existing sewer main continuing northeast from this access chamber is located within Lot 100 which is private land. Whilst no easement currently exists over this portion of the Water Corporation pipe, it could be anticipated that this would be required as part of future amalgamation or development in the future.

The depth of this existing sewer should be sufficient to service the future development at Precinct E subject to the final lot layout allowing access to this existing main. As seen from Figure 12, Lots 51 and Lot 100 can be serviced from the existing main, however, the existing drainage reserve R45069 will require consideration when extending the sewer to service Lot 51.

The wastewater servicing of Lot 1 will require further investigation, but the Water Corporation sewer main could likely need to be extended to this site, possibly from Lot 52 at Resolution Drive.

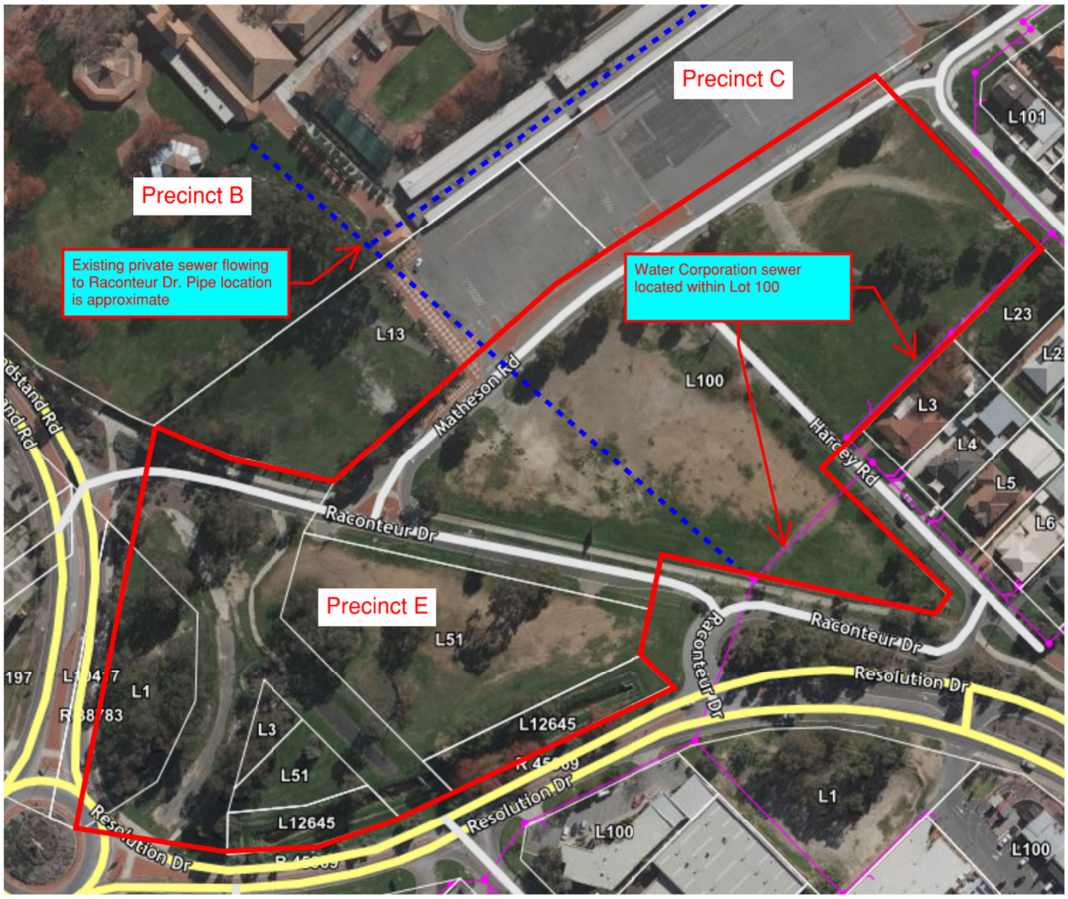



Figure 12 – Existing Gravity Wastewater Reticulation Services (Water Corporation)

Notwithstanding the advice outlined above, if the developer intends to upgrade or extend the sewer reticulation for any reason, they will be responsible for funding reticulation extensions to service the proposed lot with a gravity connection, which shall be designed and constructed to Water Corporation specifications. Standard Water Corporation infrastructure contributions will apply on a per-lot basis.

## 8 WATER SUPPLY

Advice was sought from Water Corporation regarding the established water reticulation system within the area and if service upgrades are required for the proposed development. Water Corporation has advised that the existing water reticulation in the area may be utilised to service the proposed Precincts depending on final water usage requirements, however, it should be noted that Precincts B and C are not currently included within the current Water Corporation planning assumptions.

Precinct A and Precinct B

Depending on the potable water capacity requirements for Precinct A, the existing 200dia water main located in the western verge of Waterway Cres and Grandstand roundabout should provide adequate supply to the proposed high-density developments. This 200mm water main would need to be extended to the development site from Grandstand Road to provide supply.

According to Water Corporation's database, Precinct B has an existing 100mm diameter water main feeding into the site with a 100mm meter and multiple existing 100mm fire services. The existing water main size along Grandstand Rd is 100mm PVC, therefore, if additional water is required and the supply needs to increase, an upgrade of this existing 100mm water main would be required which would require further investigation by Water Corporation.




Figure 13 - Existing Water Mains in proximity of Precincts

Precinct C and D

Precinct C has access to an existing 100mm water main located along the south verge of Matheson Road which has been constructed of varying materials (PVC, Asbestos Concrete, Cast Iron, Steel). Access to this main is readily available, however, if greater supply is required above what the 100mm diameter pipework supplied within the area, further investigation would be required with Water Corporation to increase the size of the water main to Precinct C.

Precinct D has an existing 150mm water main on the west verge of Resolution Drive, and a 100mm main on Grandstand Road, both of these providing adequate opportunity for connection and water supply.

Precinct E

There is an existing DN915mm steel water distribution main located along the eastern verge of Grandstand Road on the 2.1m alignment which also runs through the centre of Precinct E within the existing road reserve. A smaller existing DN100mm cast iron water main also conveys potable water through Precinct E within this road reserve corridor, with these mains being built in 1949 and 1987 respectively. Depending on the final use of Precinct E, it could be expected that as part of assembling the

lots in Precinct E, the Distribution Water Main and the DN100 CI main, may need to be relocated outside of the proposed lots, and reinstalled on their ultimate alignment within remaining road reserves. If these water main assets are to remain in their current location, Water Corporation would need to accept an easement over these assets with the DN915 and 100CI mains requiring 10 and 5m easements respectively.

It is anticipated that the existing DN100 cast iron water main will be suitable for water servicing. The existing DN915 steel distribution main located on the northern verge of Grandstand Road, and through Precinct E, would not be available for connection to the proposed development.

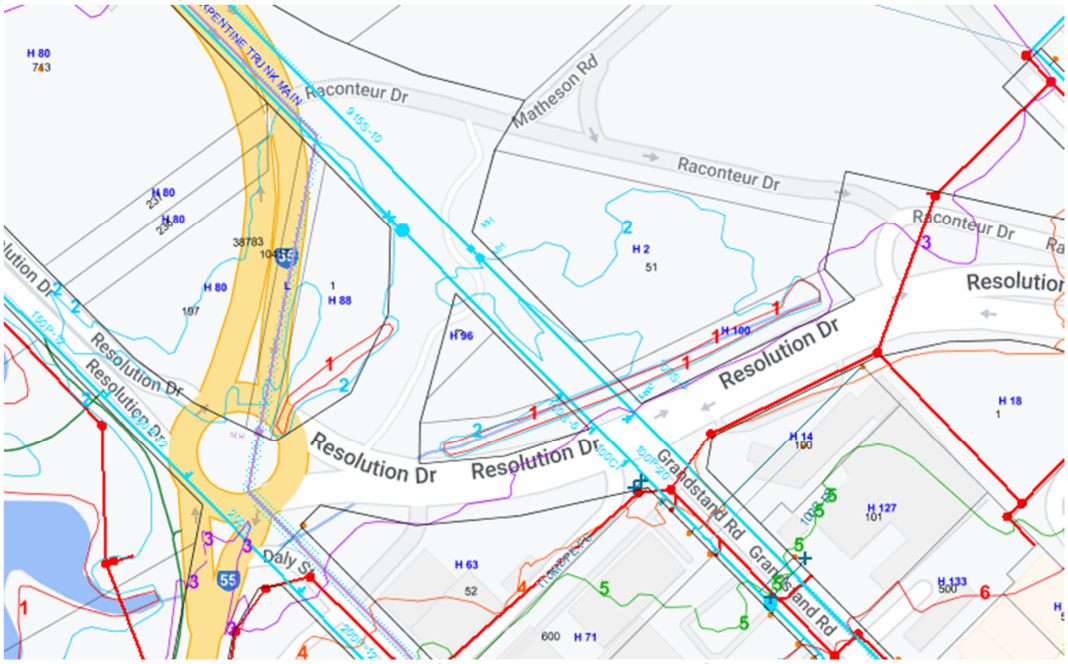



Figure 14 - Existing Water reticulation in Precinct E (Water Corporation Esinet 2024)

Whilst Water Corporation did not advise TABEC of any necessary upgrade of the old water pipe network, any modification to these existing pipes may result in the requirement to upgrade old cast iron water mains. Final upgrade requirements of the existing infrastructure will be clarified once water usage requirements are understood, and modelling has been undertaken by Water Corporation.

# 9 POWER SUPPLY

## 9.1 Power Requirements

The preliminary power requirements have been reviewed based on the proposed development at each of the precincts. It is estimated that the development equates to a total power requirement of 5.4MVA, with the new proposed developments within the precincts requiring the additional 4.2MVA. The existing developments within the precincts are estimated to be using 80% of the 1.5MVA currently available.

| Load Type | Anticipated HV infrastructure required |
|---|---|
| Precinct A | 1 x 1000kVA Transformer |
| Precinct B | **Existing** 1000kVA transformer and switchgear may be adequate<br>**Existing** 500kVA transformer located near the grassed parkland function area may be adequate |
| Precinct C | **Existing** may be adequate subject to further review. |
| Precinct D | 1 x 315kVA transformer |
| Precinct E | 2 x 1000kVA and 1 x 315kVA transformers |

The estimated load summary has been calculated as follows:

| Precinct | Development Type | Approx. sqm / No. of Units | Average kVA / sqm | Approx Total kVA | |
|---|---|---|---|---|---|
| Precinct A | Retirement Living | 390 | 3.1 | 1209 | |
| | Commercial | 300 | 140 | 42 | **1251** |
| Precinct B | Office | 680 | 140 | 95.2 | |
| | Hospitality | 1000 | 140 | 140 | **235.2** |
| Precinct C | Stables | 6400 | 10 | 64 | **64** |
| Precinct D | Childcare | 2100 | 75 | 157.5 | |
| | Residential | 41 | 4.7 | 192.7 | **350.2** |
| Precinct E | Site 1 Retail | 3400 | 140 | 476 | |
| | Site 1 Office | 2500 | 140 | 350 | |
| | Site 1 Parking | 5500 | 10 | 55 | **881** |
| | Site 2 retail | 7100 | 140 | 994 | |
| | Site 2 Parking | 3500 | 10 | 35 | **1029** |
| | Site 3 Equine | 5000 | 75 | 375 | **410** |
| **Total** | | | | **4185.4** | **kVA** |
| | | | | **5822.76** | **Amps** |

The anticipated additional power demand from the development is estimated to be in the order of 4.2MVA (4,200kVA).

## 9.2 Feeder Capacity

Western Power's (WP) Network Capacity Mapping tool indicates that the area is serviced by the Belmont Zone Substation and has more than 30MVA of power available on the network. Note that this information is unconfirmed by Western Power until such time as an application is being made to WP for connection.

To access the additional capacity in the network supplied at the Belmont Zone Substation, it is anticipated that 2 additional power feeders may need to be installed, 2.5km from the Belmont Substation Site to the development to adequately service the ultimate required supply.

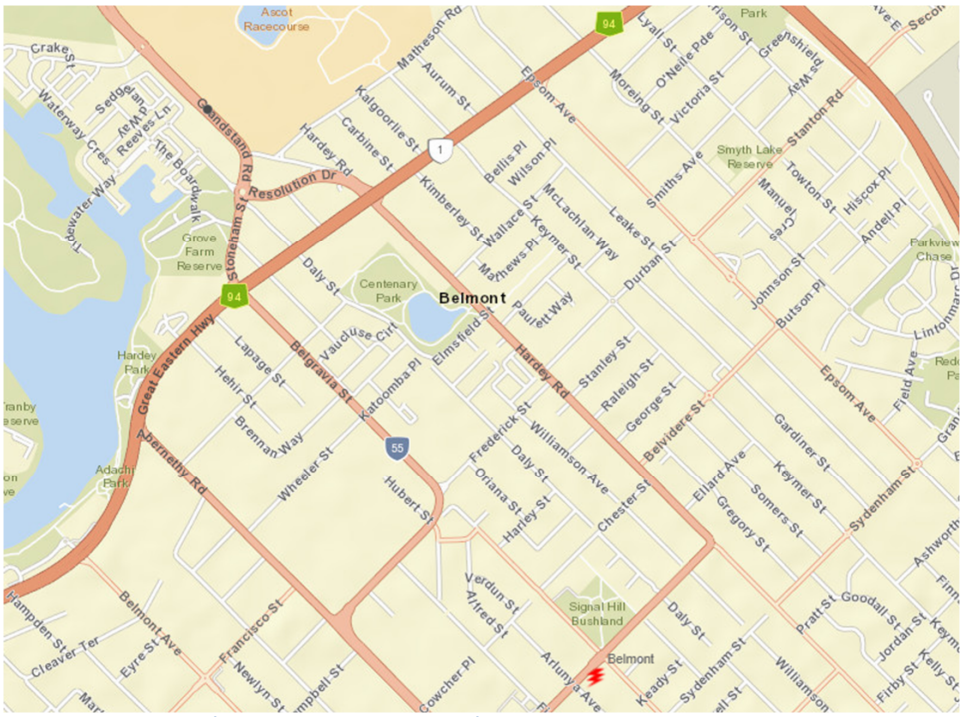



Figure 15 - WP Substation Site (Western Power Mapping 2024)

## 9.3 Existing Distribution Power Network

The Western Power Network Mapping tool (NCMT) and DBYD has indicated that there is high voltage (HV) servicing this development area. Existing 132kV overhead power is also located along Matheson Road, and along the east of Lot 9002.

There are also high voltage distribution cables surrounding the sites, with these being overhead power along Matheson Road, which transitions to underground at Resolution Drive, and north up Grandstand Road as seen within Figure 16.

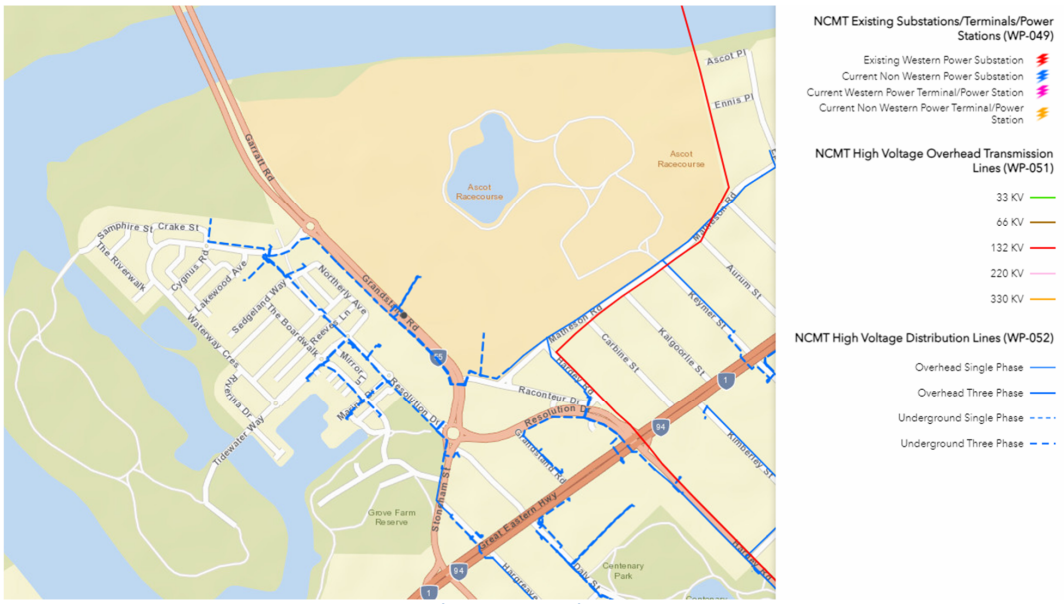



Figure 16 – NCMT Network Existing Power Services (Western Power)

## 10 COMMUNICATIONS

Ascot Racecourse is currently surrounded by NBN service in the area with FTTN Technology. It is expected with new developments or upgrades, that FTTP will be available.

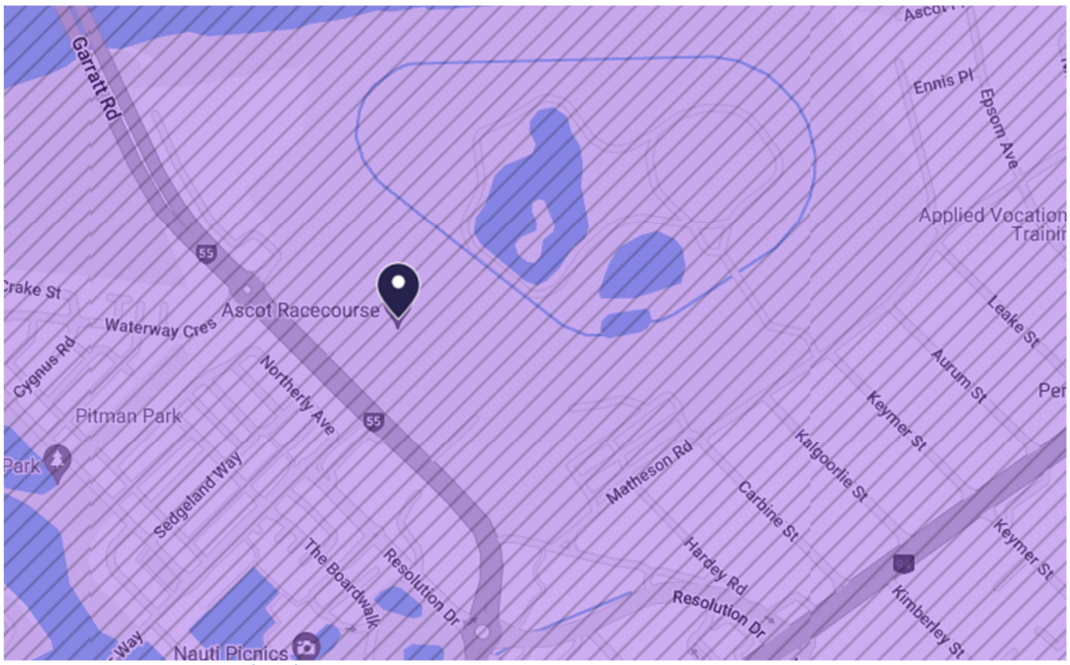



Figure 17 - NBN Rollout Map (NBN) – Fixed Line available

The Dial Before you Dig information shows Precinct D has existing Optus fibre optic assets within the site, which have been installed within the north west boundary of the lot. Precinct D also has Telstra and Vocus assets entering the lot from Grandstand Road and from Resolution Drive respectively.

Further discussion will required with the communication providers to determine whether these existing comms assets will impede the proposed development at this site, and whether relocation or removal of this asset is required.

## 11 GAS SUPPLY

There is existing medium pressure 155 PVC 1.5 ( MAOP 70kPa) gas mains located along Matheson Road and up Grandstand Road until Precinct D which are available for connection to Precinct C, Precinct D and Precinct E if required.

ATCO has completed high level modelling based on similar business connection types as those nominated developments within each precinct. The modelling was based on:

- Connection to MAOP 70kPa network
- MP Metro 25 – Severe Winter
- Full load at 350scmh (≈12000MJ/hr)
- Full connection by 2025
- Potential mains extension required for connections to Precinct A and B

Based on this modelling, the existing gas mains adjacent to Precinct D and Precinct E should be sufficient to service these residential and commercial developments.

Precinct A will require a gas mains extension to the retirement village if this development is to utilise gas, however, ATCO have not expressed any concerns with servicing capacity issues.

The supply of gas is not a WAPC subdivision condition and there is no obligation on the developer to install gas as part of the development.




Figure 18 – Existing ATCO Gas Network map (ATCO Gas)

In reviewing the Dial Before You Dig information, an existing 150 PVC gas main traverse through Precinct D, along the south east boundary. From the information available, this pipe does not look to be

operational, however, further discussions with ATCO Gas are required on whether this needs to be relocated, or removed.

## 12 CONCLUSION

Based on the infrastructure review, there does not appear to be engineering-related constraints preventing the development of the five precincts. Notwithstanding, there are a number of design issues and construction challenges to be resolved in further detail within the next phases of development.

The advice received from servicing authorities and investigations to date indicate each aspect can be resolved to support the development proposal.

## 13 RECOMMENDATIONS

Since this report is based on preliminary servicing advice and investigations, it is recommended that each Authority be kept informed as the planning progresses and concept engineering designs are refined. Communicating the proposed time frames for the precinct development is also important.

There are a number of project-related issues and challenges that require further consideration, with some of these to be assessed as part of the next phase, such as:

- further investigation and discussion on the preferred Precinct A sewer servicing methodology;
- the upgrade/relocation requirements of existing water mains if deemed necessary for Precinct E or to provide adequate servicing to Precinct B or C. If required, early engagement with Water Corporation is recommended to coordinate scope within Water Corporations capital works program;
- bio-retention locations within the centre racecourse for Precincts A, and C;
- drainage basin/storage location at Precinct D;
- existing communications assets removal or relocation within Precinct D;
- power servicing to each development sites with overlapping lots and boundaries
- understanding development timeframes for precincts, due to the limited power capacity within the existing network prior to additional HV feeders being required to the site.

The information contained within the report is preliminary in nature, has been completed based on a high-level desktop assessment, and has relied on preliminary planning advice from servicing authorities where appropriate. There are no site investigations, reports or other consultants' input unless stated within the report, which would ordinarily provide a more substantial servicing review for the purpose of supporting subdivision applications.

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# 15 APPENDIX A – DBYD INFORMATION

Job No 36962243

byda.com.au

## Contact Details

| Contact | Contact number | Company | Enquirer ID |
|---|---|---|---|
| Justin Zielinski | 0420 304 451 | - | 3140642 |

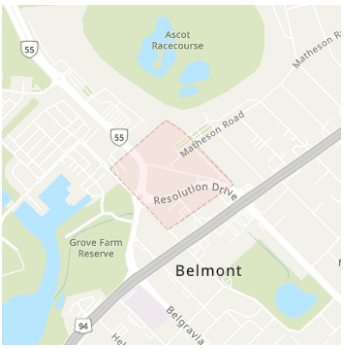
**Email**
jzielinski@tabec.com.au

**Address**
54 Havelock Street
West Perth WA 6005

## Job Site and Enquiry Details

**WARNING:** The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

| Enquiry date | Start date | End date | On behalf of | Job purpose | Locations | Onsite activities |
|---|---|---|---|---|---|---|
| 21/06/2024 | 24/06/2024 | 24/06/2024 | Private | Design | Both Road | Planning & Design |




Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

| User Reference | Address | Notes/description |
|---|---|---|
| Precinct E | 2 Raconteur Drive<br>Ascot WA 6104 | - |

## Your Responsibility and Duty of Care

- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the Privacy Policy and Term of Use.
- For more information on safe digging practices, visit www.byda.com.au

## Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

| Referral ID (Seq. no) | Authority Name | Phone | Status |
|---|---|---|---|
| 240900614 | ATCO Gas Australia | 1300 926 755 | NOTIFIED |
| 240900610 | NBN Co (WA) | 1800 687 626 | NOTIFIED |
| 240900607 | Optus (WA) | 1800 505 777 | NOTIFIED |
| 240900612 | Telstra (WA) | 1800 653 935 | NOTIFIED |
| 240900609 | TPG Telecom (WA) | 1800 786 306 | NOTIFIED |
| 240900608 | Vocus (WA) | 1800 262 663 | NOTIFIED |
| 240900613 | Water Corporation | 13 13 95 | NOTIFIED |
| 240900611 | Western Power | 13 10 87 | NOTIFIED |

END OF UTILITIES LIST

**Lodge your FREE enquiry online any time at byda.com.au**

# ATCO UNDERGROUND ASSET DETAILS ASSETS AFFECTED
GAS DIVISION

**ASSETS AFFECTED – see accompanying Plan**

**Job No:** **36962243**
**Sequence No:** **240900614**
Date of Issue: 21 June 2024
Phone: **1300 926 755**

**Justin Zielinski**
**ATCO Gas Australia**
54 Havelock Street
West Perth
WA 6005

**BYDA Utility Registration Name:** Private
**BYDA Location:** **2 Raconteur Drive Ascot WA 6104**

**ATTENTION:** This response to your enquiry has been interpreted from details in your requested DBYD picture location request only (not any street address you gave). It is your duty to ensure the accompanying plan/s match your geographical area of works.

**IF YOU SEE, HEAR, SMELL OR OTHERWISE DETECT GAS,**
**LEAVE THE IMMEDIATE AREA AND THEN CALL 13 13 52**

Our records indicate that ATCO gas infrastructure ***IS PRESENT*** in the vicinity of and/or surrounding area of the above enquiry. This response relates only to ATCO assets. Your Duty of Care requires that personnel **Must** at all times comply with, and have on site, this information sheet and the accompanying plan(s). All plans are subject to this information sheet. You should refer to the ATCO Self-service Portal (Link Here) or if unsure, contact ATCO on **1300 926 755** during business hours.

All information provided is to be used as a guide only (see Disclaimer item **5**). It does not absolve you or third parties from your Duty of Care obligations, including to take additional precautions where work has the potential to impact on gas assets, public safety or the environment, or from your duties at law (including Reg 3.21 of the Occupational Safety and Health Regulations 1996).

## WARNINGS

- No works of any type within 15 metres of any **CRITICAL GAS ASSET** infrastructure without prior approval from ATCO
- **NO HOT WORK** within 15 metres of any gas infrastructure except in compliance with applicable laws & *Australian Standard 1674.* **Do Not** let heat sources or hot works impact on any gas infrastructure and take into consideration that the ground or adjacent structures may also be capable of transmitting heat so as to circumvent protection afforded by a heat shield or barrier
- **DANGER** - Gas can cause asphyxiation and is flammable. Keep all ignition sources well away (e.g., flames, matches/ lighters, sparks, electrical devices, vehicles or engines, mobile phones, cameras)
- Gas pipes **Must Not** be unsupported or left without adequate cover or protection without prior approval from ATCO
- Damage to the pipe coating or pipe itself can be very dangerous if not given immediate attention. Report any damage to ATCO immediately on **13 13 52**. **Do Not** attempt to repair any damaged gas infrastructure
- No alteration or removal of live or abandoned gas infrastructure without prior written approval from ATCO
- Any abandoned or proposed gas infrastructure indicated on the gas plans **Must** be treated as live
- Never assume the location or depth of any gas infrastructure. Pipes may not follow straight lines or maintain a constant depth. Always check carefully (e.g., by careful hand digging of potholes)
- Unauthorised repairs or tampering with gas infrastructure may result in prosecution under the *Energy Operators (Powers) Act 1979*. ATCO Gas Australia reserves all rights to recover compensation for loss or damage to its gas infrastructure or other property including for indirect or consequential losses.

**PLANS:**

Plans provided are current for **30 days only** from date of request. You must use current plans at all times.

Plans do not show all gas service lines (which connect gas mains to individual meter positions). See condition **3.c)** below.

If plan shows **additional detail** symbols ( * ) or ( ) in the area of proposed works it is **your duty** to obtain that further detail from the number below.

Plans (including the location of pipes, services, infrastructure and boundaries) are **approximate only**. You **Must** use safe and proper procedures – including **potholing** (see condition **4** below).

Plans are not a guide as to gas availability for connection purposes.

**To call ATCO:** **Weekdays from 7.30am to 3.30pm, call – 1300 926 755 After hours, weekends and emergencies, call – 13 13 52**

**CONDITIONS FOR WORKS IN THE VICINITY OF ATCO ASSETS**

**1. Compliance with Warnings**

You **Must** comply with the Warnings contained in this information sheet and the accompanying plan(s).

**2. Compliance with 'Working around Gas Infrastructure' Document (Link Here) applicable laws and duty of care**

All work (including but not limited to using Excavator's Augers, Directional, drilling machines, 'Ditch Witch' type trenching machine, Loader, Dozer, Skid Steer (Bob Cat)) **Must** comply with all applicable requirements in the 'Working around Gas Infrastructure' Document and with all applicable laws and Australian Standards. All due care must be exercised to locate any gas infrastructure in the vicinity and when conducting any works near them.

**3. All Gas Infrastructure**

All work that may have any impact upon any gas infrastructure (see **3.a)**, **b)** and **c)** below for examples) should be carefully planned with notification to ATCO well in advance of commencement. Contact ATCO on **1300 926 755** or visit Atco's online self-service portal (Link Here). Amongst other things, this includes excavation of or near gas pipelines, boring/drilling, crossings of pipelines (including by other underground infrastructure e.g. drains, power cables, etc.), road works and structural installations. In addition:

a) Critical Asset

No works of any type are permitted within 15 meters of these pipelines without prior approval from ATCO. For approvals contact ATCO on **1300 926 755** or visit the Atco online Self-service portal (Link Here)

You **Must** ascertain the location of any Critical Asset, in relation to your proposed work by:

- Locating a straight line between two marker danger signs, and
- Assessing the distance from this line to your proposed work area.

ATCO may require stand-by supervision during your works and will advise of attendance requirements.

b) Non Critical Assets

These pipelines are installed in most streets throughout the Perth metro area and several country centers. Main valves, regulator sets, and test points also exist at intervals along these pipelines. Where work may impact upon these pipelines or assets then ATCO **Must** be contacted as per item **3** above.

c) Gas Services and Meters

If a gas meter is installed on a property, an underground gas service pipe will run from the meter position to the gas main in the street. Plans do not show all gas service lines (with the exception of Critical Assets), but their presence must be anticipated. Most gas meter boxes installed since 1996 will include a sticker giving approximate guidelines for the gas service line location. All due care must be exercised to locate any gas services in the vicinity and when conducting any works near them.

**4. Compliance with Safe Work Practices**

It is your responsibility to have and comply with adequate safe work practices and procedures. Without limiting your obligations:

**PLAN** The complete & current Before you Dig Australia documentation and plans must always be on site & referred to for the duration of work. Refer to regulation 3.21 of the Occupational Safety and Health Regulations 1996 and the Utility Providers "Code of Practice" for further useful information.

**PREPARE** Prepare by reviewing the Before you Dig Australia Documentation and contacting ATCO if you need assistance. Look for onsite ATCO asset and infrastructure clues such as pit lids, marker posts and meters. No works of any type are permitted within 15 meters of a **CRITICAL ASSET** without prior approval from ATCO. For approvals contact ATCO on **1300 926 755** or visit the Atco website Self Service portal (Link Here) and allow suitable

processing time. Atco recommends engaging a BYDA Certified Locator which includes undertaking electronic location prior to potholing.

**POTHOLE** Using current Before you Dig Australia plans, all gas pipes should be located (including any deviation in the direction of a gas pipe) by exposing them by careful digging using a HAND SHOVEL. Where the proposed work is parallel to a gas pipeline, pothole every 10 meters along the entire route. Damage to the pipe coating or to the pipe itself can create a very dangerous situation if not given immediate attention. If damage does occur, it **Must** be reported to ATCO immediately on Ph. **13 13 52**.

**PROTECT** Supervise and monitor all excavations near gas infrastructure using a dedicated spotter. Where any gas infrastructure is required to be exposed, adequate protection of the gas infrastructure is required to prevent potential damage. Also implement appropriate controls when conducting 'hot work' (in accordance with AS 1674) in the vicinity of the ATCO infrastructure such as; isolation; separation distance; the placement of an effective non-combustible barrier of sufficient size and thermal resistance for the intensity, type and duration of heat exposure; gas monitoring; monitoring the environment surrounding the ATCO infrastructure to ensure it is not being impacted by the work, and other controls as necessary.

**PROCEED** You should **only proceed** with your excavation work after you have planned, prepared, potholed (unless prohibited) and have protective measures in place. All locations markers/pegs are to be removed on completion of works. If you are unsure, **DO NOT** Proceed. Call ATCO on **1300 926 755**

**5. Disclaimer and Further Terms**

a) Nothing in this document, any accompanying plan or the 'Additional Information for Working around Gas Infrastructure' (AGA-O&M-PR24) (together called "**Documents**") purports to exclude or modify any term, condition or warranty to the extent that by law it cannot lawfully be excluded or modified by agreement or notice, including but not limited to those contained in Schedule 2 of the *Competition and Consumer Act* 2010 (Cth) and corresponding provisions of any state legislation.

b) If any of ATCO, or their respective related entities, officers, employees, agents, contractors or advisers (together called "**Associates**") is liable for a breach of a term, condition or warranty described in paragraph **5.a)** above, its liability is, to the fullest extent permitted by law, limited to any one or more of the
following as it determines in its absolute discretion:

i) in relation to goods supplied by them, replacing or repairing the goods, supplying an equivalent item, paying the cost of replacing or repairing the goods or paying the cost of acquiring or hiring an equivalent item; and

ii) in relation to services supplied by them, the re-supply of the services or the payment of the cost of having the services re-supplied.

c) Subject to paragraphs **5.a)** and **b)**, but otherwise despite any other provision in the Documents, no representation or warranty is made or given (whether expressly or by implication) by any of ATCO or their respective Associates in respect of any information contained or referred to in any of the Documents or in any other communication from ATCO concerning any of the Documents or the subject matter of any of the
Documents ("Information"). In particular, but without limiting the generality of the foregoing limitation, none of ATCO or their respective Associates makes any warranty or representation as to the truth, accuracy, completeness, reliability, currency, timeliness, quality or fitness for any purpose of or the standard of care taken in the preparation of any Document or Information (including, but not limited to, the accuracy of the scale of, or the location of anything or symbol shown on, any plan or diagram).

d) Subject to paragraphs **5.a)** and **b)**, to the maximum extent permitted by law, none of ATCO or their respective Associates is liable to any person or other body ("**Recipient**") who receives or otherwise obtains access to all or any part or parts of the Documents or Information, in any way (including, but not limited to, liability for negligence, breach of statutory duty or lack of care) in respect of any cost, expense, damages, loss or liability, including, but not limited to:

i) any financial or economic loss, cost, expense or damage, including but not limited to loss of production, loss of profit, loss of revenue, loss of use, loss of contract, loss of goodwill or loss of business opportunity;

ii) any new or increased costs or expenses, including but not limited to financing or operating costs;

iii) any failure to achieve any actual or anticipated saving in respect of any cost or expense;

iv) any cost, expense, damage or loss resulting from any liability of the Recipient to any other person or body howsoever and whensoever arising, suffered or incurred by the Recipient in relation to, or in connection with, the disclosure to them of, or use of, or reliance on, all or any

part or parts of the Documents or Information.

e) By using any Document or Information, each Recipient is taken to represent and warrant to ATCO that the Recipient will comply with the conditions and other terms referred to in the Documents or Information, including but not limited to conditions that:

i) the Recipient **Must** comply with the conditions in numbered paragraphs **1** to **4** above and this paragraph **5**;

ii) as between ATCO and each Recipient, ATCO owns the Information and all rights and title in and to the Information are to remain vested in ATCO;

iii) no Recipient has any right, title or interest in the Information or, except as expressly provided for in the Documents, any license or right to copy, alter, modify, publish or otherwise use or deal with the Information without prior written approval from ATCO;

iv) ATCO makes no representation and gives no warranty as to its right to disclose any Information;

v) the Recipient relies on any Information entirely at its own risk and expense;

vi) the Recipient **Must** undertake its own independent due diligence and investigations in relation to the Information;

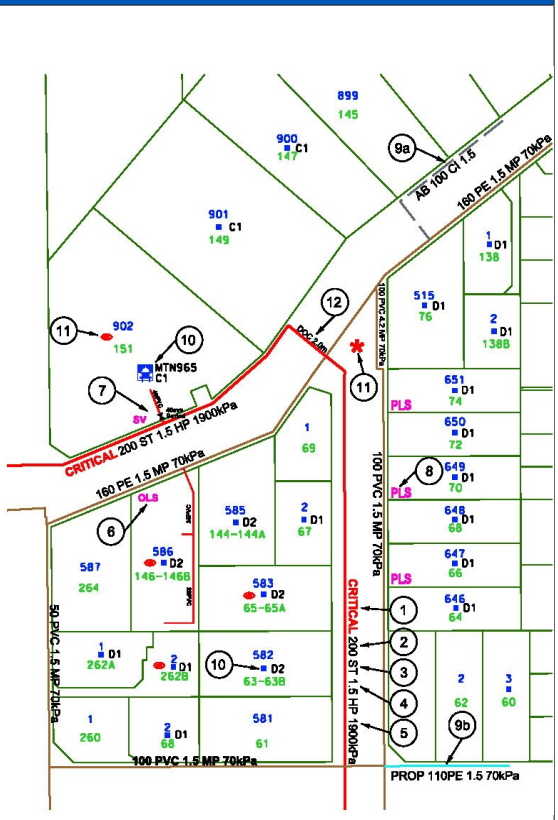
vii) none of ATCO or their respective Associates owes the Recipient any duty of care in respect of the Information; and

viii) none of ATCO or their respective Associates is under any obligation to correct, update or revise any Documents or Information.

## GAS MAIN AND SERVICE IDENTIFICATION

**LEGEND**

1. Critical Asset (See **WARNINGS** page 1)
2. Pipe Diameter (millimetres)
3. Pipe Material
   CI = Cast Iron PE = Polyethylene
   GI = Galvanised Iron PVC = PVC
   ST = Steel
4. Alignment (in metres from property line)
5. Pressure in main (MP 70 kPa = Medium Pressure and MAOP (Maximum Allowable Operating Pressure)
6. Off-line Service – service may not be straight line to meter. (**WARNING – OLS may not always be shown on plan**. See item **Error: Reference source not found** above)
7. Service Valve in the vicinity
   (**NOTE:** Service Valve may be **"BURIED"**)
8. Pre-laid Service laid in Common Trench
9. Main Status: (See **WARNINGS** page 1)
   9a. AB = Abandoned Mains
   9b. PROP = Proposed Mains
10. Customer Connection: Does not indicate actual location of Meter Position
    D2 (D = Domestic & 2 = Number of Meters)
    C1 (C = Commercial & 1 = Number of Meters)
11. **Additional detail available and Must be obtained if within area of proposed works – see page 2 above.**
12. Depth of Cover (DOC) in metres.




IF UNSURE, PLEASE CONTACT ATCO ON **1300 926 755**

ATCO

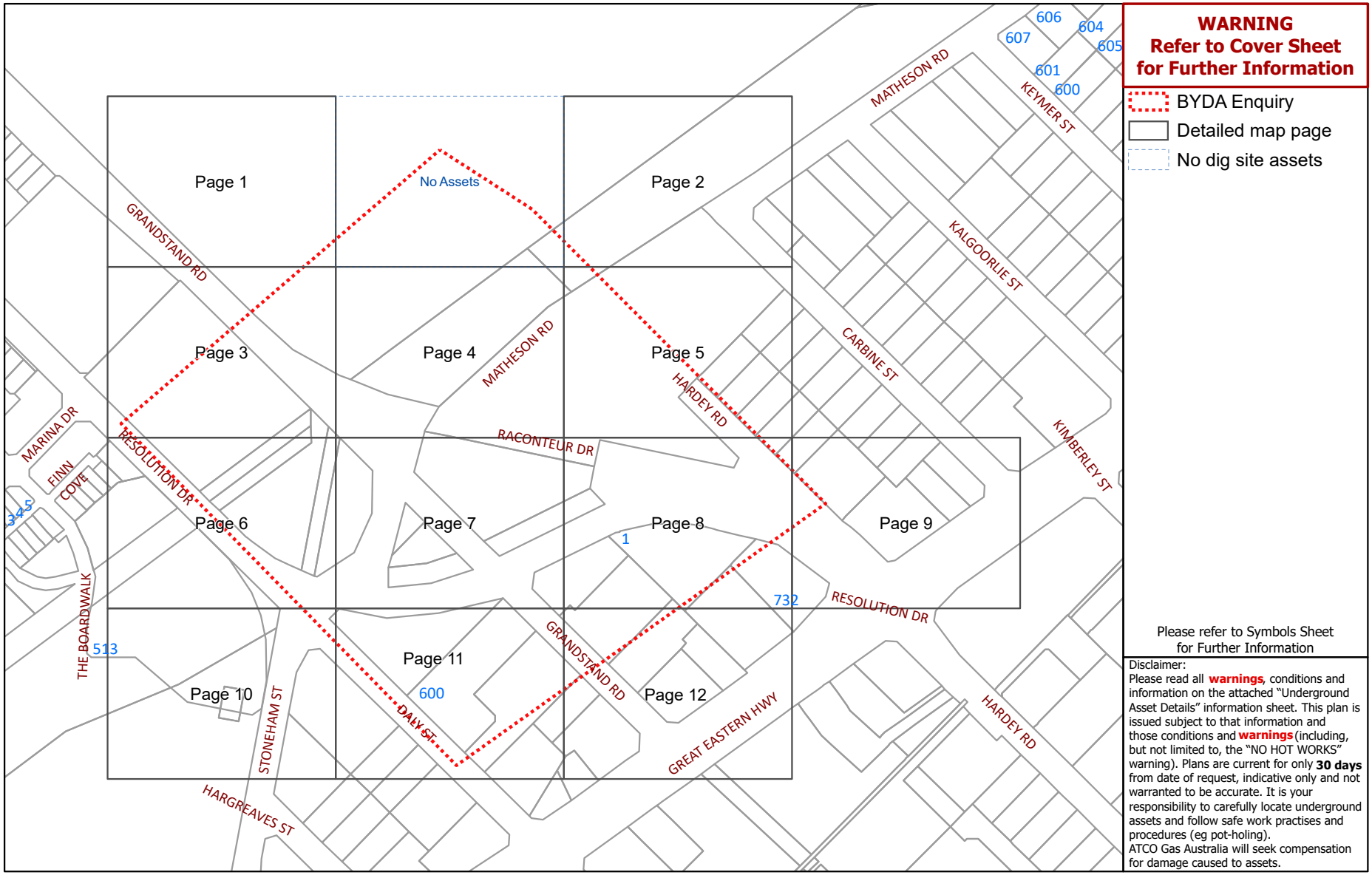
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ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)
Index Sheet

Seq # 240900614
Job # 36962243

BYDA Location: 2 Raconteur Drive Ascot 6104
Scale: 1:3,500

BEFORE YOU DIG www.byda.com.au




**WARNING**
**Refer to Cover Sheet for Further Information**

BYDA Enquiry
Detailed map page
No dig site assets

Please refer to Symbols Sheet for Further Information

Disclaimer:
Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing).
ATCO Gas Australia will seek compensation for damage caused to assets.

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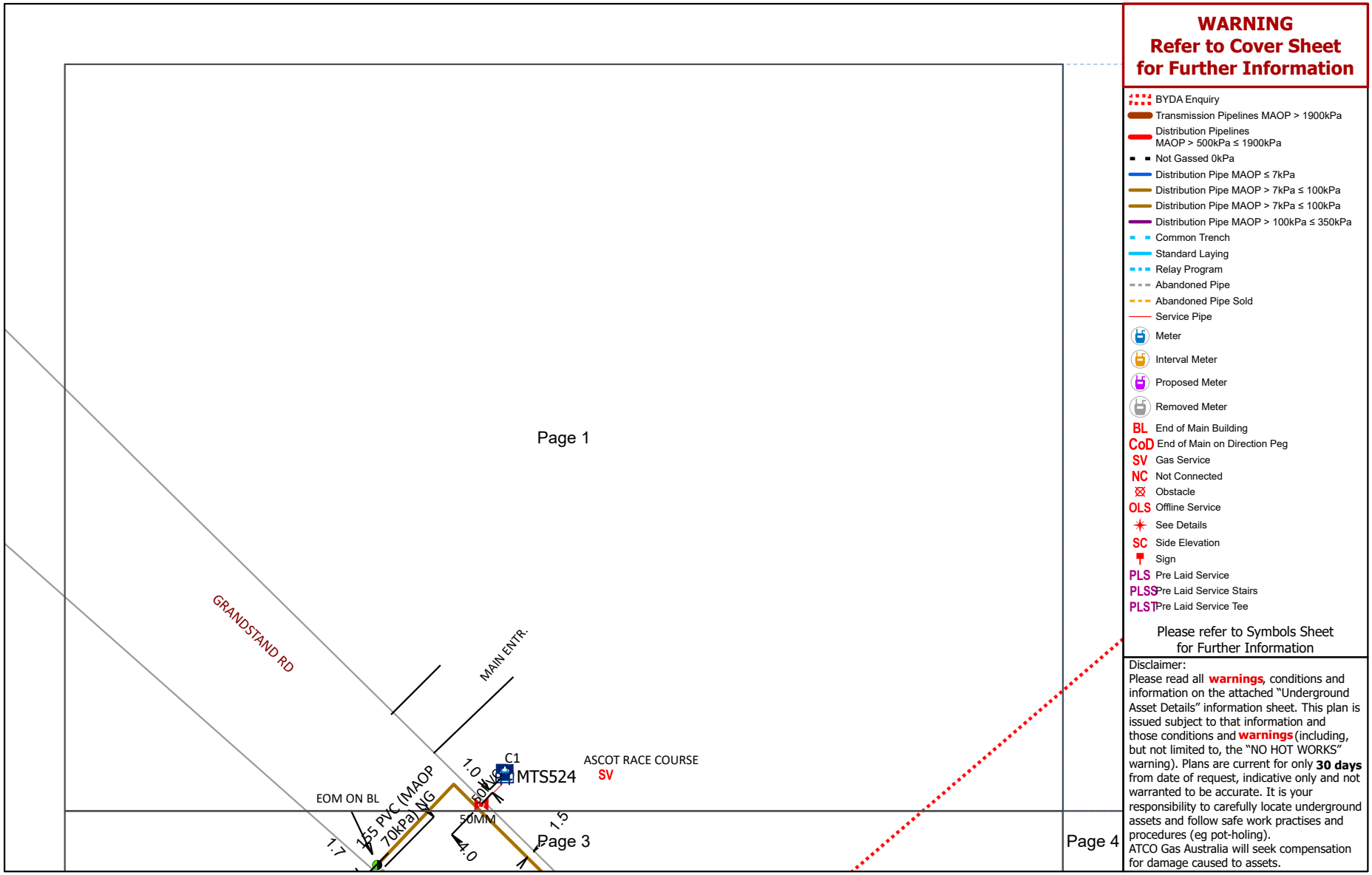
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BYDA Location: 2 Raconteur Drive Ascot 6104
Scale: 1:800

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**WARNING**
**Refer to Cover Sheet for Further Information**

- BYDA Enquiry
- Transmission Pipelines MAOP > 1900kPa
- Distribution Pipelines MAOP > 500kPa ≤ 1900kPa
- Not Gassed 0kPa
- Distribution Pipe MAOP ≤ 7kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 100kPa ≤ 350kPa
- Common Trench
- Standard Laying
- Relay Program
- Abandoned Pipe
- Abandoned Pipe Sold
- Service Pipe
- Meter
- Interval Meter
- Proposed Meter
- Removed Meter
- BL End of Main Building
- CoD End of Main on Direction Peg
- SV Gas Service
- NC Not Connected
- Obstacle
- OLS Offline Service
- See Details
- SC Side Elevation
- Sign
- PLS Pre Laid Service
- PLSS Pre Laid Service Stairs
- PLST Pre Laid Service Tee

Please refer to Symbols Sheet for Further Information

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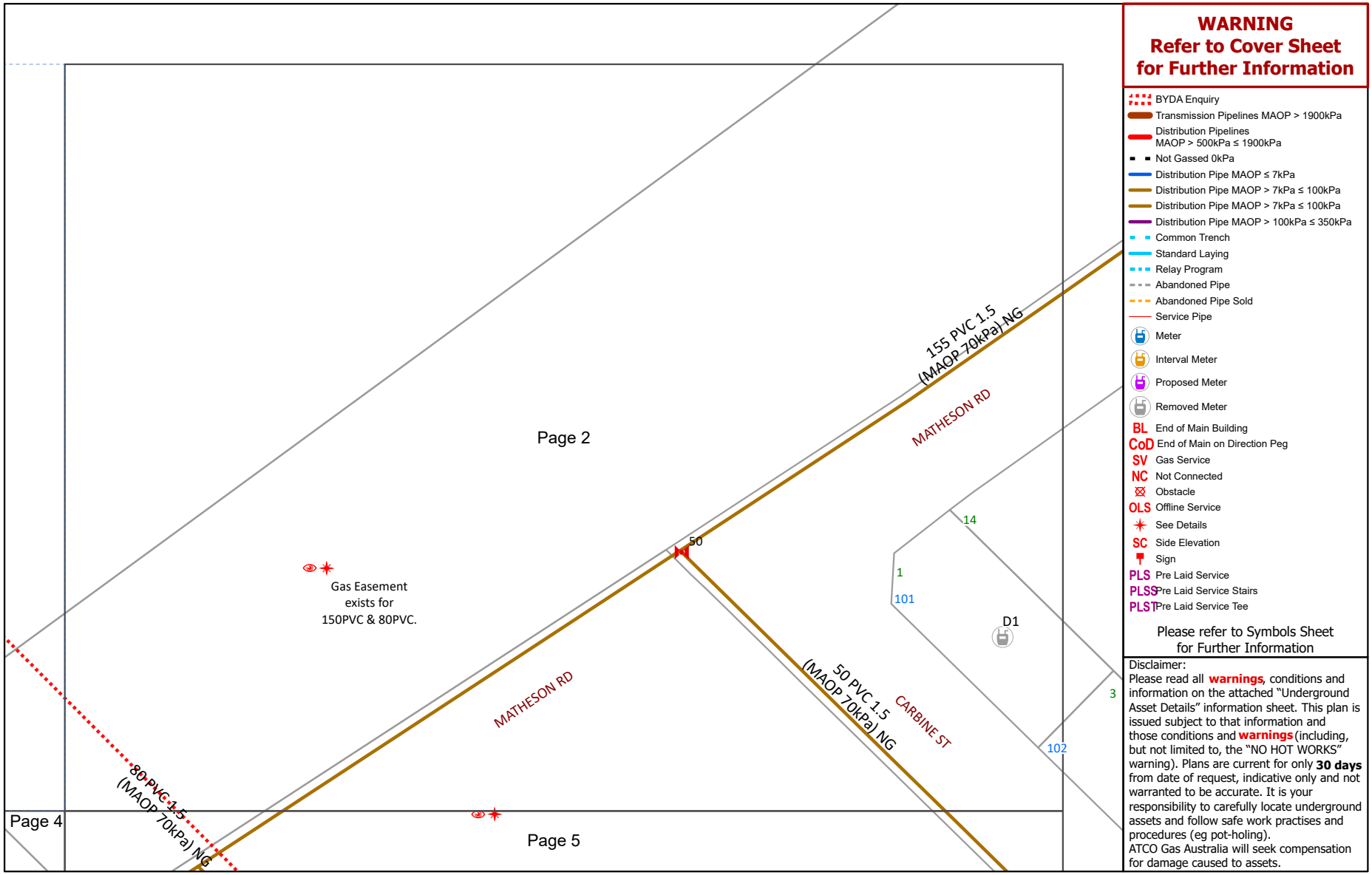
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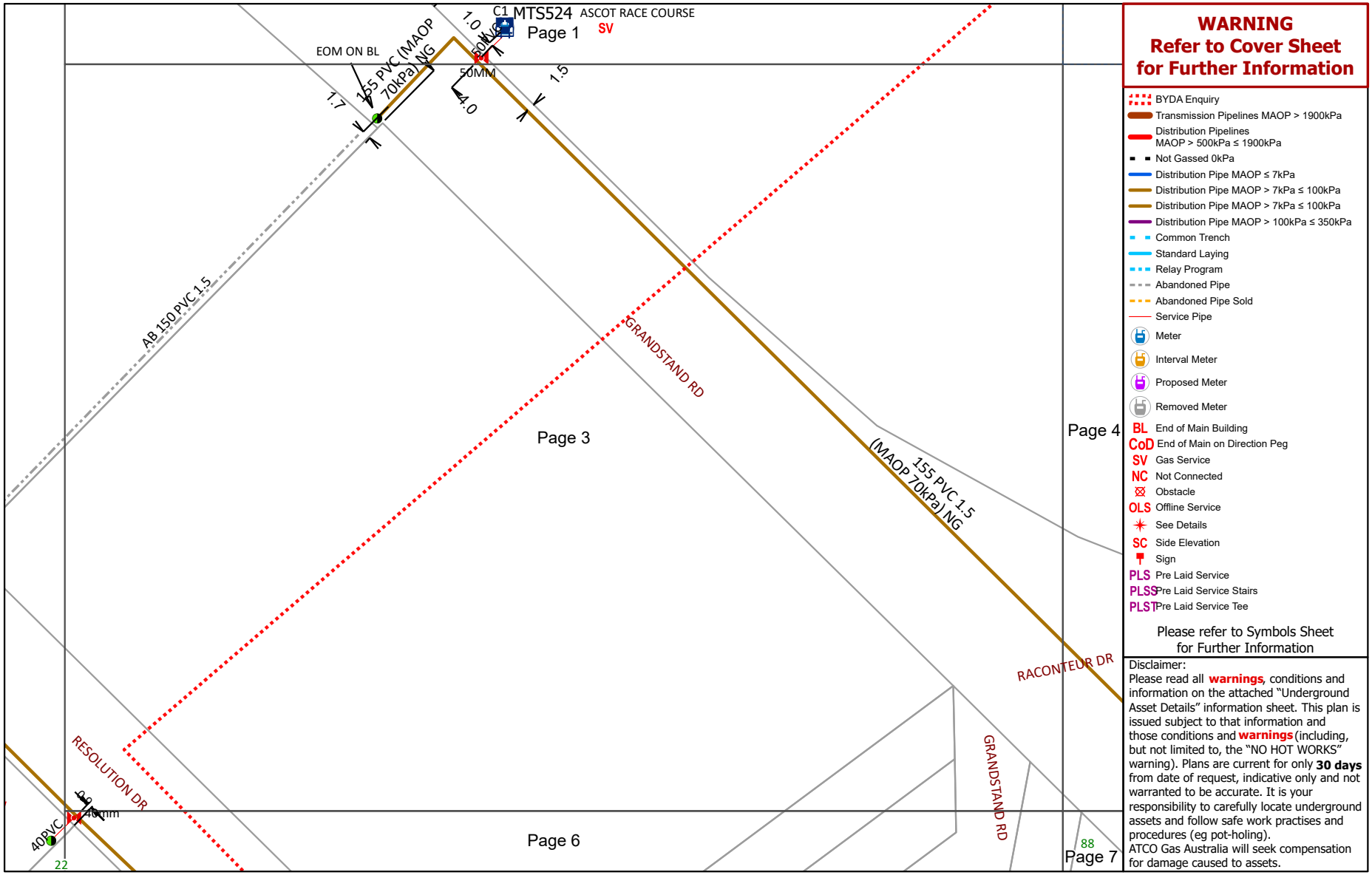
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- NC Not Connected
- Obstacle
- OLS Offline Service
- See Details
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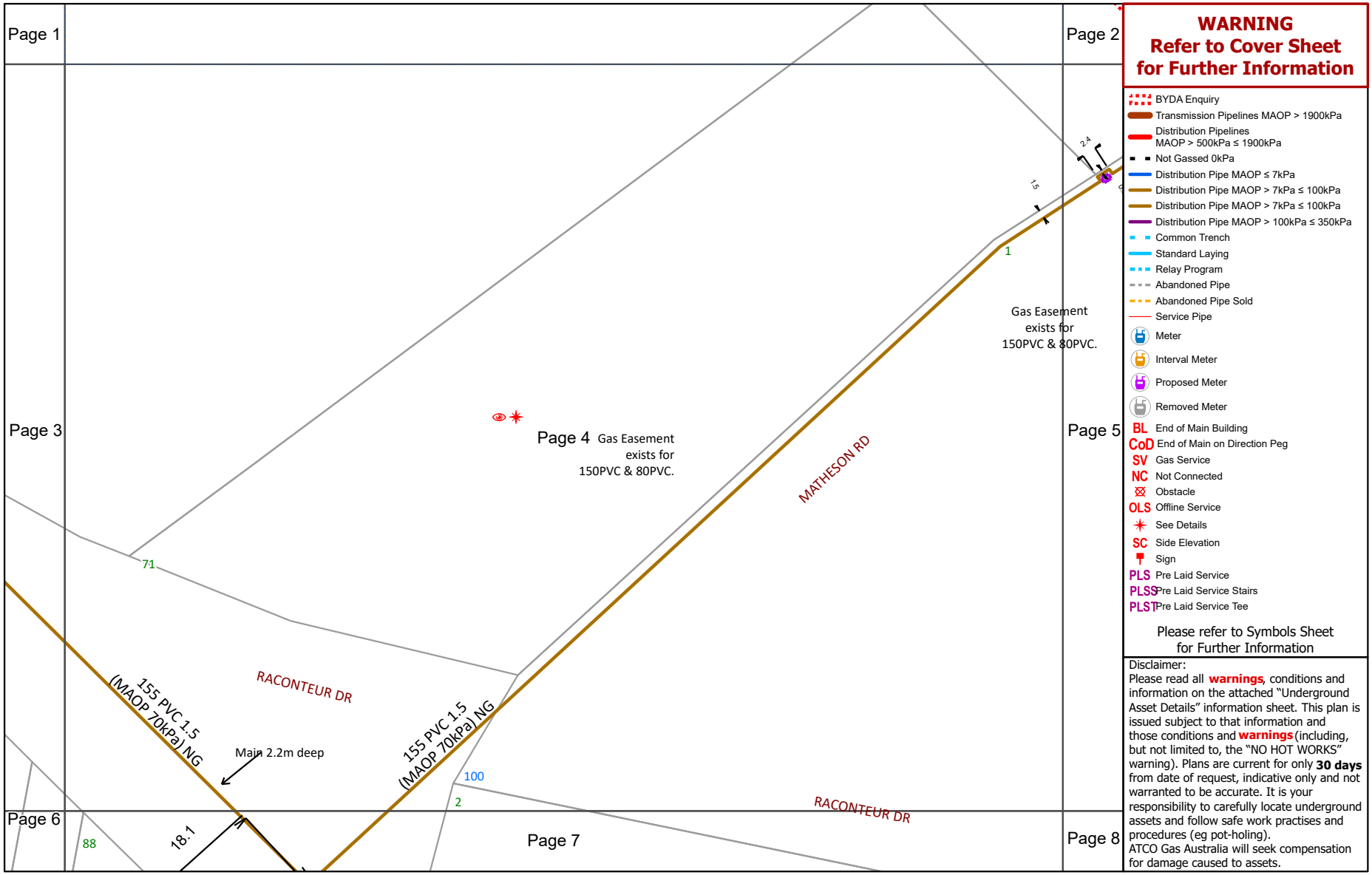
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ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)

Seq # 240900614
Job # 36962243

BYDA Location: 2 Raconteur Drive Ascot 6104
Scale: 1:800

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**WARNING**
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- BYDA Enquiry
- Transmission Pipelines MAOP > 1900kPa
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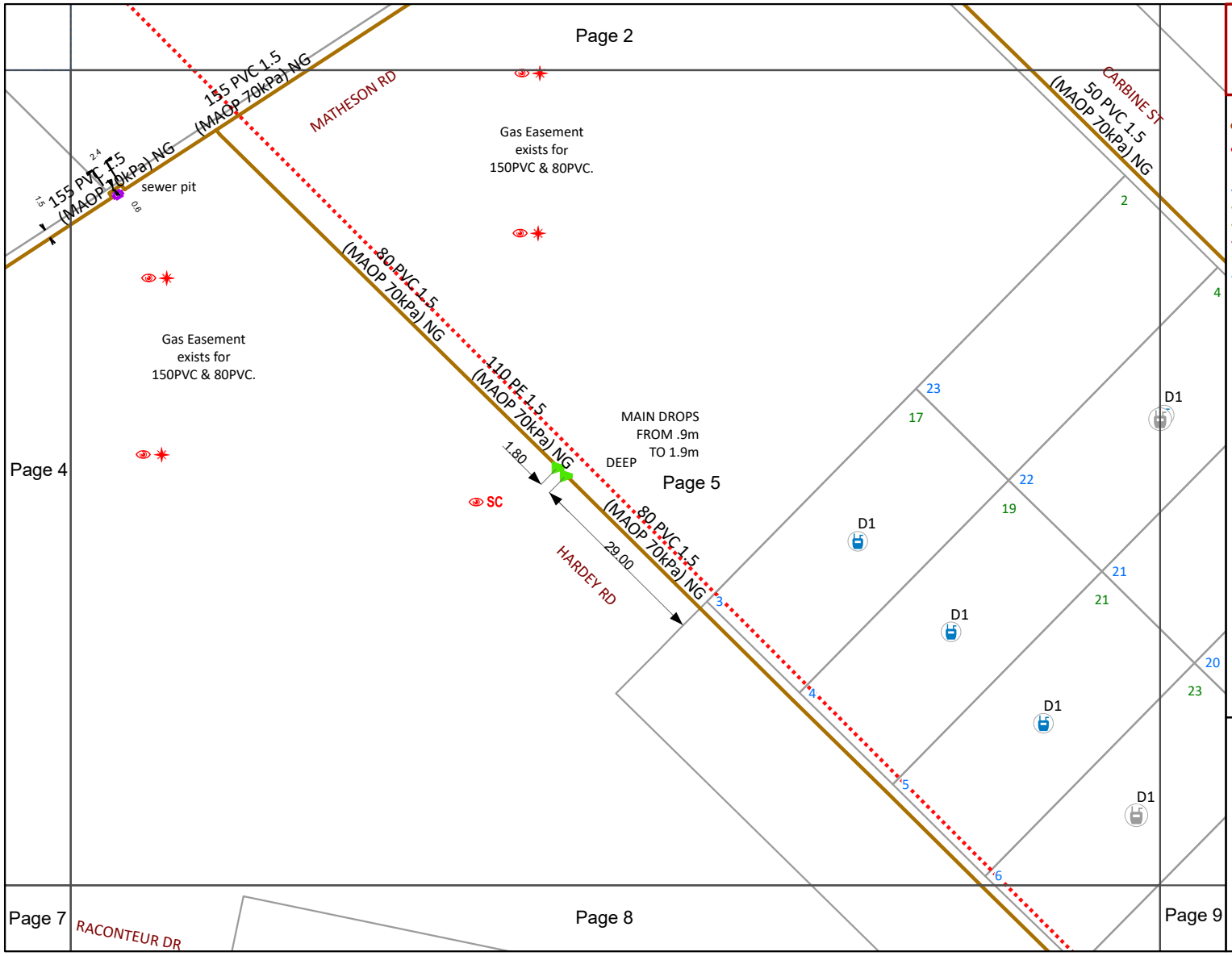
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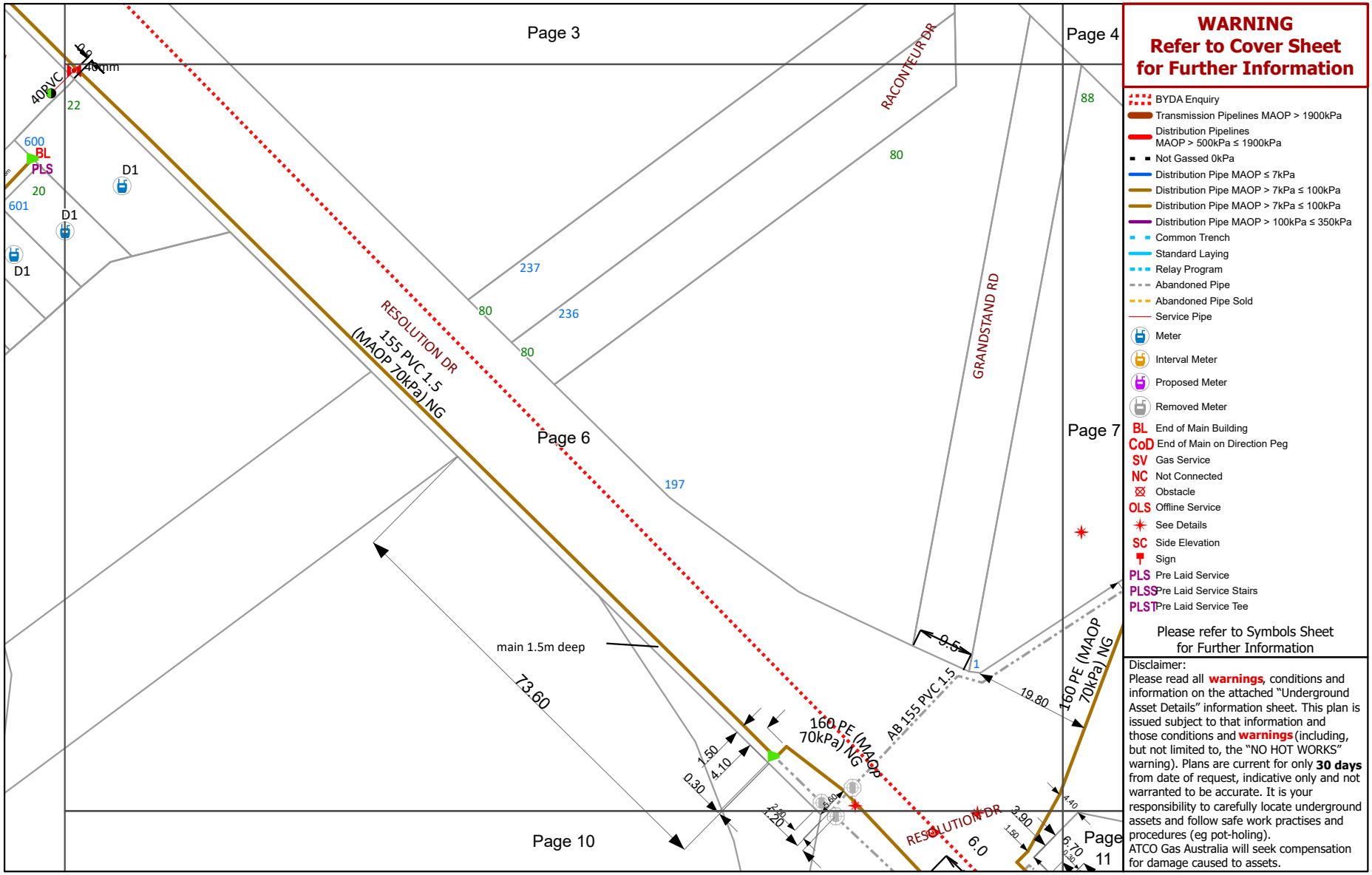
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BYDA Location: 2 Raconteur Drive Ascot 6104
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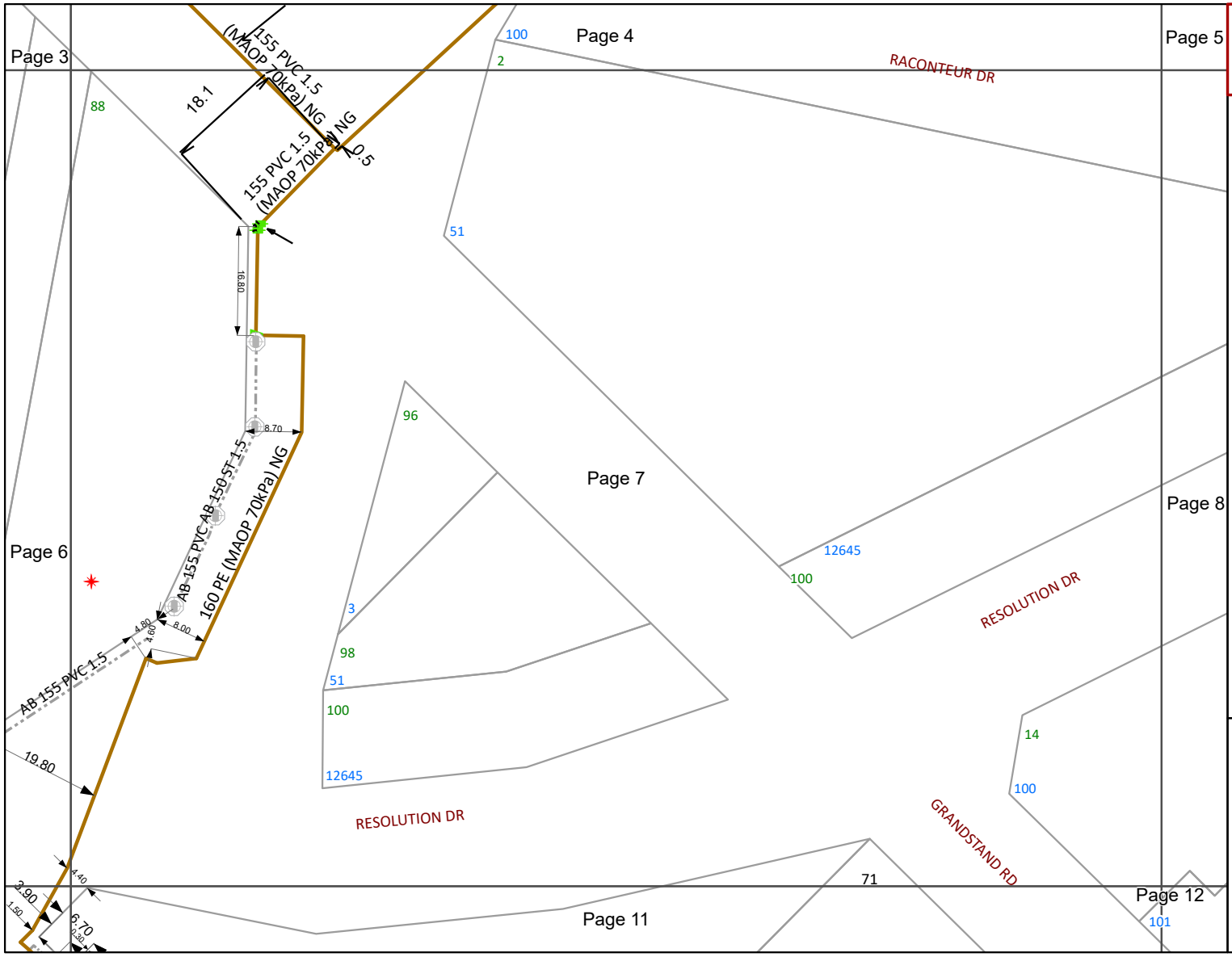
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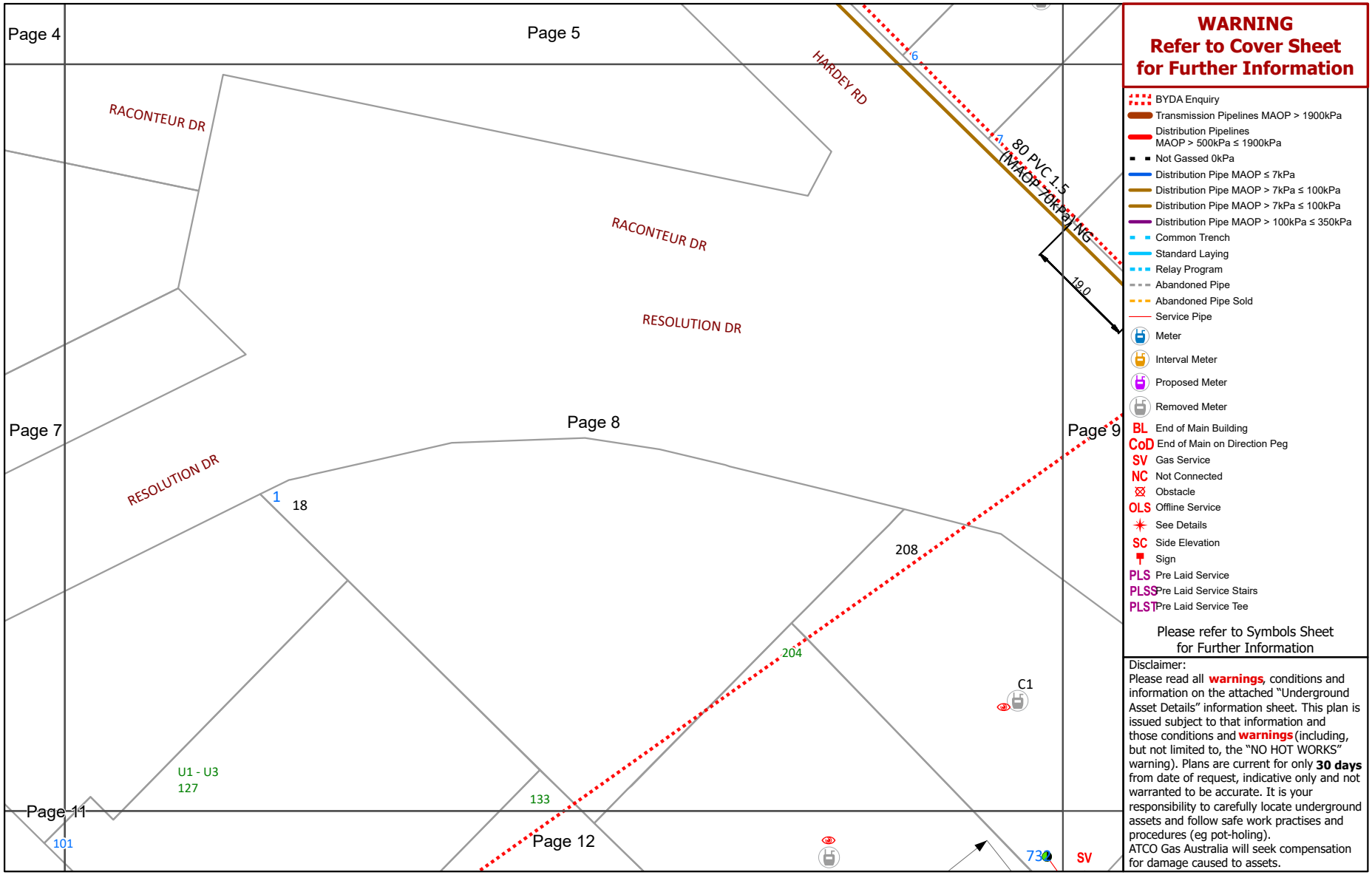
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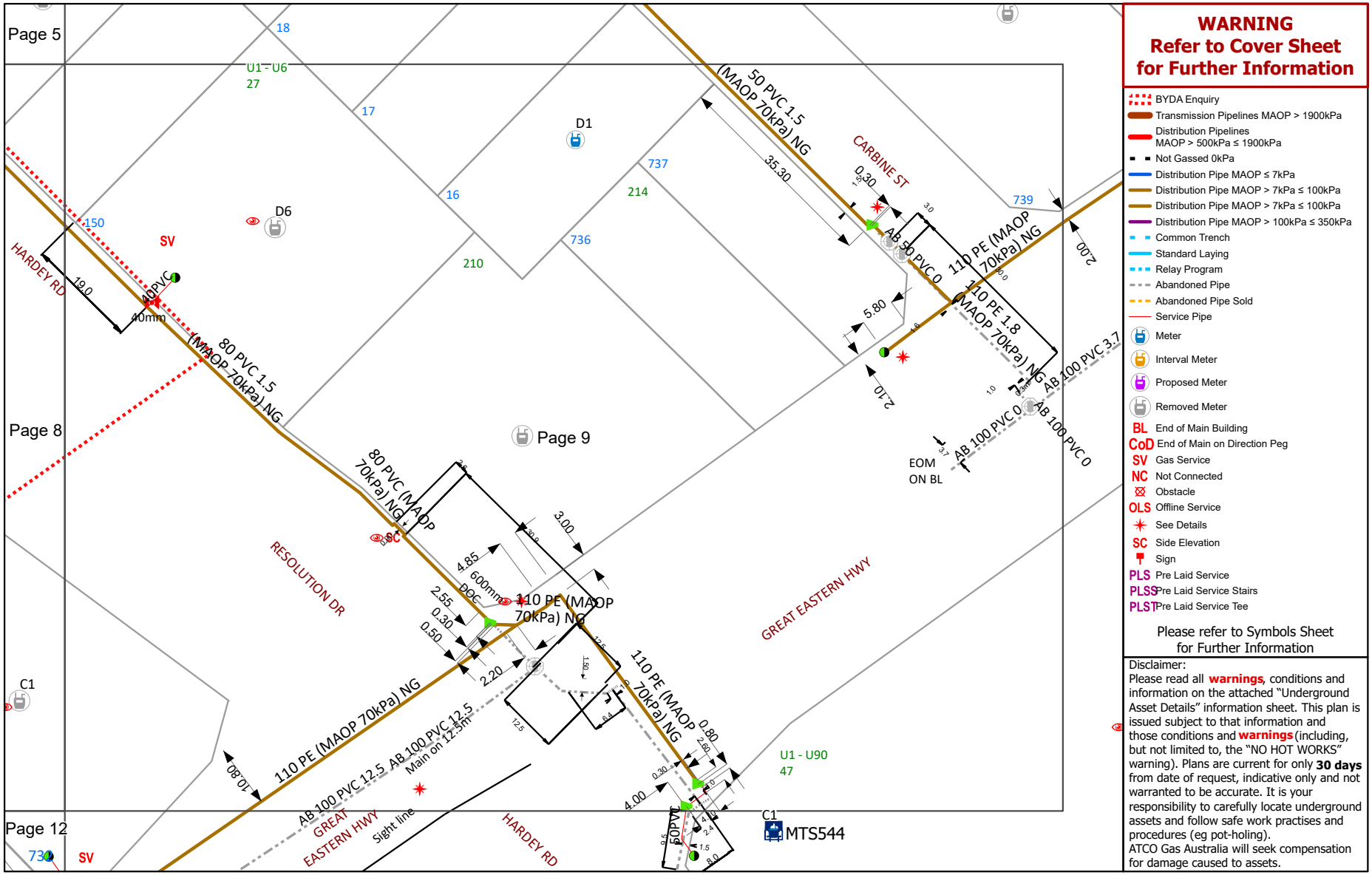
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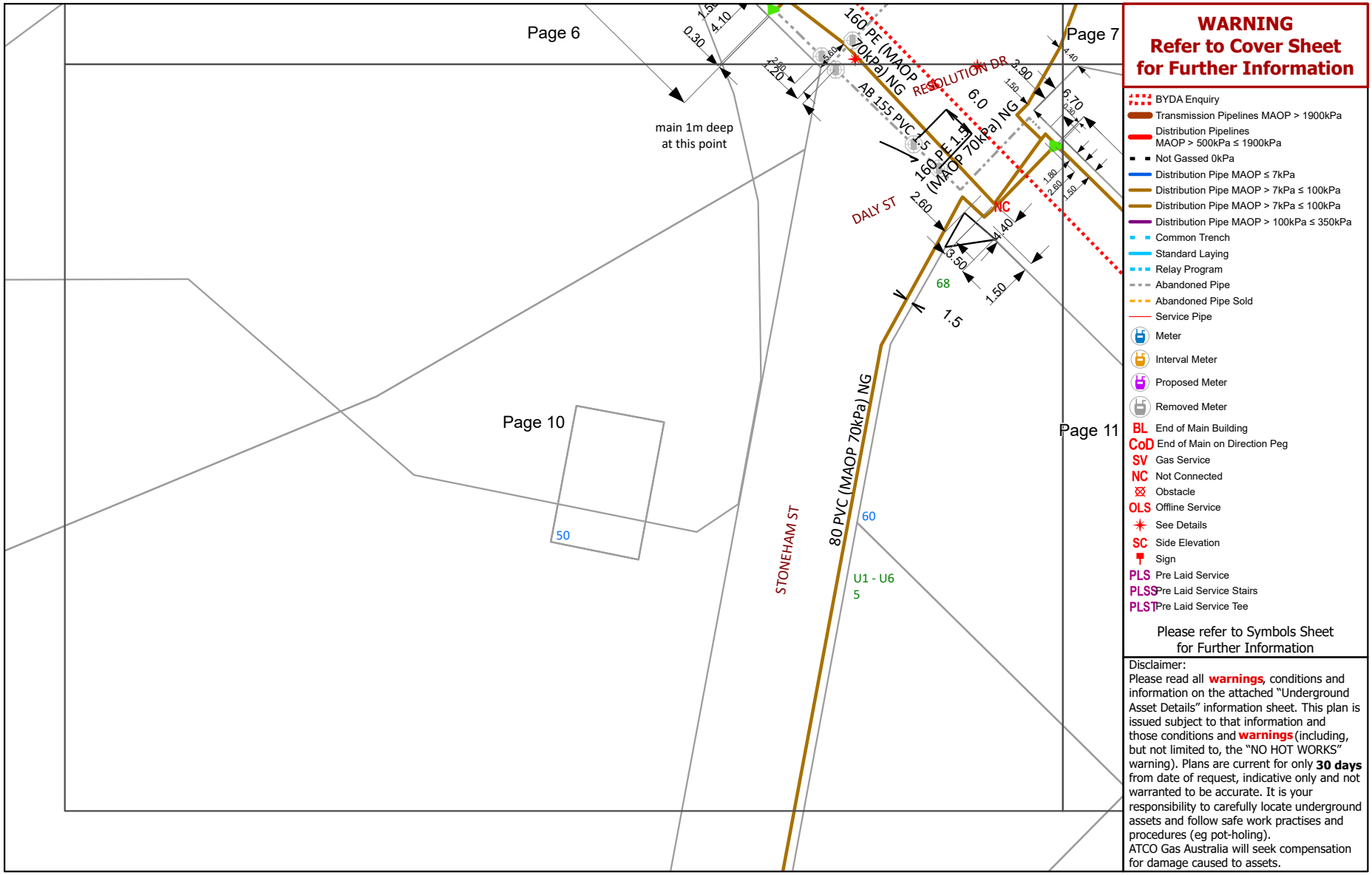
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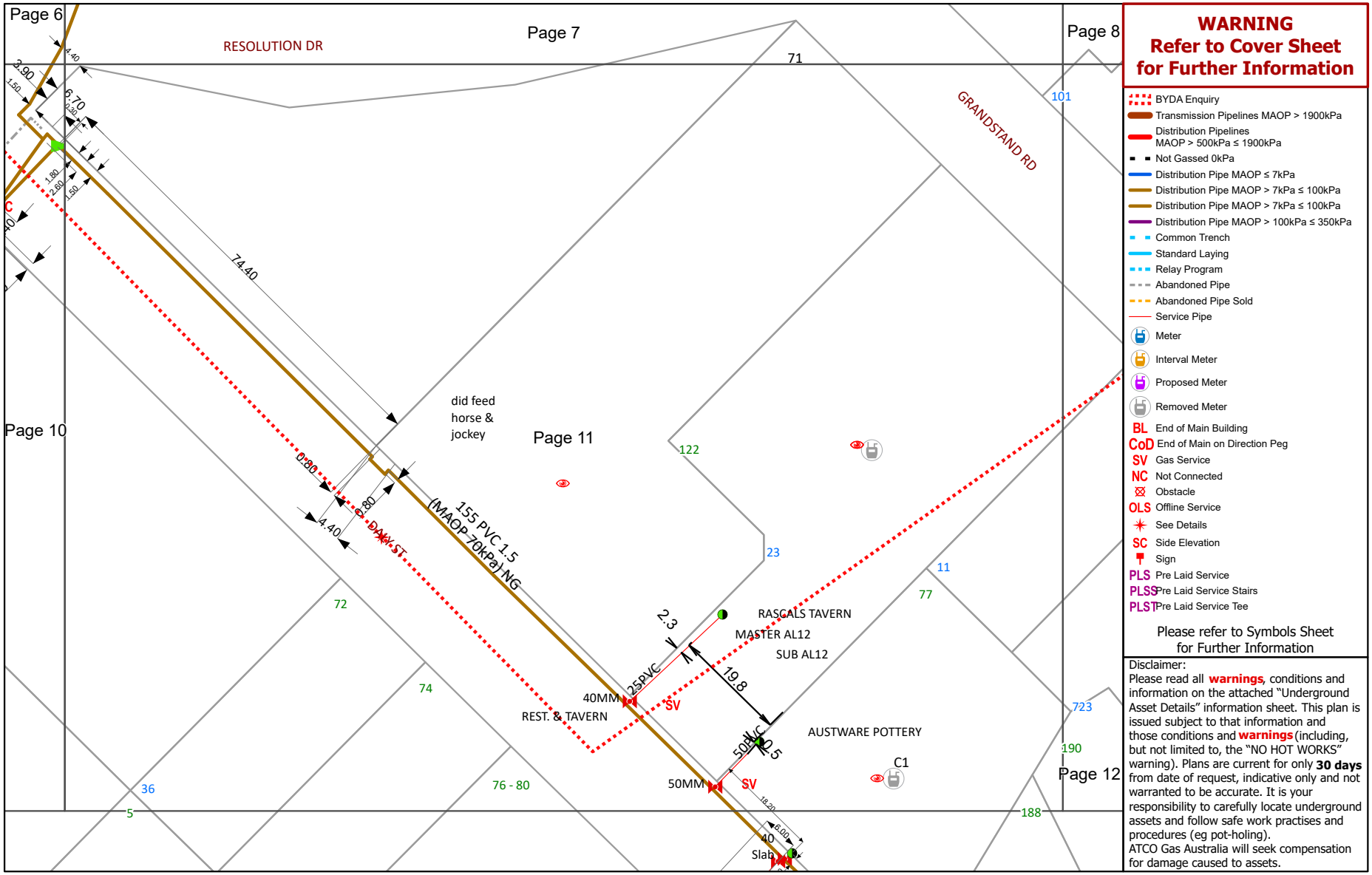
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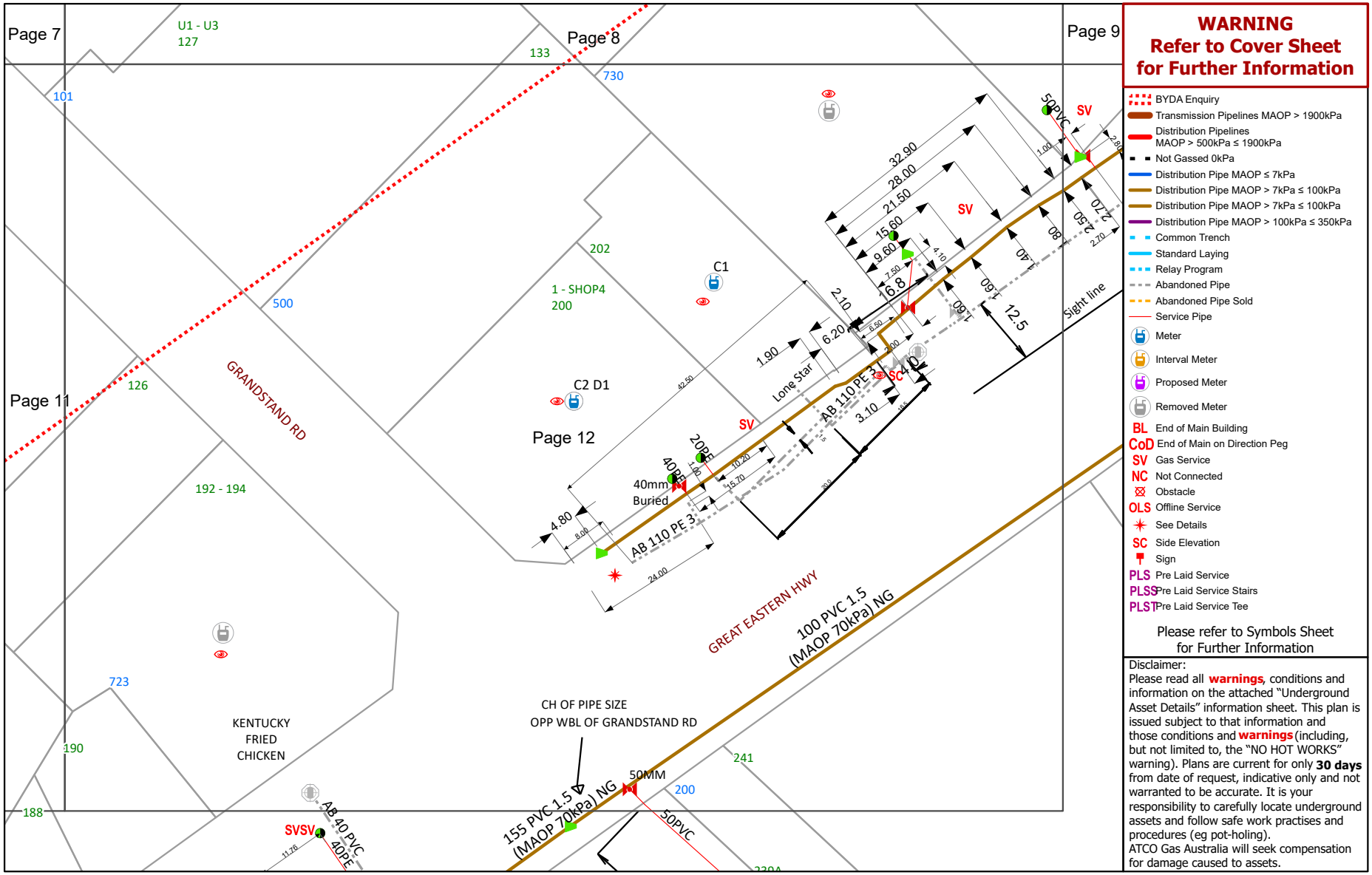
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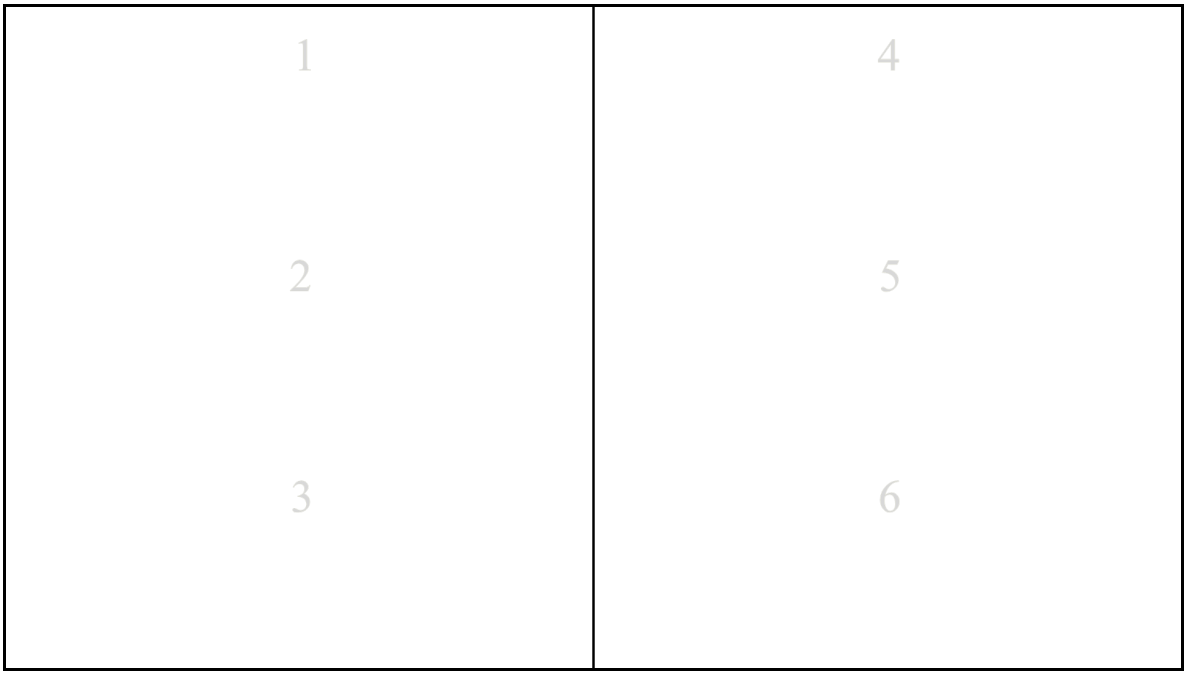
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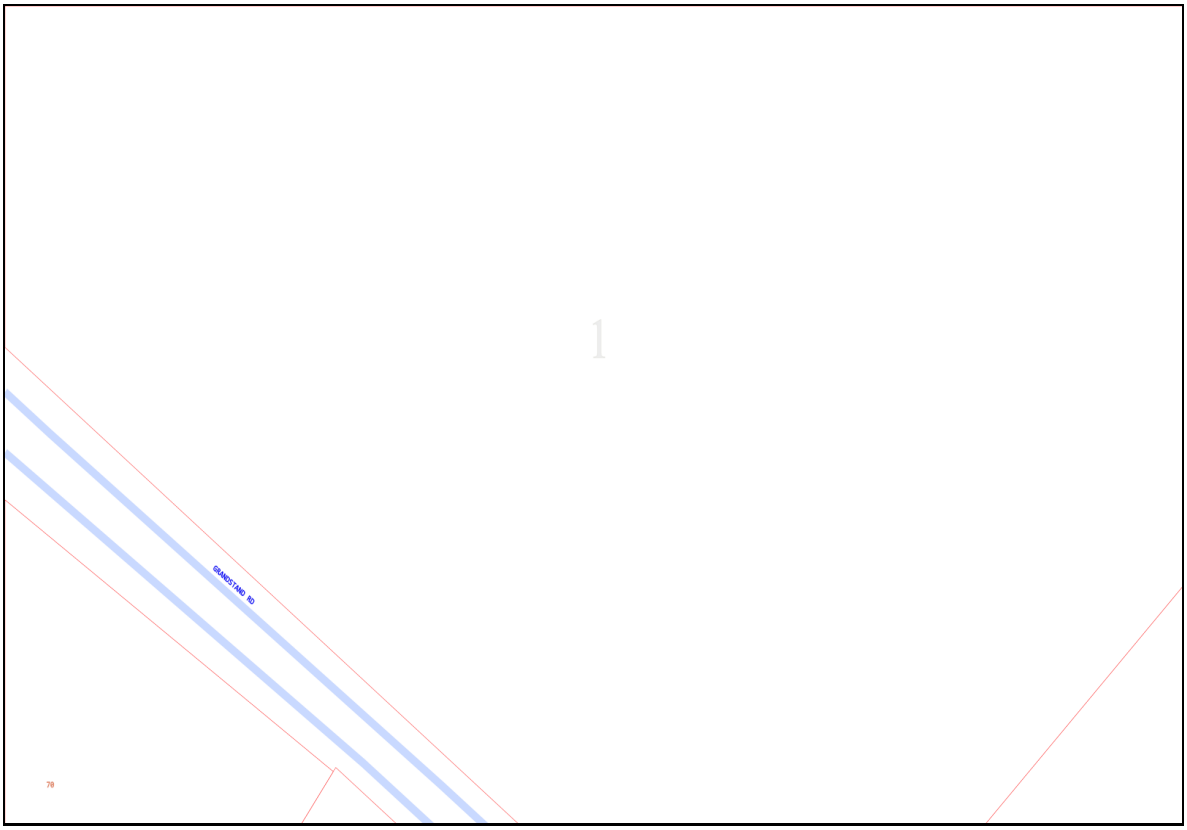
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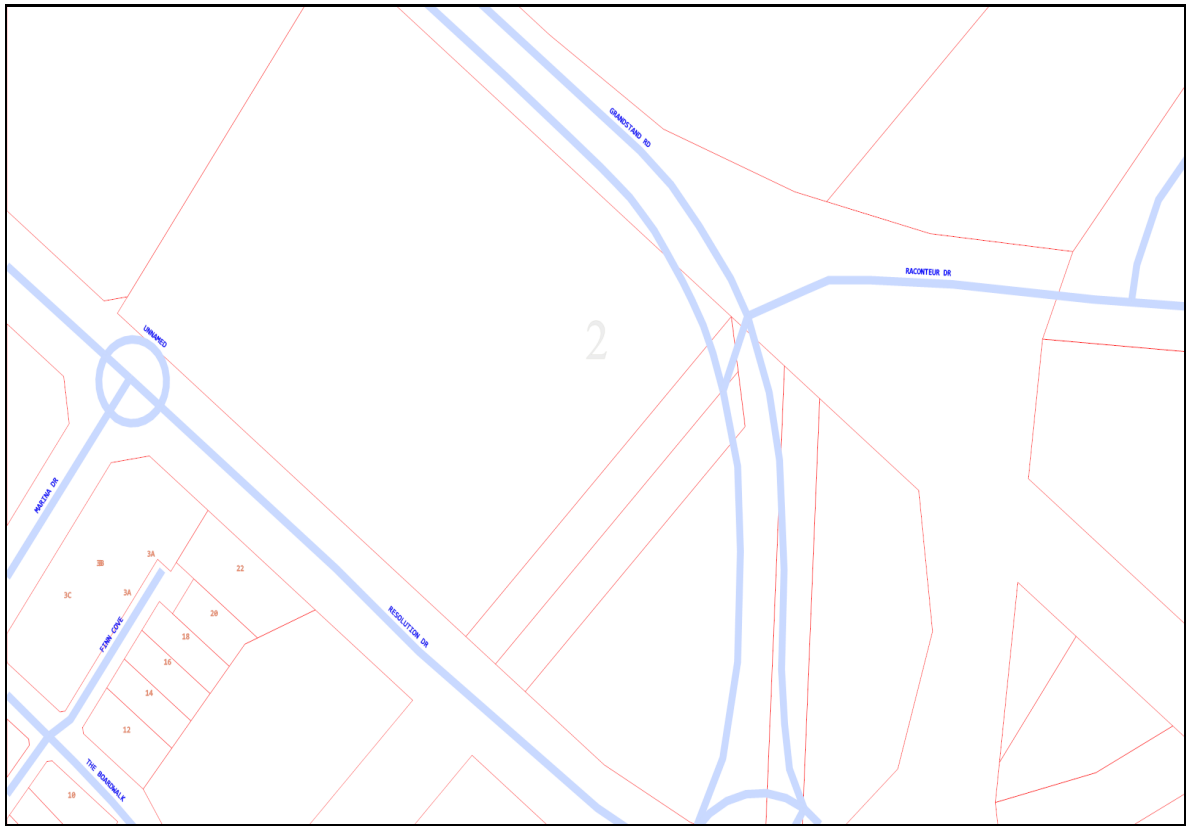
| | |
|---|---|
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| **Phone:** | Not Supplied |
| **Fax:** | Not Supplied |
| **Email:** | jzielinski@tabec.com.au |

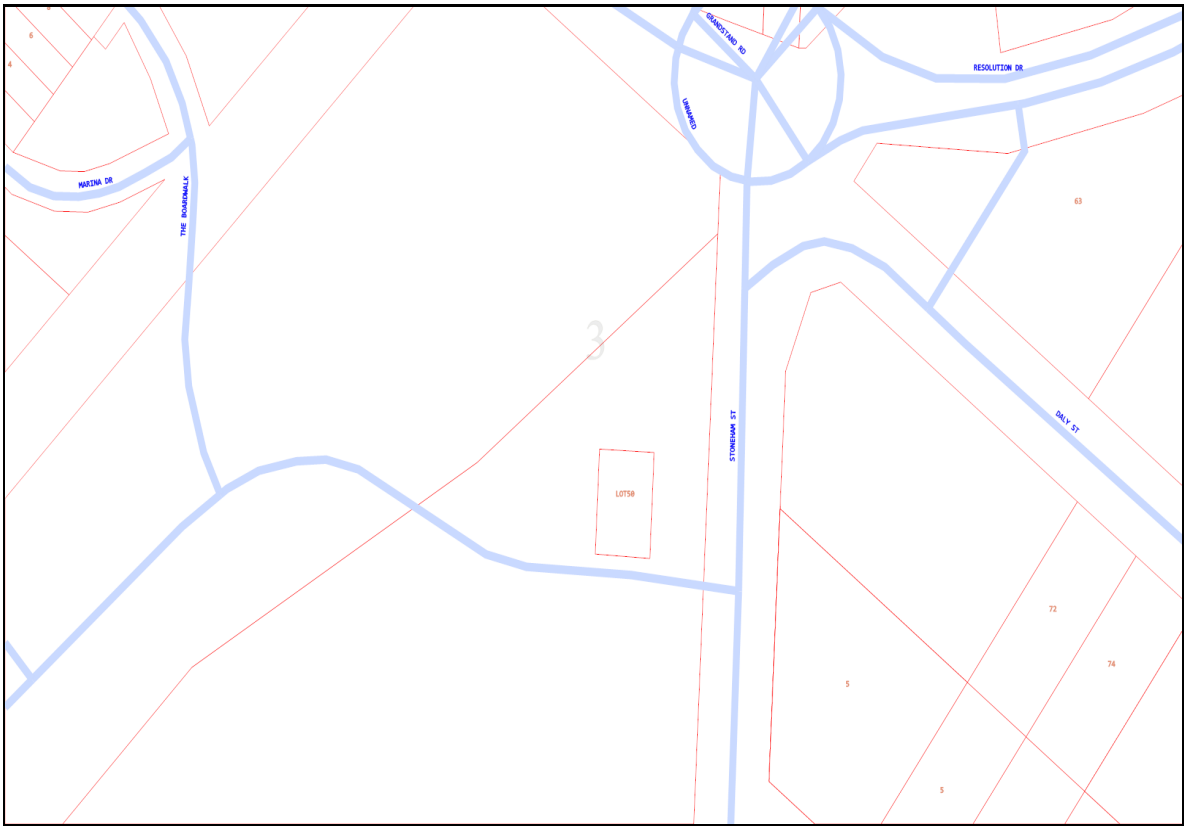
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| **Sequence #** | 240900610 |
| **Issue Date:** | 21/06/2024 |
| **Location:** | 2 Raconteur Drive , Ascot , WA , 6104 |

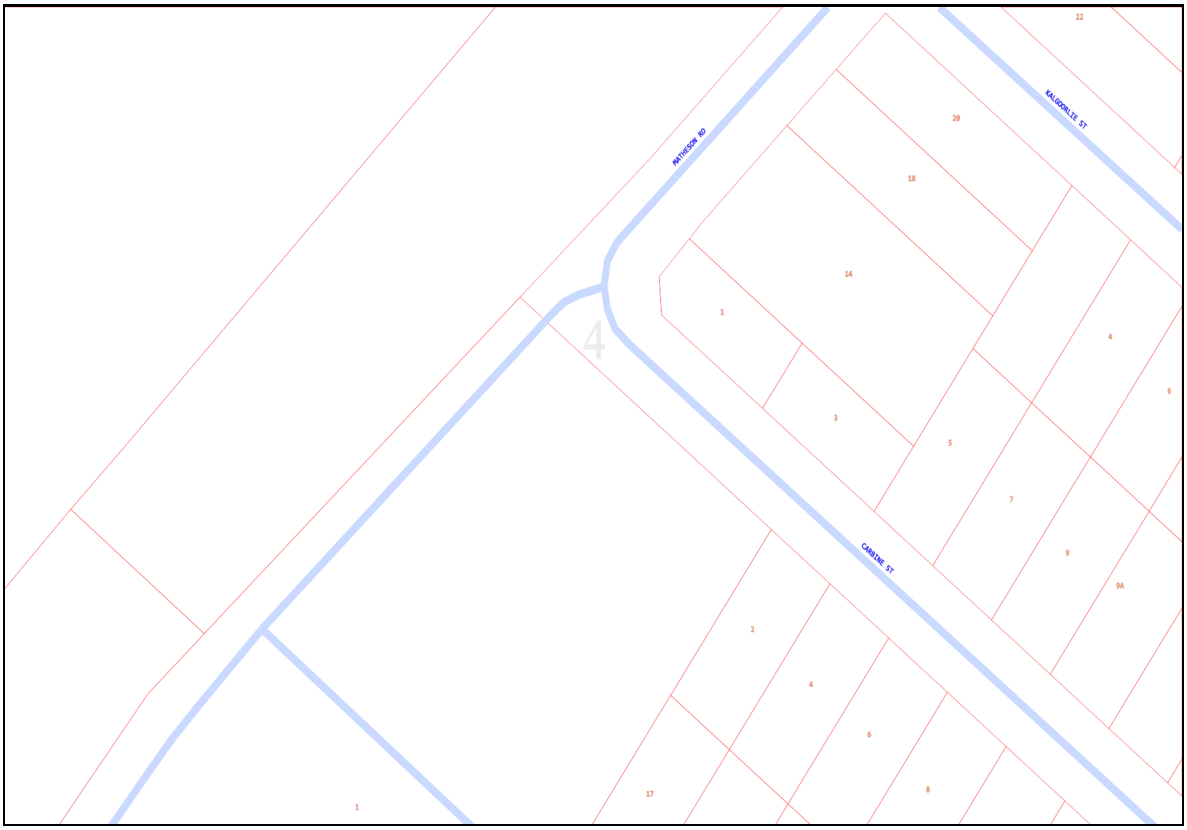
## Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans

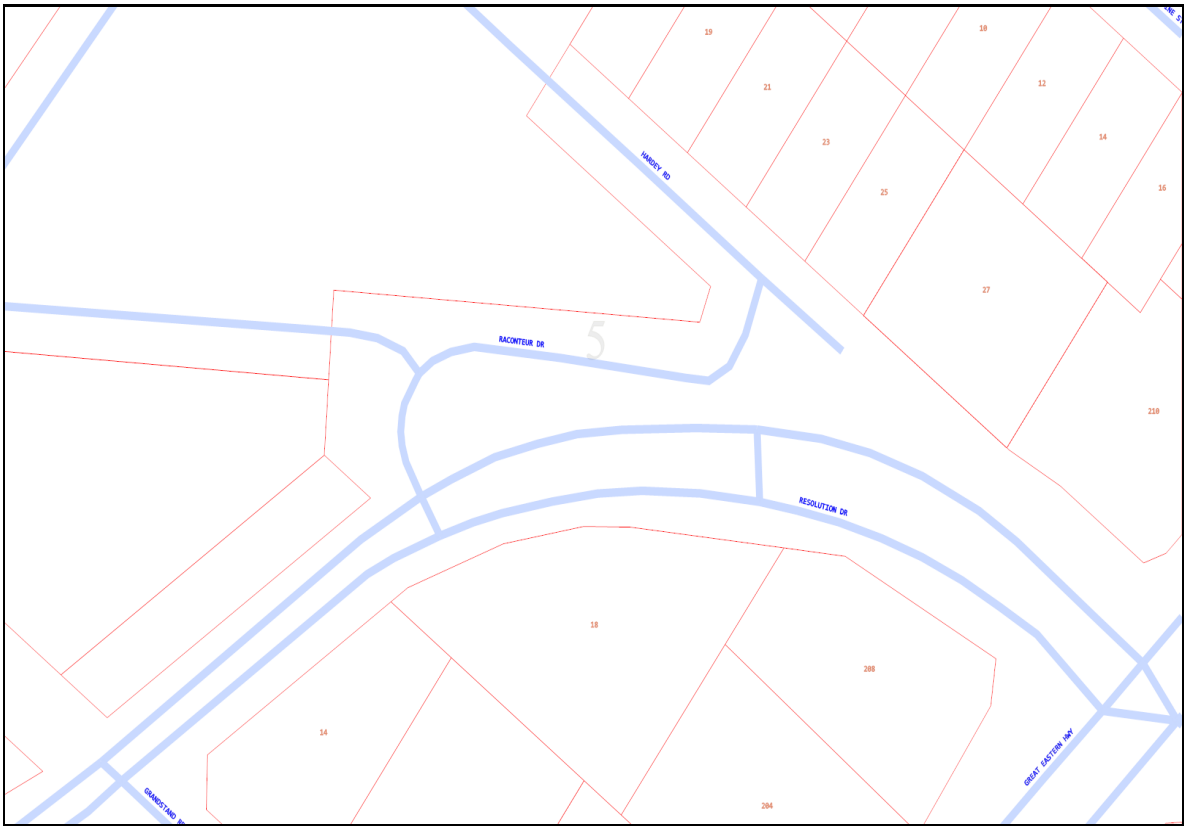


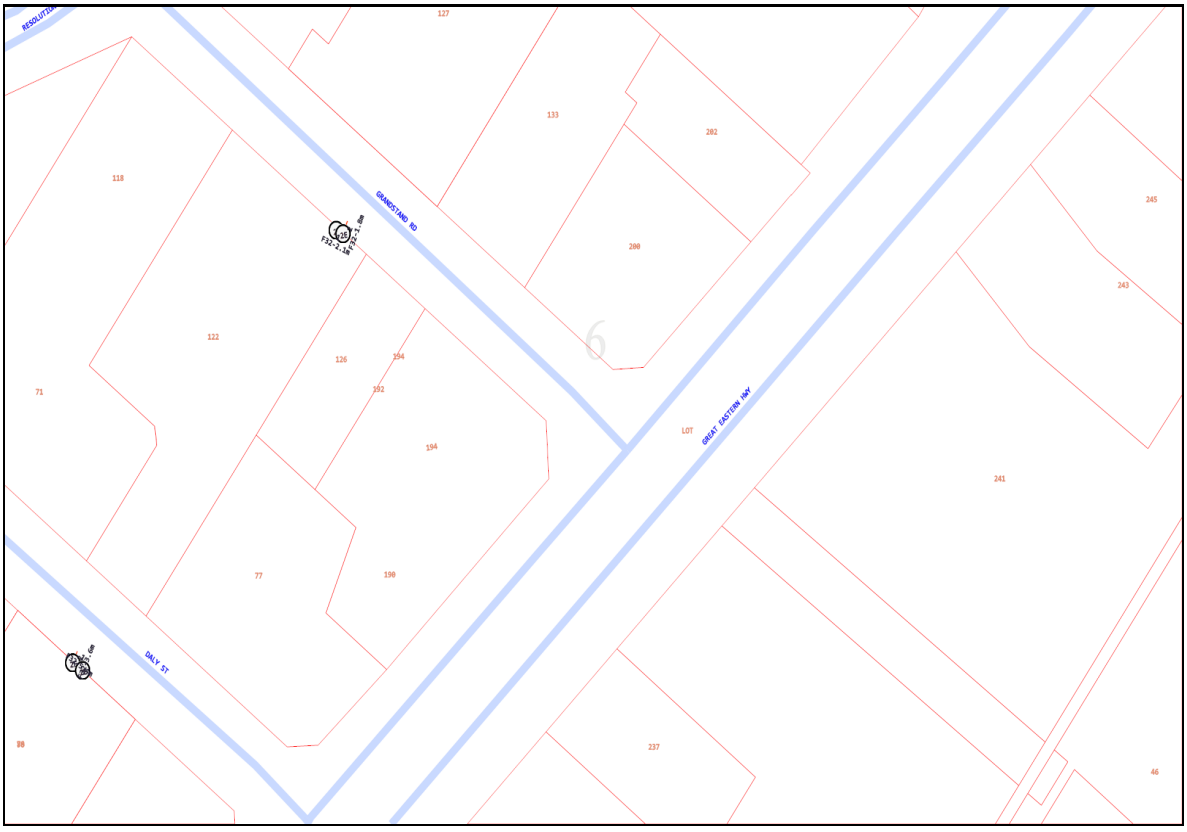

GRANDSTAND RD
70


GRANDSTAND RD
RACONTEUR DR
UNNAMED
RESOLUTION DR
THE BOARDWALK
2
3B
3A
3C
22
20
18
16
14
12
10


GRANDSTAND RD
RESOLUTION DR
UNNAMED
MARINA DR
THE BOARDWALK
STONEHAM ST
DALY ST
LOT50
63
72
74
5
5


MATHESON RD
KALGOORLIE ST
CARBINE ST
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HARVEY RD
RACONTEUR DR
RESOLUTION DR
GREAT EASTERN HWY
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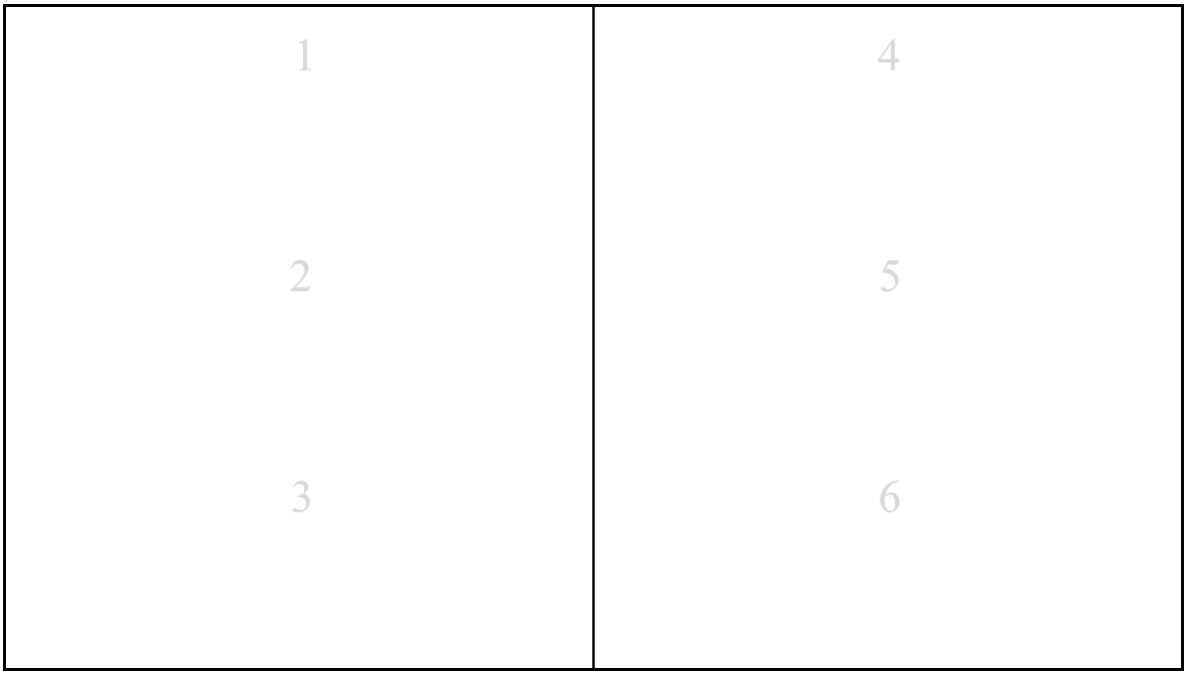

## Emergency Contacts

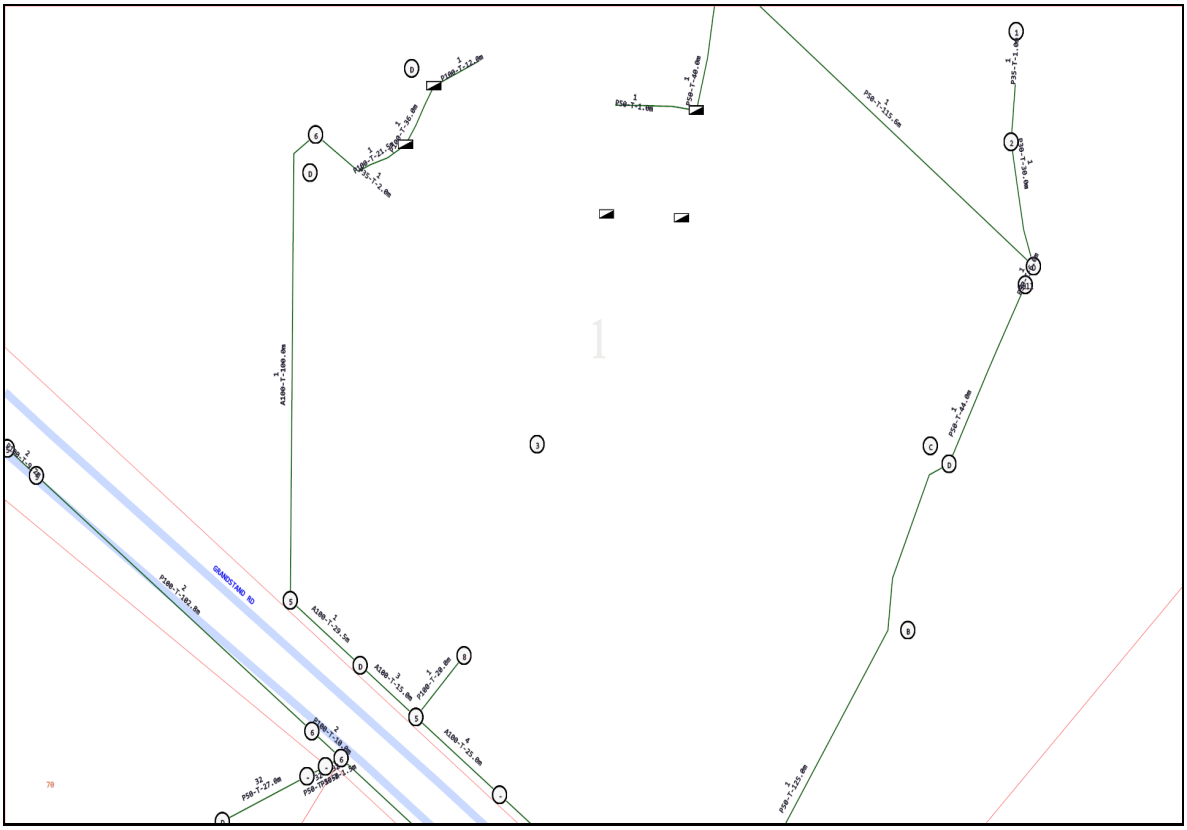
You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

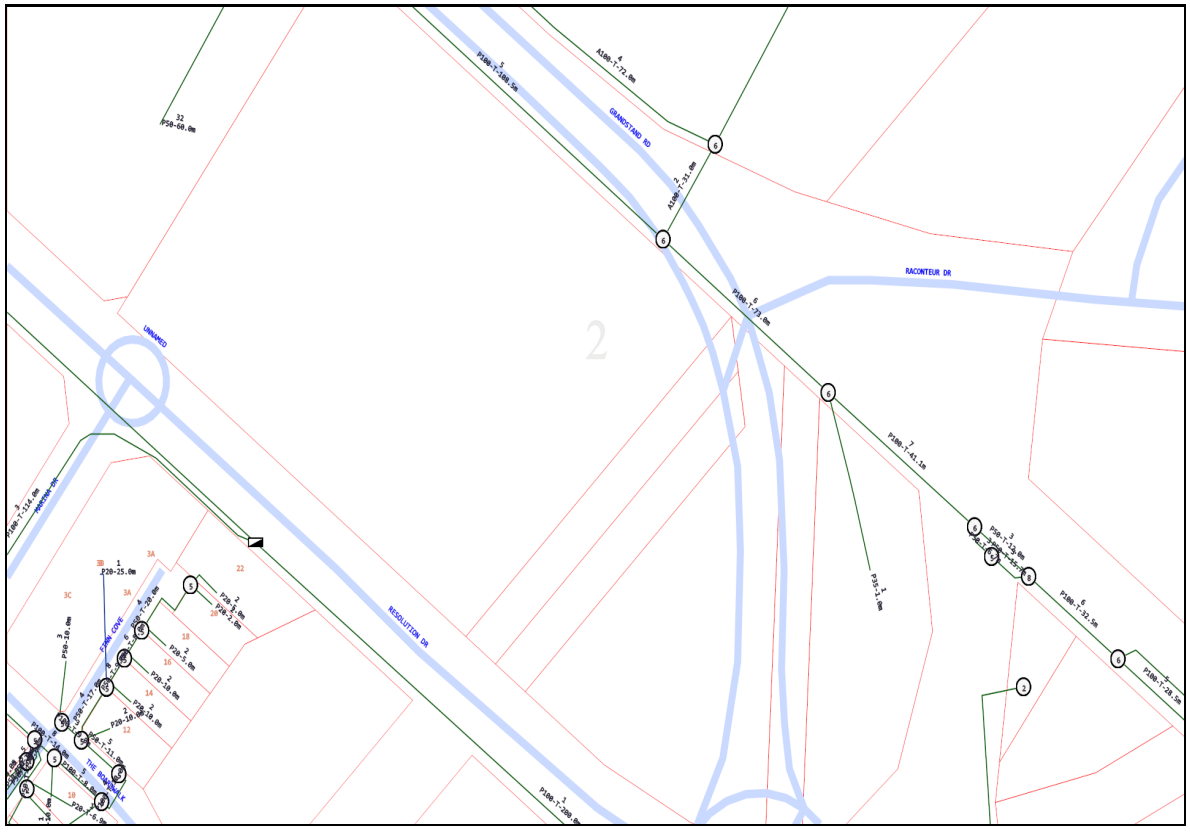
| | |
|---|---|
| **To:** | Justin Zielinski |
| **Phone:** | Not Supplied |
| **Fax:** | Not Supplied |
| **Email:** | jzielinski@tabec.com.au |

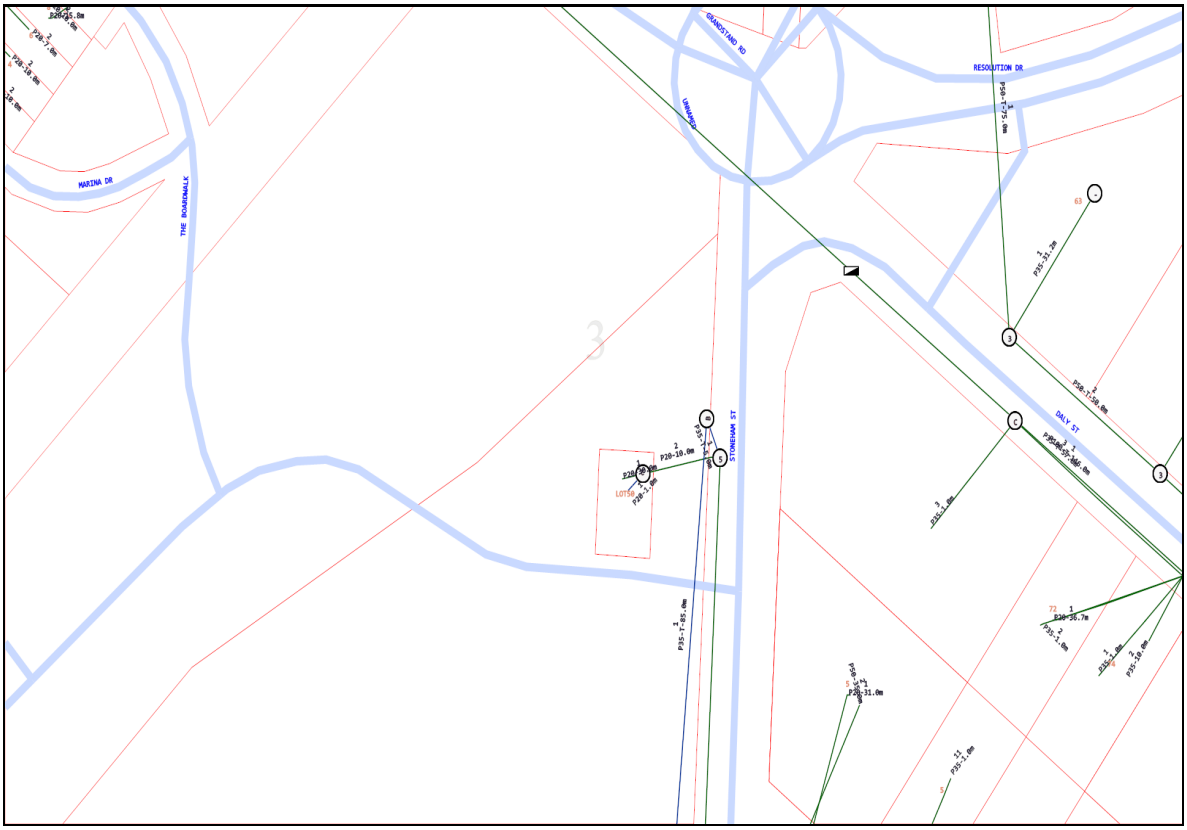
| | |
|---|---|
| **Dial before you dig Job #:** | 36962243 |
| **Sequence #** | 240900610 |
| **Issue Date:** | 21/06/2024 |
| **Location:** | 2 Raconteur Drive , Ascot , WA , 6104 |

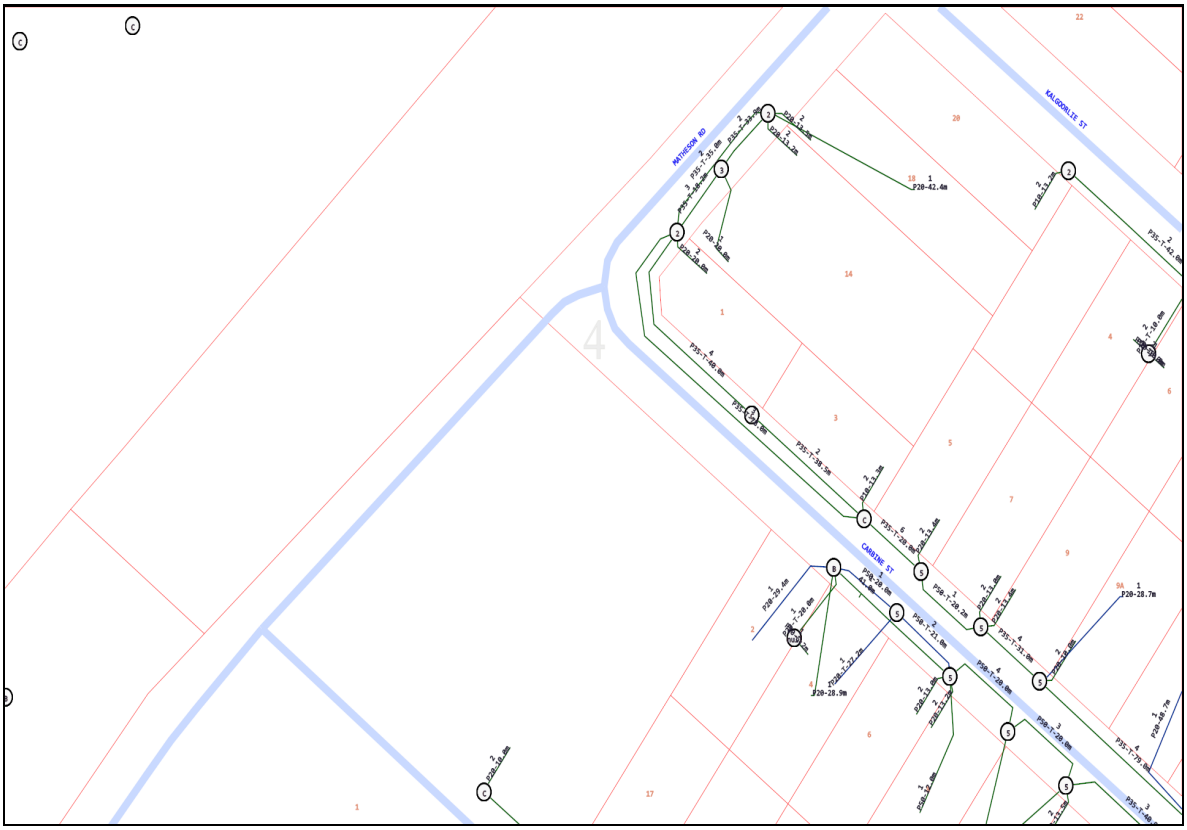
## Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans

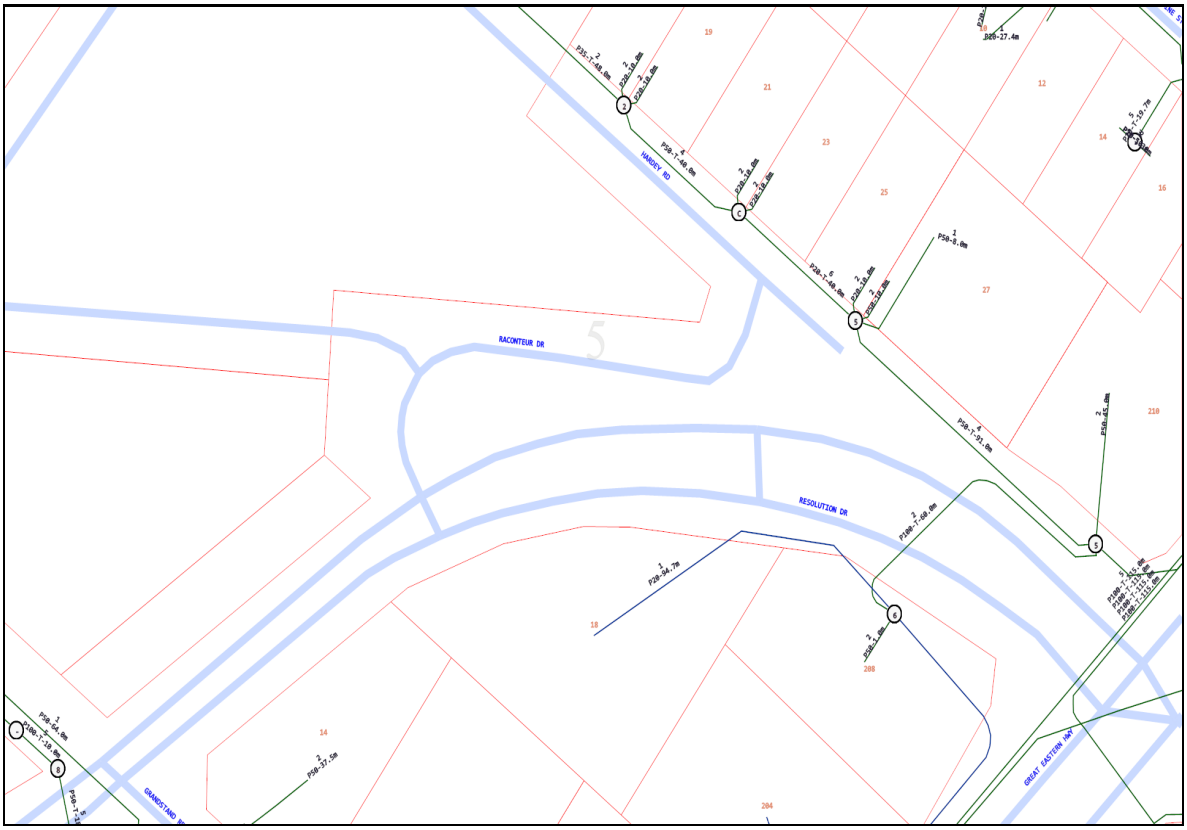


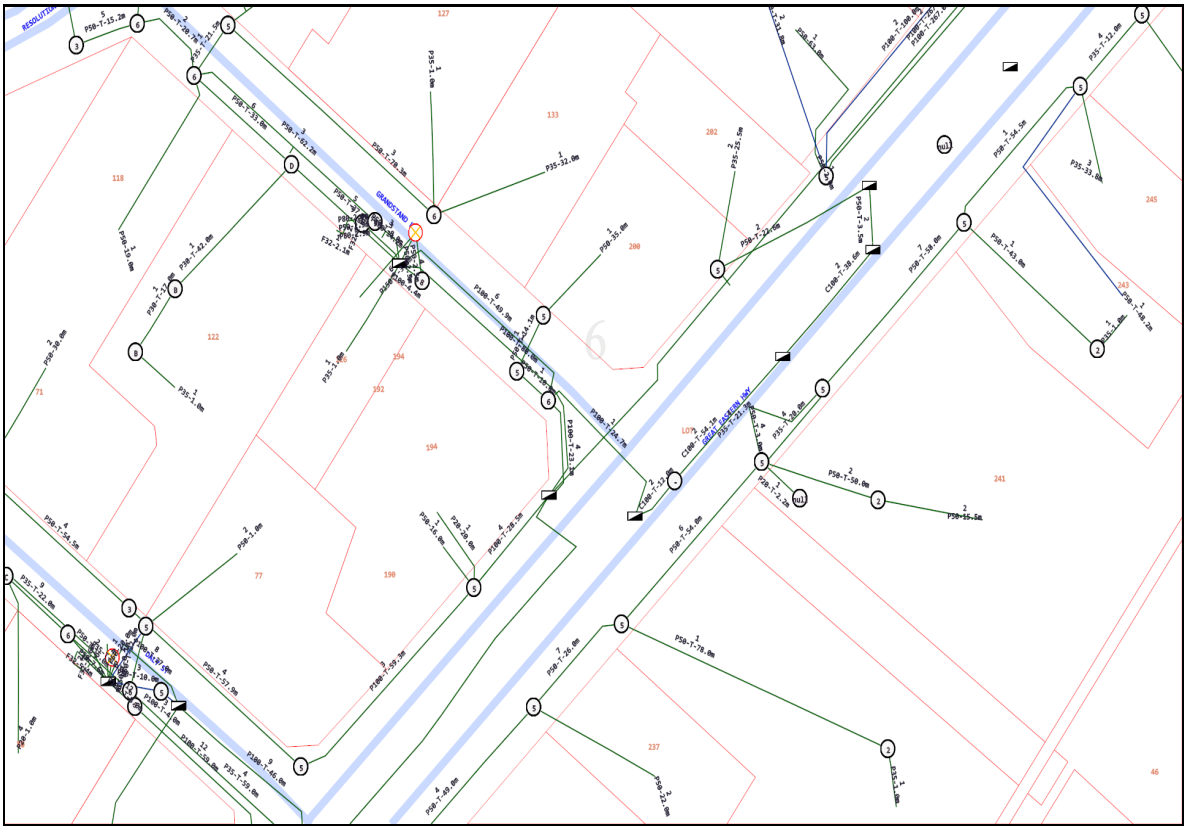

GRANDSTAND RD


GRANDSTAND RD
RACONTEUR DR
UNNAMED
RESOLUTION DR
2


MARINA DR
THE BOARDWALK
GRANDSTAND RD
UNNAMED
RESOLUTION DR
DALY ST
STRINGHAM ST

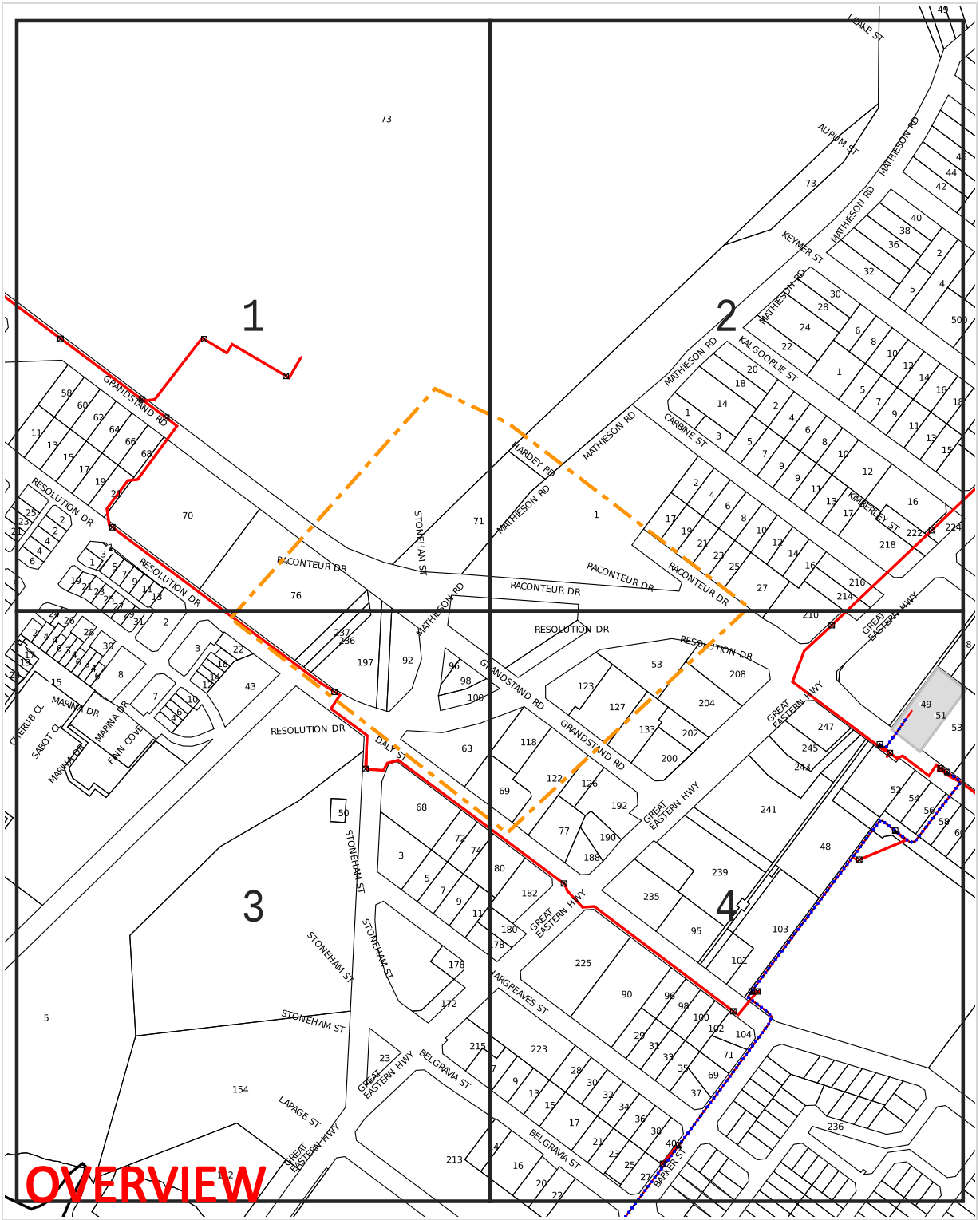

MATHESON RD
KALGOORLIE ST
CARMINE ST


RACONTEUR DR
RESOLUTION DR
HANDEY RD
GRANDSTAND
GREAT EASTERN HWY



## Emergency Contacts

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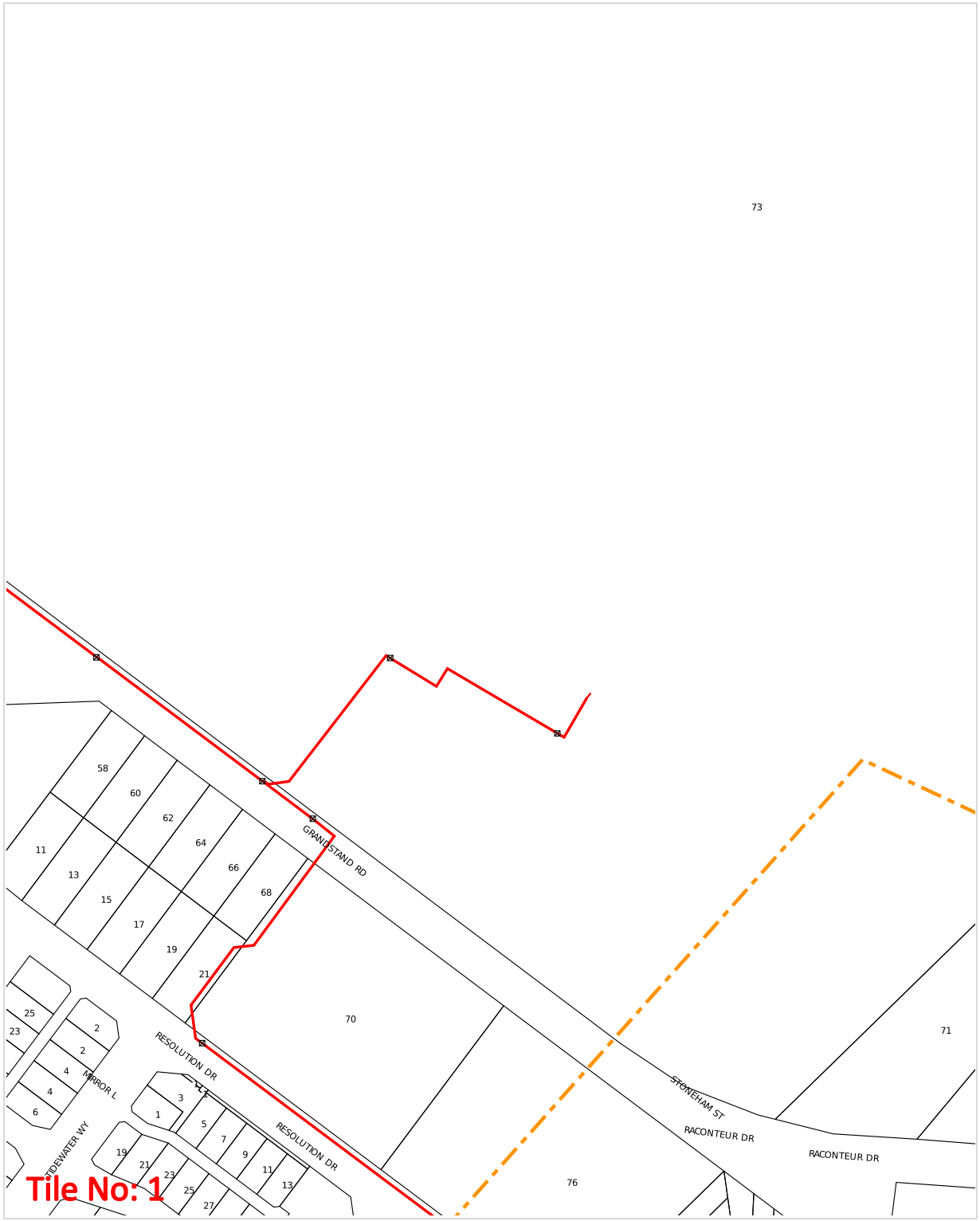

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Sequence Number: 240900607

Date Generated: 21 Jun 2024

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

Plans generated 21 Jun 2024 by Pelicancorp TicketAccess Software | www.pelicancorp.com




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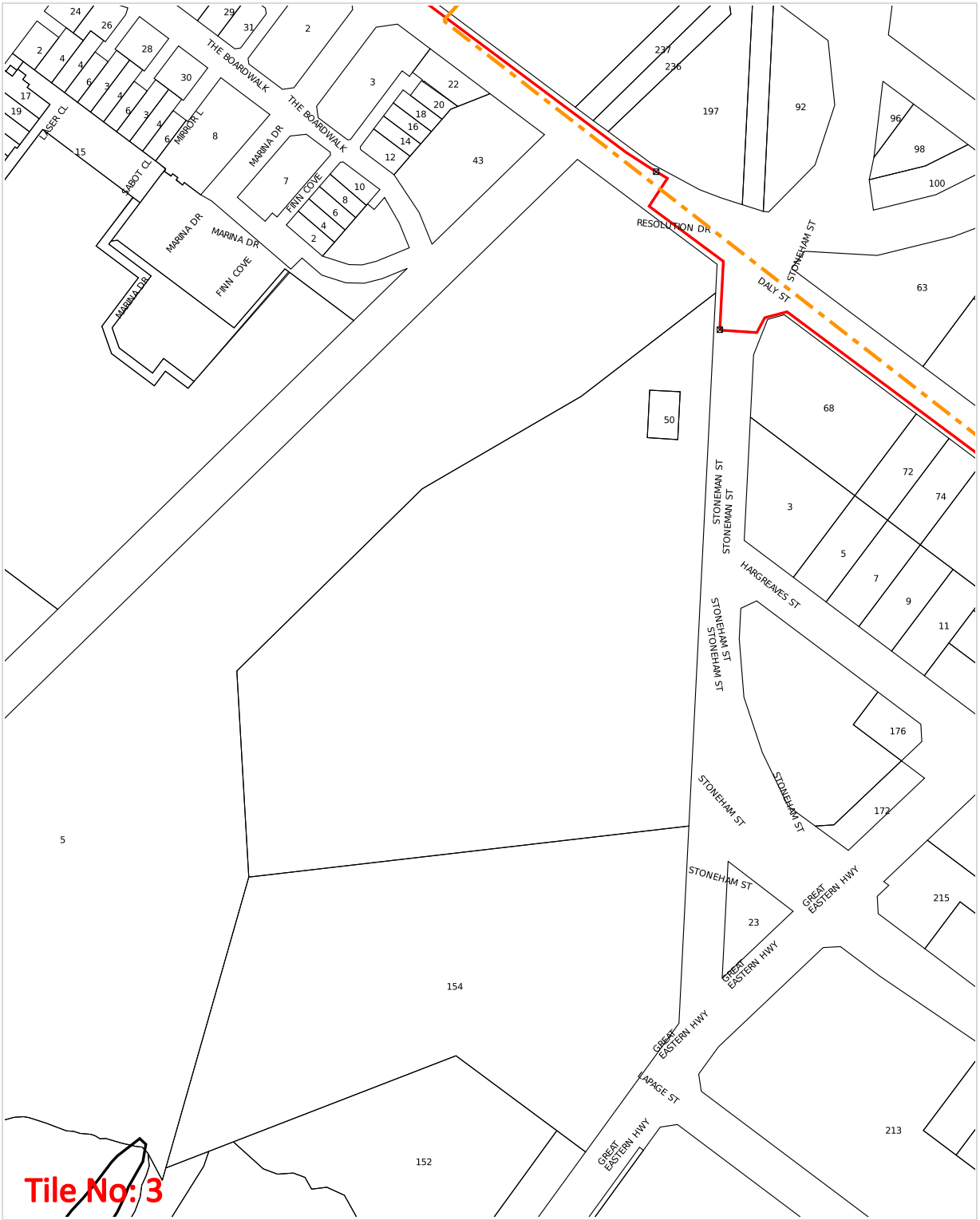

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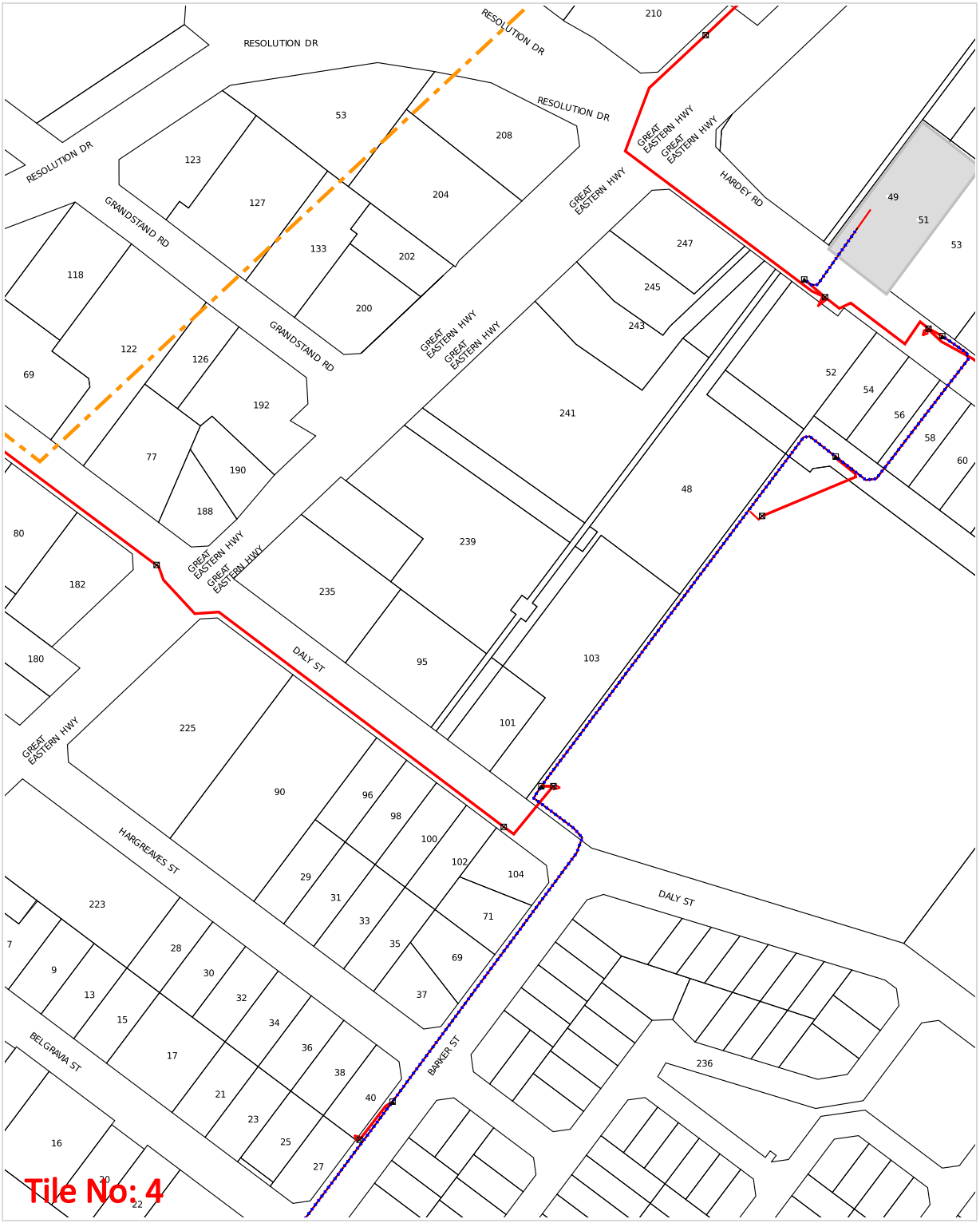

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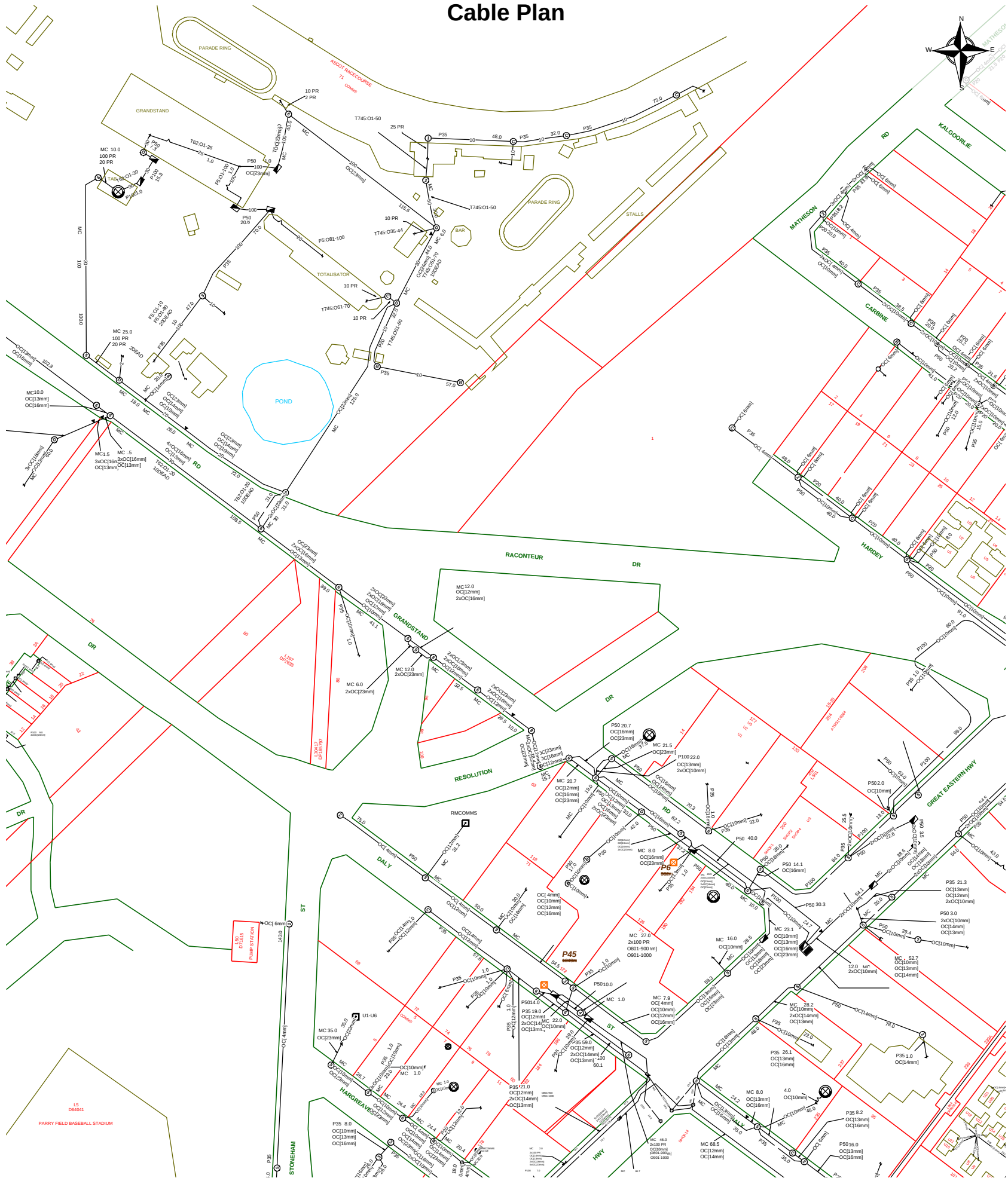
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Date Generated: 21 Jun 2024

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

Plans generated 21 Jun 2024 by Pelicancorp TicketAccess Software | www.pelicancorp.com

# Cable Plan



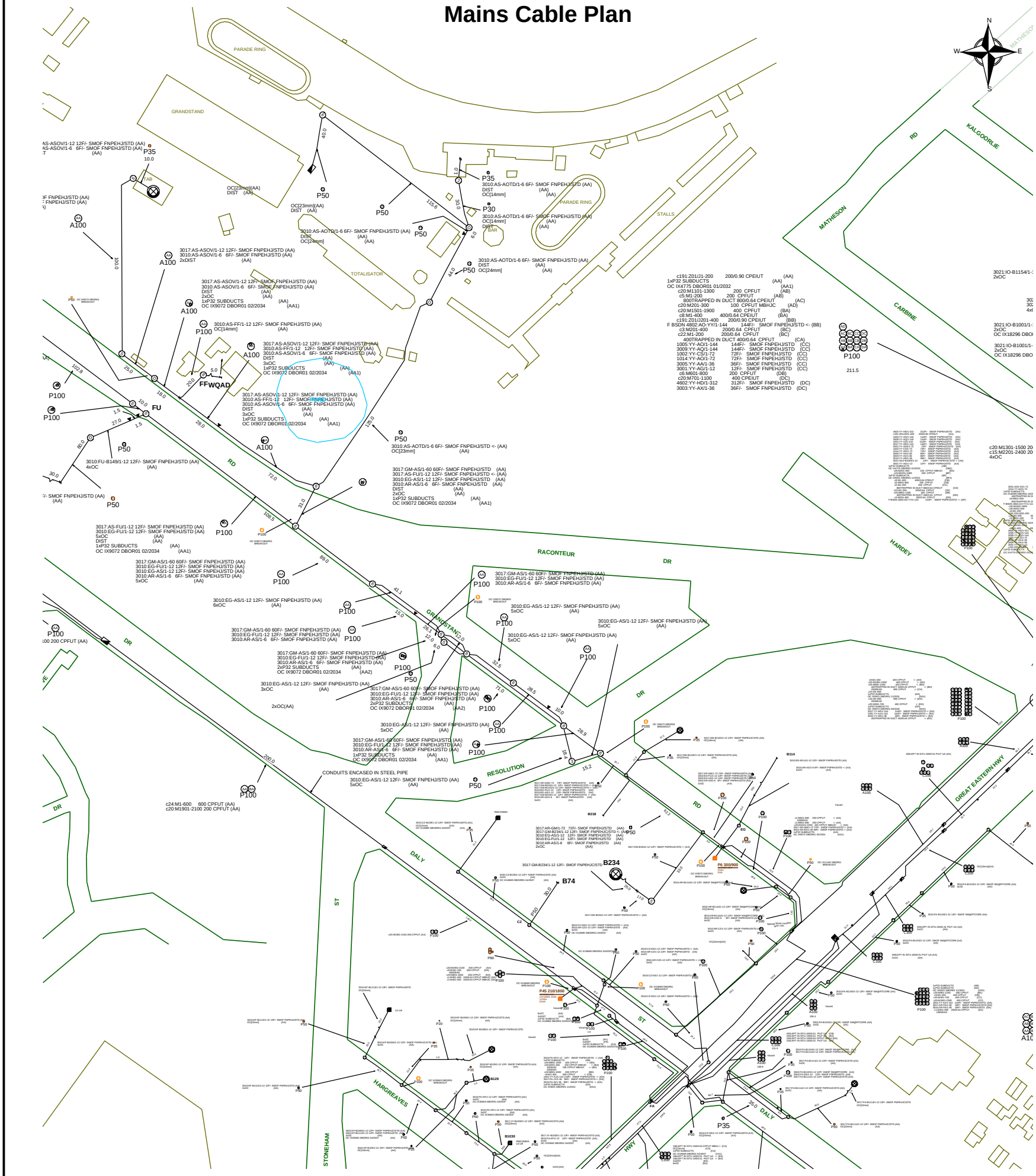

| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240900612 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 21/06/2024 19:05:39 | |

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

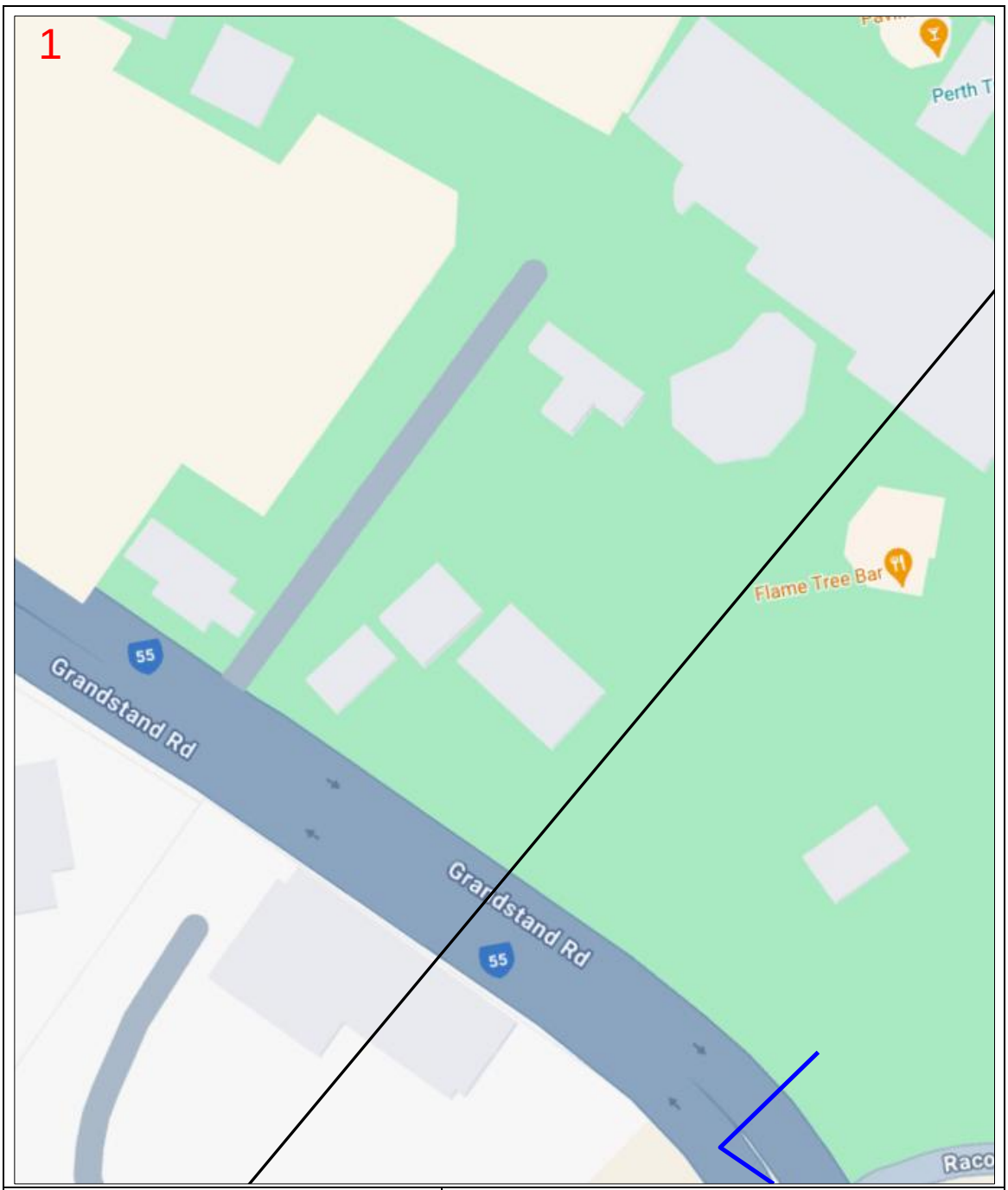
# Mains Cable Plan




| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240900612 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 21/06/2024 19:05:45 | |

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
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Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.




**Enquiry Number:** 240900609

**Map Sheet:** 1

**Scale:** 1: 750

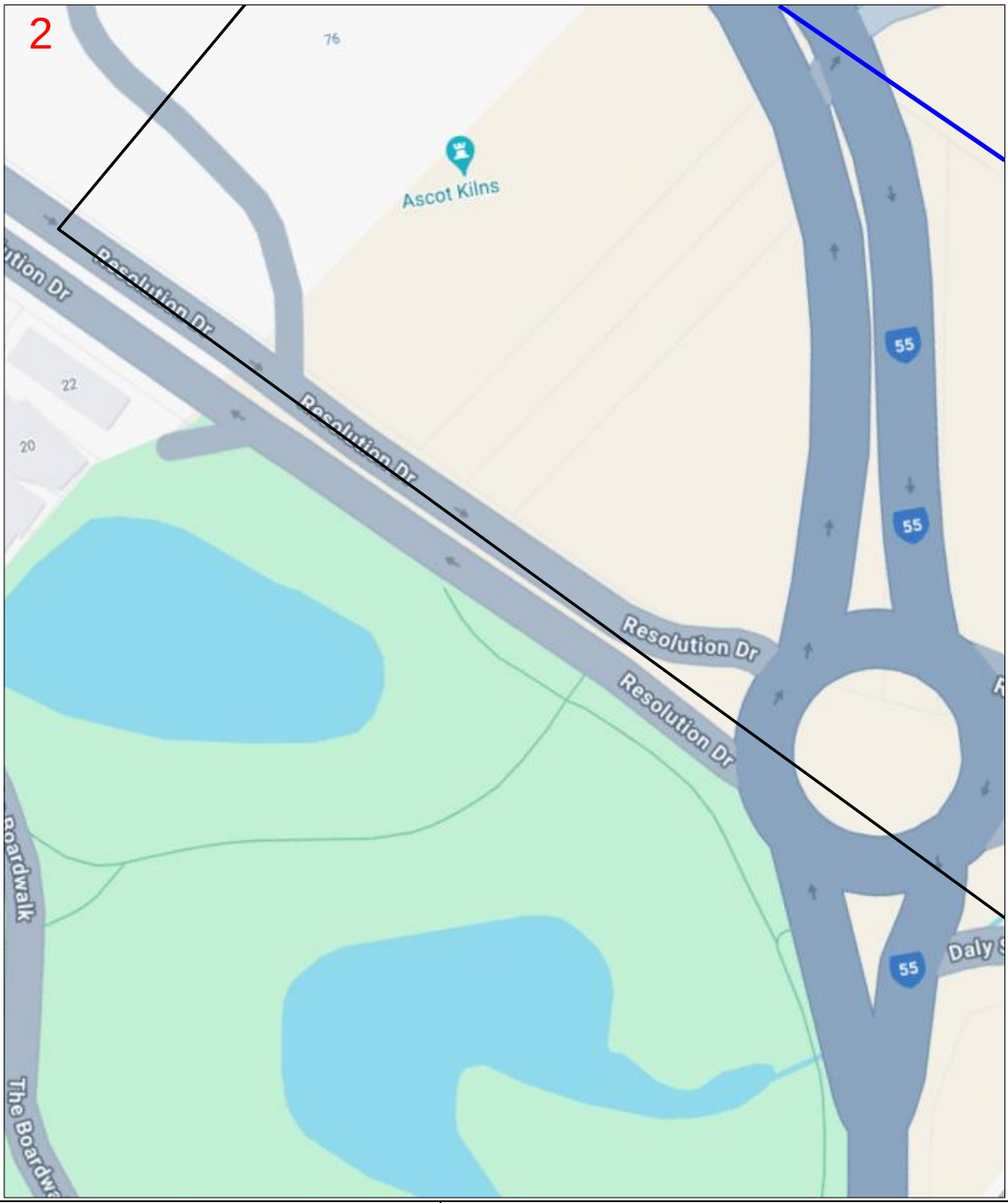
0 0.008km

N

LEGEND

| | |
|---|---|
| BYDA Work Area | |
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240900609

**Map Sheet:** 2

**Scale:** 1: 750

0 0.008km

N

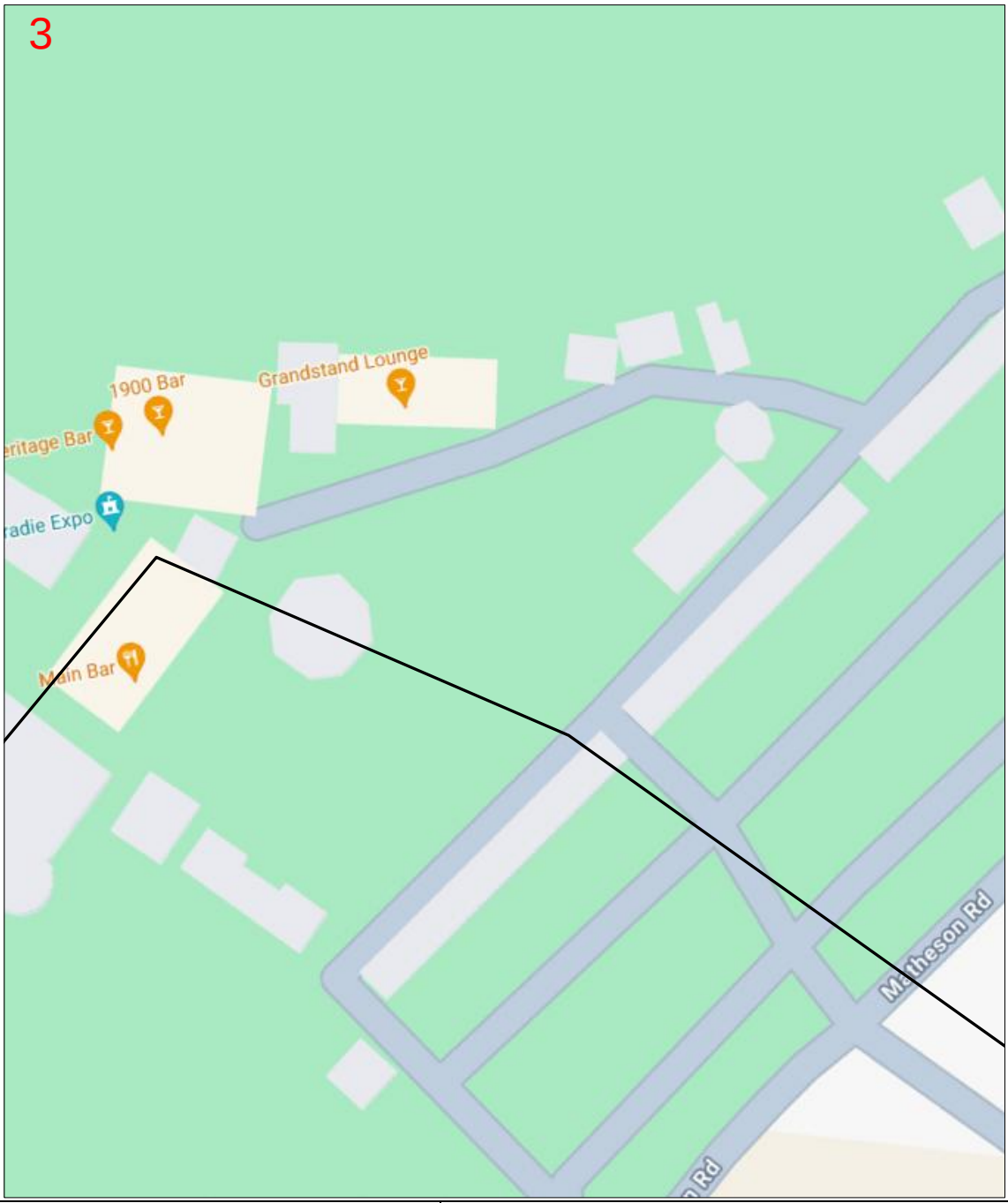
***LEGEND***

BYDA Work Area

| | |
|---|---|
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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Page 4




**Enquiry Number:** 240900609

**Map Sheet:** 3

**Scale:** 1: 750

0 0.008km

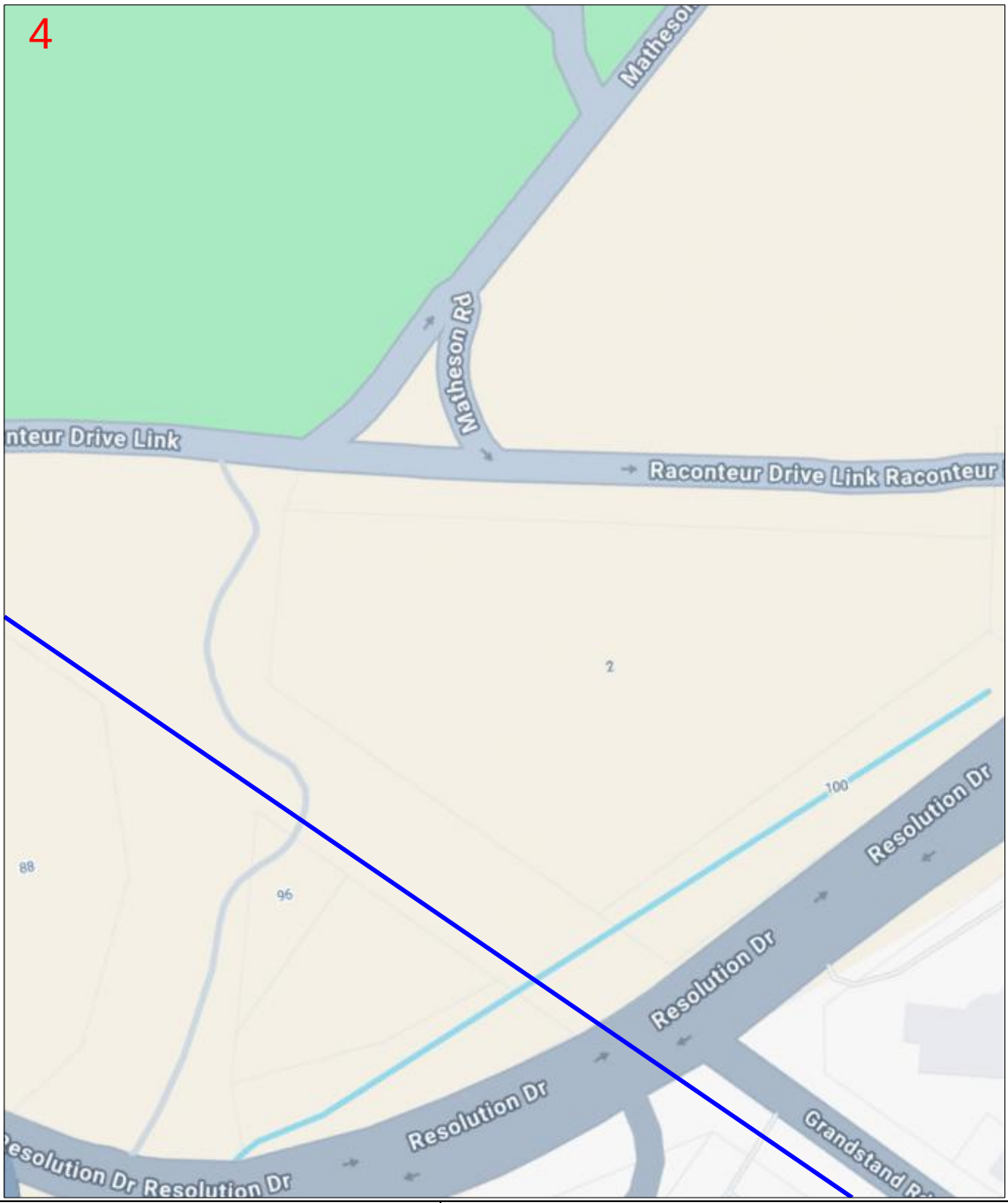
N

LEGEND

BYDA Work Area

| | |
|---|---|
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240900609

**Map Sheet:** 4

**Scale:** 1: 750

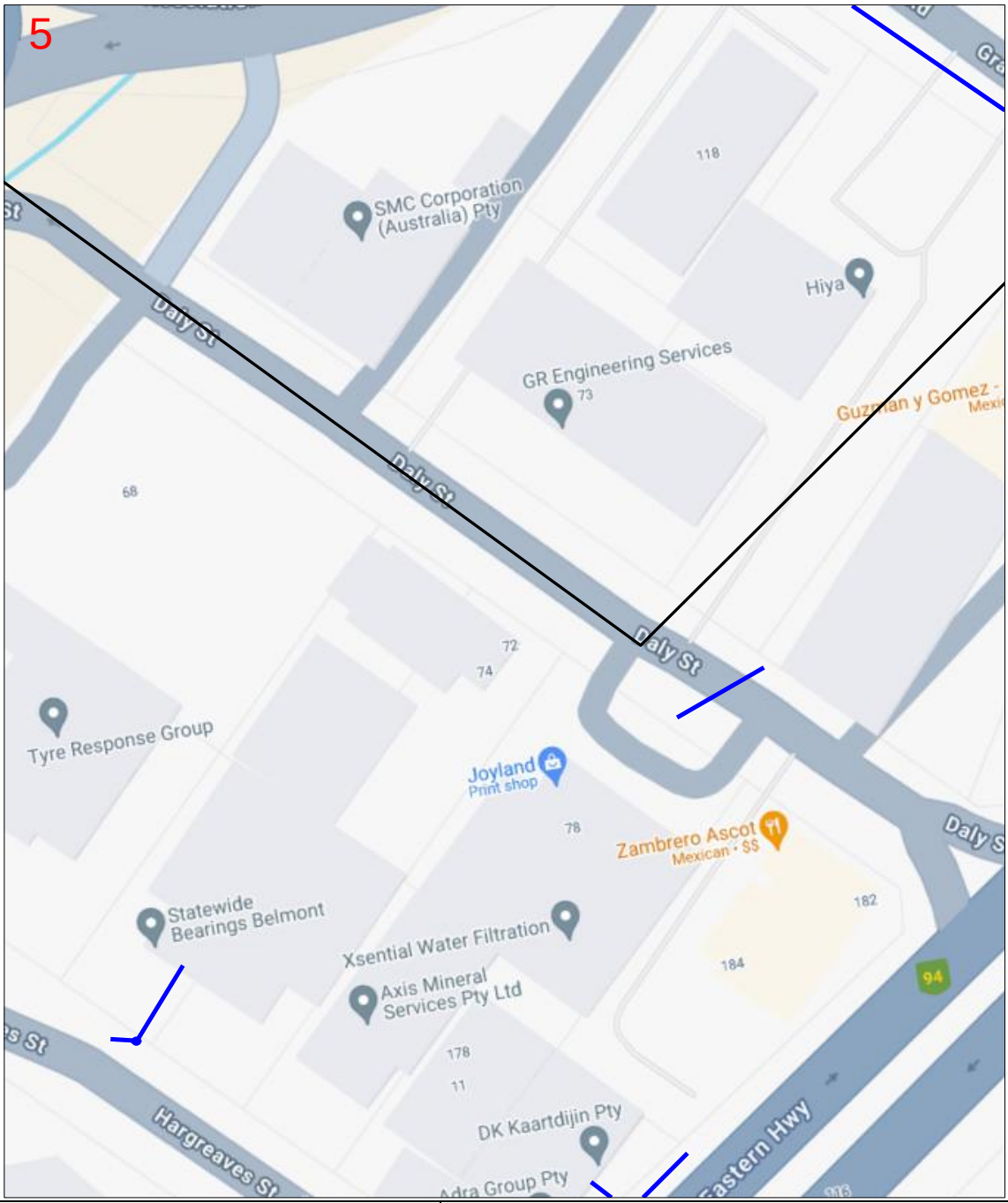
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N

***LEGEND***

| | |
|---|---|
| BYDA Work Area | |
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240900609

**Map Sheet:** 5

**Scale:** 1: 750

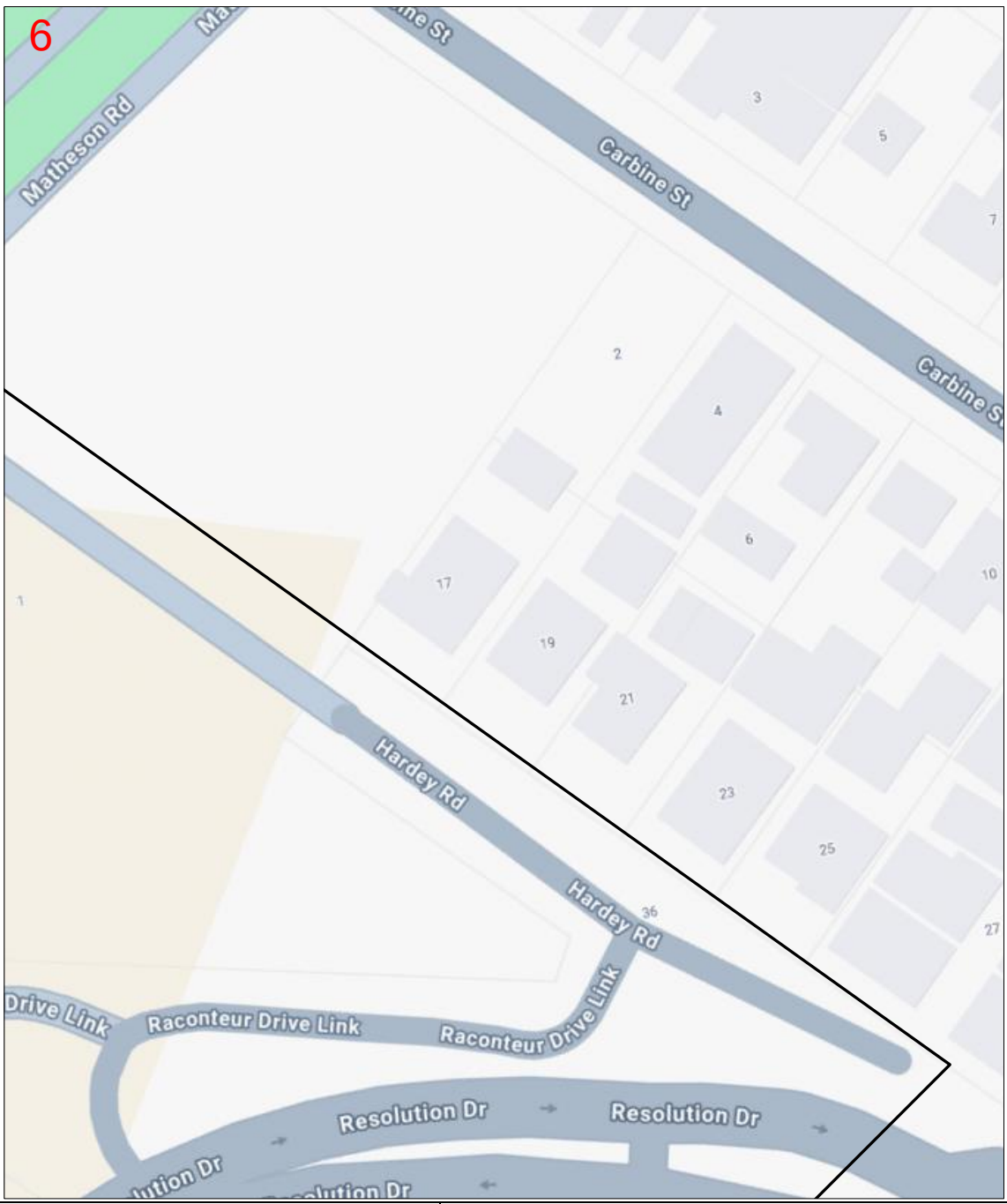
0 0.008km

N

**LEGEND**

| | |
|---|---|
| BYDA Work Area | |
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240900609

**Map Sheet:** 6

**Scale:** 1: 750

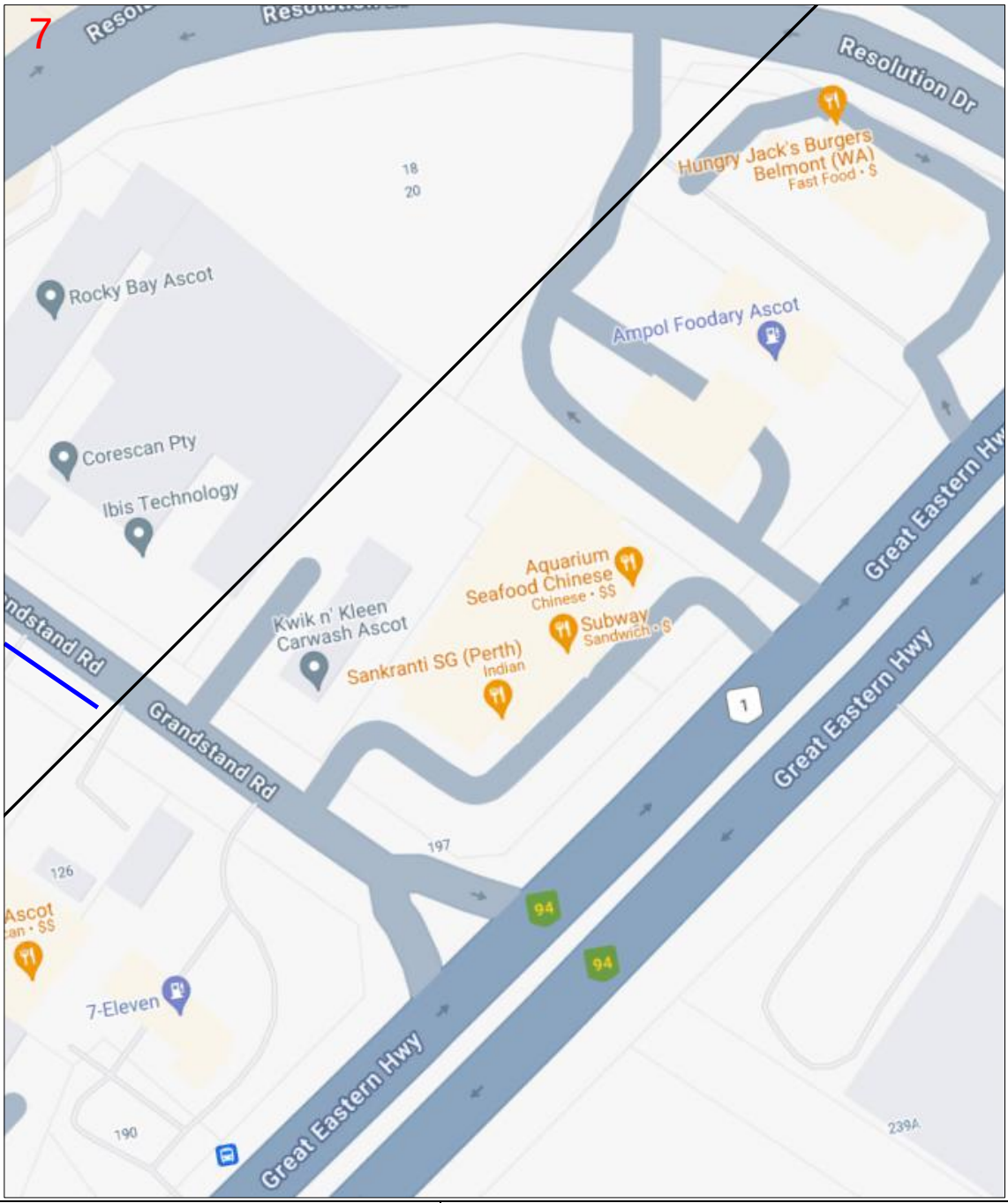
0 0.008km

N

***LEGEND***

| | |
|---|---|
| BYDA Work Area | |
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240900609

**Map Sheet:** 7

**Scale:** 1: 750

0 0.008km

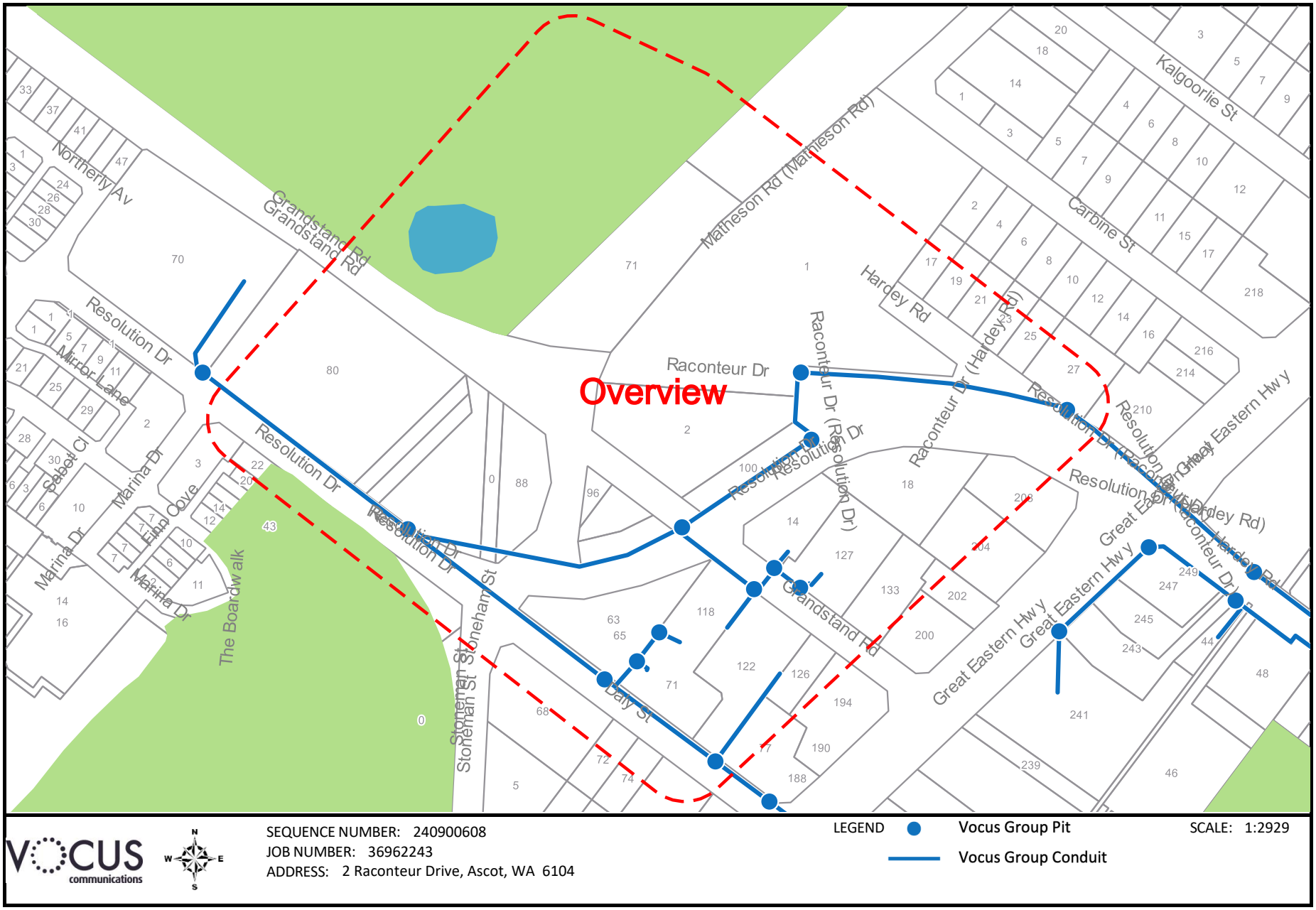
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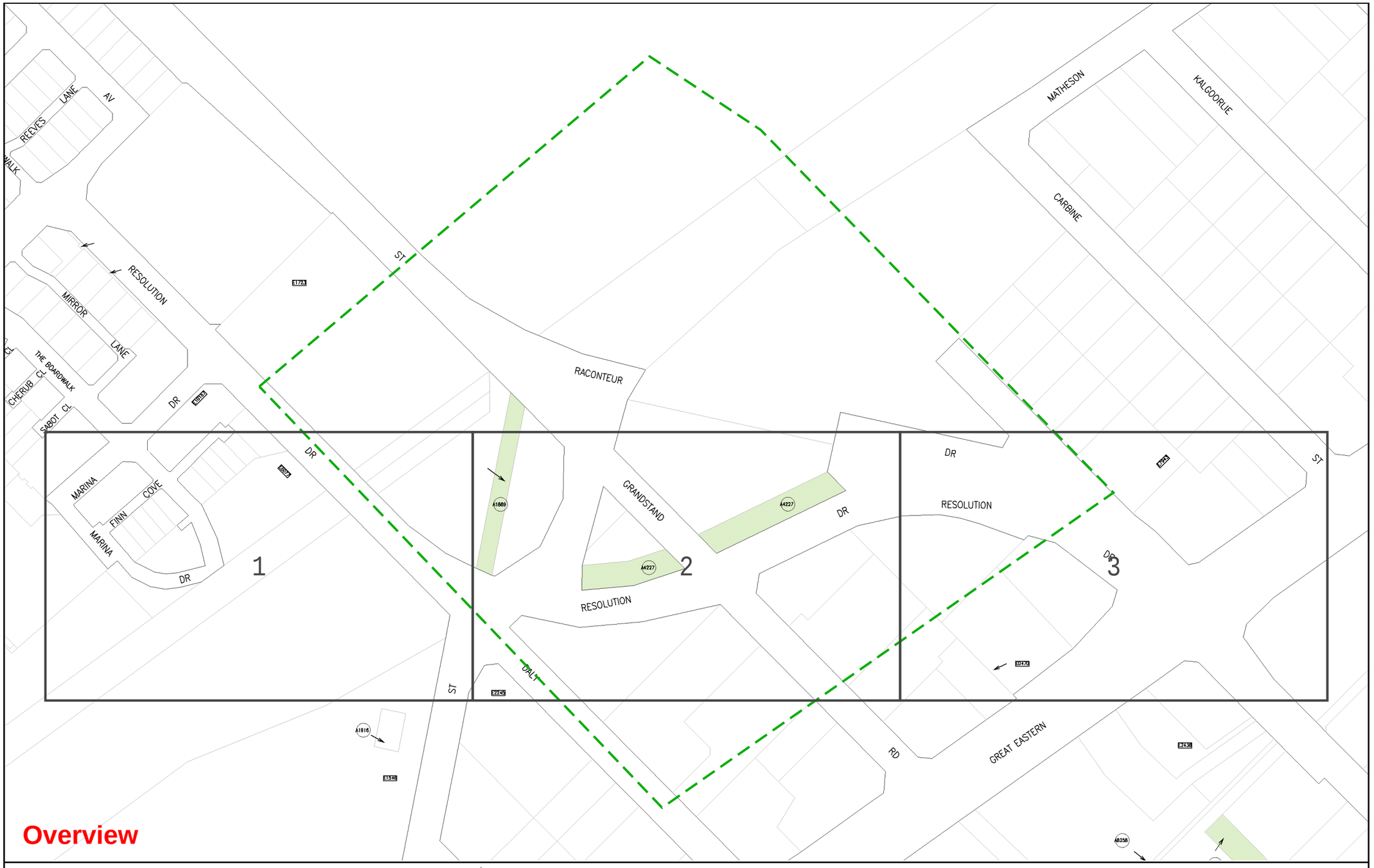
BYDA Work Area

| | |
|---|---|
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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The Vocus Group includes related bodies corporate of Vocus Communications Limited ACN 084 115 499.



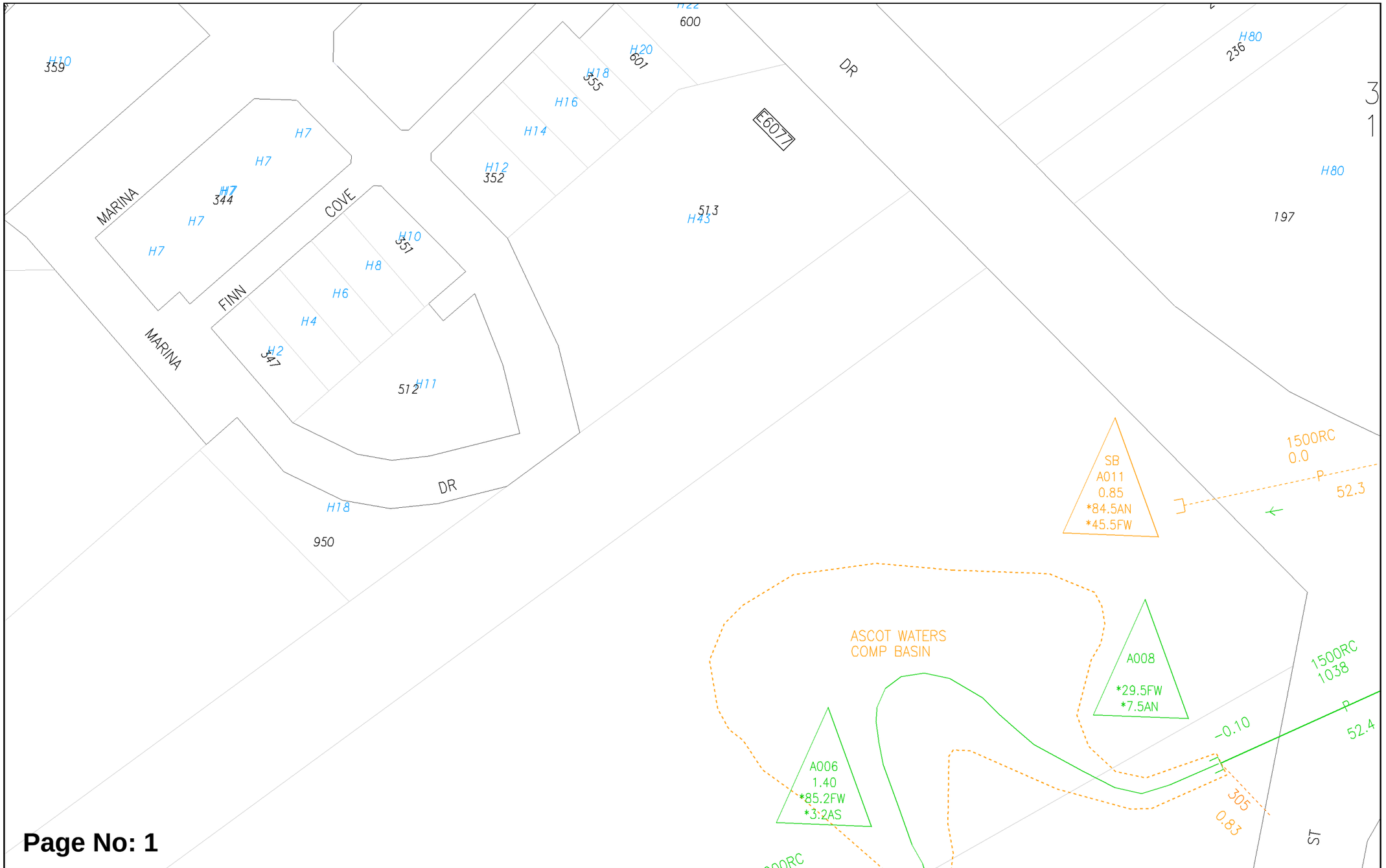

WATER CORPORATION

Scale: 1:2392
Job No.: 36962243
Sequence No.: 240900613
Print Date: 21 Jun 2024

N

**Drainage**

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**Page No: 1**

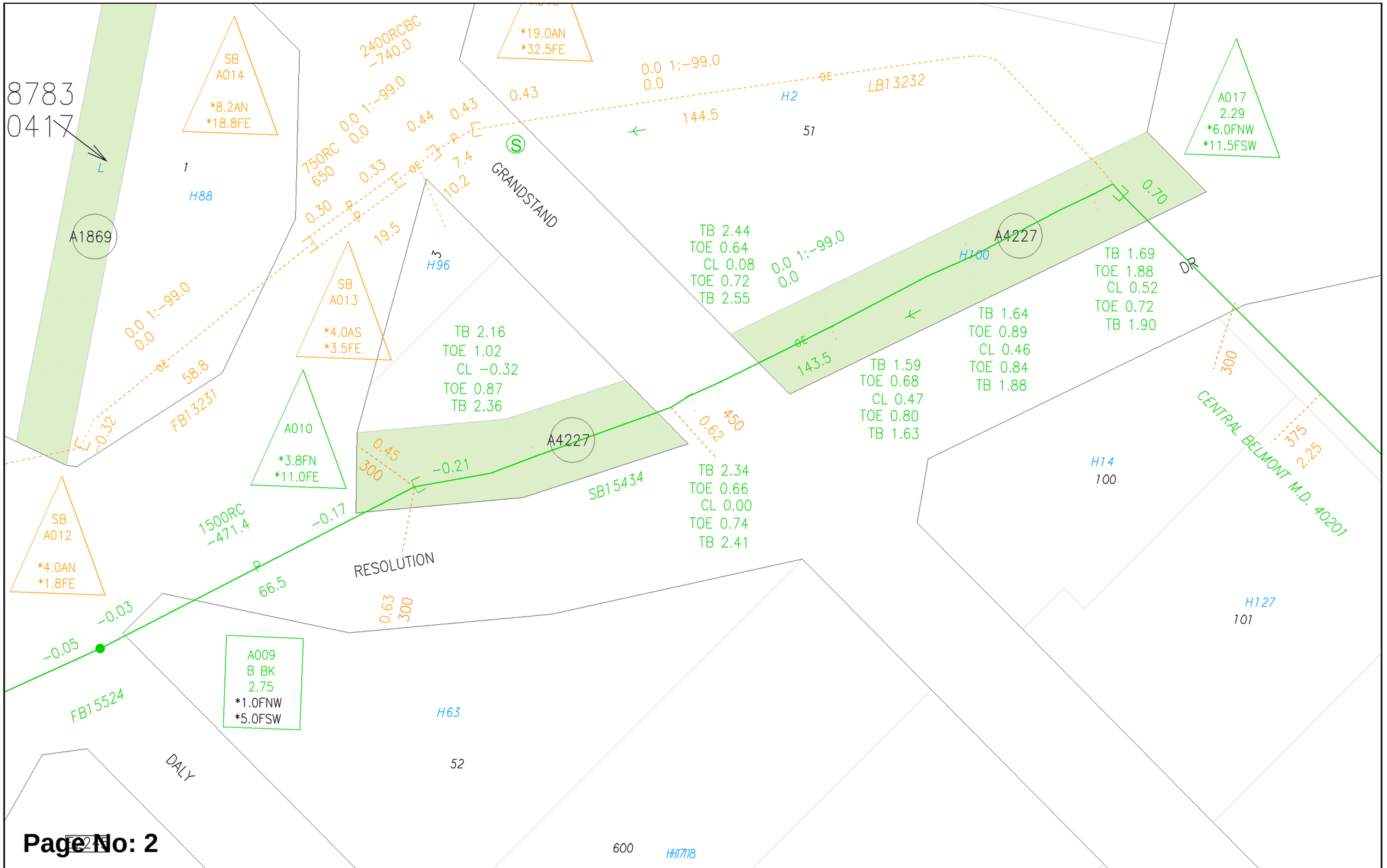
WATER CORPORATION

Scale: 1:750
Job No.: 36962243
Sequence No.: 240900613
Print Date: 21 Jun 2024

N

**Drainage**

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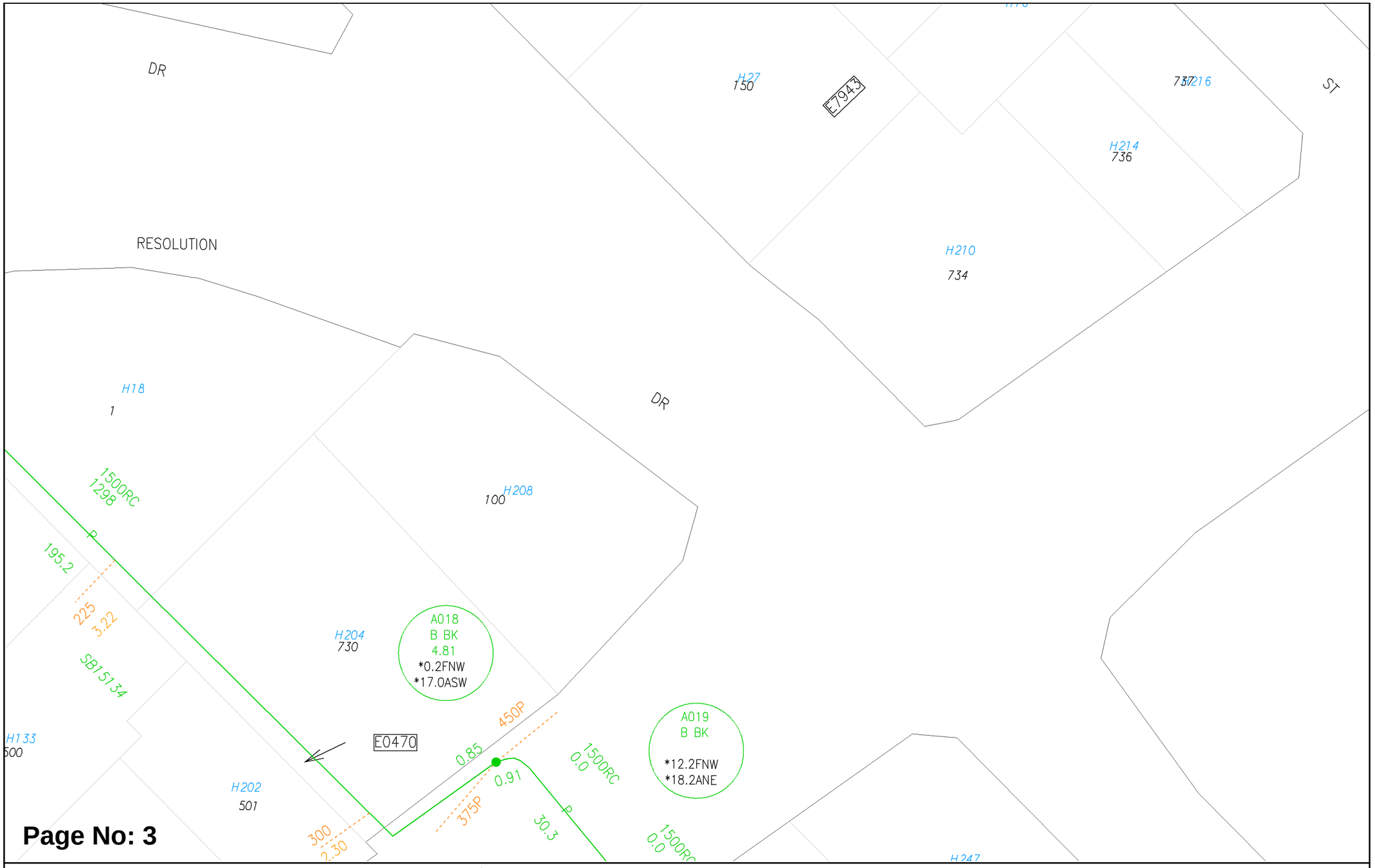

WATER CORPORATION

Scale: 1:750
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Sequence No.: 240900613
Print Date: 21 Jun 2024

N

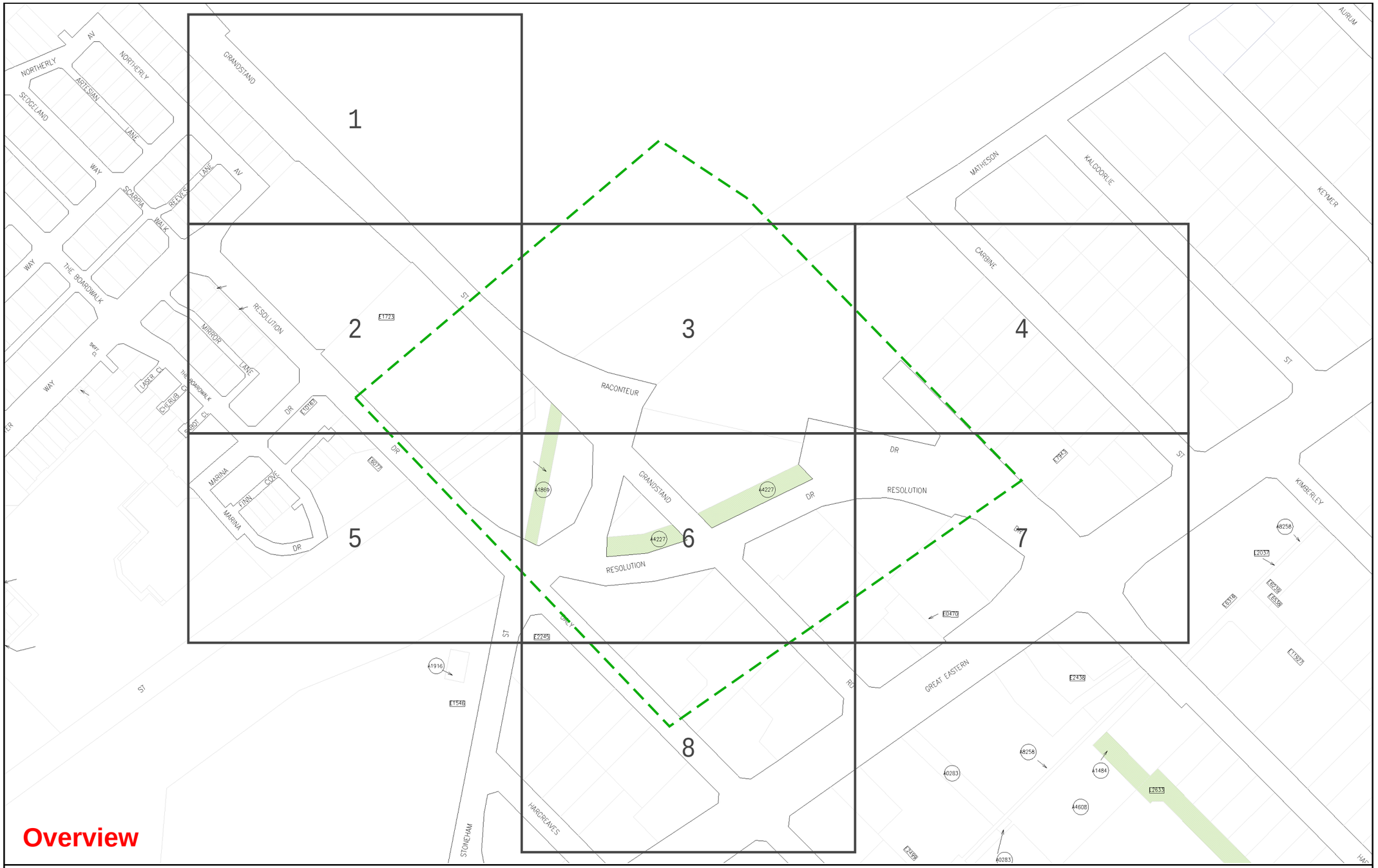
**Drainage**

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Water Corp - Non-critical Plan.docx (21 May 2024)



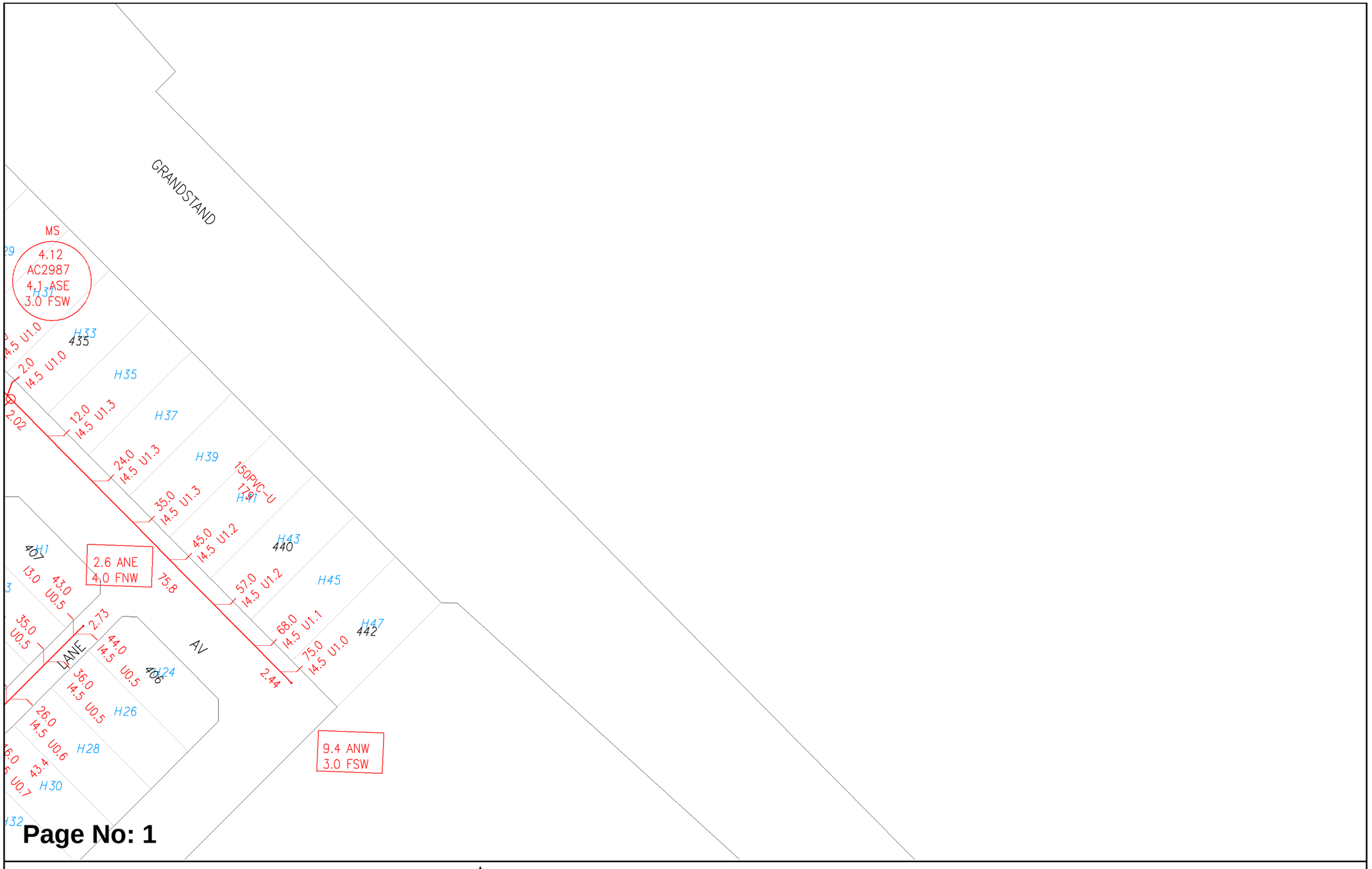

WATER CORPORATION

| | |
|---|---|
| Scale: | 1:3075 |
| Job No.: | 36962243 |
| Sequence No.: | 240900613 |
| Print Date: | 21 Jun 2024 |

N

**Sewer**

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WATER CORPORATION

| | |
|---|---|
| Scale: | 1:750 |
| Job No.: | 36962243 |
| Sequence No.: | 240900613 |
| Print Date: | 21 Jun 2024 |

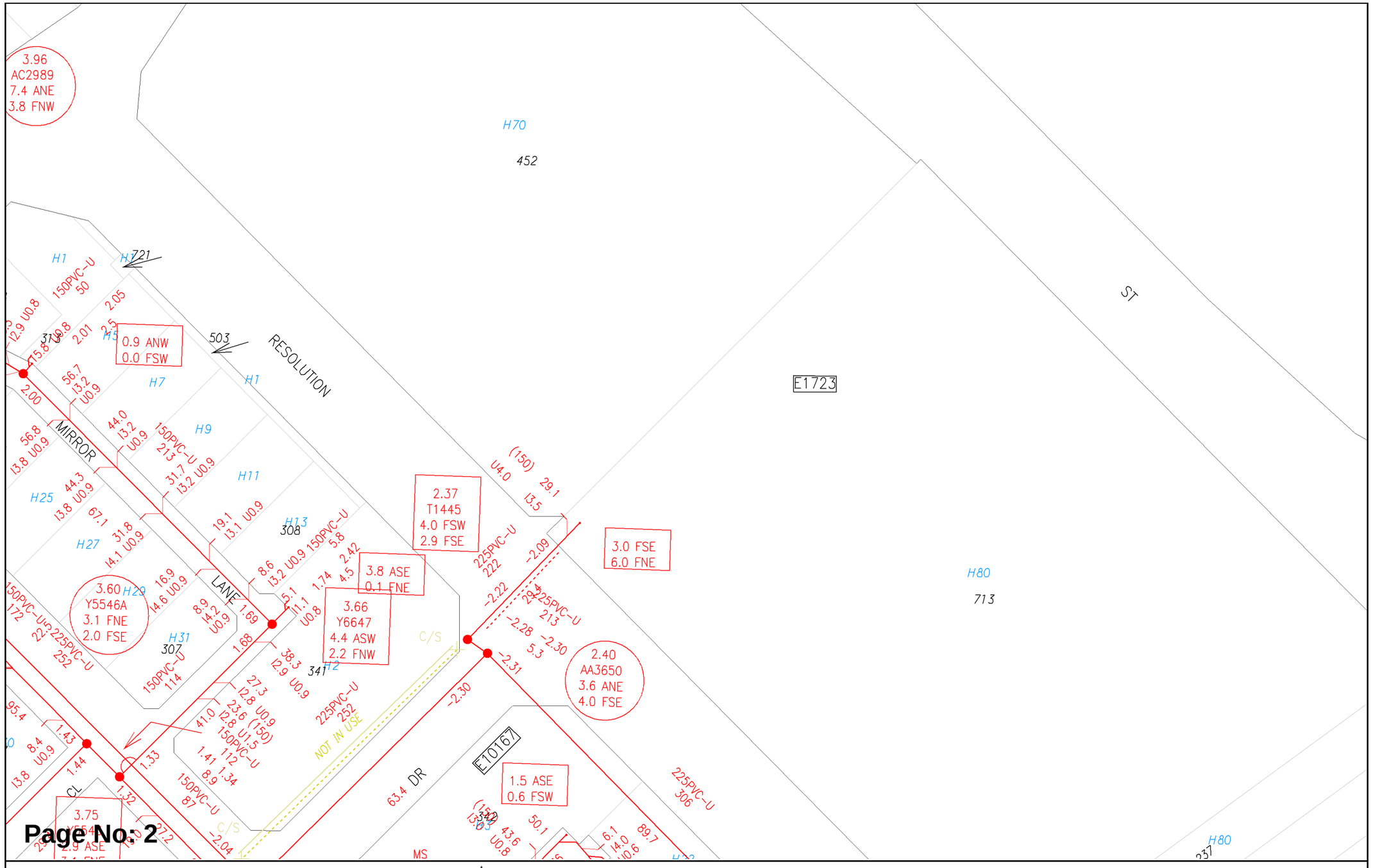
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Water Corp - Non-critical Plan.docx (21 May 2024)



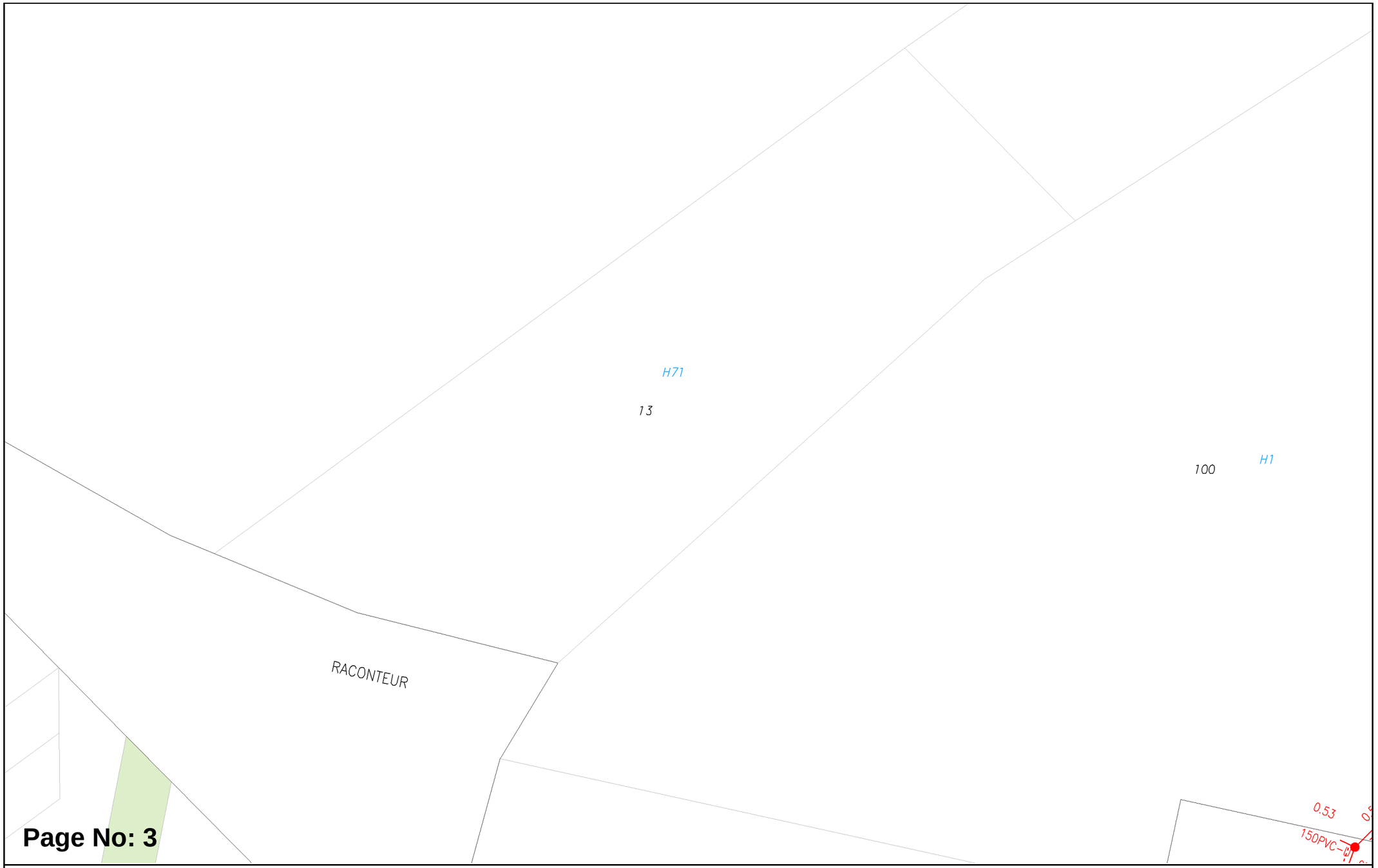

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WATER CORPORATION

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| Job No.: | 36962243 |
| Sequence No.: | 240900613 |
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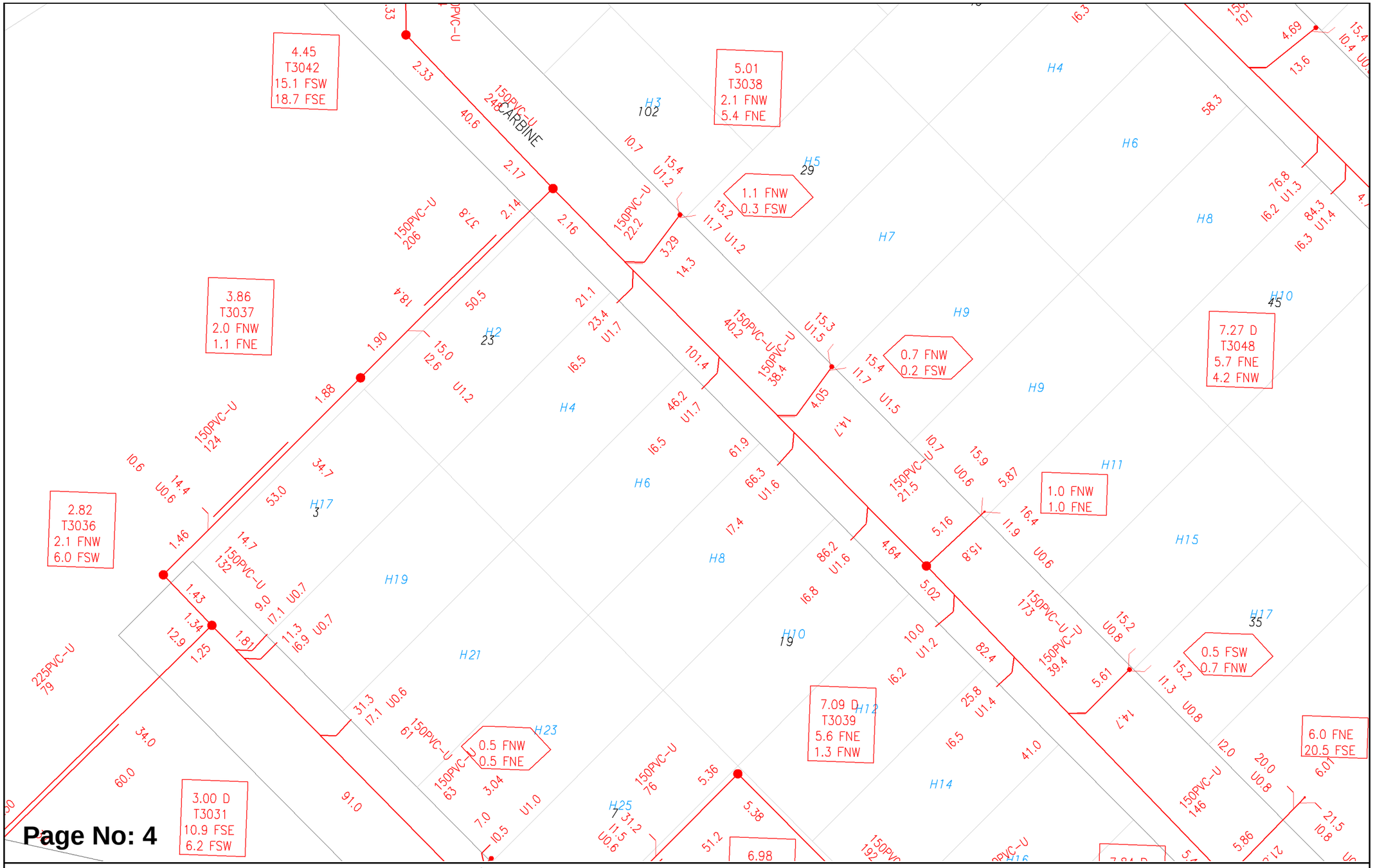
WATER CORPORATION

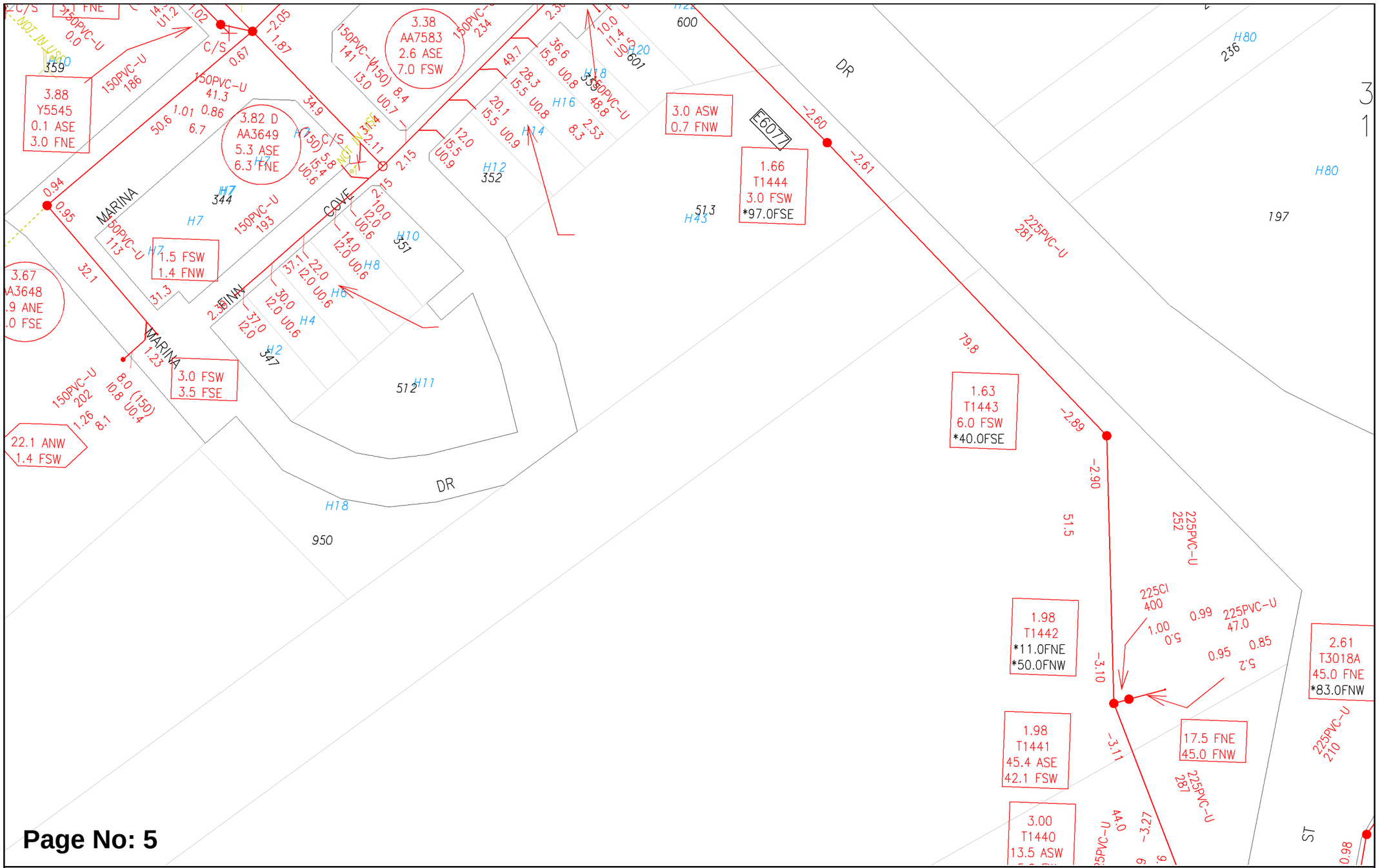
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4.45
T3042
15.1 FSW
18.7 FSE
5.01
T3038
2.1 FNW
5.4 FNE
1.1 FNW
0.3 FSW
3.86
T3037
2.0 FNW
1.1 FNE
0.7 FNW
0.2 FSW
7.27 D
T3048
5.7 FNE
4.2 FNW
1.0 FNW
1.0 FNE
2.82
T3036
2.1 FNW
6.0 FSW
0.5 FSW
0.7 FNW
7.09 D
T3039
5.6 FNE
1.3 FNW
6.0 FNE
20.5 FSE
3.00 D
T3031
10.9 FSE
6.2 FSW
0.5 FNW
0.5 FNE
6.98
CARBINE
150PVC-U
225PVC-U
H1
H2
H3
H4
H5
H6
H7
H8
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H10
H11
H12
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Page No: 4
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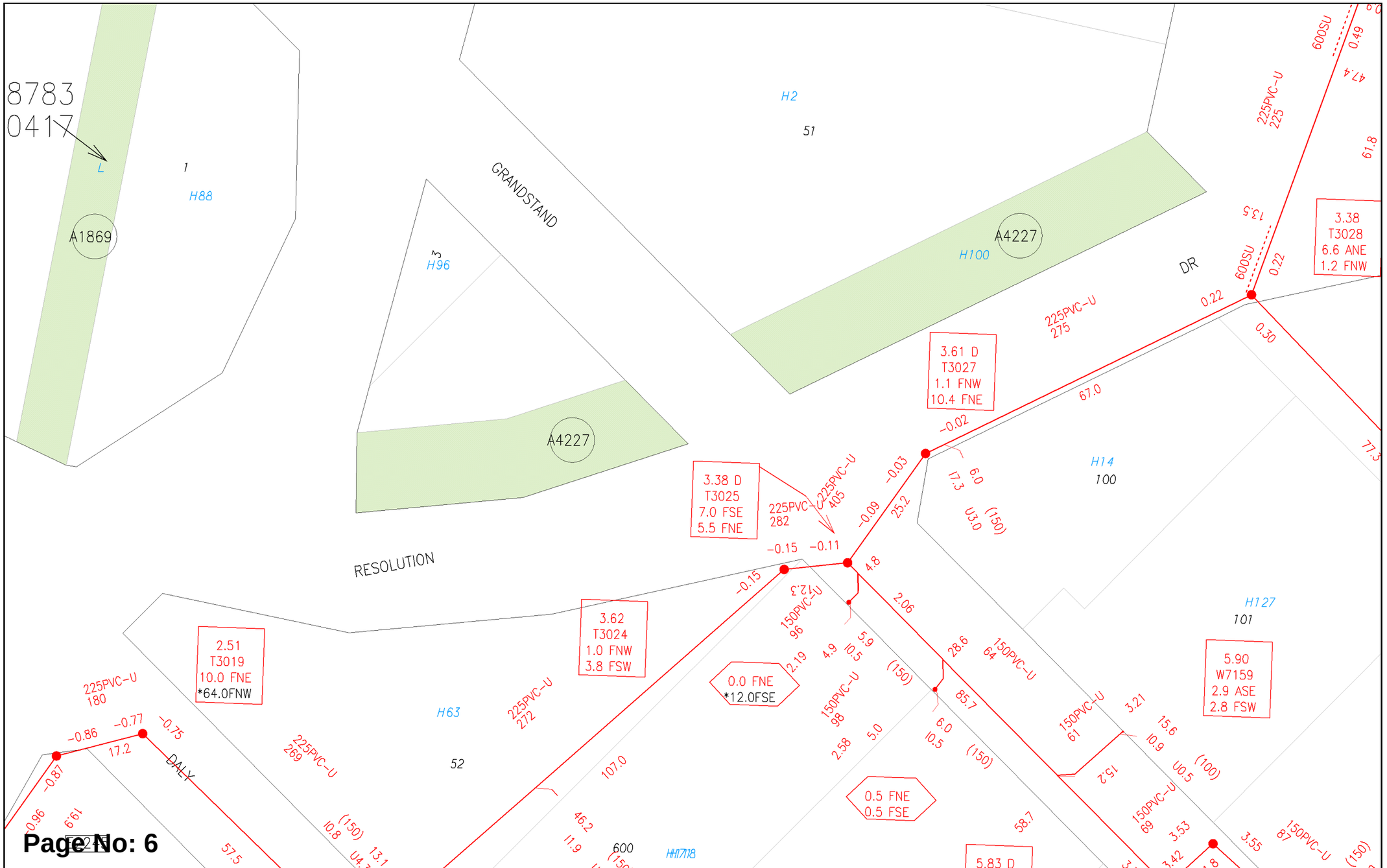



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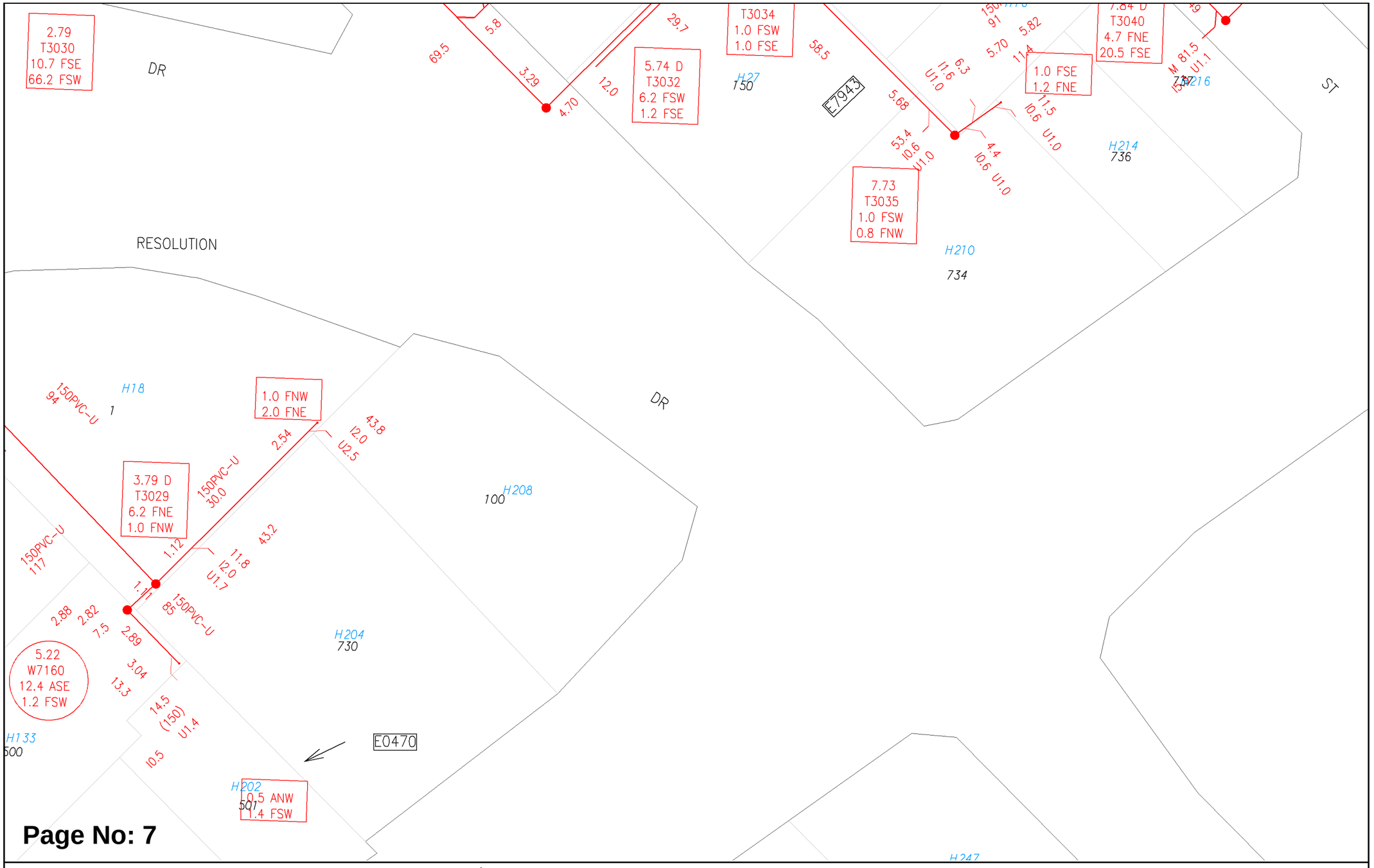

WATER CORPORATION

Scale: 1:750
Job No.: 36962243
Sequence No.: 240900613
Print Date: 21 Jun 2024

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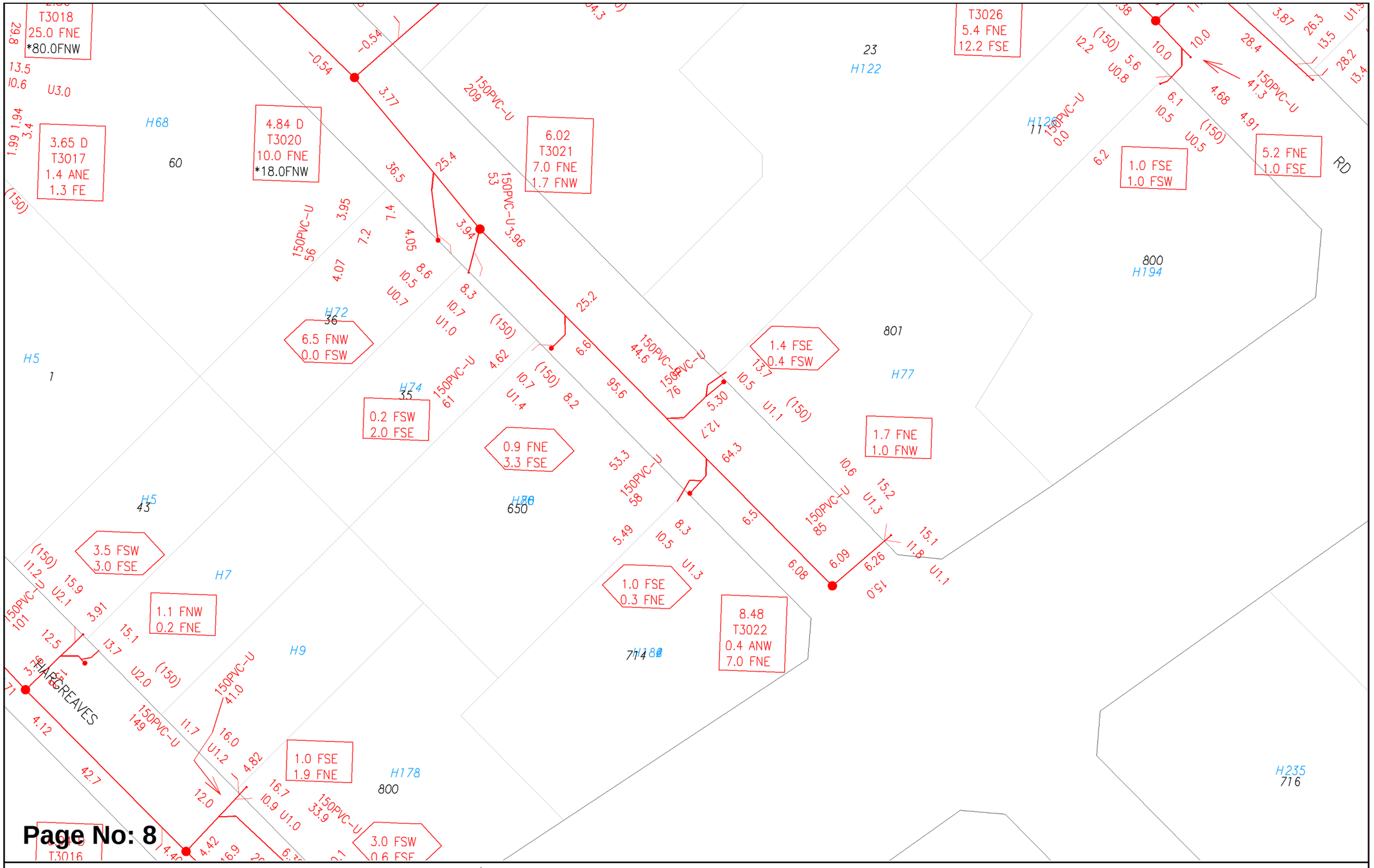
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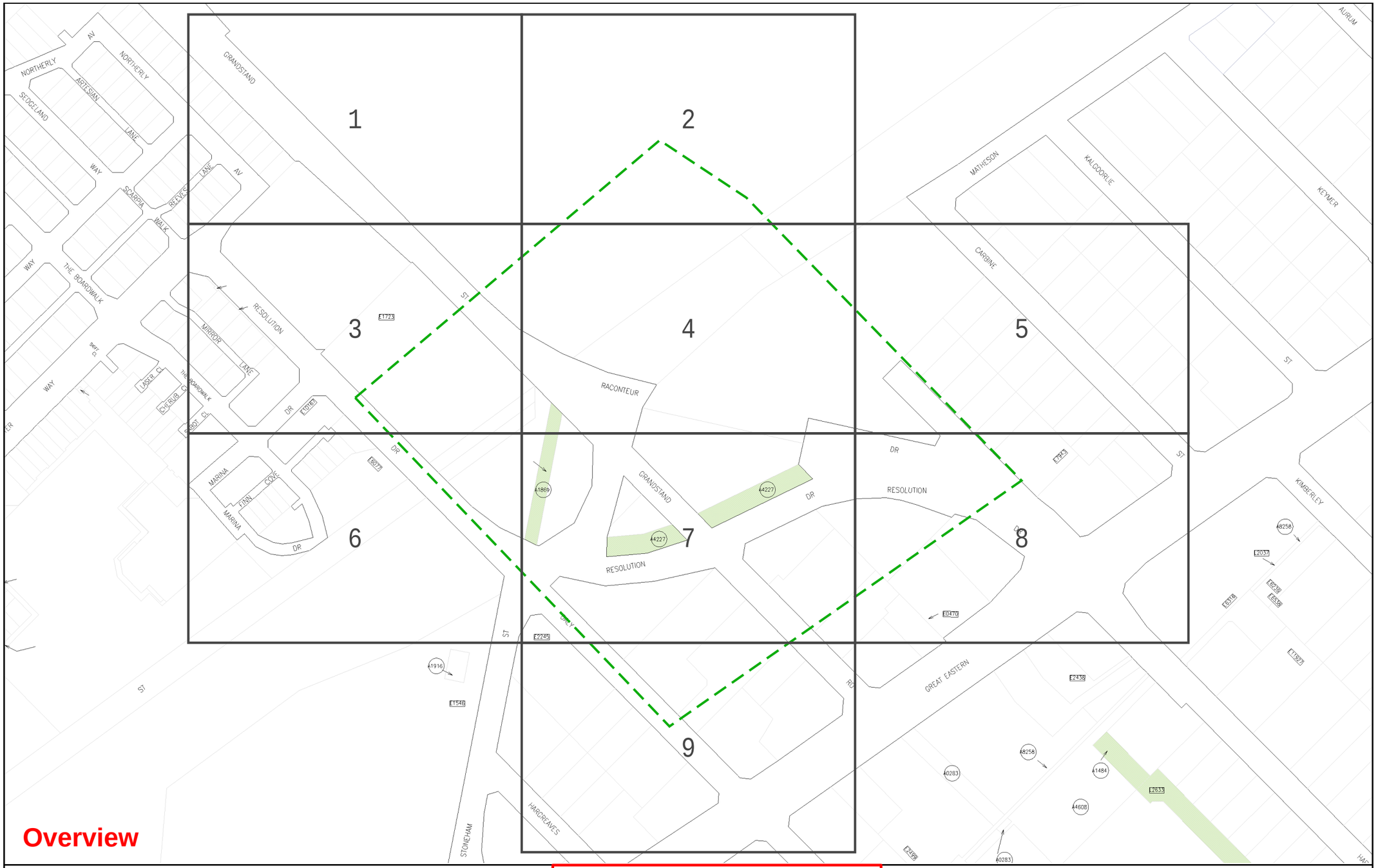
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WATER CORPORATION

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Job No.: 36962243
Sequence No.: 240900613
Print Date: 21 Jun 2024

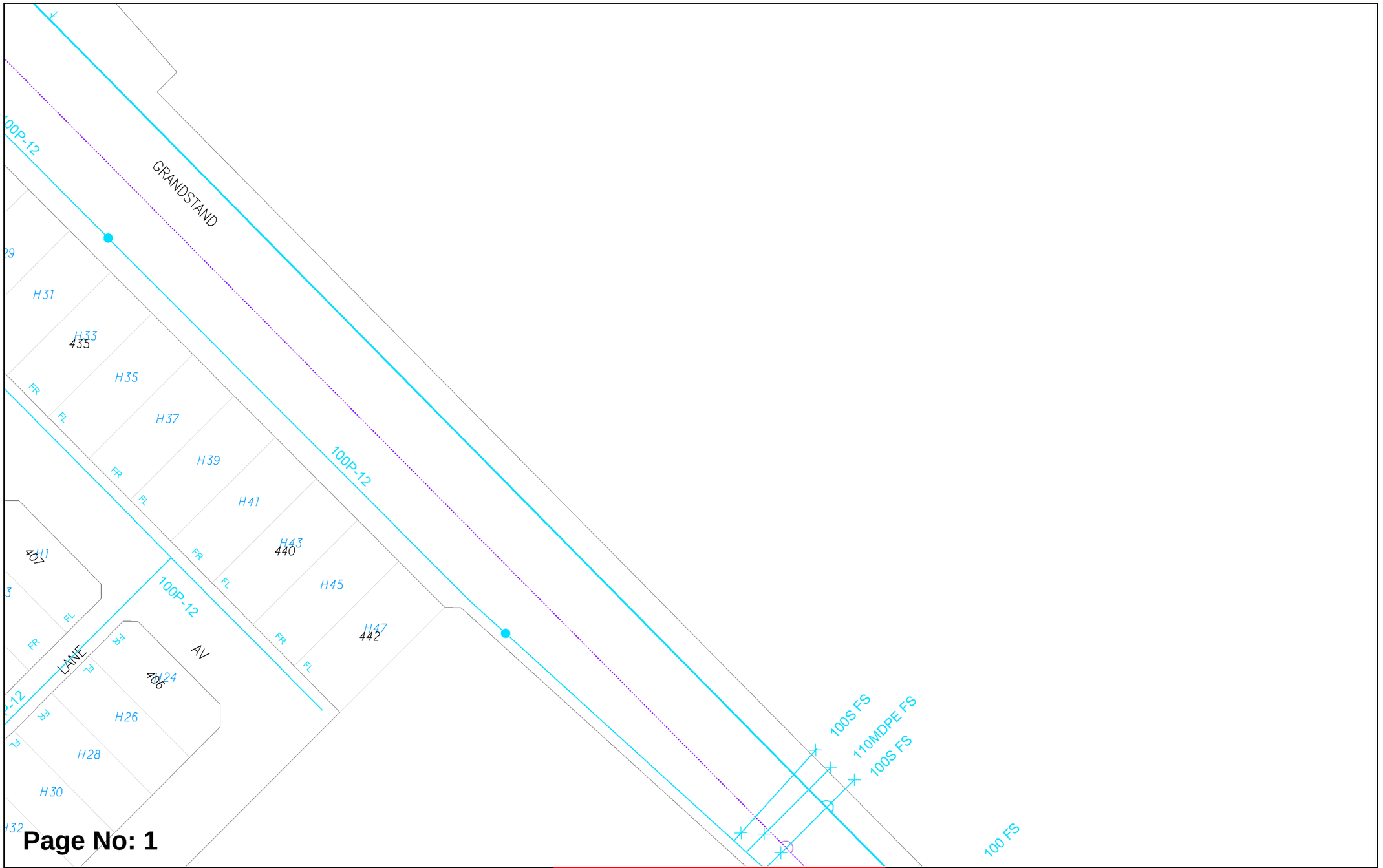
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Water

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WATER CORPORATION

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| Print Date: | 21 Jun 2024 |

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Water

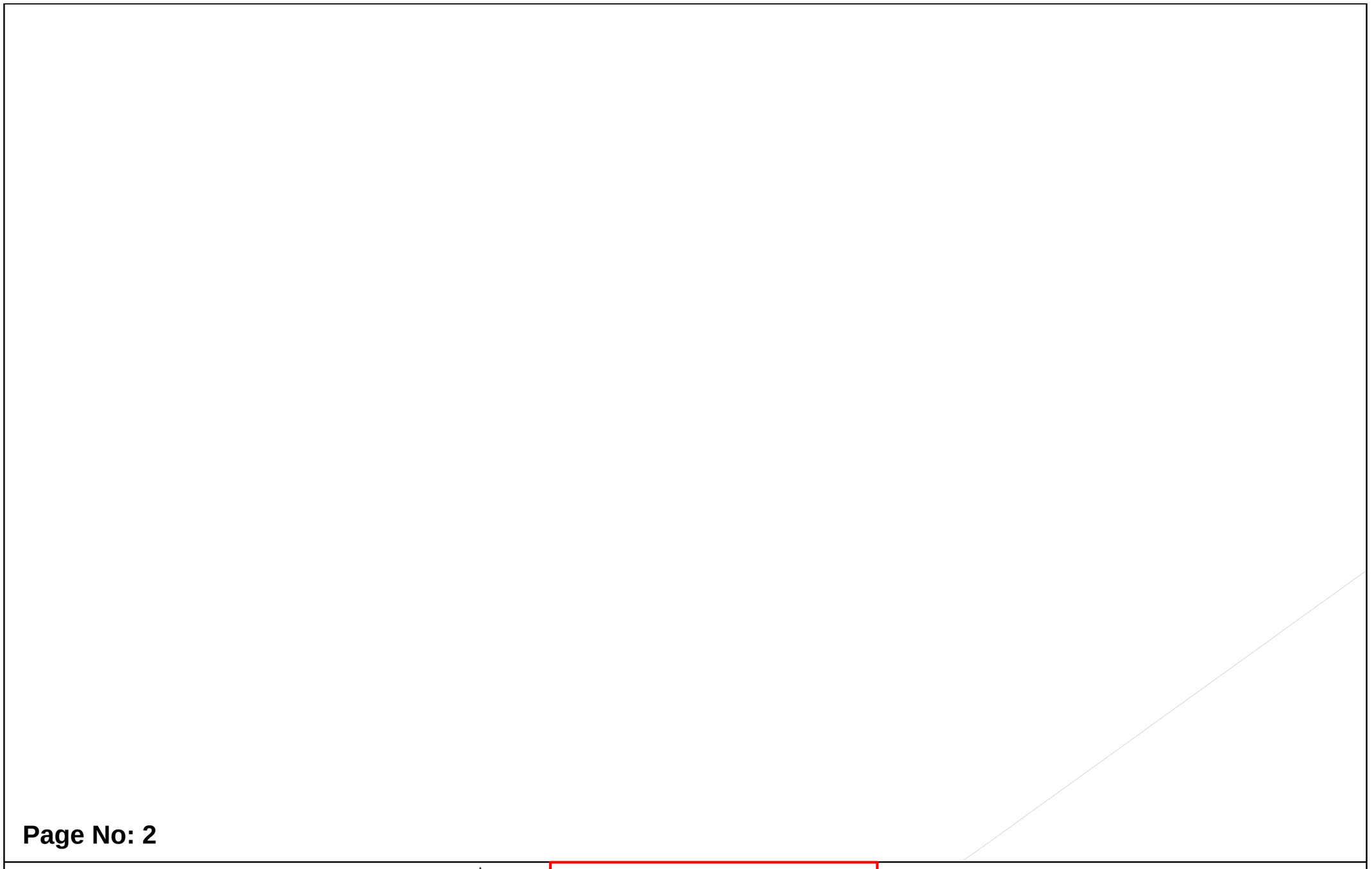
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**Page No: 2**

WATER CORPORATION

Scale: 1:750
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Print Date: 21 Jun 2024

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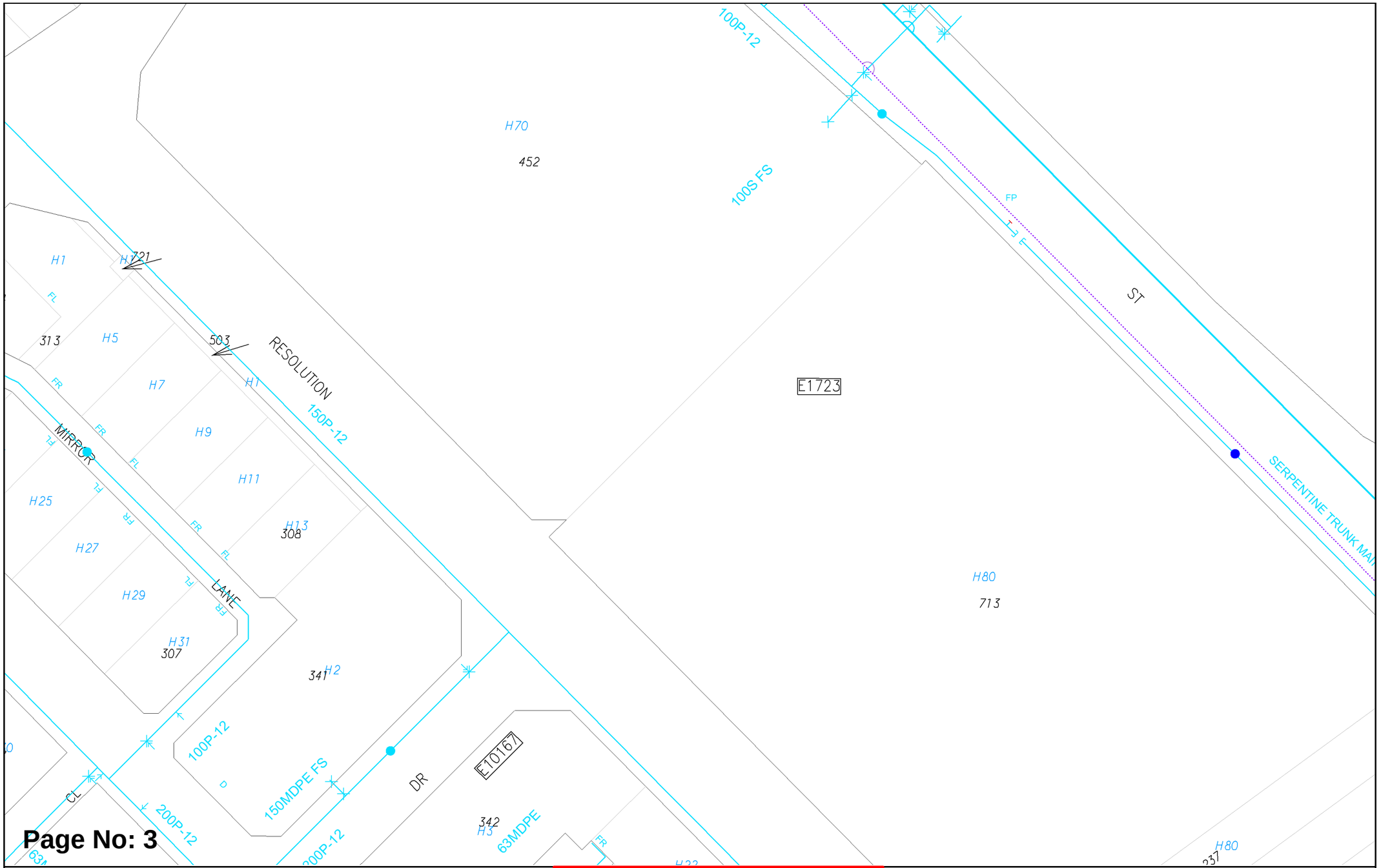
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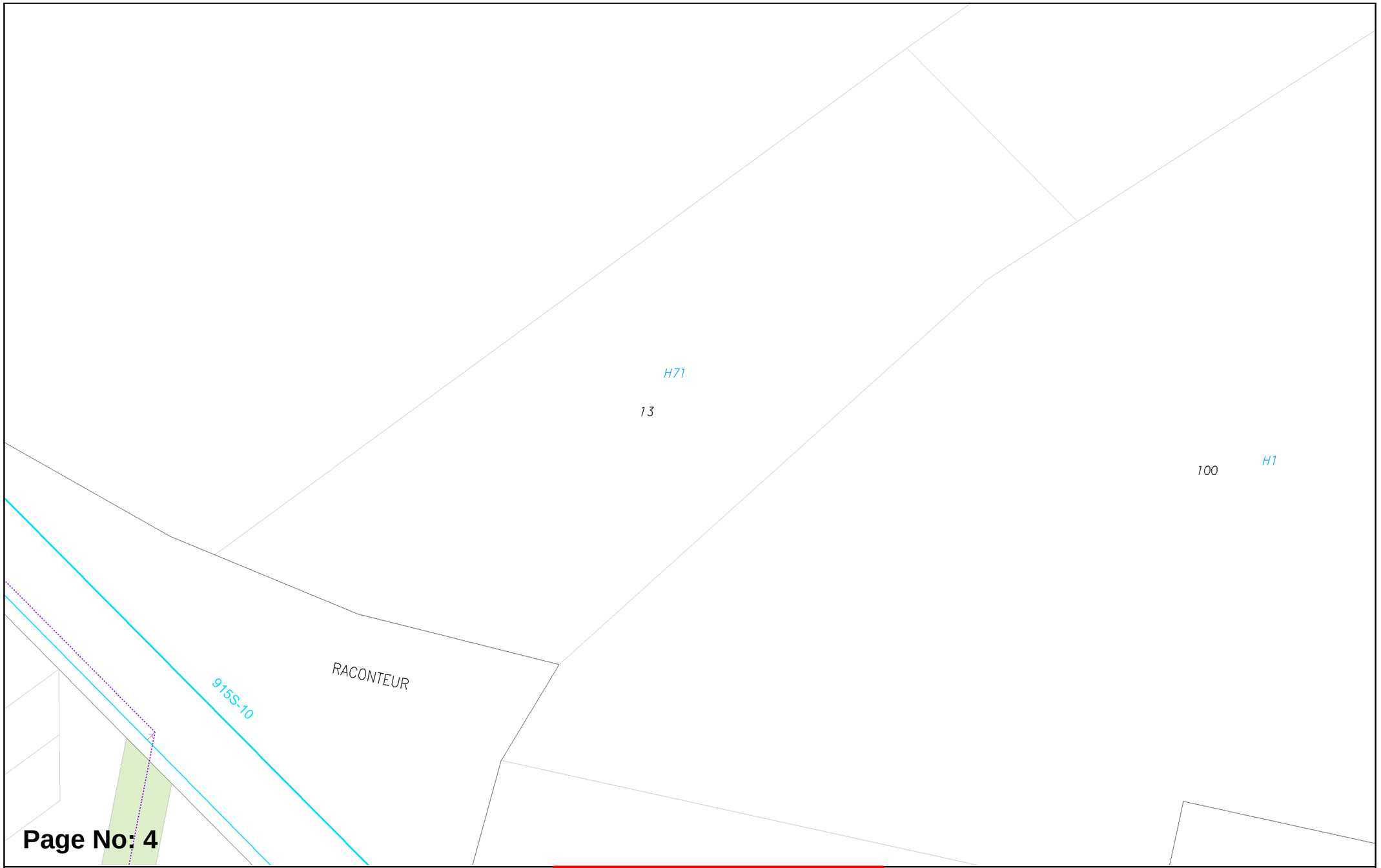
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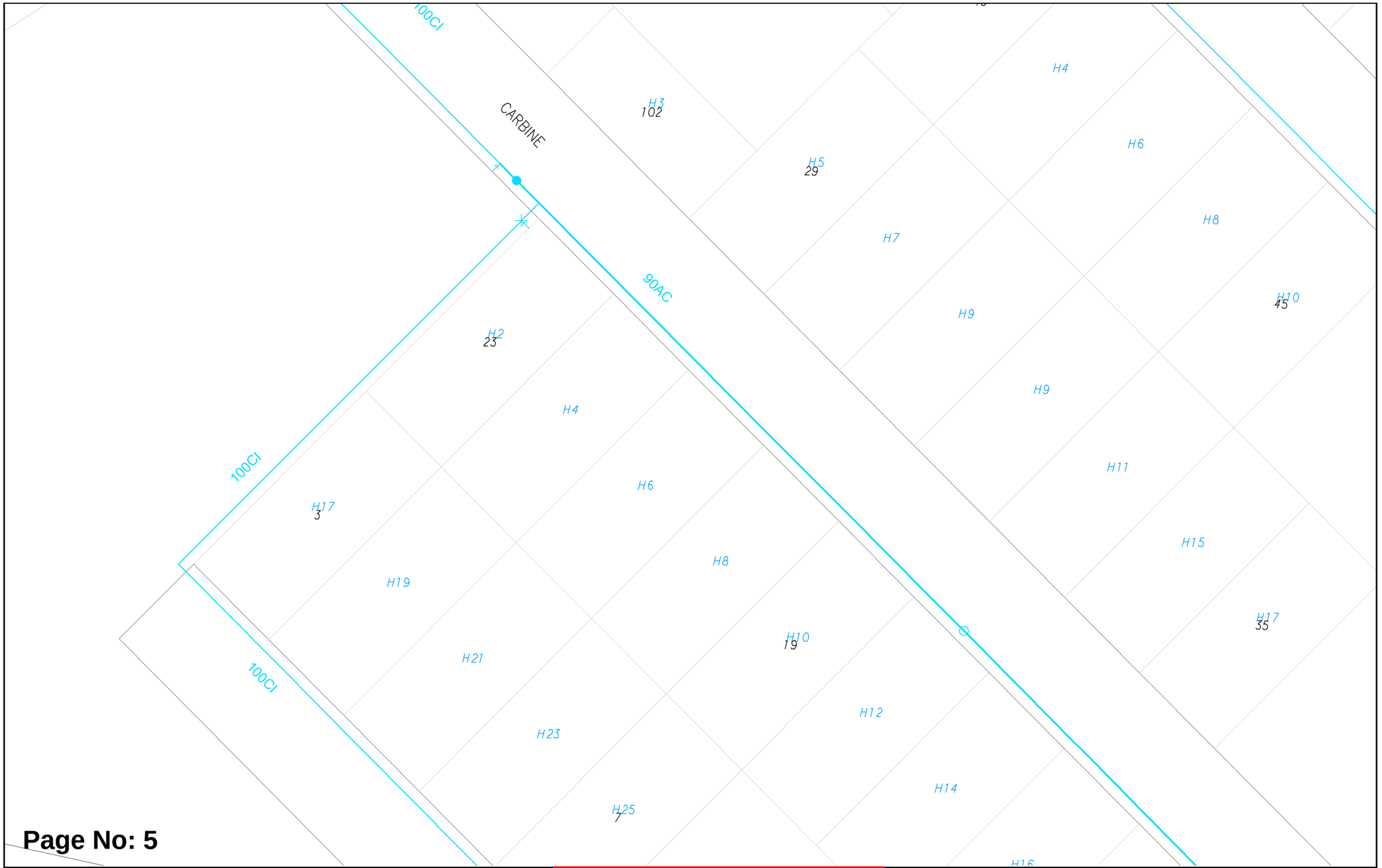

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**Water**

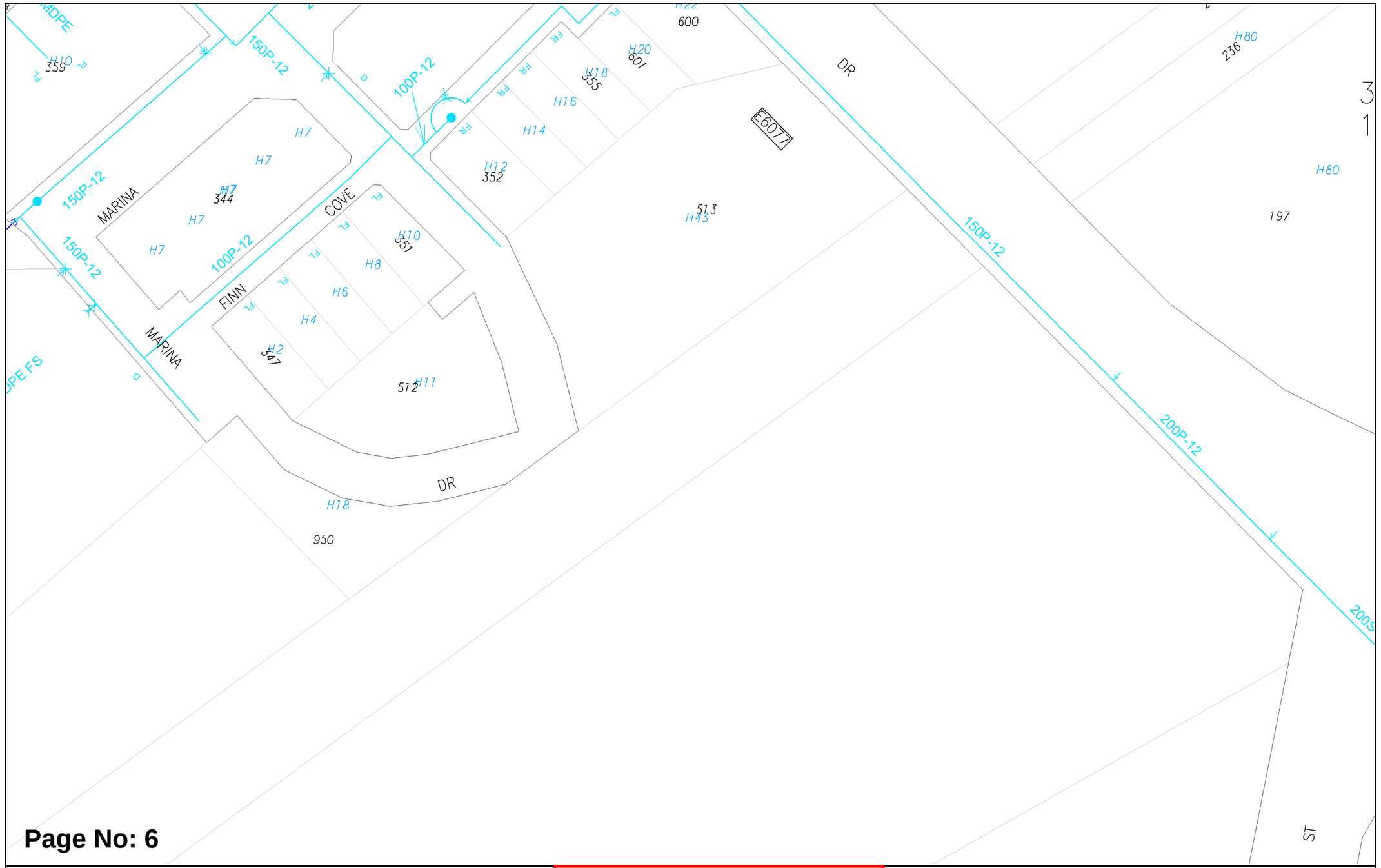
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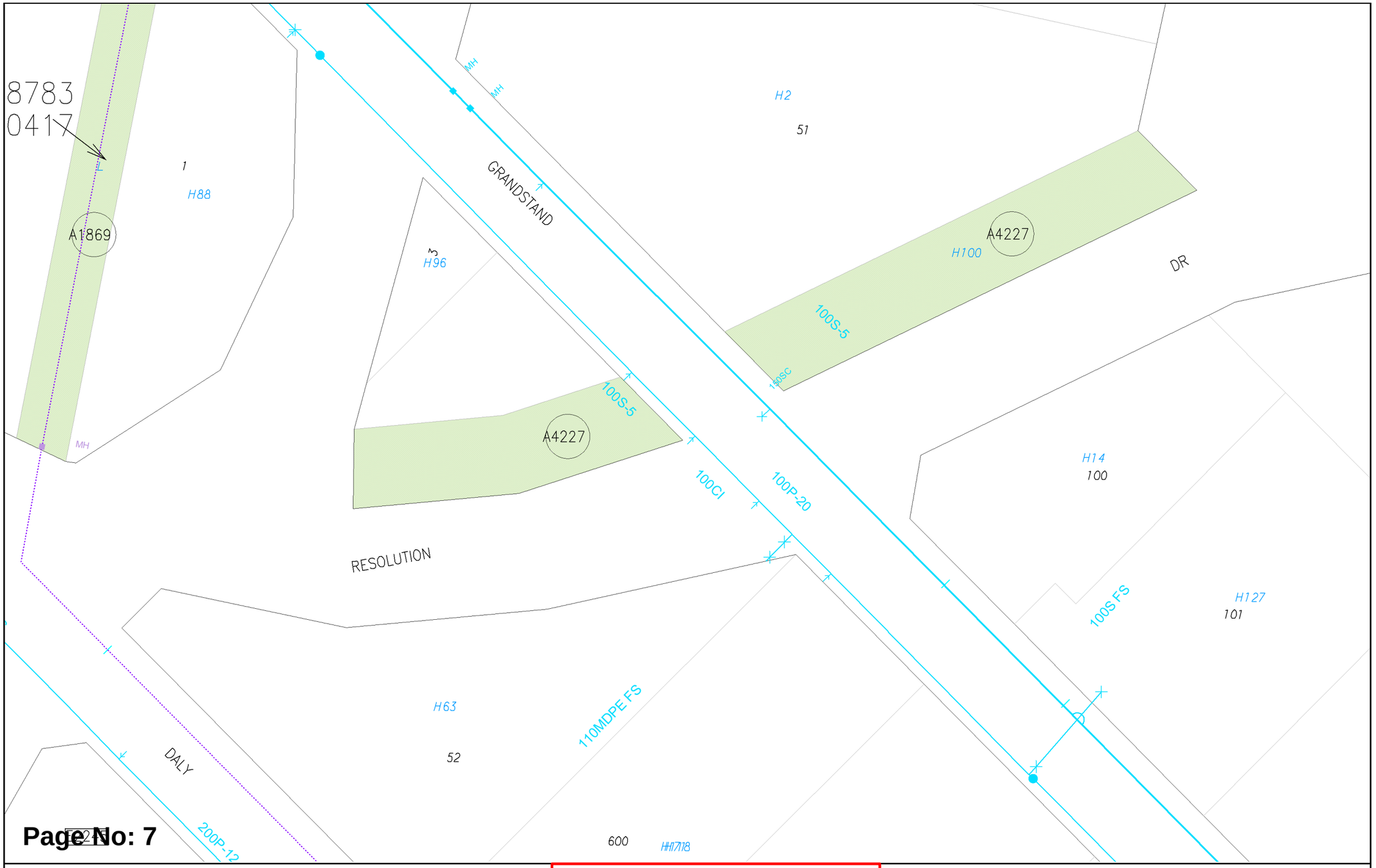
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MDPE
H10
359
150P-12
100P-12
H7
344
MARINA
COVE
FINN
H8
H6
H4
H2
347
351
H10
512
H11
H18
950
DR
H12
352
H14
H16
H18
355
H20
601
600
E6077
513
H43
150P-12
200P-12
H80
236
197
ST
Page No: 6
Scale: 1:750
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Sequence No.: 240900613
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Water
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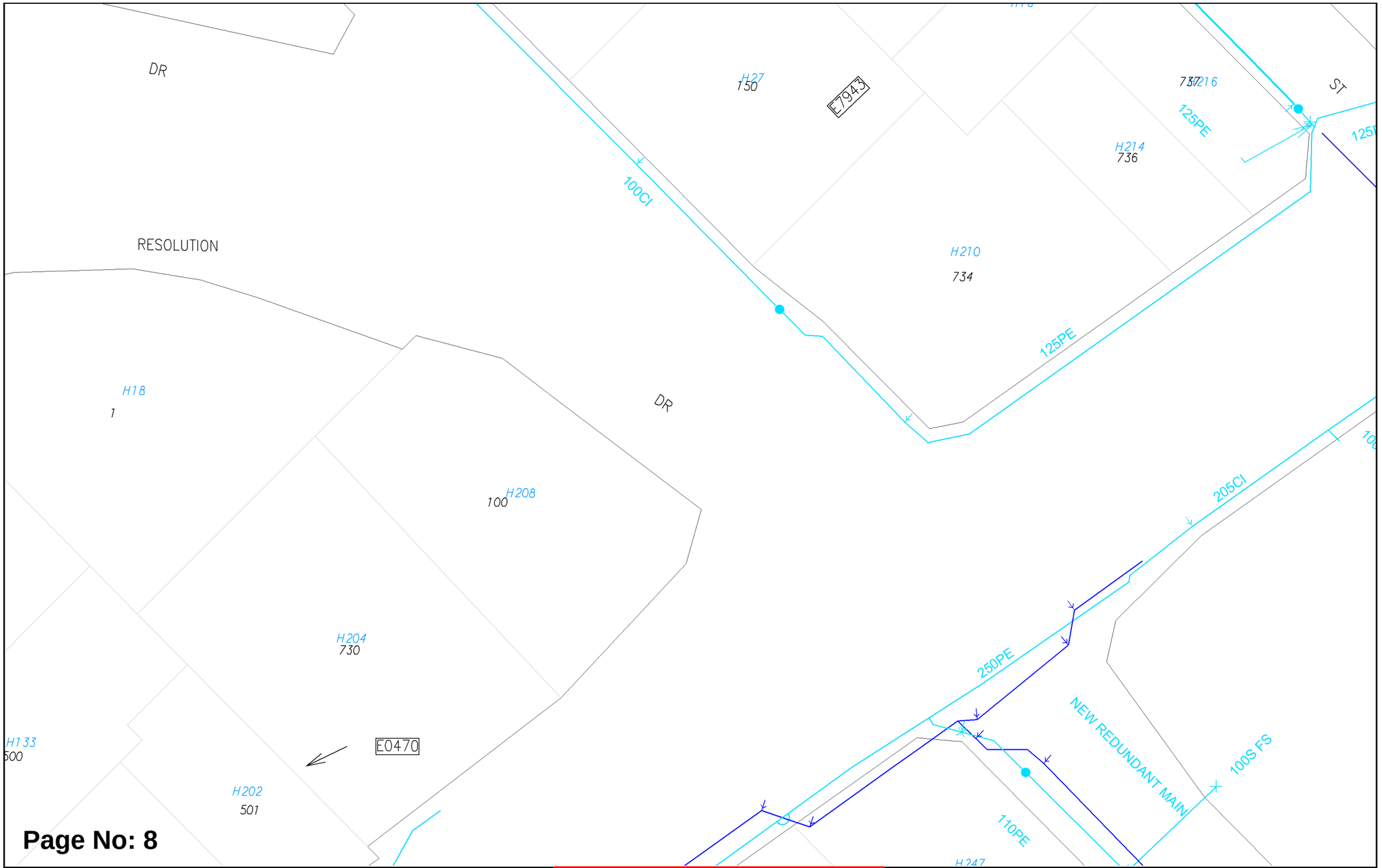
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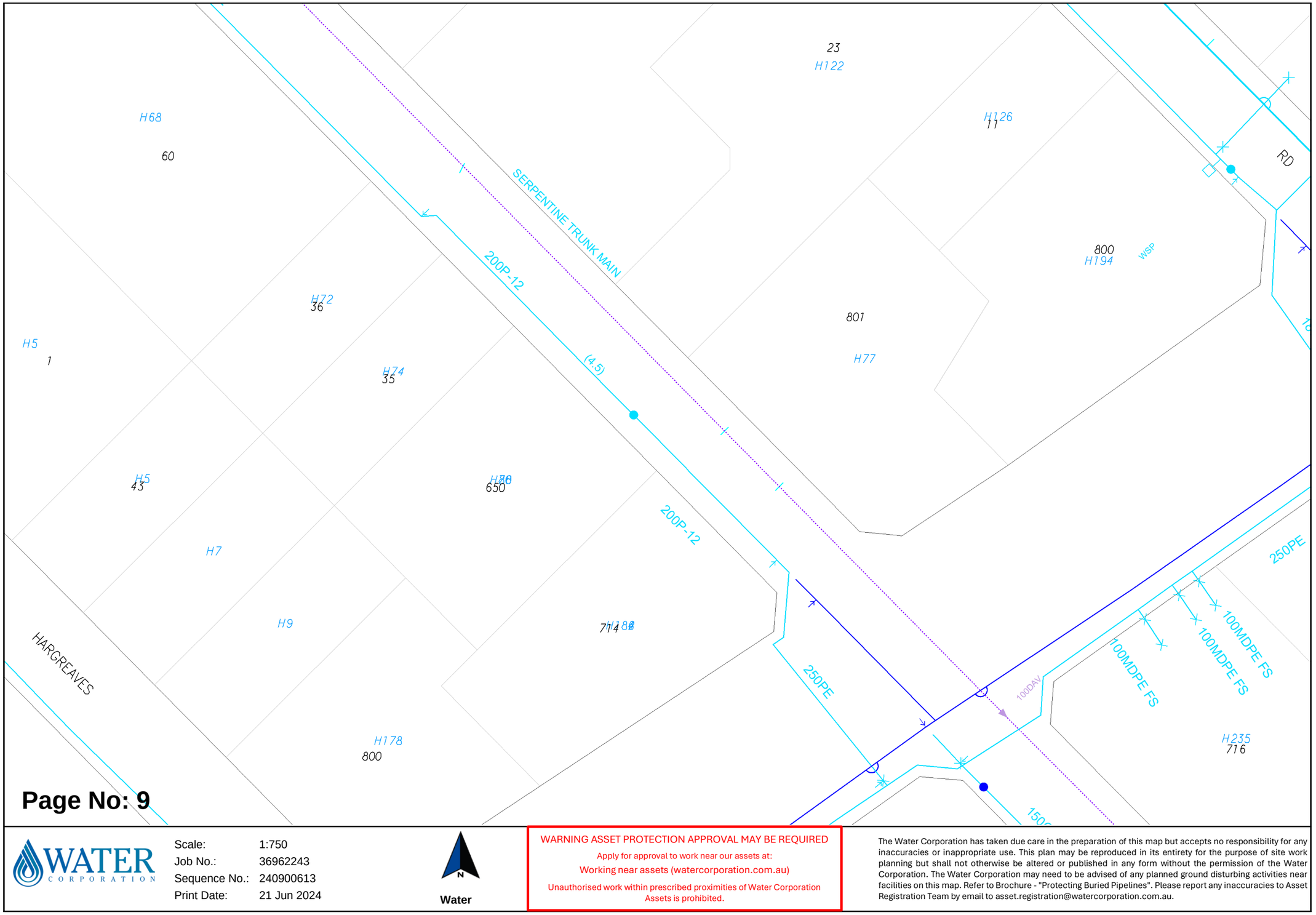
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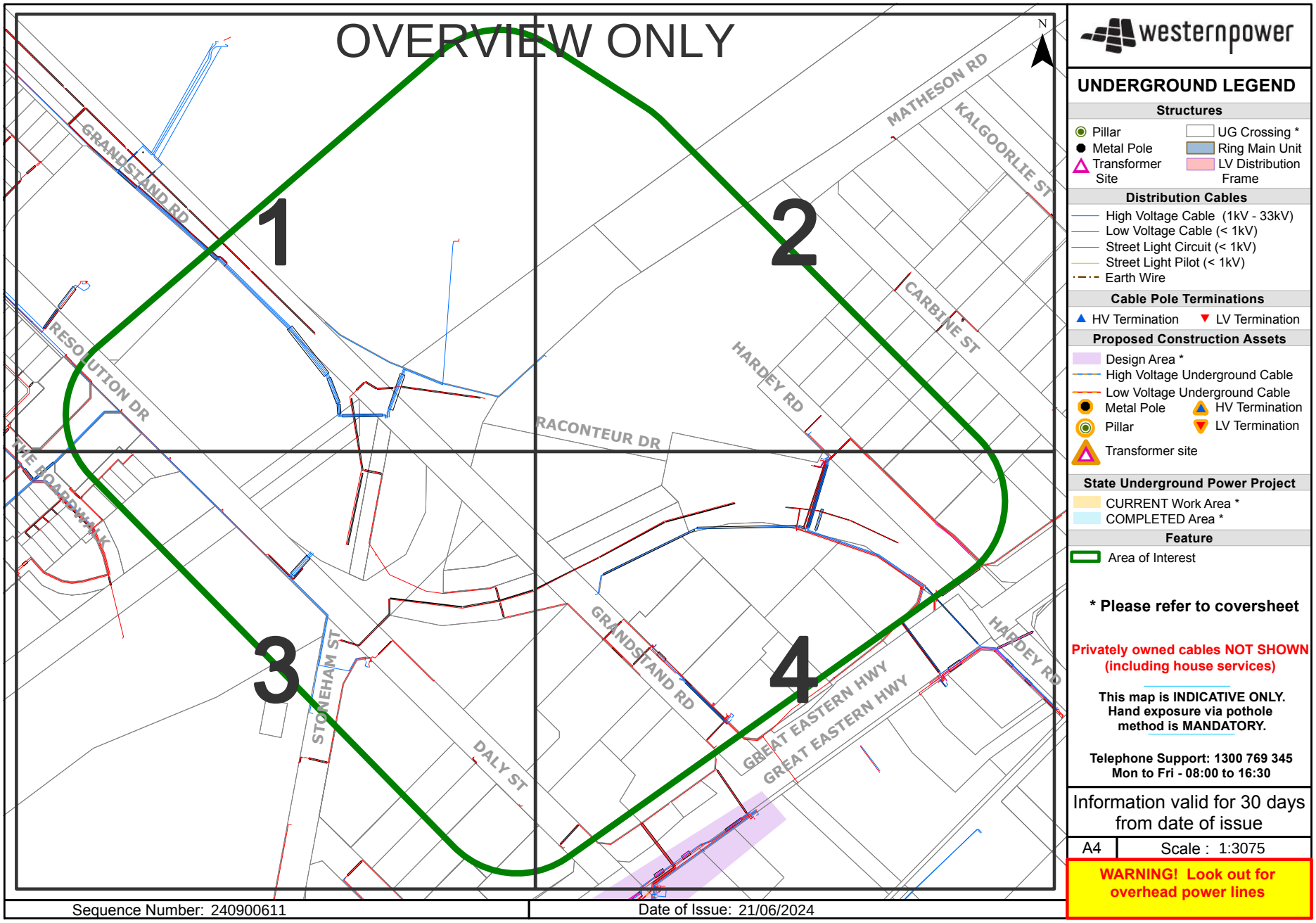
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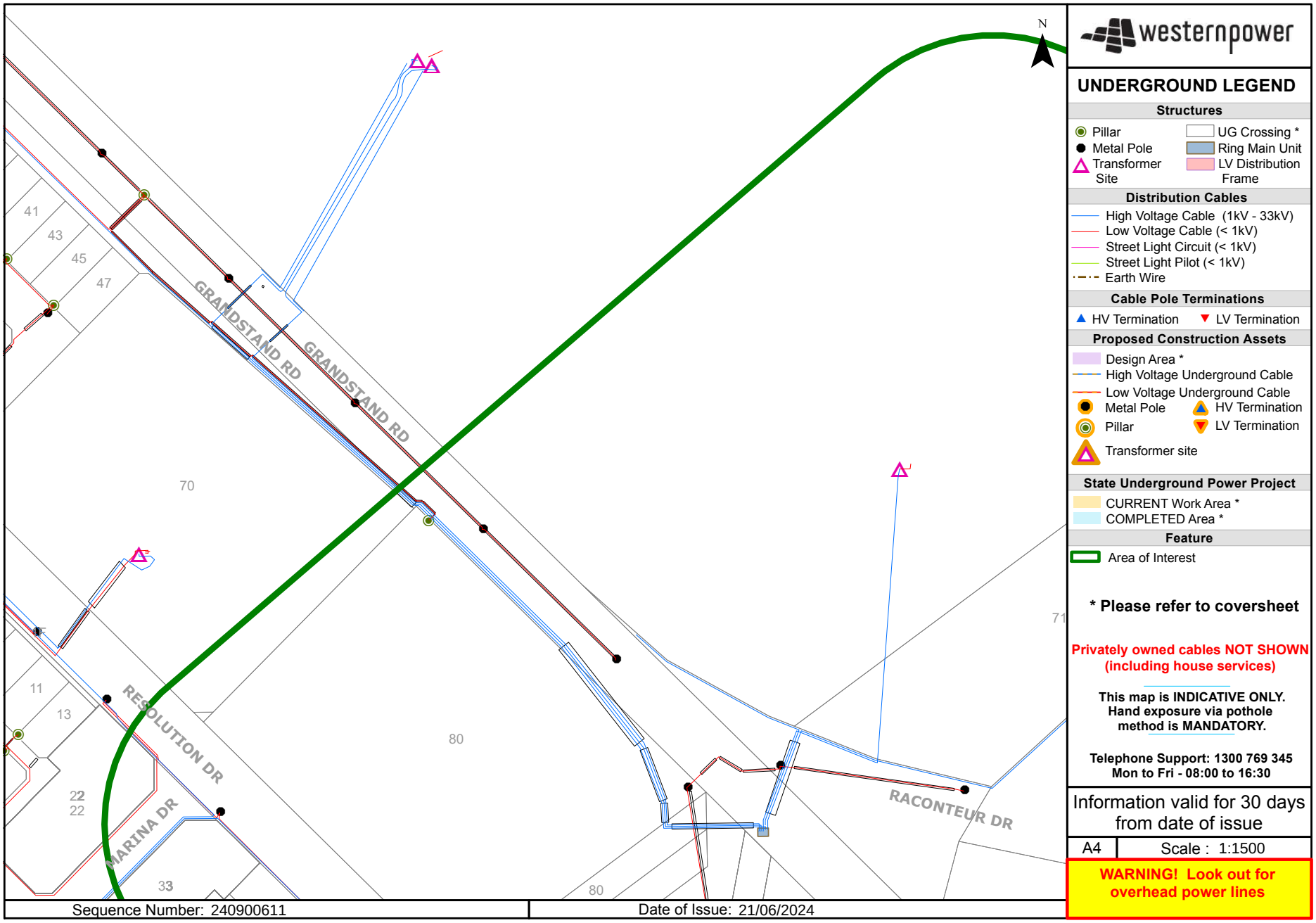
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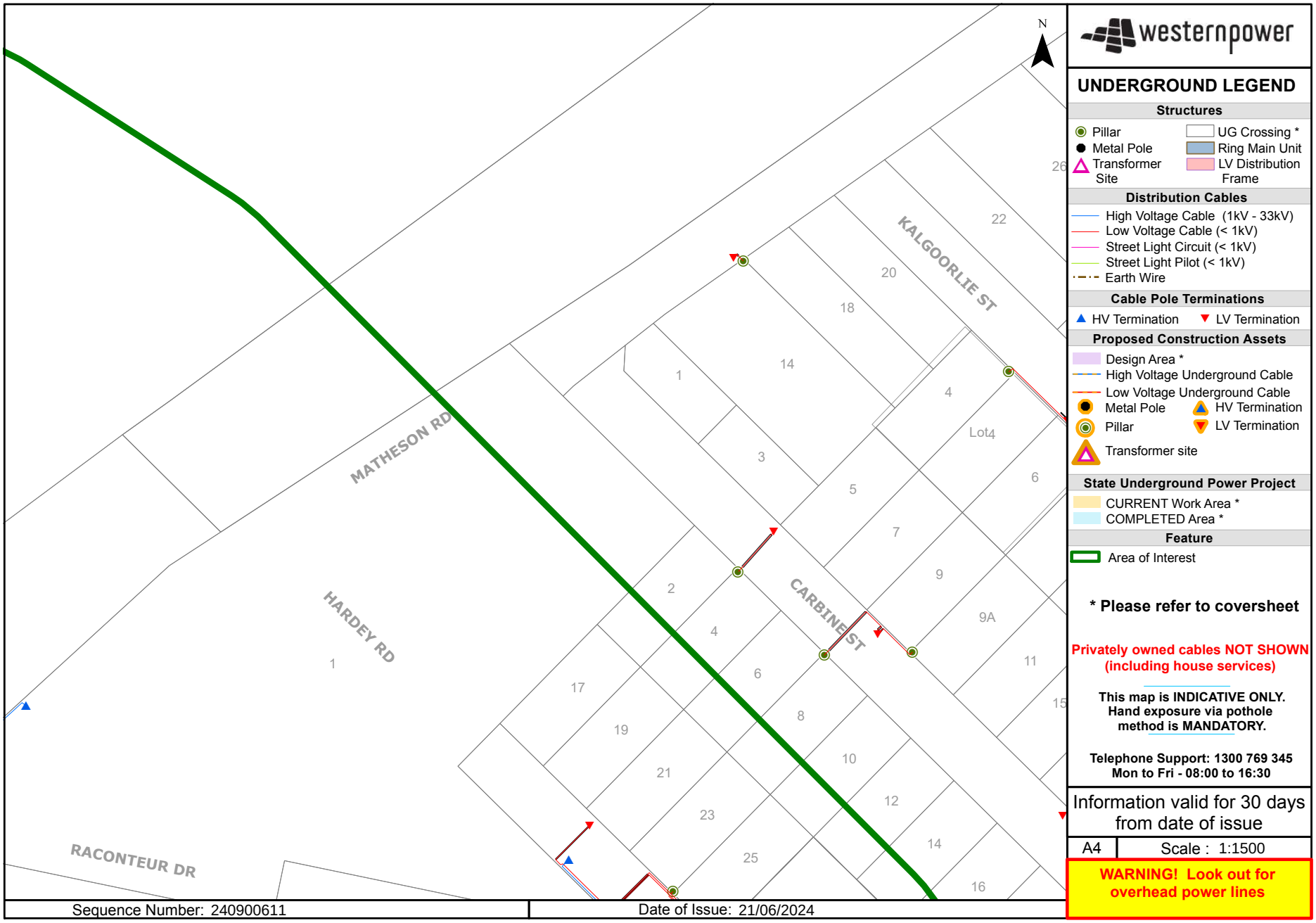
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OVERVIEW ONLY
1
2
3
4
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GRANDSTAND RD
RESOLUTION DR
THE BOARDWALK
RACONTEUR DR
MATHESON RD
KALGOORLIE ST
CARBINE ST
HARDEY RD
STONEHAM ST
DALY ST
GREAT EASTERN HWY
GREAT EASTERN HWY
HARDEY RD
Sequence Number: 240900611
Date of Issue: 21/06/2024
westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
Low Voltage Cable (< 1kV)
Street Light Circuit (< 1kV)
Street Light Pilot (< 1kV)
Earth Wire
Cable Pole Terminations
HV Termination
LV Termination
Proposed Construction Assets
Design Area *
High Voltage Underground Cable
Low Voltage Underground Cable
Metal Pole
Pillar
Transformer site
HV Termination
LV Termination
State Underground Power Project
CURRENT Work Area *
COMPLETED Area *
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:3075
WARNING! Look out for overhead power lines


N
GRANDSTAND RD
GRANDSTAND RD
RESOLUTION DR
MARINA DR
RACONTEUR DR
41
43
45
47
70
11
13
22
22
33
80
80
71
Sequence Number: 240900611
Date of Issue: 21/06/2024
westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
Low Voltage Cable (< 1kV)
Street Light Circuit (< 1kV)
Street Light Pilot (< 1kV)
Earth Wire
Cable Pole Terminations
HV Termination
LV Termination
Proposed Construction Assets
Design Area *
High Voltage Underground Cable
Low Voltage Underground Cable
Metal Pole
Pillar
Transformer site
HV Termination
LV Termination
State Underground Power Project
CURRENT Work Area *
COMPLETED Area *
Feature
Area of Interest
* Please refer to coversheet
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Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines




westernpower

## UNDERGROUND LEGEND

**Structures**

- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

**Distribution Cables**

- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

**Cable Pole Terminations**

- HV Termination
- LV Termination

**Proposed Construction Assets**

- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

**State Underground Power Project**

- CURRENT Work Area *
- COMPLETED Area *

**Feature**

- Area of Interest

*** Please refer to coversheet**

**Privately owned cables NOT SHOWN (including house services)**

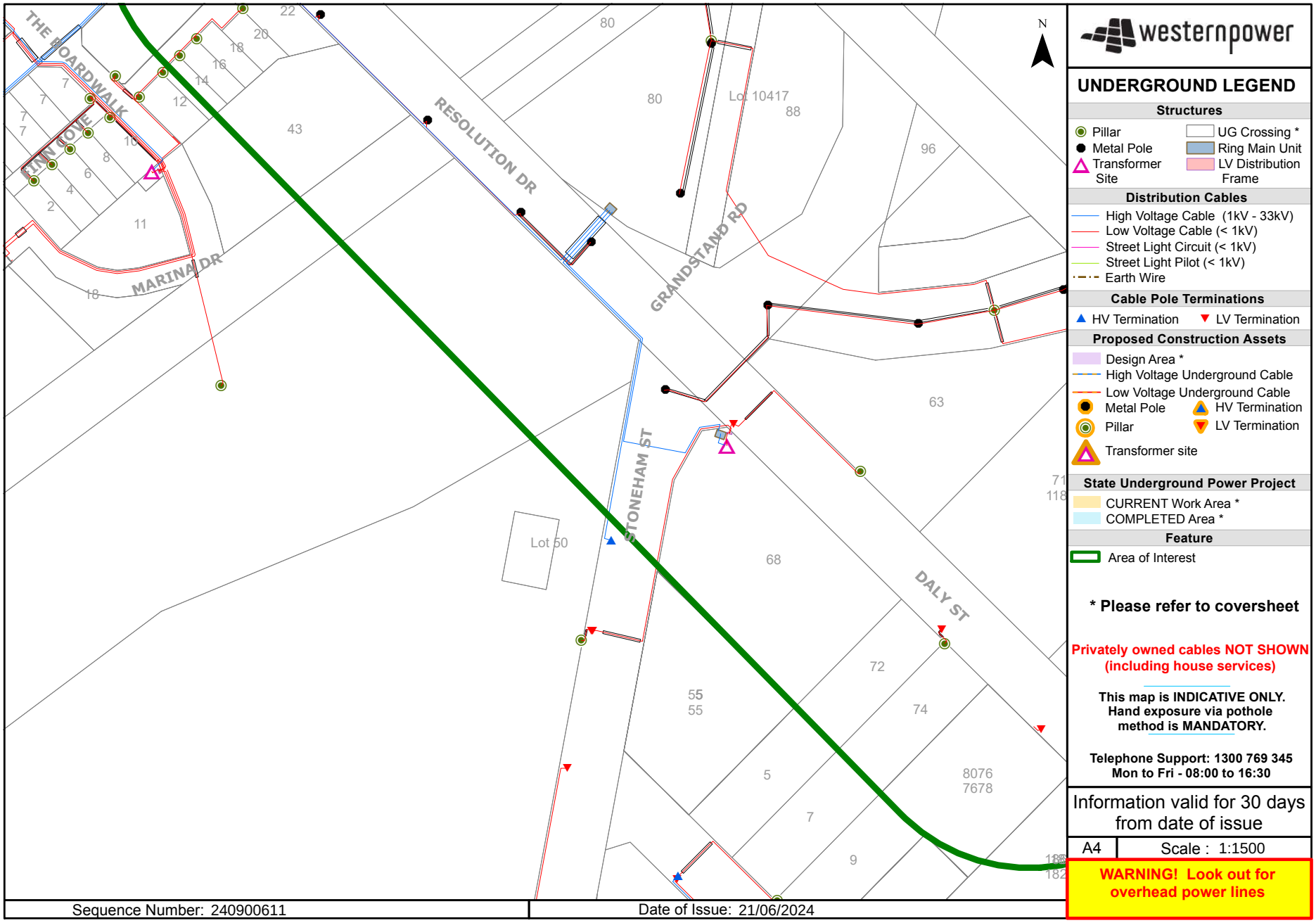
**This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.**

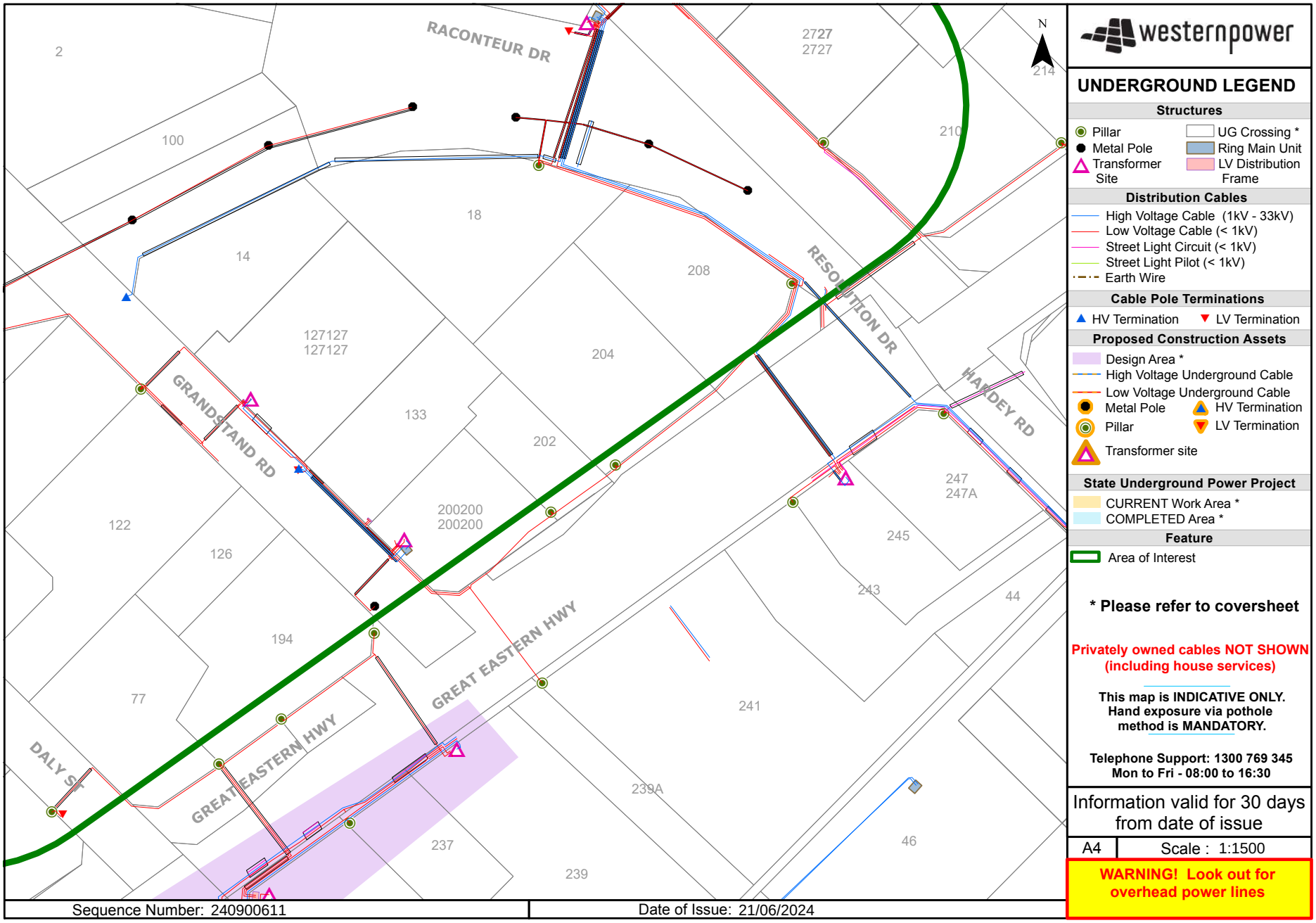
**Telephone Support: 1300 769 345**
**Mon to Fri - 08:00 to 16:30**

Information valid for 30 days from date of issue

A4 | Scale : 1:1500

**WARNING! Look out for overhead power lines**


THE BOARDWALK
TINN COVE
MARINA DR
RESOLUTION DR
GRANDSTAND RD
STONEHAM ST
DALY ST
Lot 10417
Lot 50
N
westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
Low Voltage Cable (< 1kV)
Street Light Circuit (< 1kV)
Street Light Pilot (< 1kV)
Earth Wire
Cable Pole Terminations
HV Termination
LV Termination
Proposed Construction Assets
Design Area *
High Voltage Underground Cable
Low Voltage Underground Cable
Metal Pole
HV Termination
Pillar
LV Termination
Transformer site
State Underground Power Project
CURRENT Work Area *
COMPLETED Area *
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
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Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines
Sequence Number: 240900611
Date of Issue: 21/06/2024




westernpower

## UNDERGROUND LEGEND

**Structures**

- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

**Distribution Cables**

- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

**Cable Pole Terminations**

- HV Termination
- LV Termination

**Proposed Construction Assets**

- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

**State Underground Power Project**

- CURRENT Work Area *
- COMPLETED Area *

**Feature**

- Area of Interest

*** Please refer to coversheet**

**Privately owned cables NOT SHOWN (including house services)**

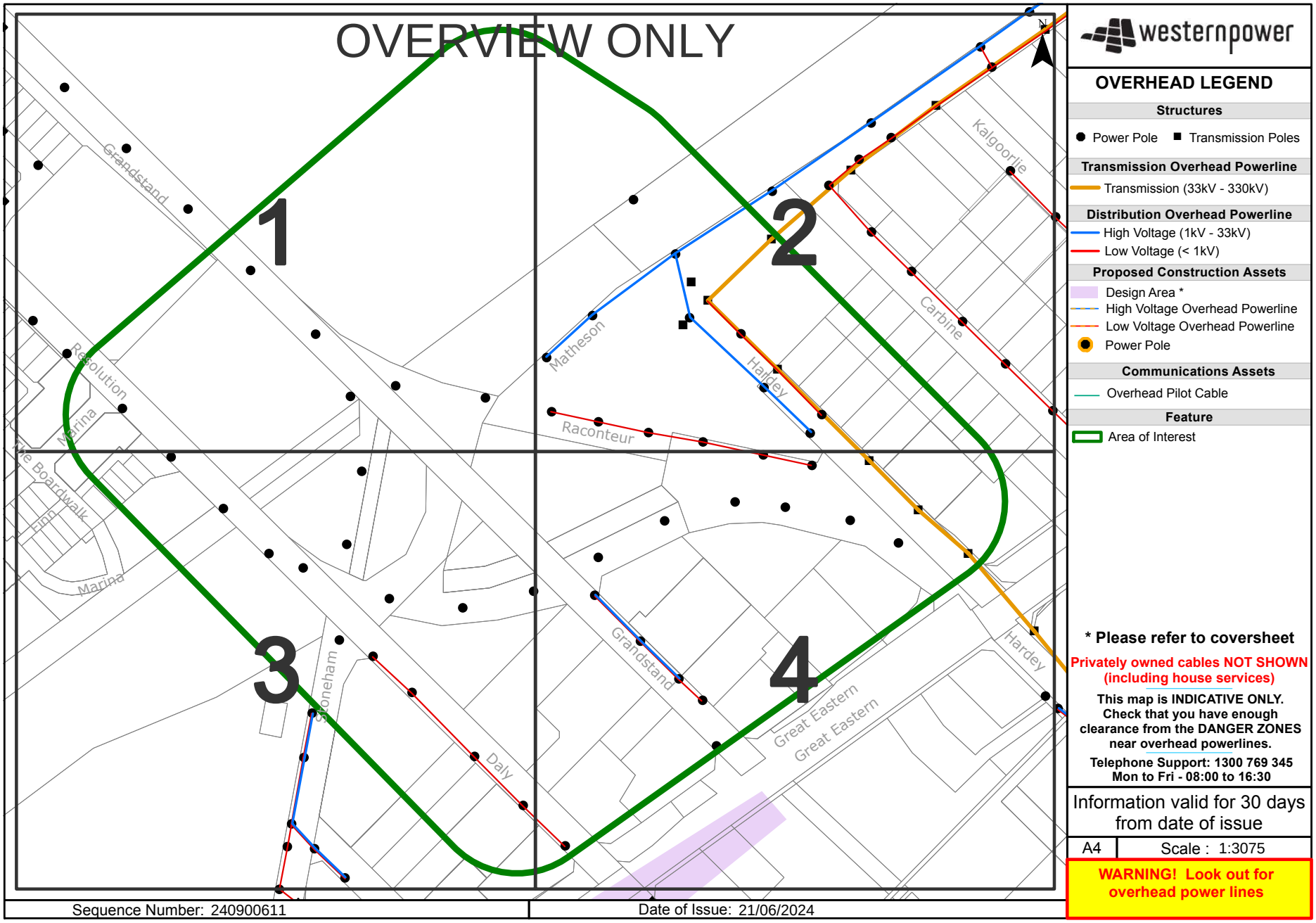
**This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.**

**Telephone Support: 1300 769 345**
**Mon to Fri - 08:00 to 16:30**

Information valid for 30 days from date of issue

A4 | Scale : 1:1500

**WARNING! Look out for overhead power lines**




westernpower

**OVERHEAD LEGEND**

**Structures**
- Power Pole
- Transmission Poles

**Transmission Overhead Powerline**
- Transmission (33kV - 330kV)

**Distribution Overhead Powerline**
- High Voltage (1kV - 33kV)
- Low Voltage (< 1kV)

**Proposed Construction Assets**
- Design Area *
- High Voltage Overhead Powerline
- Low Voltage Overhead Powerline
- Power Pole

**Communications Assets**
- Overhead Pilot Cable

**Feature**
- Area of Interest

*** Please refer to coversheet**

**Privately owned cables NOT SHOWN (including house services)**

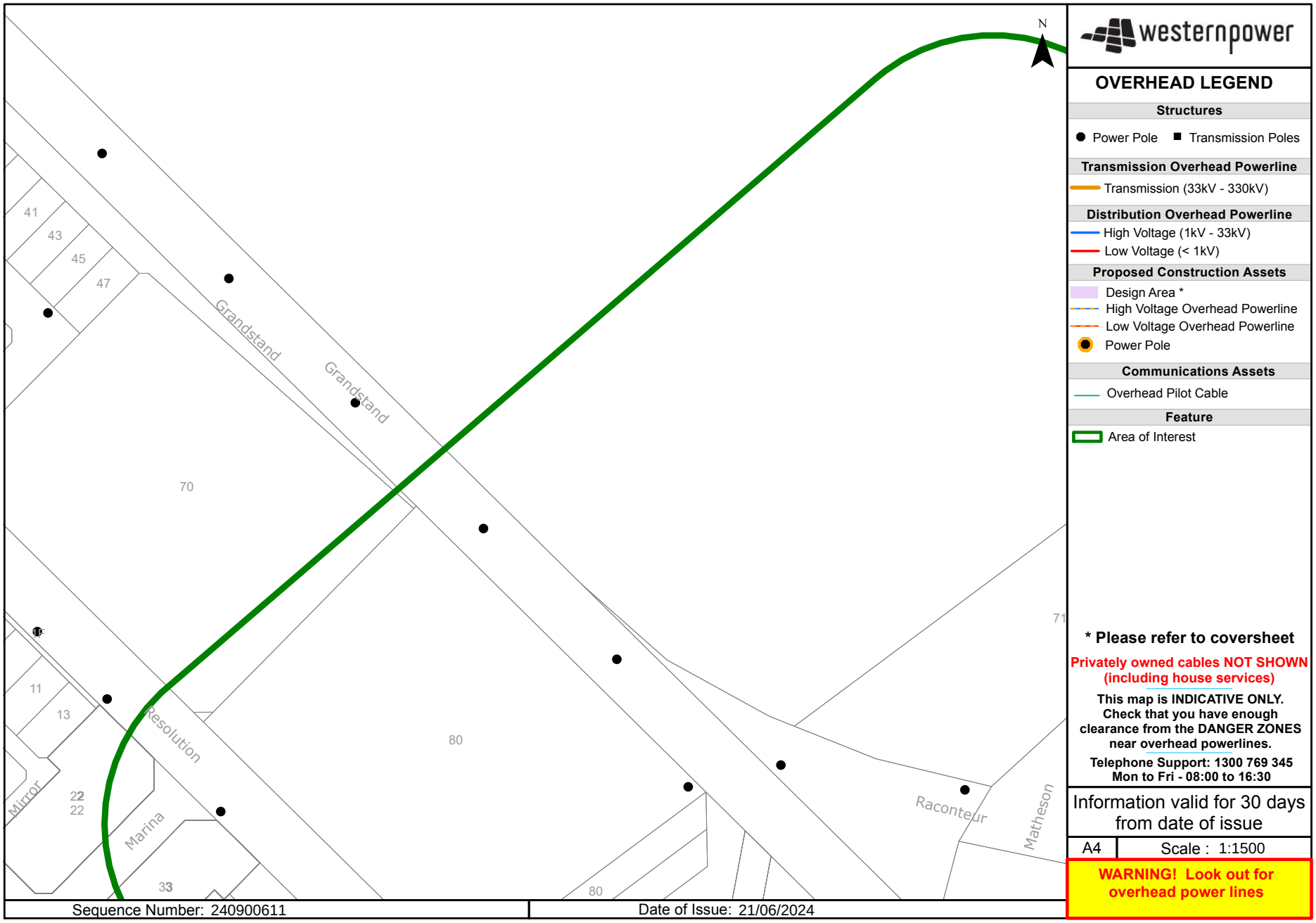
**This map is INDICATIVE ONLY. Check that you have enough clearance from the DANGER ZONES near overhead powerlines.**

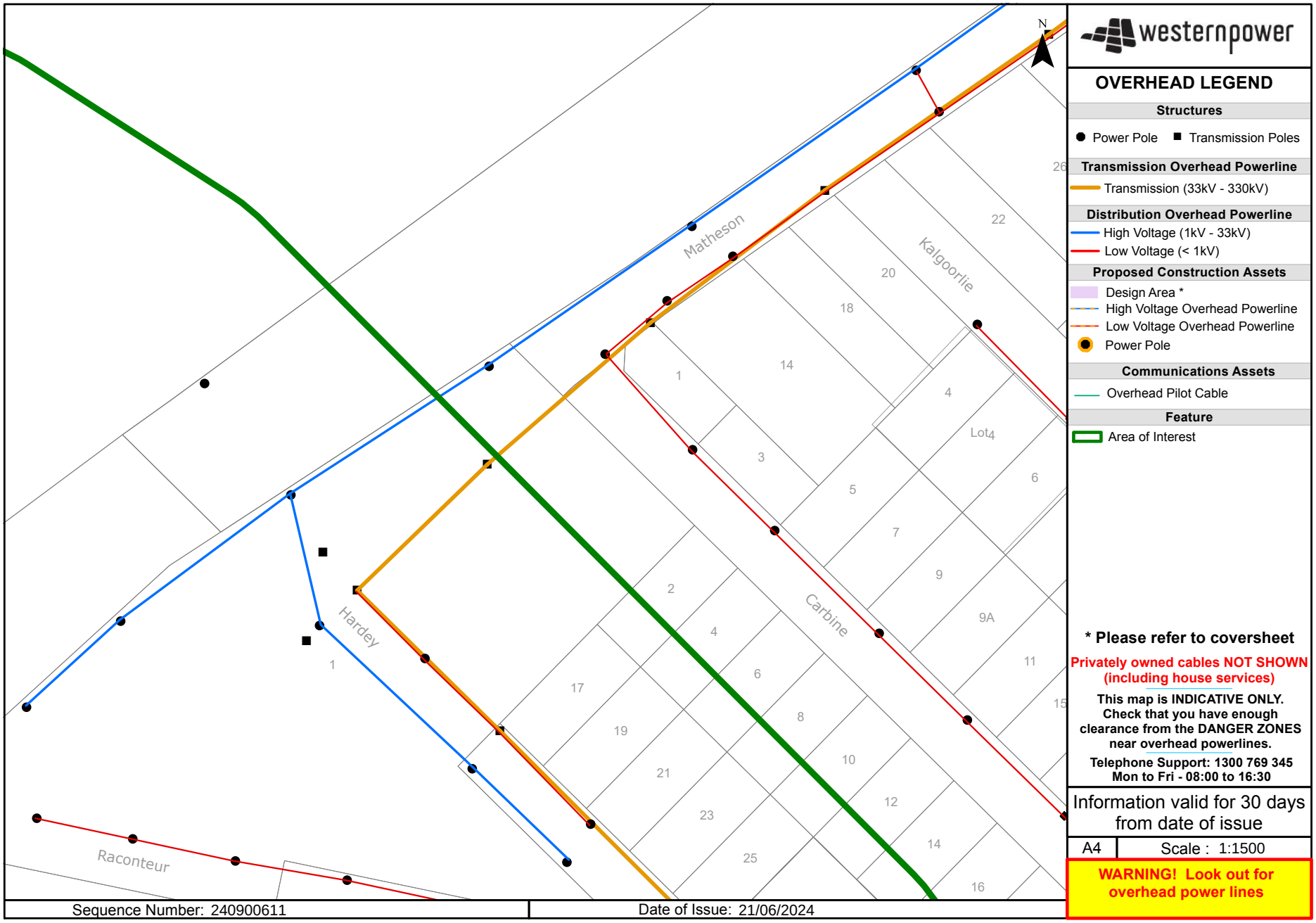
**Telephone Support: 1300 769 345**
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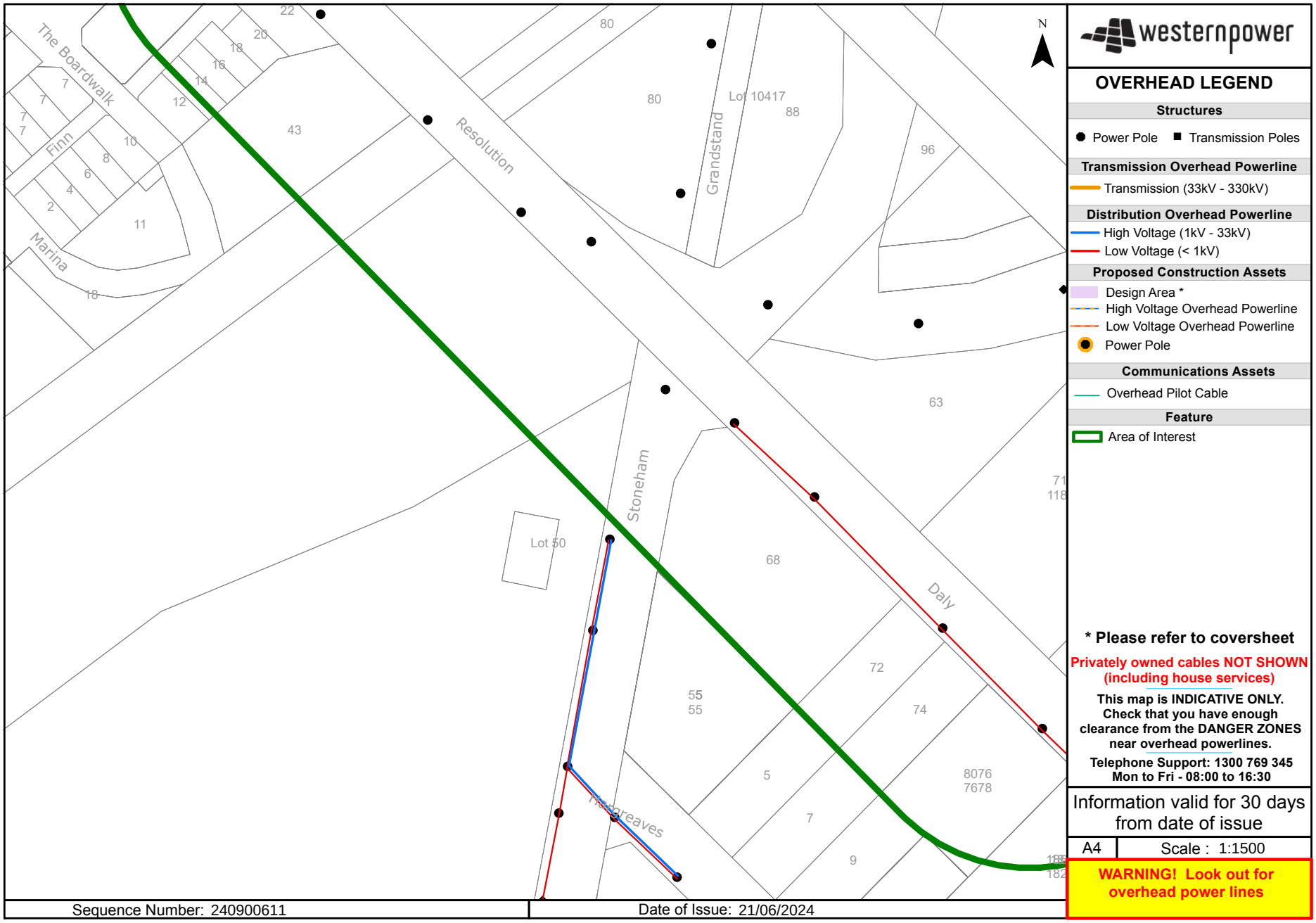
Information valid for 30 days from date of issue

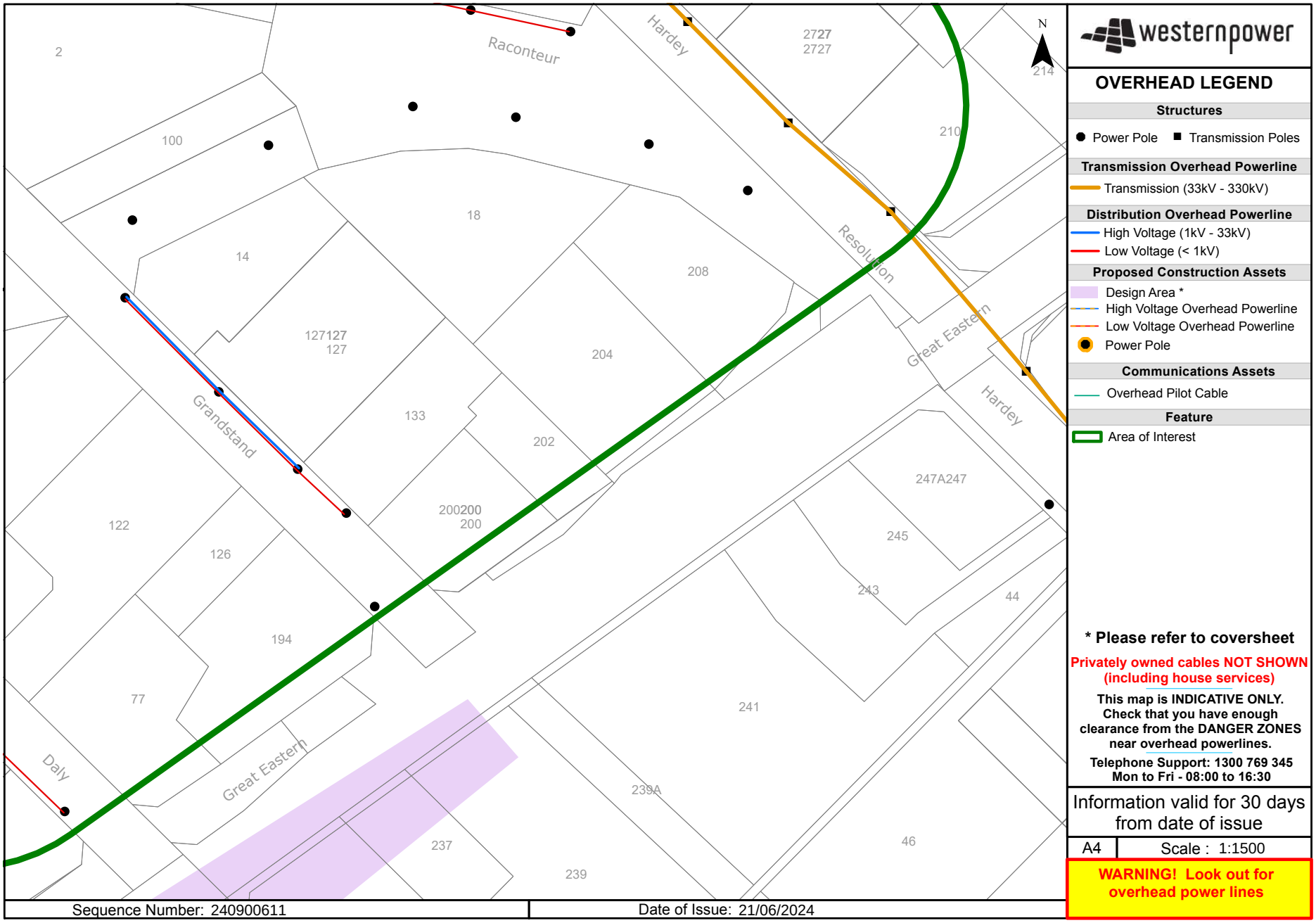
A4 | Scale : 1:3075

**WARNING! Look out for overhead power lines**


N
41
43
45
47
Grandstand
Grandstand
70
11
13
Resolution
Mirror
22
22
Marina
33
80
80
71
Raconteur
Matheson
Sequence Number: 240900611
Date of Issue: 21/06/2024
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
Low Voltage (< 1kV)
Proposed Construction Assets
Design Area *
High Voltage Overhead Powerline
Low Voltage Overhead Powerline
Power Pole
Communications Assets
Overhead Pilot Cable
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
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Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines


N
Matheson
Kalgoorlie
Carbine
Hardey
Raconteur
Lot4
Sequence Number: 240900611
Date of Issue: 21/06/2024
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
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A4
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WARNING! Look out for overhead power lines


The Boardwalk
Finn
Marina
Resolution
Grandstand
Stoneham
Daly
Hargreaves
Lot 10417
Lot 50
N
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
Low Voltage (< 1kV)
Proposed Construction Assets
Design Area *
High Voltage Overhead Powerline
Low Voltage Overhead Powerline
Power Pole
Communications Assets
Overhead Pilot Cable
Feature
Area of Interest
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A4
Scale : 1:1500
WARNING! Look out for overhead power lines
Sequence Number: 240900611
Date of Issue: 21/06/2024


Raconteur
Hardey
Resolution
Great Eastern
Hardey
Grandstand
Daly
Great Eastern
2
100
14
18
208
210
214
204
133
202
122
126
194
77
241
239A
237
239
46
44
243
245
247A247
200200
200
127127
127
2727
2727
N
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
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Power Pole
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Overhead Pilot Cable
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A4
Scale : 1:1500
WARNING! Look out for overhead power lines
Sequence Number: 240900611
Date of Issue: 21/06/2024

Job ID 36962243

## Precinct E

# End of document

**This document may exclude some files (eg. DWF or ZIP files)**

This document was automatically generated at a point-in-time. Be aware that the source information from which this document was created may have changed since it was produced. This document may contain incomplete or out-of-date information. Always check your enquiry details in the BYDA Referral Service for the most recent information. For copyright information refer to individual responses.

Job No 36962238

byda.com.au

## Contact Details

| Contact | Contact number | Company | Enquirer ID |
|---|---|---|---|
| Justin Zielinski | 0420 304 451 | - | 3140642 |

**Email**
jzielinski@tabec.com.au

**Address**
54 Havelock Street
West Perth WA 6005

## Job Site and Enquiry Details

**WARNING:** The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

| Enquiry date | Start date | End date | On behalf of | Job purpose | Locations | Onsite activities |
|---|---|---|---|---|---|---|
| 21/06/2024 | 24/06/2024 | 24/06/2024 | Private | Design | Both Road | Planning & Design |




Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

| User Reference | Address | Notes/description |
|---|---|---|
| Preinct D | 70 Grandstand Road<br>Ascot WA 6104 | - |

## Your Responsibility and Duty of Care

- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the Privacy Policy and Term of Use.
- For more information on safe digging practices, visit www.byda.com.au

## Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

| Referral ID (Seq. no) | Authority Name | Phone | Status |
|---|---|---|---|
| 240900580 | ATCO Gas Australia | 1300 926 755 | NOTIFIED |
| 240900576 | NBN Co (WA) | 1800 687 626 | NOTIFIED |
| 240900574 | Optus (WA) | 1800 505 777 | NOTIFIED |
| 240900578 | Telstra (WA) | 1800 653 935 | NOTIFIED |
| 240900575 | Vocus (WA) | 1800 262 663 | NOTIFIED |
| 240900579 | Water Corporation | 13 13 95 | NOTIFIED |
| 240900577 | Western Power | 13 10 87 | NOTIFIED |

END OF UTILITIES LIST

**Lodge your FREE enquiry online any time at byda.com.au**

# ATCO UNDERGROUND ASSET DETAILS ASSETS AFFECTED
GAS DIVISION

**ASSETS AFFECTED – see accompanying Plan**

**Job No:** **36962238**
**Sequence No:** **240900580**
Date of Issue: 21 June 2024
Phone: **1300 926 755**

**Justin Zielinski**
**ATCO Gas Australia**
54 Havelock Street
West Perth
WA 6005

**BYDA Utility Registration Name:** Private
**BYDA Location:** **70 Grandstand Road Ascot WA 6104**

**ATTENTION:** This response to your enquiry has been interpreted from details in your requested DBYD picture location request only (not any street address you gave). It is your duty to ensure the accompanying plan/s match your geographical area of works.

**IF YOU SEE, HEAR, SMELL OR OTHERWISE DETECT GAS,**
**LEAVE THE IMMEDIATE AREA AND THEN CALL 13 13 52**

Our records indicate that ATCO gas infrastructure ***IS PRESENT*** in the vicinity of and/or surrounding area of the above enquiry. This response relates only to ATCO assets. Your Duty of Care requires that personnel **Must** at all times comply with, and have on site, this information sheet and the accompanying plan(s). All plans are subject to this information sheet. You should refer to the ATCO Self-service Portal (Link Here) or if unsure, contact ATCO on **1300 926 755** during business hours.

All information provided is to be used as a guide only (see Disclaimer item **5**). It does not absolve you or third parties from your Duty of Care obligations, including to take additional precautions where work has the potential to impact on gas assets, public safety or the environment, or from your duties at law (including Reg 3.21 of the Occupational Safety and Health Regulations 1996).

## WARNINGS

- No works of any type within 15 metres of any **CRITICAL GAS ASSET** infrastructure without prior approval from ATCO
- **NO HOT WORK** within 15 metres of any gas infrastructure except in compliance with applicable laws & *Australian Standard 1674.* **Do Not** let heat sources or hot works impact on any gas infrastructure and take into consideration that the ground or adjacent structures may also be capable of transmitting heat so as to circumvent protection afforded by a heat shield or barrier
- **DANGER** - Gas can cause asphyxiation and is flammable. Keep all ignition sources well away (e.g., flames, matches/ lighters, sparks, electrical devices, vehicles or engines, mobile phones, cameras)
- Gas pipes **Must Not** be unsupported or left without adequate cover or protection without prior approval from ATCO
- Damage to the pipe coating or pipe itself can be very dangerous if not given immediate attention. Report any damage to ATCO immediately on **13 13 52**. **Do Not** attempt to repair any damaged gas infrastructure
- No alteration or removal of live or abandoned gas infrastructure without prior written approval from ATCO
- Any abandoned or proposed gas infrastructure indicated on the gas plans **Must** be treated as live
- Never assume the location or depth of any gas infrastructure. Pipes may not follow straight lines or maintain a constant depth. Always check carefully (e.g., by careful hand digging of potholes)
- Unauthorised repairs or tampering with gas infrastructure may result in prosecution under the *Energy Operators (Powers) Act 1979*. ATCO Gas Australia reserves all rights to recover compensation for loss or damage to its gas infrastructure or other property including for indirect or consequential losses.

**PLANS:**

Plans provided are current for **30 days only** from date of request. You must use current plans at all times.

Plans do not show all gas service lines (which connect gas mains to individual meter positions). See condition **3.c)** below.

If plan shows **additional detail** symbols ( * ) or ( ) in the area of proposed works it is **your duty** to obtain that further detail from the number below.

Plans (including the location of pipes, services, infrastructure and boundaries) are **approximate only**. You **Must** use safe and proper procedures – including **potholing** (see condition **4** below).

Plans are not a guide as to gas availability for connection purposes.

**To call ATCO:** **Weekdays from 7.30am to 3.30pm, call – 1300 926 755 After hours, weekends and emergencies, call – 13 13 52**

**CONDITIONS FOR WORKS IN THE VICINITY OF ATCO ASSETS**

**1. Compliance with Warnings**

You **Must** comply with the Warnings contained in this information sheet and the accompanying plan(s).

**2. Compliance with 'Working around Gas Infrastructure' Document (Link Here) applicable laws and duty of care**

All work (including but not limited to using Excavator's Augers, Directional, drilling machines, 'Ditch Witch' type trenching machine, Loader, Dozer, Skid Steer (Bob Cat)) **Must** comply with all applicable requirements in the 'Working around Gas Infrastructure' Document and with all applicable laws and Australian Standards. All due care must be exercised to locate any gas infrastructure in the vicinity and when conducting any works near them.

**3. All Gas Infrastructure**

All work that may have any impact upon any gas infrastructure (see **3.a)**, **b)** and **c)** below for examples) should be carefully planned with notification to ATCO well in advance of commencement. Contact ATCO on **1300 926 755** or visit Atco's online self-service portal (Link Here). Amongst other things, this includes excavation of or near gas pipelines, boring/drilling, crossings of pipelines (including by other underground infrastructure e.g. drains, power cables, etc.), road works and structural installations. In addition:

a) Critical Asset

No works of any type are permitted within 15 meters of these pipelines without prior approval from ATCO. For approvals contact ATCO on **1300 926 755** or visit the Atco online Self-service portal (Link Here)

You **Must** ascertain the location of any Critical Asset, in relation to your proposed work by:

- Locating a straight line between two marker danger signs, and
- Assessing the distance from this line to your proposed work area.

ATCO may require stand-by supervision during your works and will advise of attendance requirements.

b) Non Critical Assets

These pipelines are installed in most streets throughout the Perth metro area and several country centers. Main valves, regulator sets, and test points also exist at intervals along these pipelines. Where work may impact upon these pipelines or assets then ATCO **Must** be contacted as per item **3** above.

c) Gas Services and Meters

If a gas meter is installed on a property, an underground gas service pipe will run from the meter position to the gas main in the street. Plans do not show all gas service lines (with the exception of Critical Assets), but their presence must be anticipated. Most gas meter boxes installed since 1996 will include a sticker giving approximate guidelines for the gas service line location. All due care must be exercised to locate any gas services in the vicinity and when conducting any works near them.

**4. Compliance with Safe Work Practices**

It is your responsibility to have and comply with adequate safe work practices and procedures. Without limiting your obligations:

**PLAN** The complete & current Before you Dig Australia documentation and plans must always be on site & referred to for the duration of work. Refer to regulation 3.21 of the Occupational Safety and Health Regulations 1996 and the Utility Providers "Code of Practice" for further useful information.

**PREPARE** Prepare by reviewing the Before you Dig Australia Documentation and contacting ATCO if you need assistance. Look for onsite ATCO asset and infrastructure clues such as pit lids, marker posts and meters. No works of any type are permitted within 15 meters of a **CRITICAL ASSET** without prior approval from ATCO. For approvals contact ATCO on **1300 926 755** or visit the Atco website Self Service portal (Link Here) and allow suitable

processing time. Atco recommends engaging a BYDA Certified Locator which includes undertaking electronic location prior to potholing.

**POTHOLE** Using current Before you Dig Australia plans, all gas pipes should be located (including any deviation in the direction of a gas pipe) by exposing them by careful digging using a HAND SHOVEL. Where the proposed work is parallel to a gas pipeline, pothole every 10 meters along the entire route. Damage to the pipe coating or to the pipe itself can create a very dangerous situation if not given immediate attention. If damage does occur, it **Must** be reported to ATCO immediately on Ph. **13 13 52**.

**PROTECT** Supervise and monitor all excavations near gas infrastructure using a dedicated spotter. Where any gas infrastructure is required to be exposed, adequate protection of the gas infrastructure is required to prevent potential damage. Also implement appropriate controls when conducting 'hot work' (in accordance with AS 1674) in the vicinity of the ATCO infrastructure such as; isolation; separation distance; the placement of an effective non-combustible barrier of sufficient size and thermal resistance for the intensity, type and duration of heat exposure; gas monitoring; monitoring the environment surrounding the ATCO infrastructure to ensure it is not being impacted by the work, and other controls as necessary.

**PROCEED** You should **only proceed** with your excavation work after you have planned, prepared, potholed (unless prohibited) and have protective measures in place. All locations markers/pegs are to be removed on completion of works. If you are unsure, **DO NOT** Proceed. Call ATCO on **1300 926 755**

**5. Disclaimer and Further Terms**

a) Nothing in this document, any accompanying plan or the 'Additional Information for Working around Gas Infrastructure' (AGA-O&M-PR24) (together called "**Documents**") purports to exclude or modify any term, condition or warranty to the extent that by law it cannot lawfully be excluded or modified by agreement or notice, including but not limited to those contained in Schedule 2 of the *Competition and Consumer Act* 2010 (Cth) and corresponding provisions of any state legislation.

b) If any of ATCO, or their respective related entities, officers, employees, agents, contractors or advisers (together called "**Associates**") is liable for a breach of a term, condition or warranty described in paragraph **5.a)** above, its liability is, to the fullest extent permitted by law, limited to any one or more of the following as it determines in its absolute discretion:

i) in relation to goods supplied by them, replacing or repairing the goods, supplying an equivalent item, paying the cost of replacing or repairing the goods or paying the cost of acquiring or hiring an equivalent item; and

ii) in relation to services supplied by them, the re-supply of the services or the payment of the cost of having the services re-supplied.

c) Subject to paragraphs **5.a)** and **b)**, but otherwise despite any other provision in the Documents, no representation or warranty is made or given (whether expressly or by implication) by any of ATCO or their respective Associates in respect of any information contained or referred to in any of the Documents or in any other communication from ATCO concerning any of the Documents or the subject matter of any of the Documents ("Information"). In particular, but without limiting the generality of the foregoing limitation, none of ATCO or their respective Associates makes any warranty or representation as to the truth, accuracy, completeness, reliability, currency, timeliness, quality or fitness for any purpose of or the standard of care taken in the preparation of any Document or Information (including, but not limited to, the accuracy of the scale of, or the location of anything or symbol shown on, any plan or diagram).

d) Subject to paragraphs **5.a)** and **b)**, to the maximum extent permitted by law, none of ATCO or their respective Associates is liable to any person or other body ("**Recipient**") who receives or otherwise obtains access to all or any part or parts of the Documents or Information, in any way (including, but not limited to, liability for negligence, breach of statutory duty or lack of care) in respect of any cost, expense, damages, loss or liability, including, but not limited to:

i) any financial or economic loss, cost, expense or damage, including but not limited to loss of production, loss of profit, loss of revenue, loss of use, loss of contract, loss of goodwill or loss of business opportunity;

ii) any new or increased costs or expenses, including but not limited to financing or operating costs;

iii) any failure to achieve any actual or anticipated saving in respect of any cost or expense;

iv) any cost, expense, damage or loss resulting from any liability of the Recipient to any other person or body howsoever and whensoever arising, suffered or incurred by the Recipient in relation to, or in connection with, the disclosure to them of, or use of, or reliance on, all or any

part or parts of the Documents or Information.

e) By using any Document or Information, each Recipient is taken to represent and warrant to ATCO that the Recipient will comply with the conditions and other terms referred to in the Documents or Information, including but not limited to conditions that:

i) the Recipient **Must** comply with the conditions in numbered paragraphs **1** to **4** above and this paragraph **5**;

ii) as between ATCO and each Recipient, ATCO owns the Information and all rights and title in and to the Information are to remain vested in ATCO;

iii) no Recipient has any right, title or interest in the Information or, except as expressly provided for in the Documents, any license or right to copy, alter, modify, publish or otherwise use or deal with the Information without prior written approval from ATCO;

iv) ATCO makes no representation and gives no warranty as to its right to disclose any Information;

v) the Recipient relies on any Information entirely at its own risk and expense;

vi) the Recipient **Must** undertake its own independent due diligence and investigations in relation to the Information;

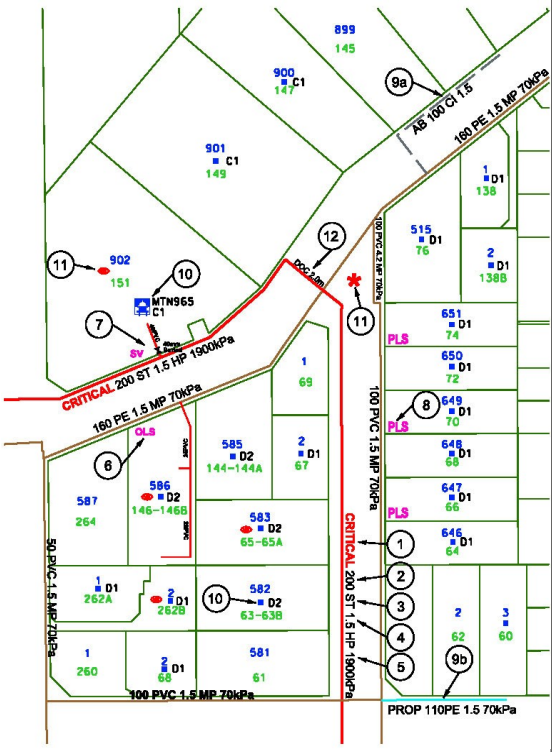
vii) none of ATCO or their respective Associates owes the Recipient any duty of care in respect of the Information; and

viii) none of ATCO or their respective Associates is under any obligation to correct, update or revise any Documents or Information.

## GAS MAIN AND SERVICE IDENTIFICATION

**LEGEND**

1. Critical Asset (See **WARNINGS** page 1)
2. Pipe Diameter (millimetres)
3. Pipe Material
   CI = Cast Iron PE = Polyethylene
   GI = Galvanised Iron PVC = PVC
   ST = Steel
4. Alignment (in metres from property line)
5. Pressure in main (MP 70 kPa = Medium Pressure and MAOP (Maximum Allowable Operating Pressure)
6. Off-line Service – service may not be straight line to meter. (**WARNING – OLS may not always be shown on plan**. See item **Error: Reference source not found** above)
7. Service Valve in the vicinity
   (**NOTE:** Service Valve may be **"BURIED"**)
8. Pre-laid Service laid in Common Trench
9. Main Status: (See **WARNINGS** page 1)
   9a. AB = Abandoned Mains
   9b. PROP = Proposed Mains
10. Customer Connection: Does not indicate actual location of Meter Position
    D2 (D = Domestic & 2 = Number of Meters)
    C1 (C = Commercial & 1 = Number of Meters)
11. **Additional detail available and Must be obtained if within area of proposed works – see page 2 above.**
12. Depth of Cover (DOC) in metres.




IF UNSURE, PLEASE CONTACT ATCO ON **1300 926 755**

ATCO

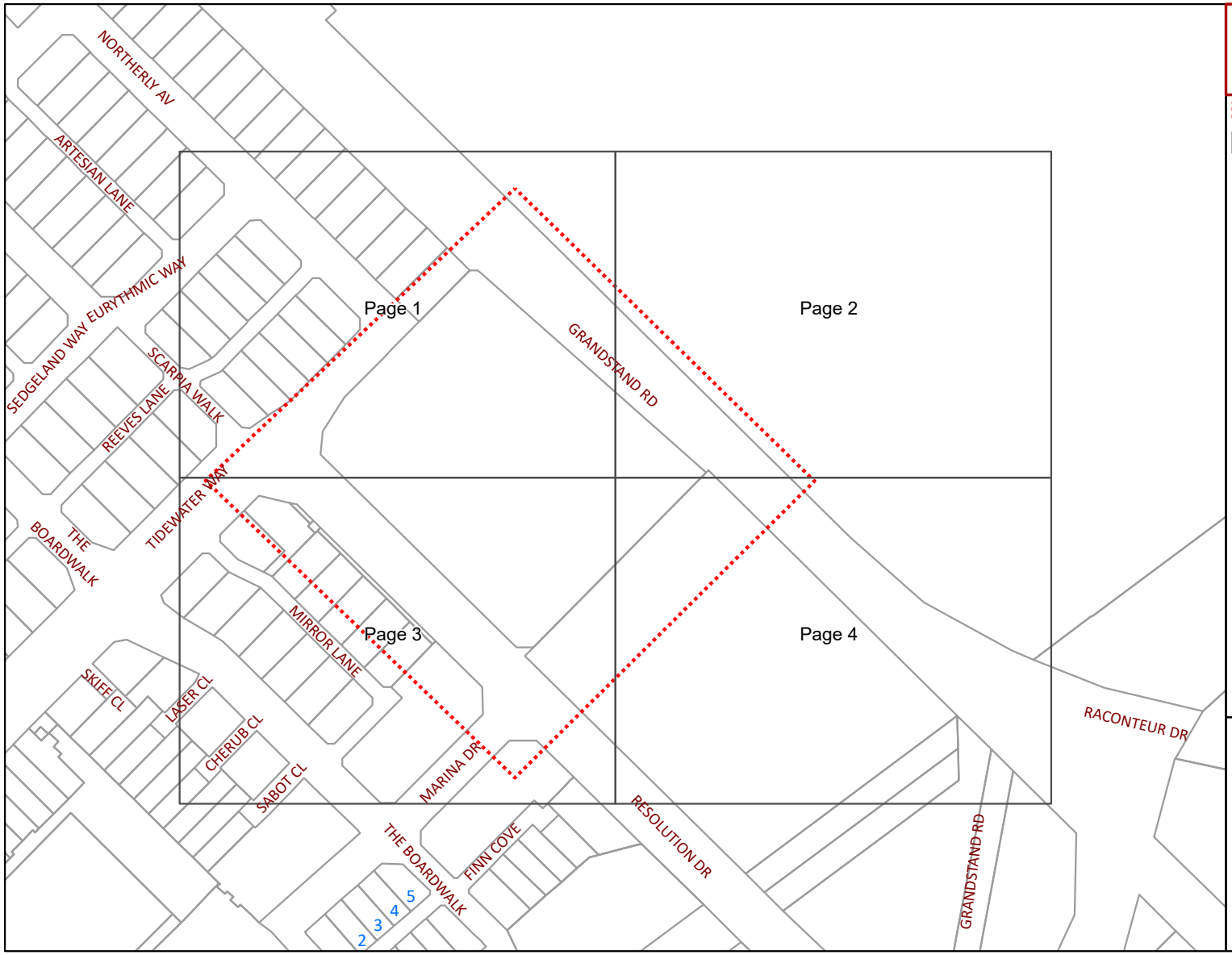
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ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)
Index Sheet

Seq # 240900580
Job # 36962238

BYDA Location: 70 Grandstand Road Ascot 6104
Scale: 1:2,000

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**WARNING**
**Refer to Cover Sheet for Further Information**

BYDA Enquiry

Detailed map page

Please refer to Symbols Sheet for Further Information

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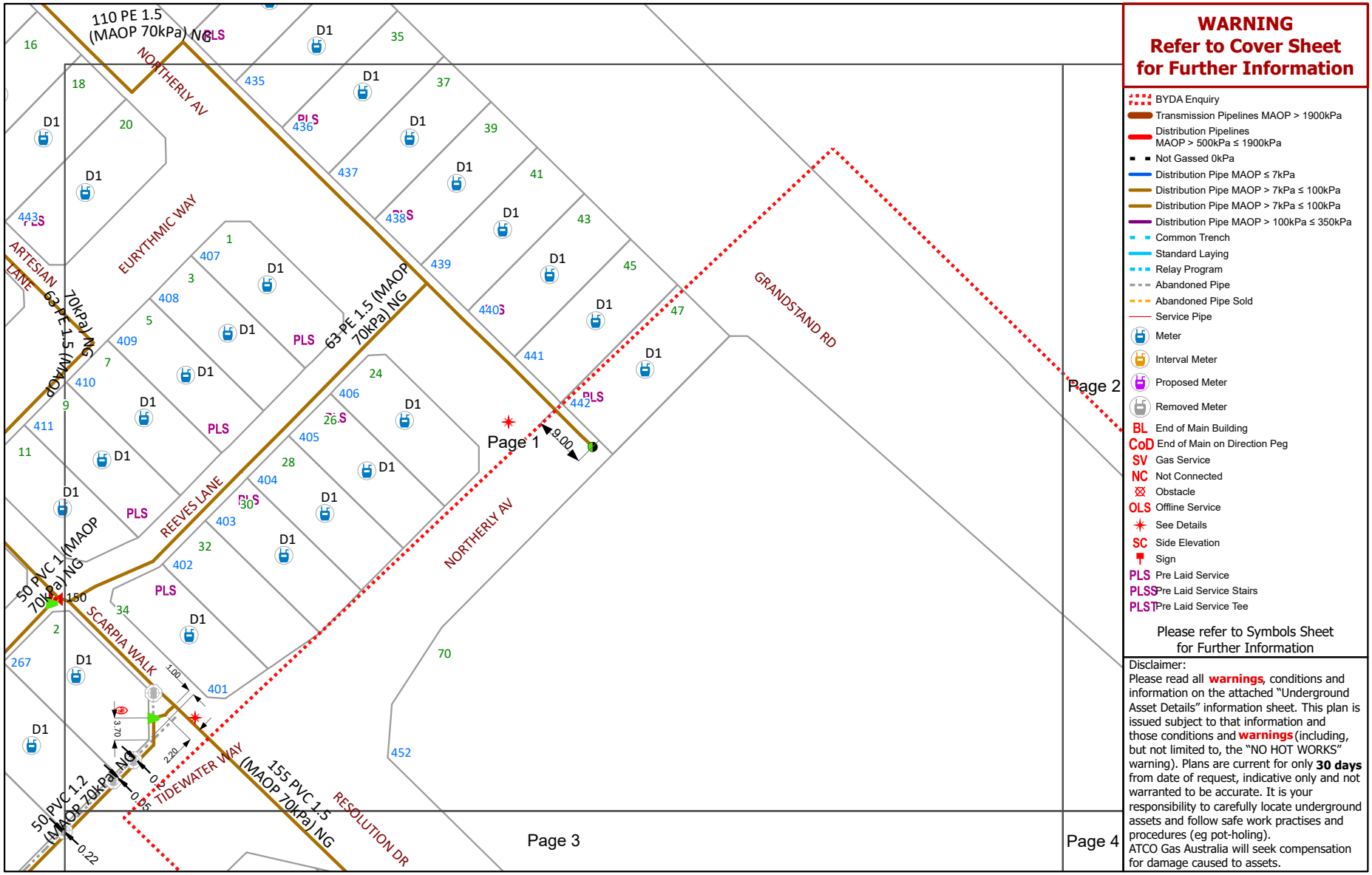
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ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)

Seq # 240900580
Job # 36962238

BYDA Location: 70 Grandstand Road Ascot 6104
Scale: 1:800

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**WARNING**
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- BYDA Enquiry
- Transmission Pipelines MAOP > 1900kPa
- Distribution Pipelines MAOP > 500kPa ≤ 1900kPa
- Not Gassed 0kPa
- Distribution Pipe MAOP ≤ 7kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 100kPa ≤ 350kPa
- Common Trench
- Standard Laying
- Relay Program
- Abandoned Pipe
- Abandoned Pipe Sold
- Service Pipe
- Meter
- Interval Meter
- Proposed Meter
- Removed Meter
- BL End of Main Building
- CoD End of Main on Direction Peg
- SV Gas Service
- NC Not Connected
- Obstacle
- OLS Offline Service
- See Details
- SC Side Elevation
- Sign
- PLS Pre Laid Service
- PLSS Pre Laid Service Stairs
- PLST Pre Laid Service Tee

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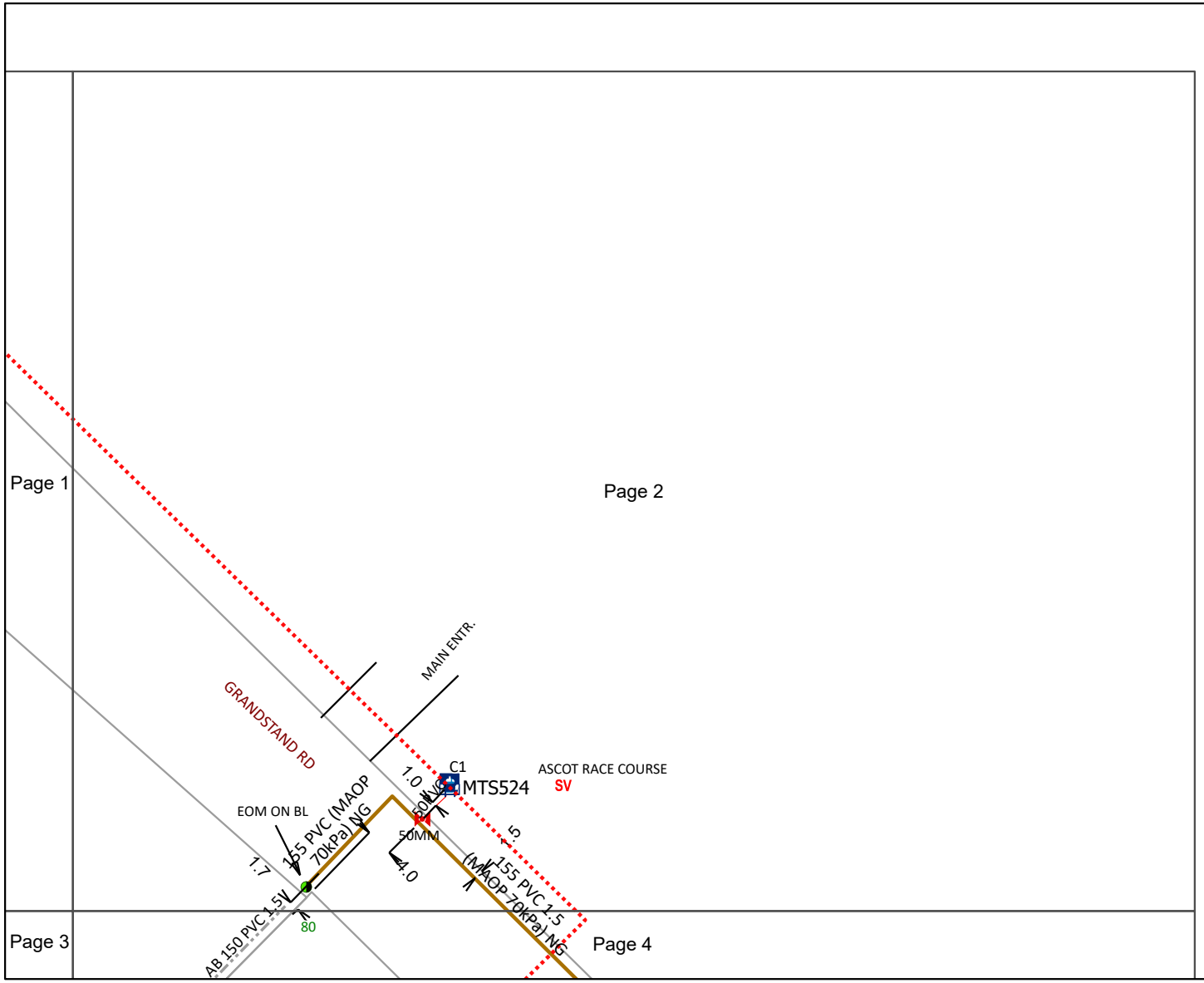
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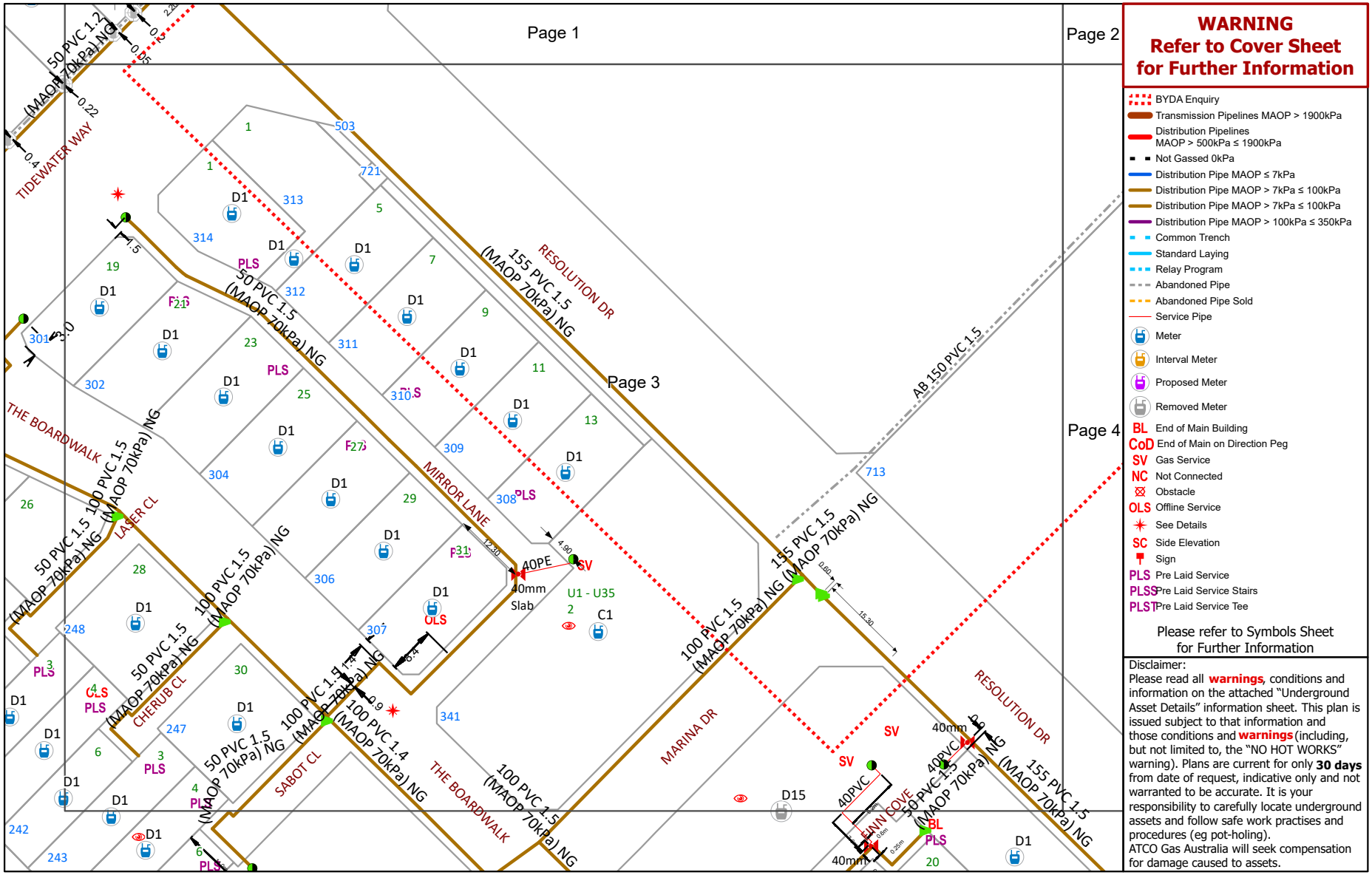
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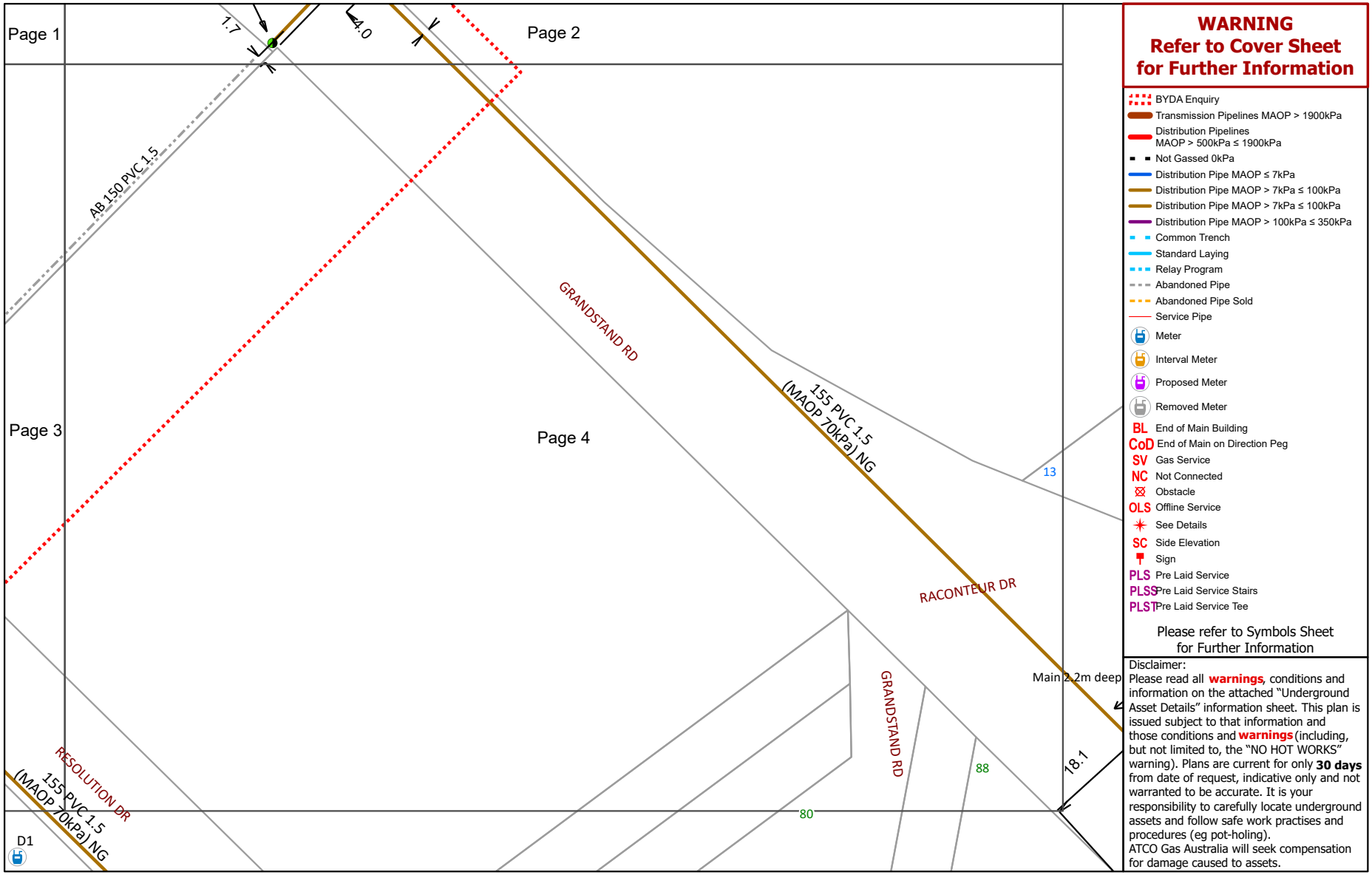
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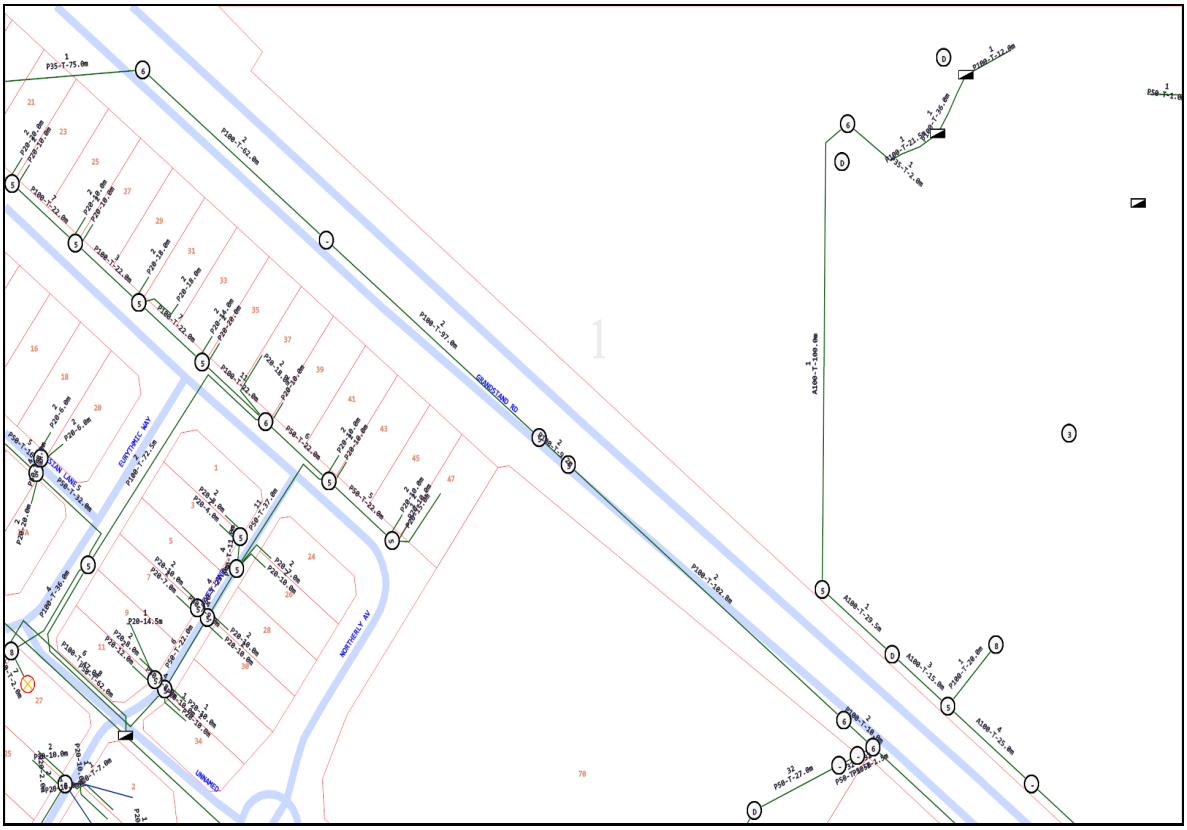
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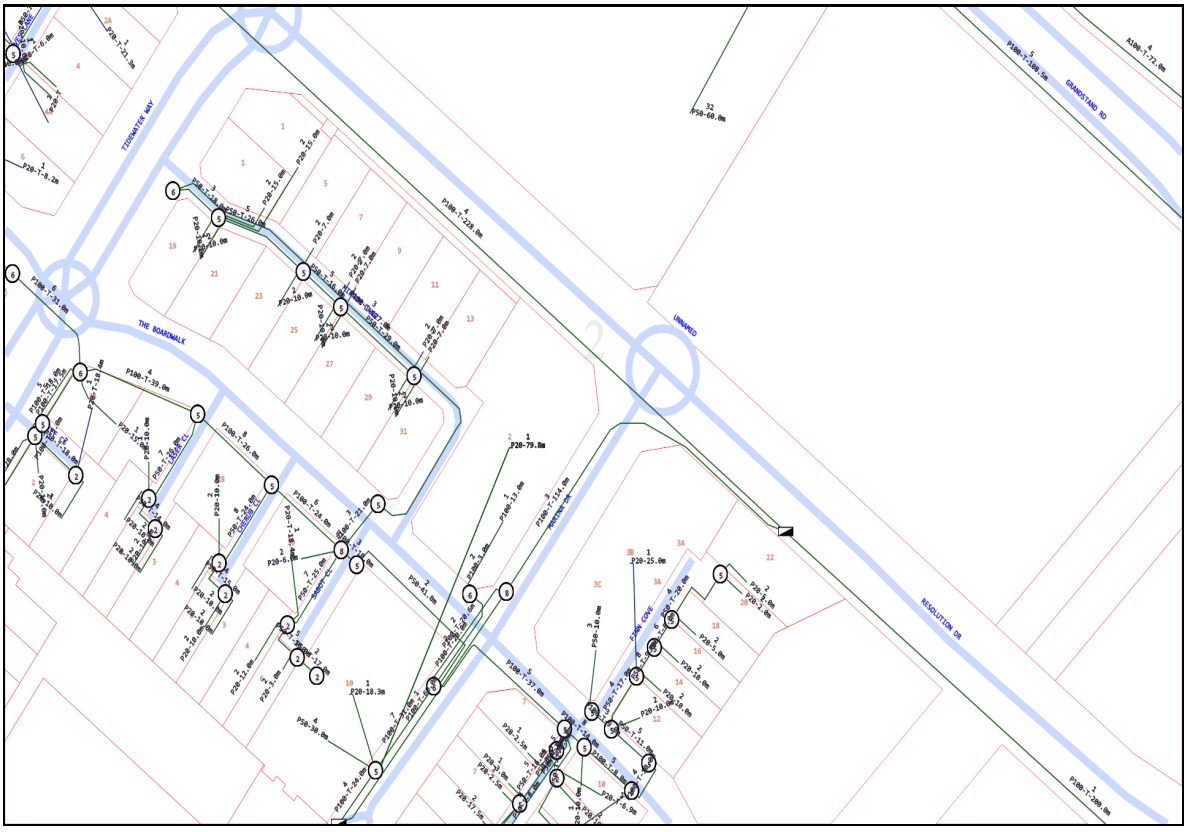
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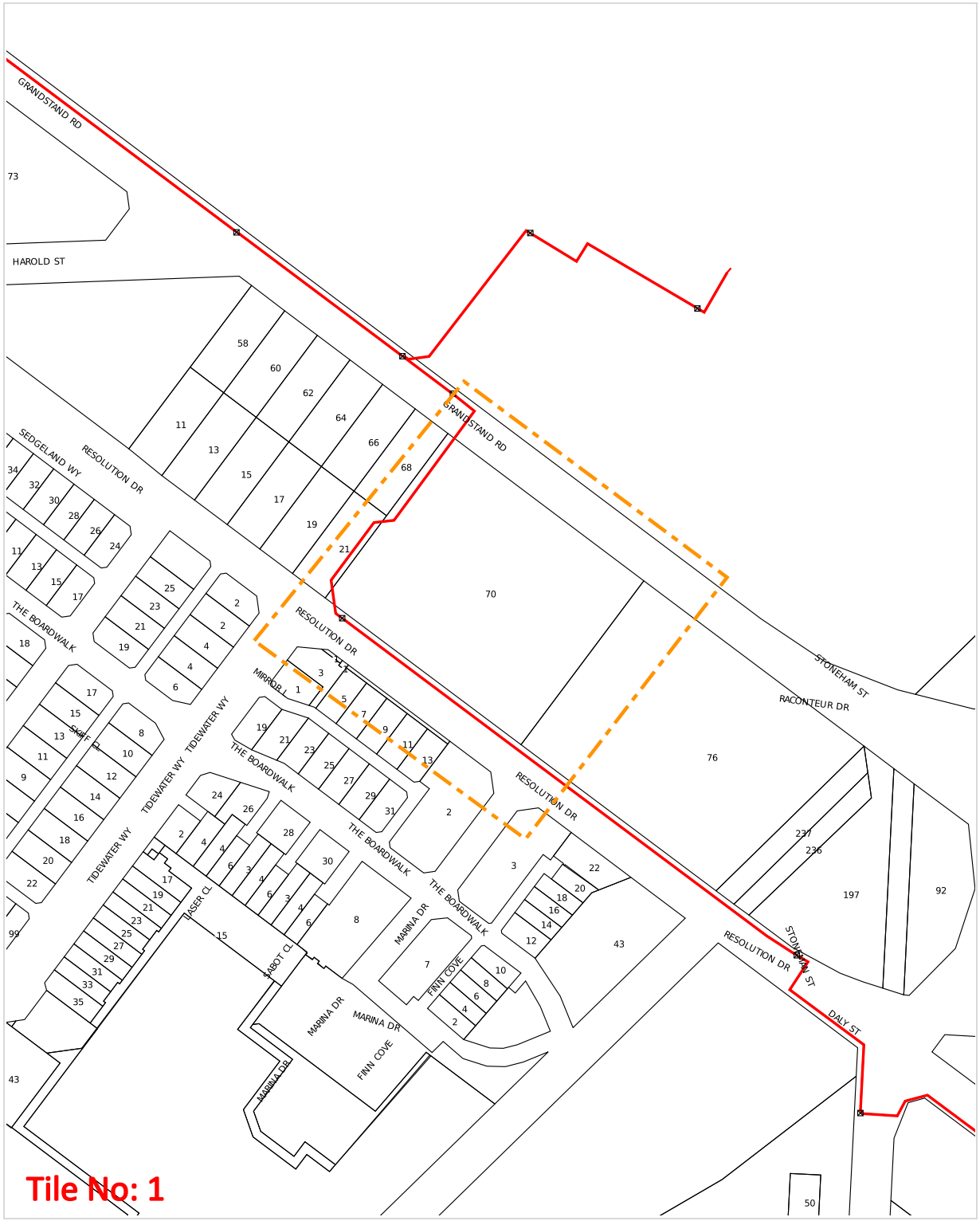
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## Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.




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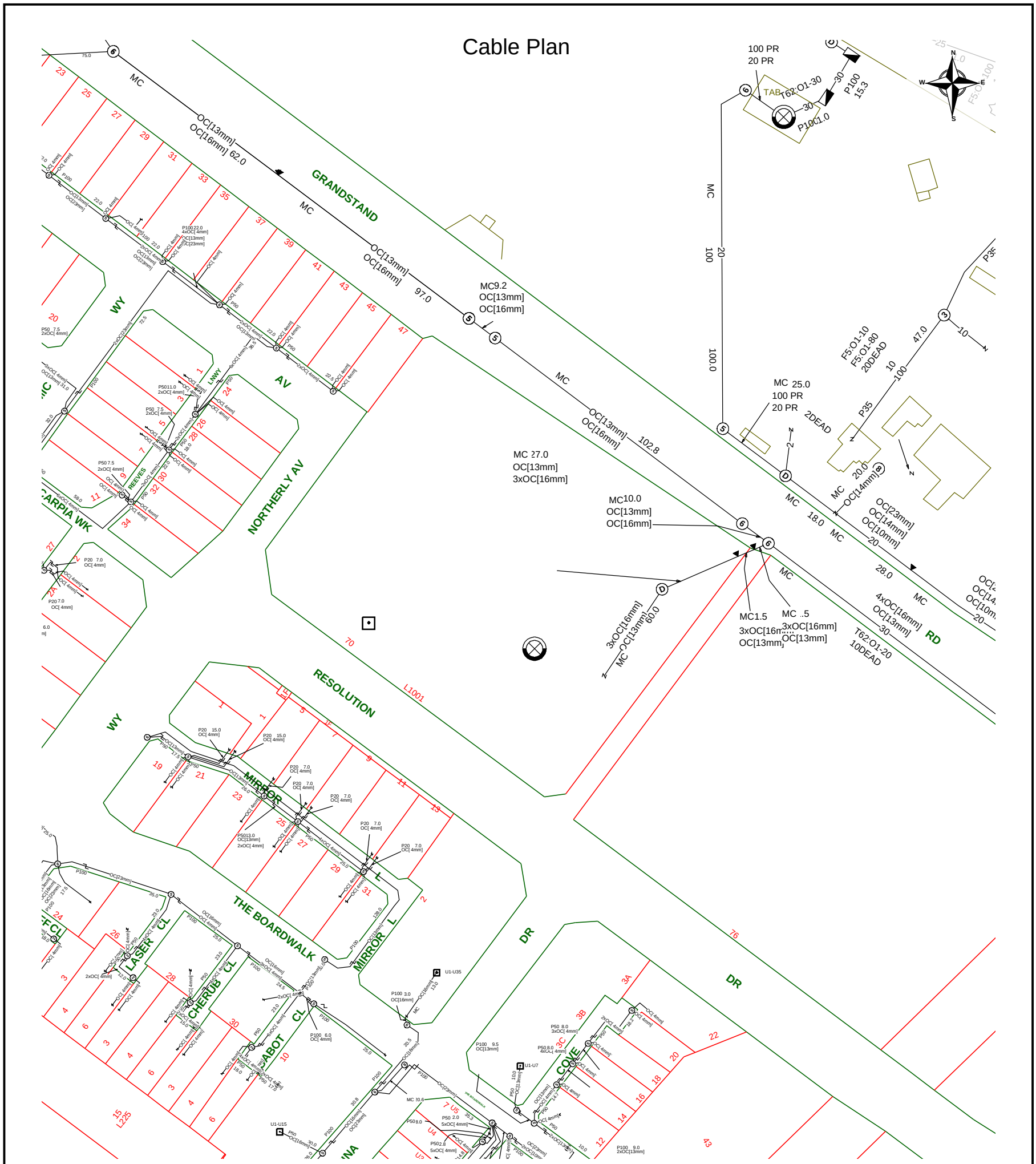
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For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

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# Cable Plan



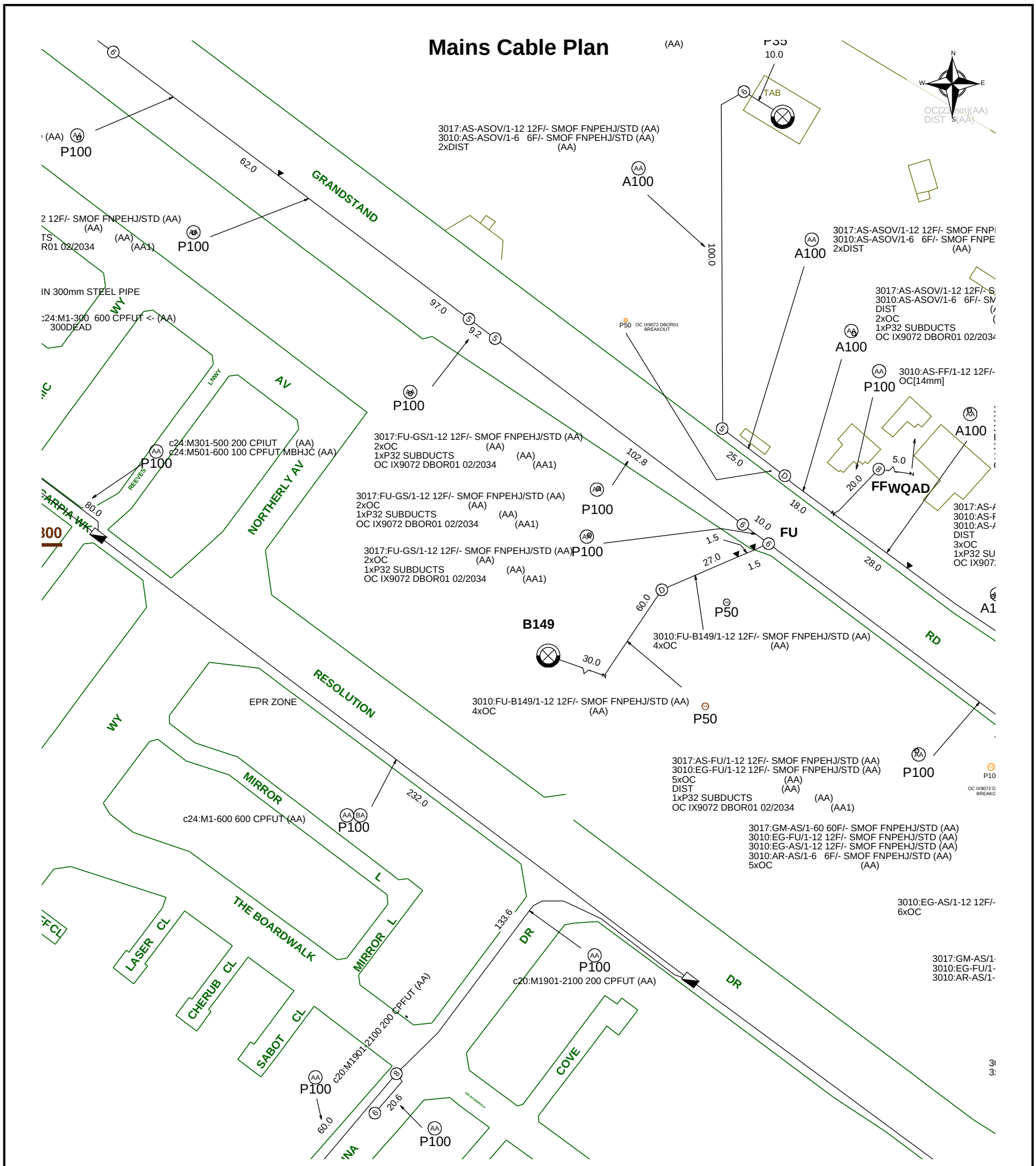

| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240900578 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 21/06/2024 19:05:32 | |

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

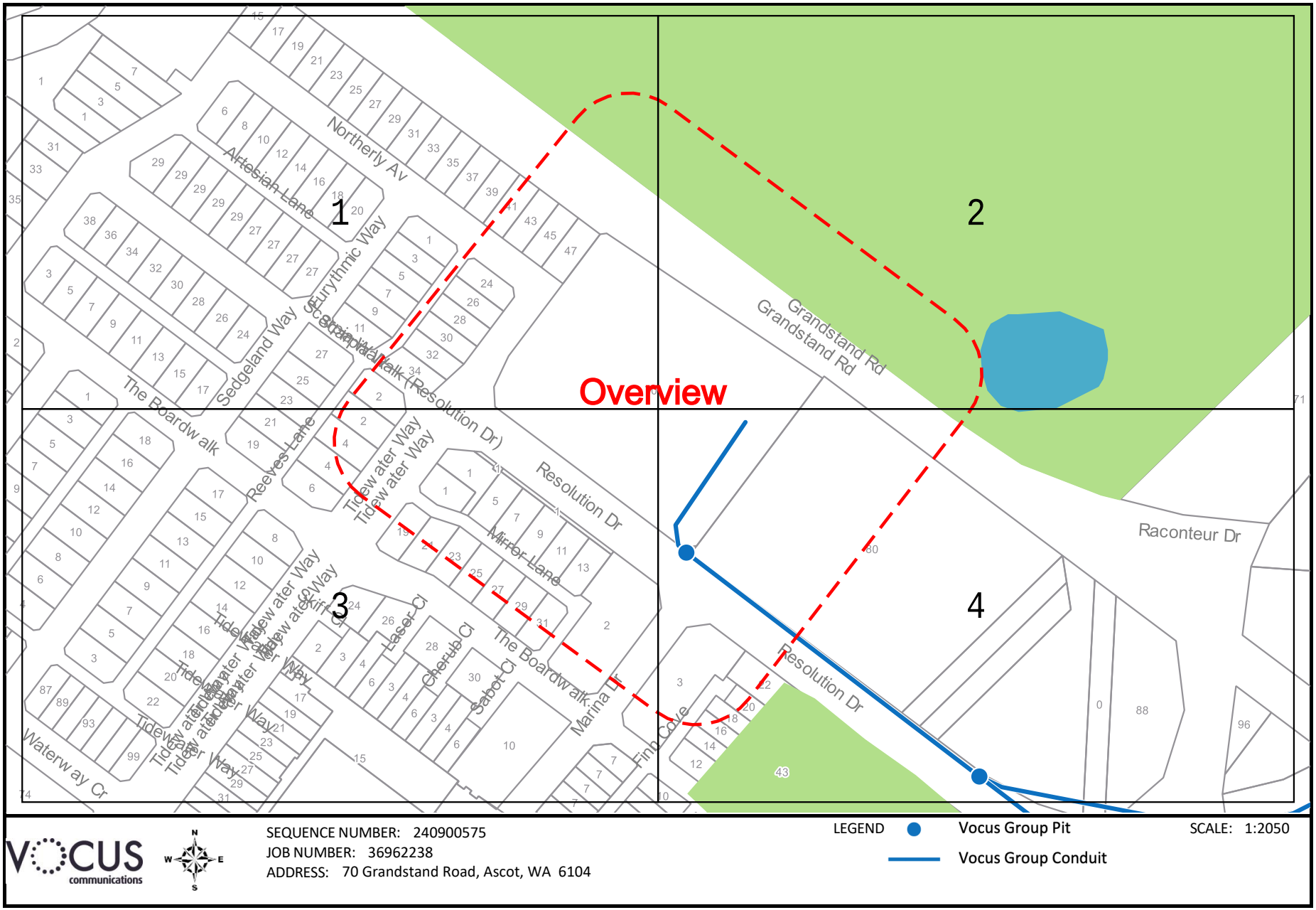
**Page 1 of 2**



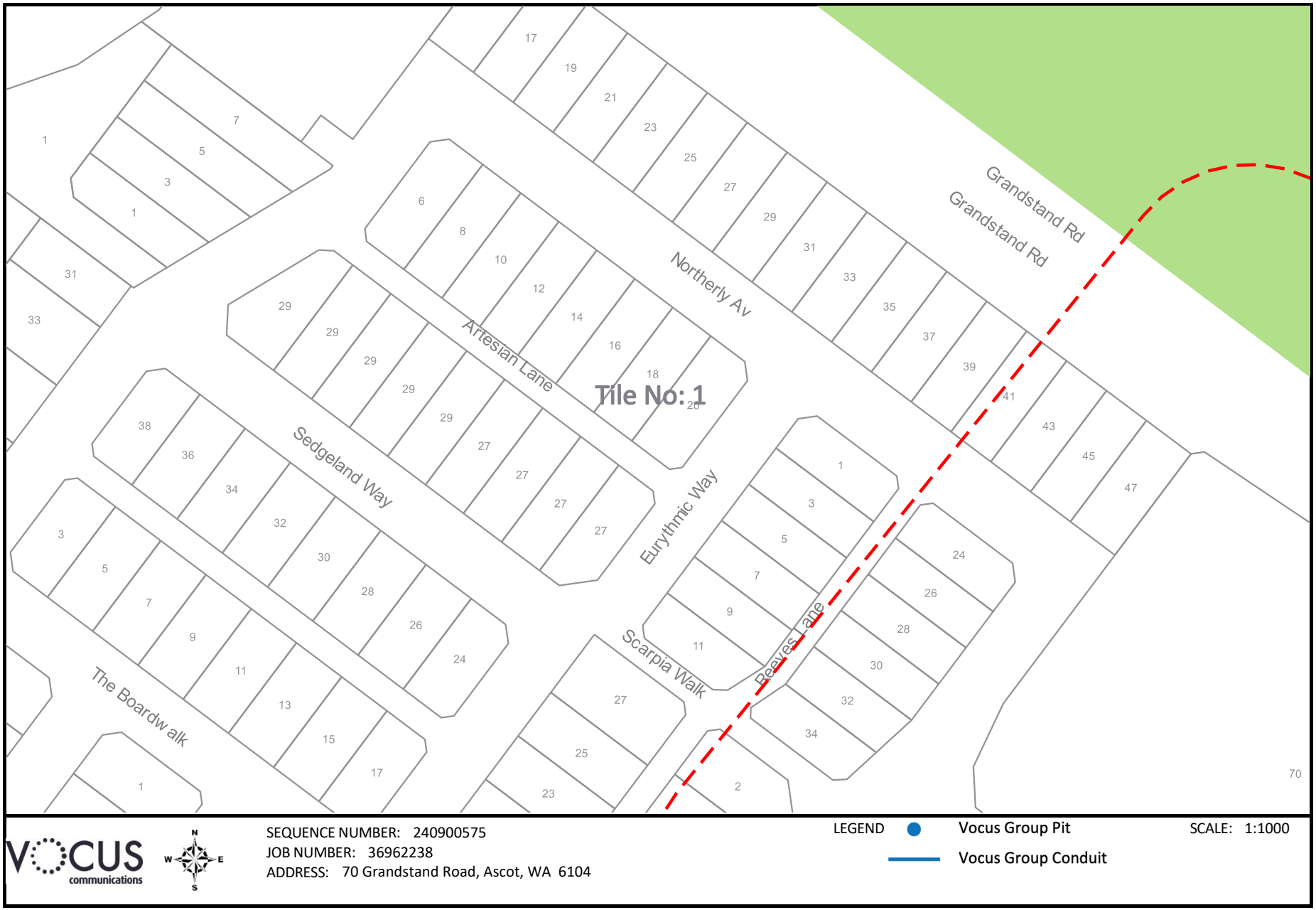

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|---|---|---|
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| | Generated On 21/06/2024 19:05:34 | |

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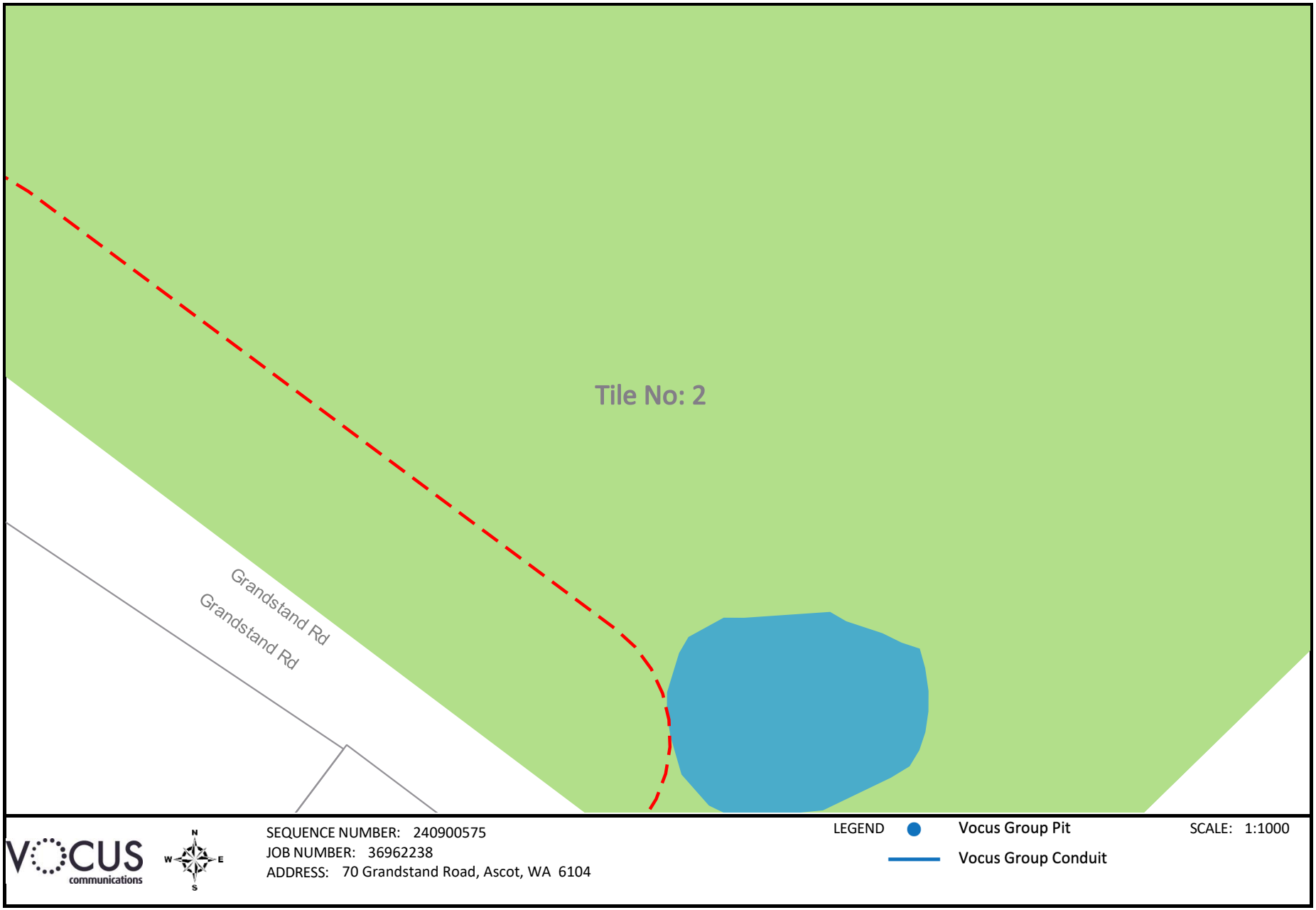
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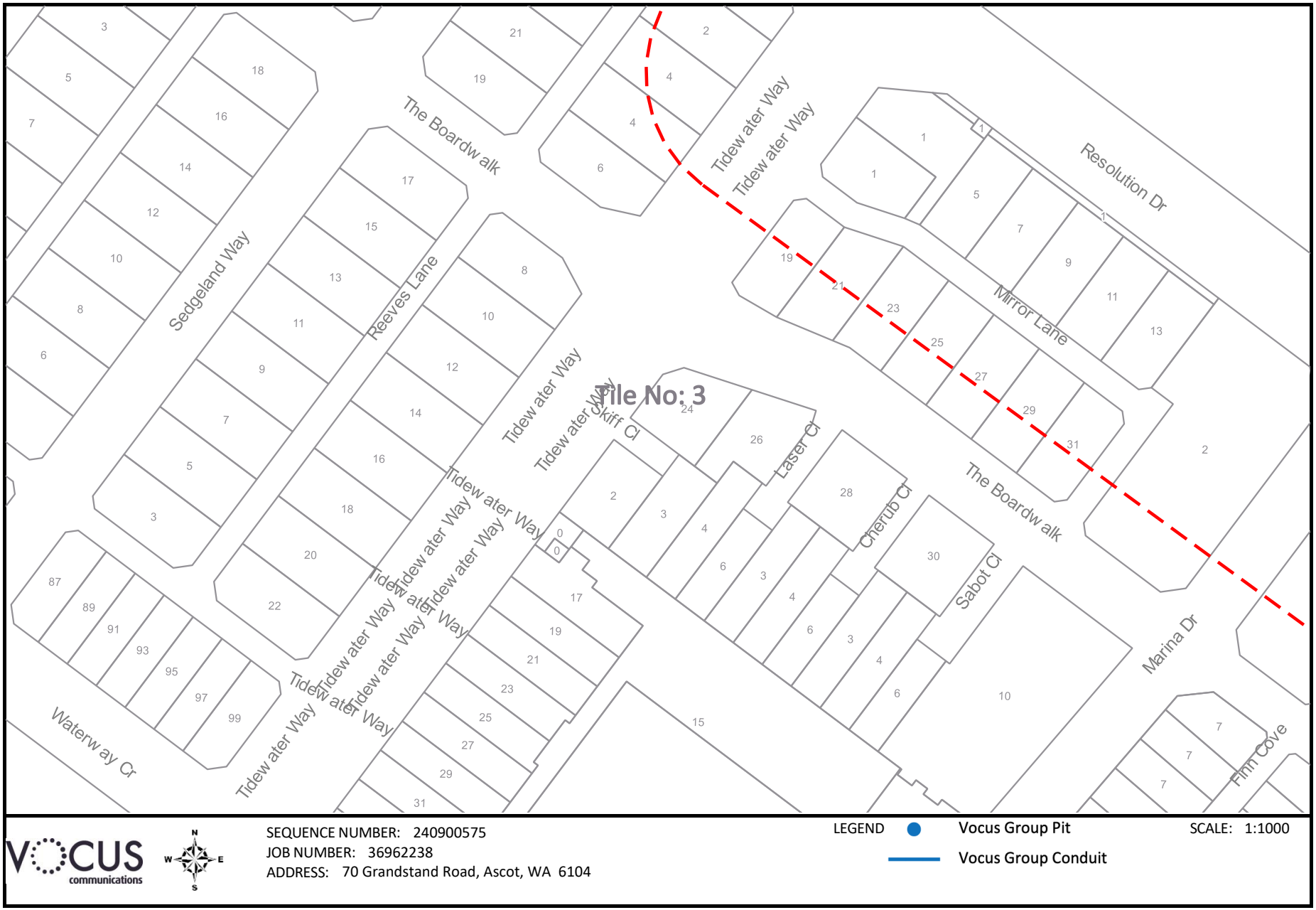

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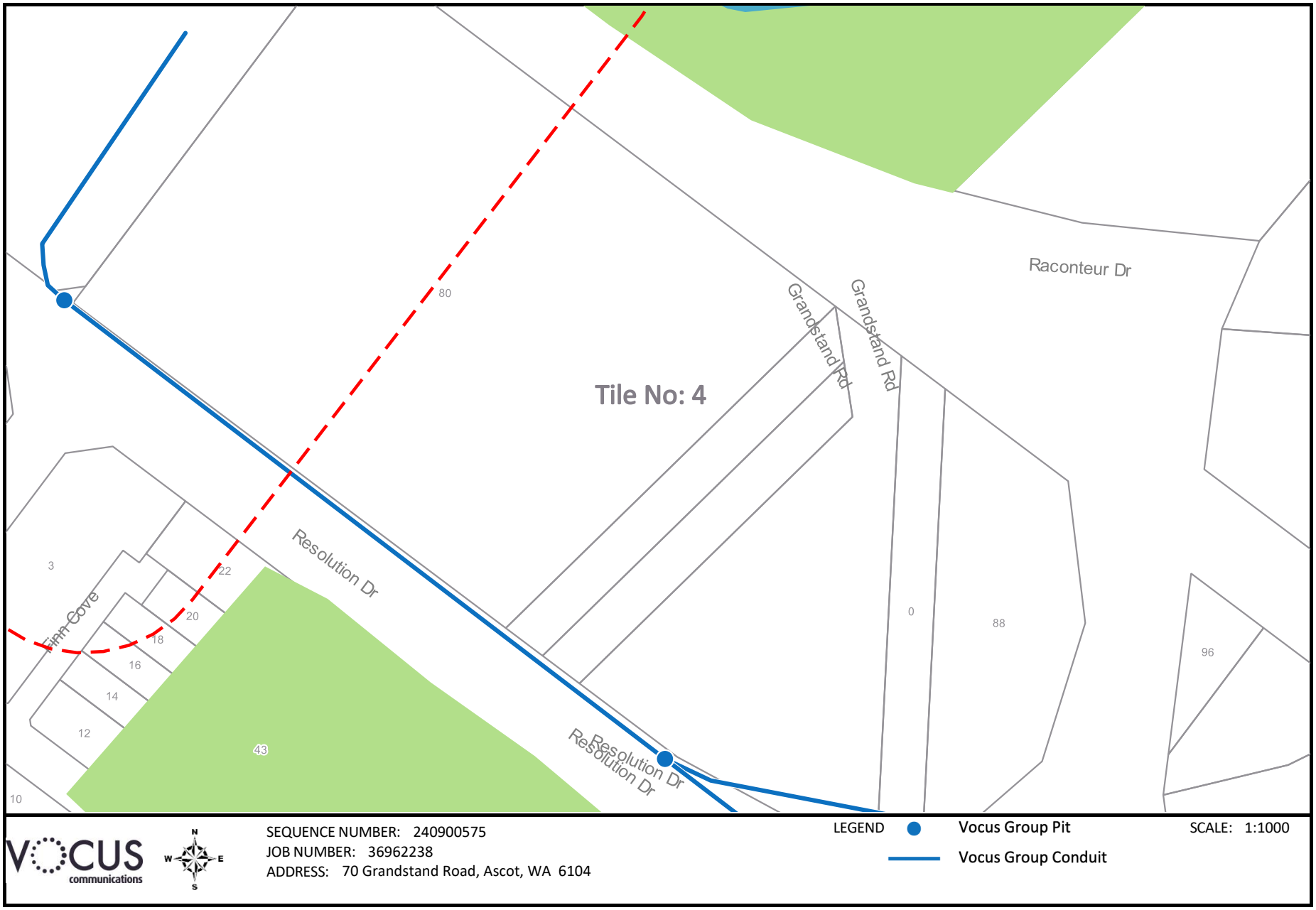

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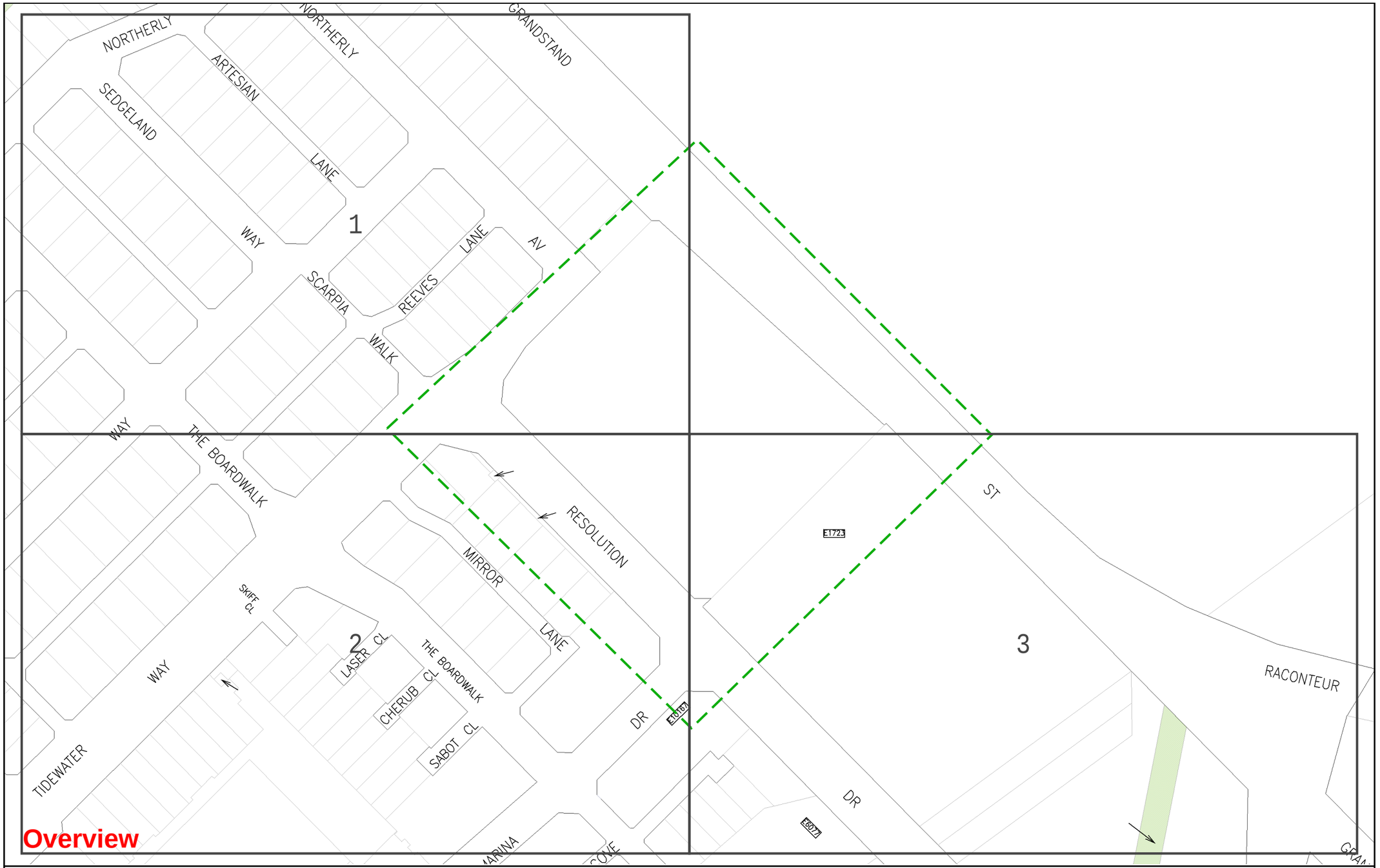

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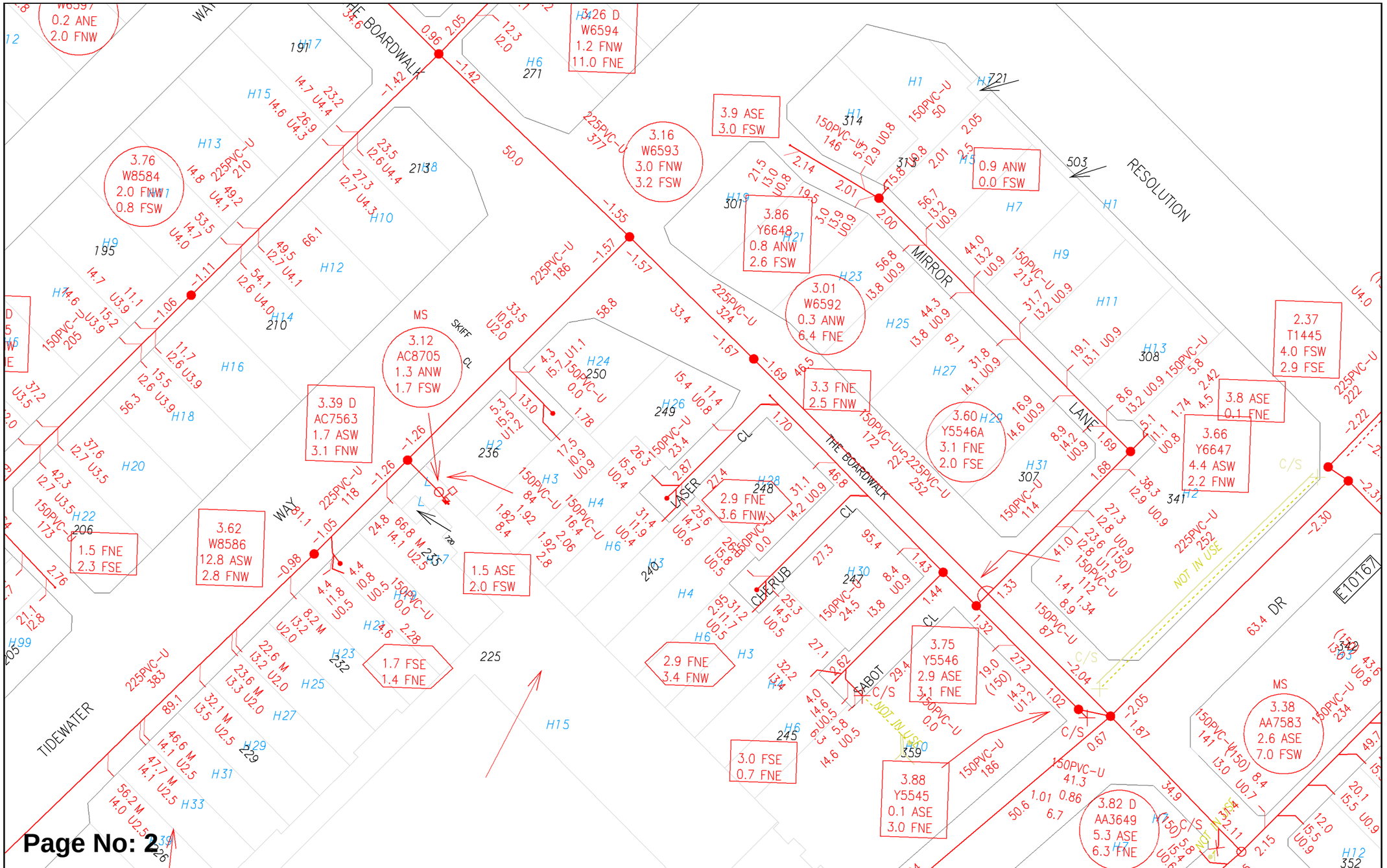

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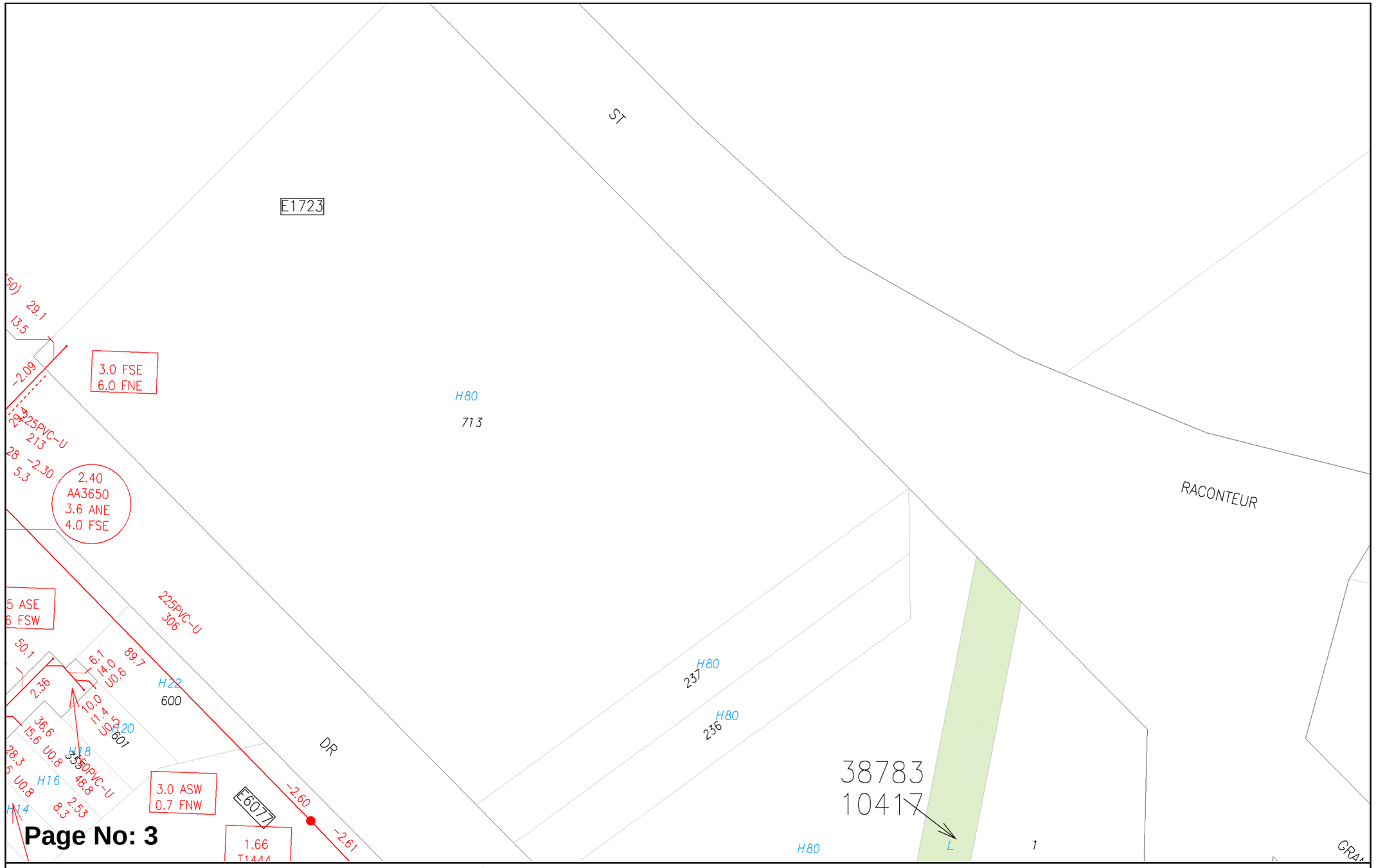



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NORTHERLY
NORTHERLY
GRANDSTAND
ARTESIAN
SEDGELAND
LANE
1
WAY
LANE
AV
SCARPIA
REEVES
WALK
WAY
THE BOARDWALK
RESOLUTION
MIRROR
LANE
SKIFF CL
2
LASER CL
THE BOARDWALK
CHERUB CL
SABOT CL
WAY
TIDEWATER
DR
E1723
E6077
ST
3
RACONTEUR
DR
Overview
Scale: 1:1538
Job No.: 36962238
Sequence No.: 240900579
Print Date: 21 Jun 2024
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NORTHERLY
ARTESIAN
SEDGELAND
LANE
WAY
SCARPIA
REEVES
WALK
AV
3.20
W8581
1.9 FSW
2.8 FNW
3.4 ASE
2.0 FSW
4.12
AC2987
4.1 ASE
3.0 FSW
4.15
AC2988
5.0 ASE
2.2 FSW
3.89
AC2990
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0.8 FSE
2.6 ANE
4.0 FNW
9.4 ANW
3.0 FSW
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W8582
2.0 FSW
0.0 FSE
3.68
W8583
2.0 FSW
3.0 FNW
3.39
W6595
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2.9 FNW
2.8 ANE
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1.0 FNE
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AC2989
7.4 ANE
3.8 FNW
Page No: 1
Scale: 1:750
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WATER
BOARDWALK
RESOLUTION
MIRROR
LANE
THE BOARDWALK
CHERUB
CABOT
TIDEWATER
WAY
DR
CL
SKIFF
MS
C/S
NOT IN USE
E10167
3.76 W8584 2.0 FNW 0.8 FSW
3.39 D AC7563 1.7 ASW 3.1 FNW
3.12 AC8705 1.3 ANW 1.7 FSW
3.62 W8586 12.8 ASW 2.8 FNW
1.5 FNE 2.3 FSE
1.5 ASE 2.0 FSW
1.7 FSE 1.4 FNE
3.16 W6593 3.0 FNW 3.2 FSW
3.26 D W6594 1.2 FNW 11.0 FNE
3.9 ASE 3.0 FSW
3.86 Y6648 0.8 ANW 2.6 FSW
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3.01 W6592 0.3 ANW 6.4 FNE
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3.75 Y5546 2.9 ASE 3.1 FNE
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225PVC-U 186
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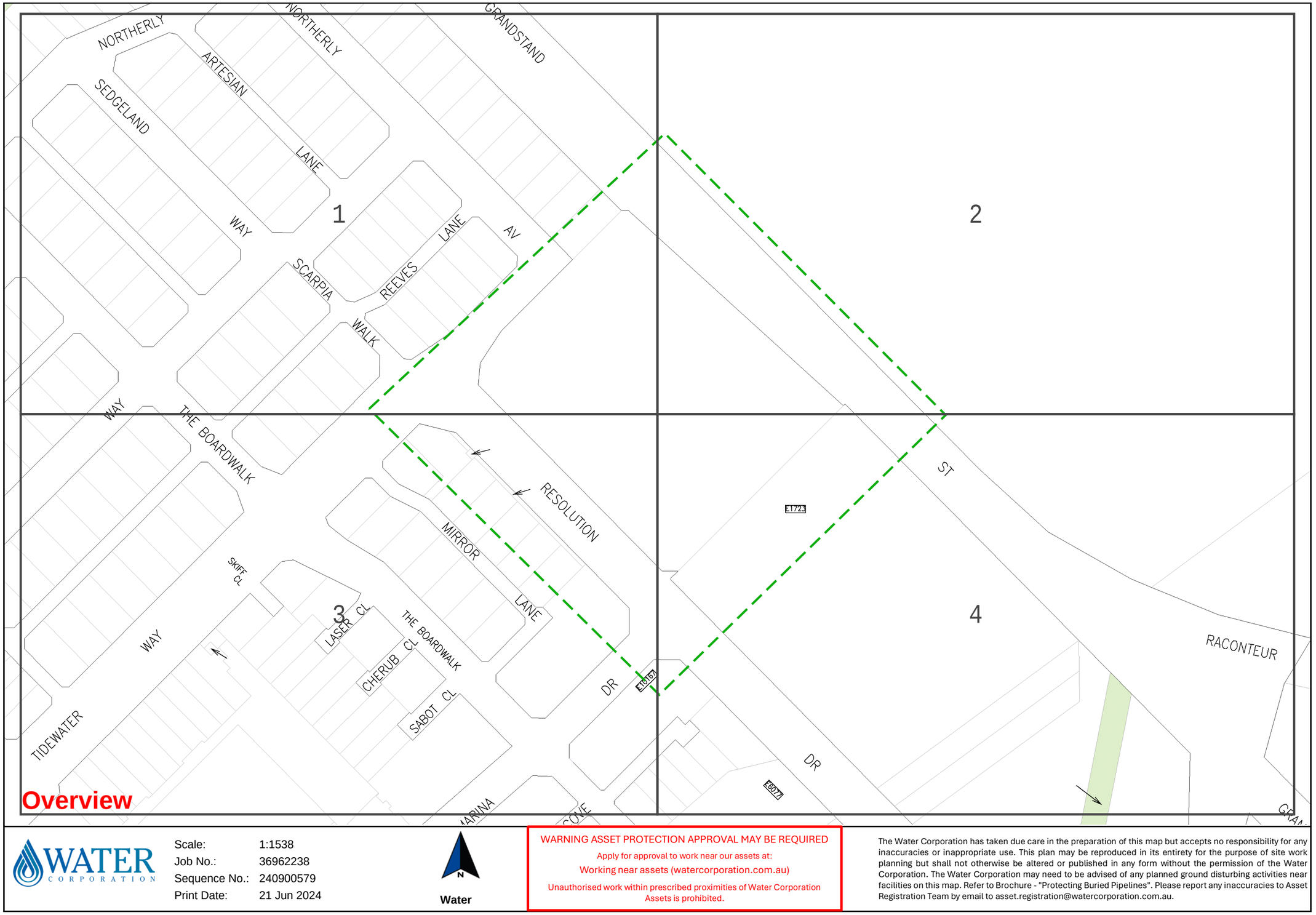

WATER CORPORATION

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| Scale: | 1:750 |
| Job No.: | 36962238 |
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Water Corp - Critical Plan.docx (21 May 2024)



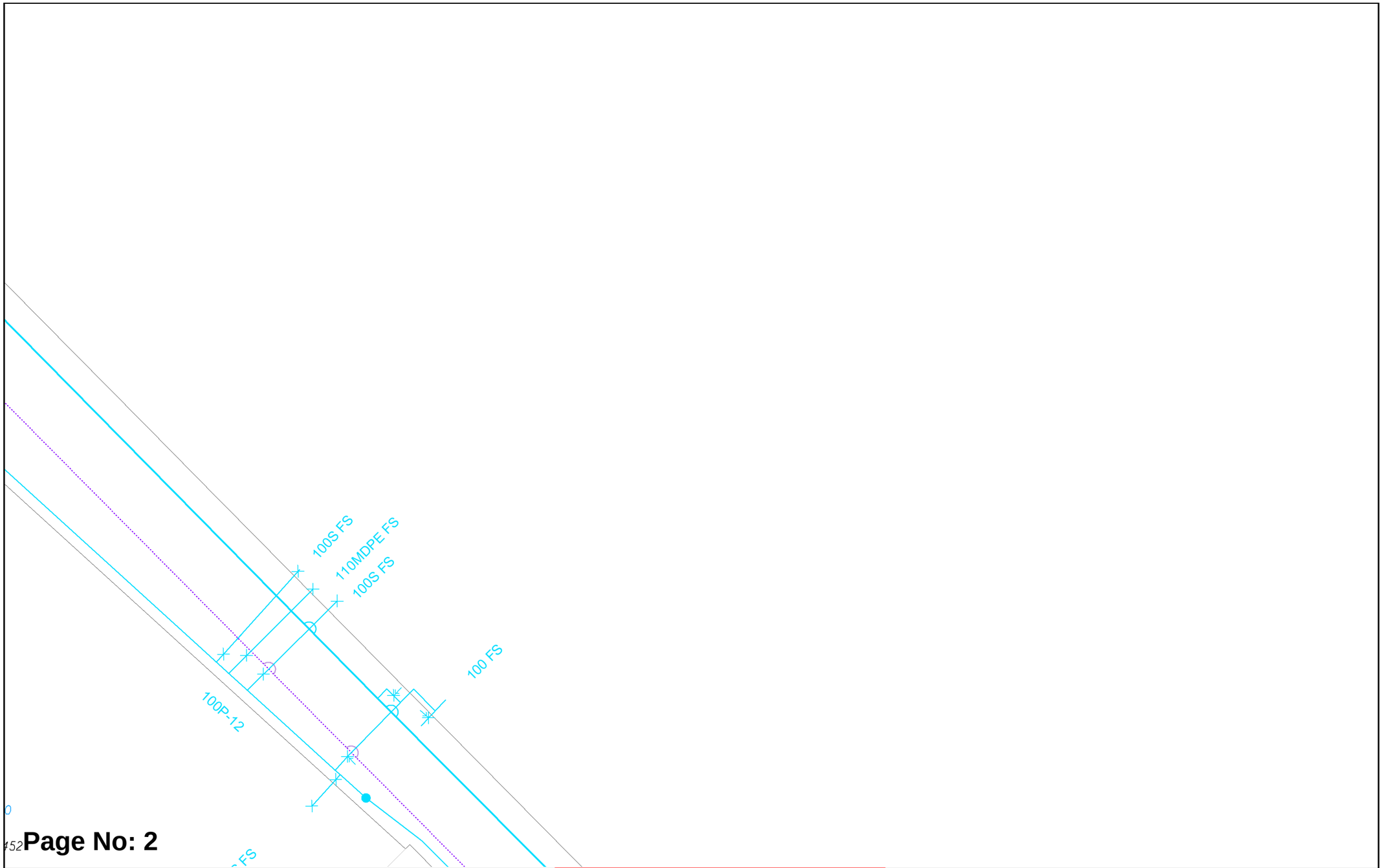

WATER CORPORATION

Scale: 1:750
Job No.: 36962238
Sequence No.: 240900579
Print Date: 21 Jun 2024

N
Water

WARNING ASSET PROTECTION APPROVAL MAY BE REQUIRED
Apply for approval to work near our assets at:
Working near assets (watercorporation.com.au)
Unauthorised work within prescribed proximities of Water Corporation Assets is prohibited.

The Water Corporation has taken due care in the preparation of this map but accepts no responsibility for any inaccuracies or inappropriate use. This plan may be reproduced in its entirety for the purpose of site work planning but shall not otherwise be altered or published in any form without the permission of the Water Corporation. The Water Corporation may need to be advised of any planned ground disturbing activities near facilities on this map. Refer to Brochure - "Protecting Buried Pipelines". Please report any inaccuracies to Asset Registration Team by email to asset.registration@watercorporation.com.au.



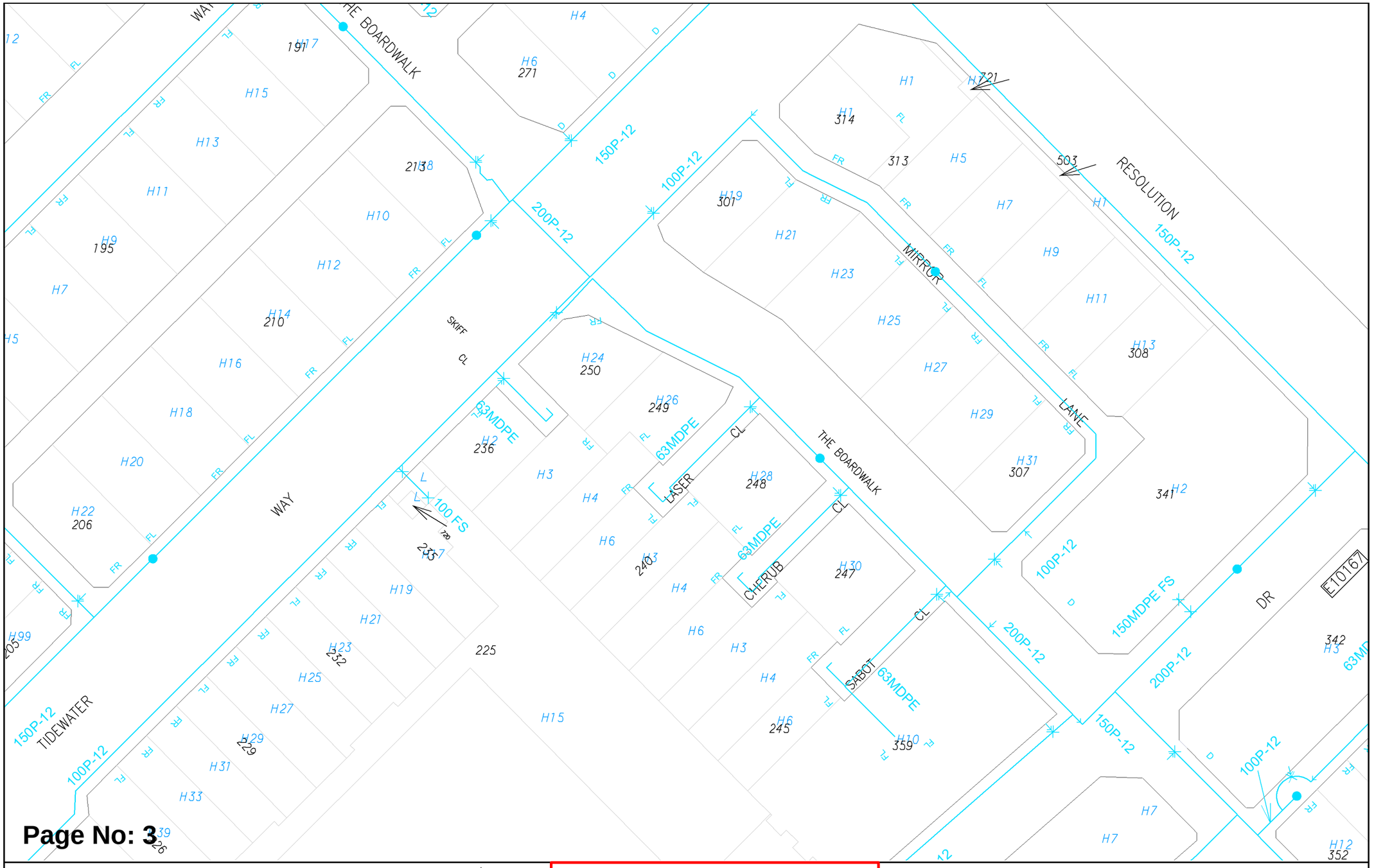

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**Page No: 3**

WATER CORPORATION

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| Job No.: | 36962238 |
| Sequence No.: | 240900579 |
| Print Date: | 21 Jun 2024 |

N

**Water**

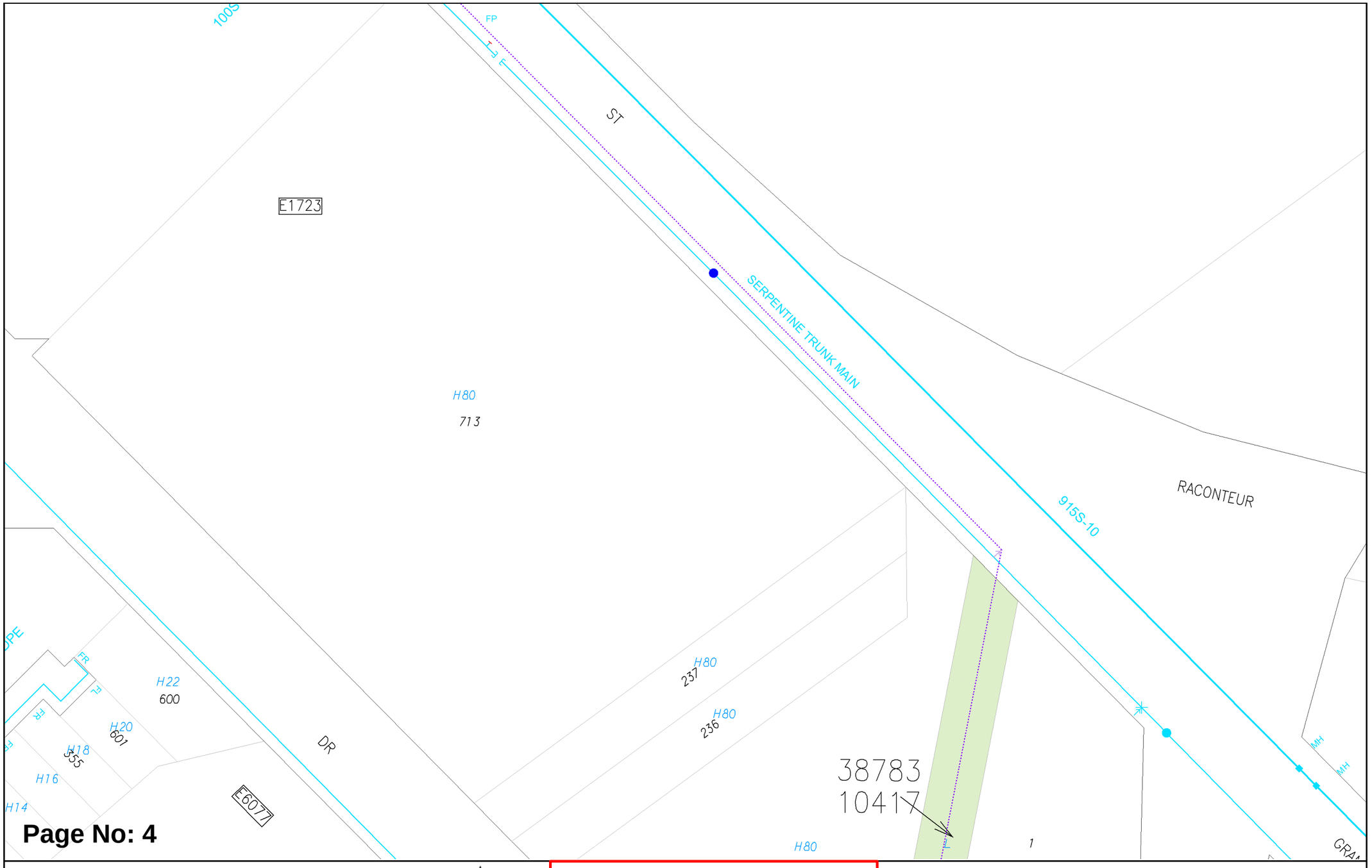
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**Page No: 4**

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Water

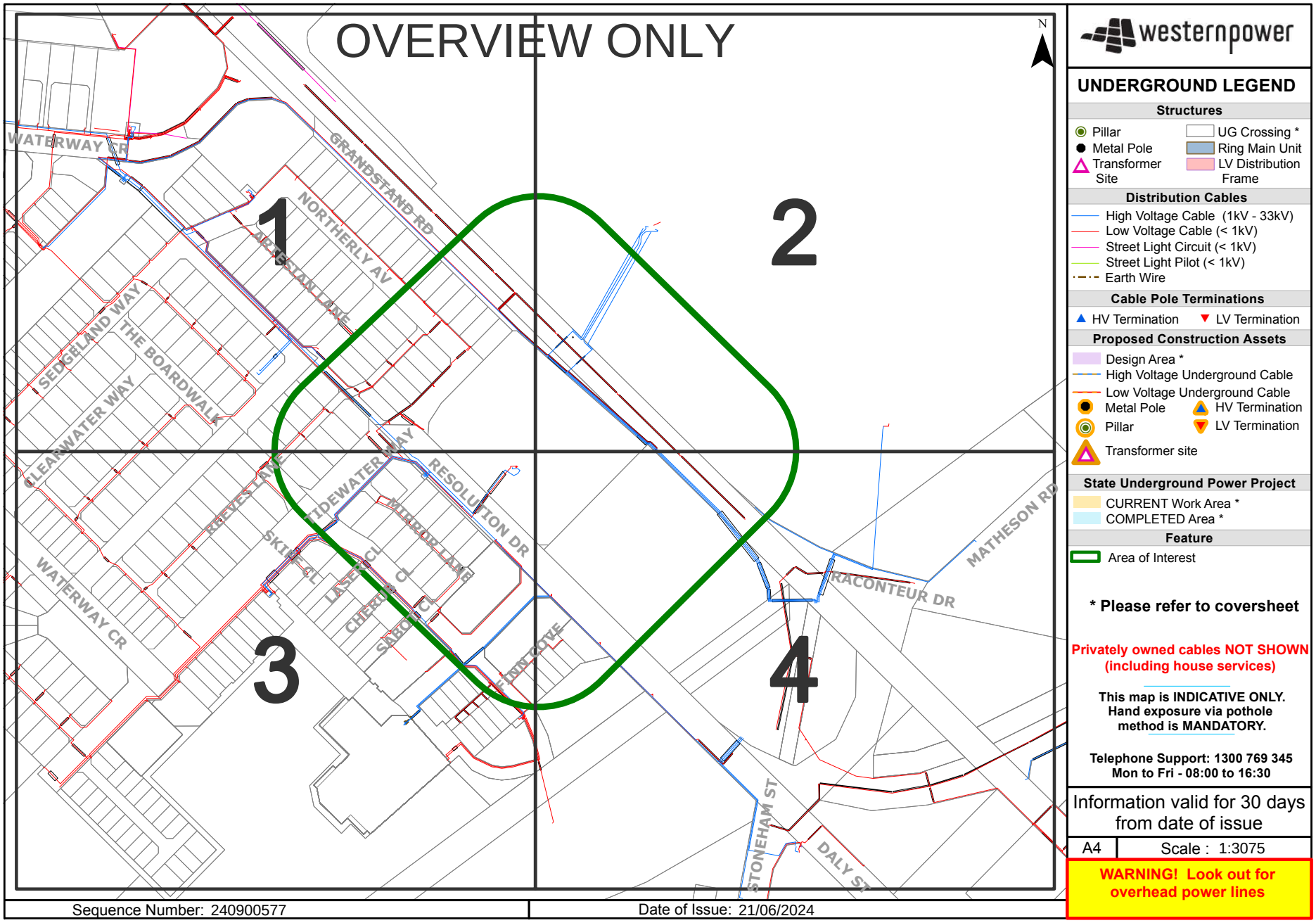
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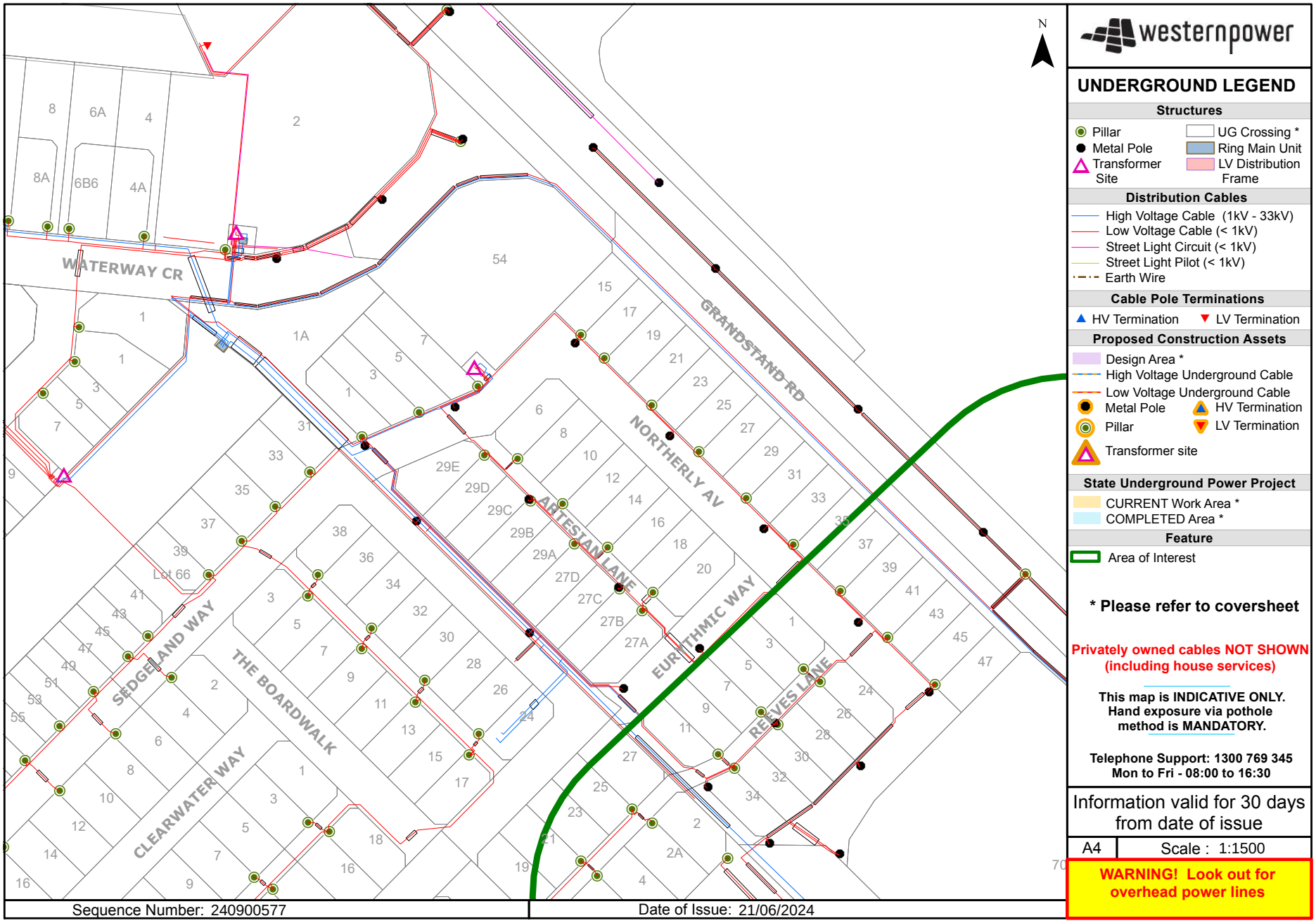
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OVERVIEW ONLY
N
1
2
3
4
WATERWAY CR
GRANDSTAND RD
NORTHERLY AV
ARBITRAN LANE
SEDGELAND WAY
THE BOARDWALK
CLEARWATER WAY
REEVES LANE
TIDEWATER WAY
RESOLUTION DR
MURPHY LOOP
SKIFF CL
LASER CL
CHEROKEE CL
SABOT CL
FLINN COVE
RACONTEUR DR
MATHESON RD
STONEHAM ST
DALY ST
Sequence Number: 240900577
Date of Issue: 21/06/2024
westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
Low Voltage Cable (< 1kV)
Street Light Circuit (< 1kV)
Street Light Pilot (< 1kV)
Earth Wire
Cable Pole Terminations
HV Termination
LV Termination
Proposed Construction Assets
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Low Voltage Underground Cable
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Pillar
Transformer site
HV Termination
LV Termination
State Underground Power Project
CURRENT Work Area *
COMPLETED Area *
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:3075
WARNING! Look out for overhead power lines




westernpower

## UNDERGROUND LEGEND

**Structures**

- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

**Distribution Cables**

- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

**Cable Pole Terminations**

- HV Termination
- LV Termination

**Proposed Construction Assets**

- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

**State Underground Power Project**

- CURRENT Work Area *
- COMPLETED Area *

**Feature**

- Area of Interest

*** Please refer to coversheet**

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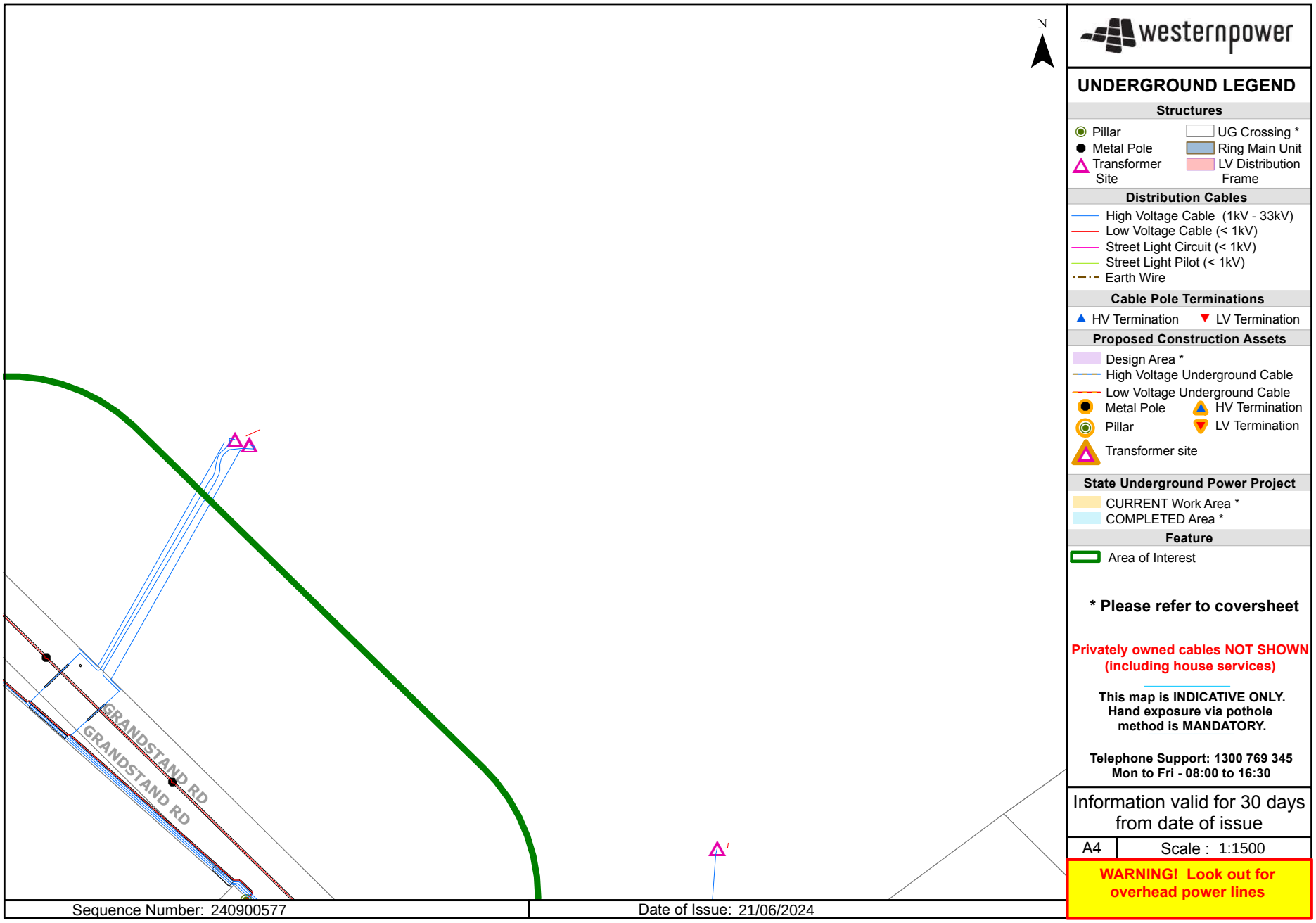
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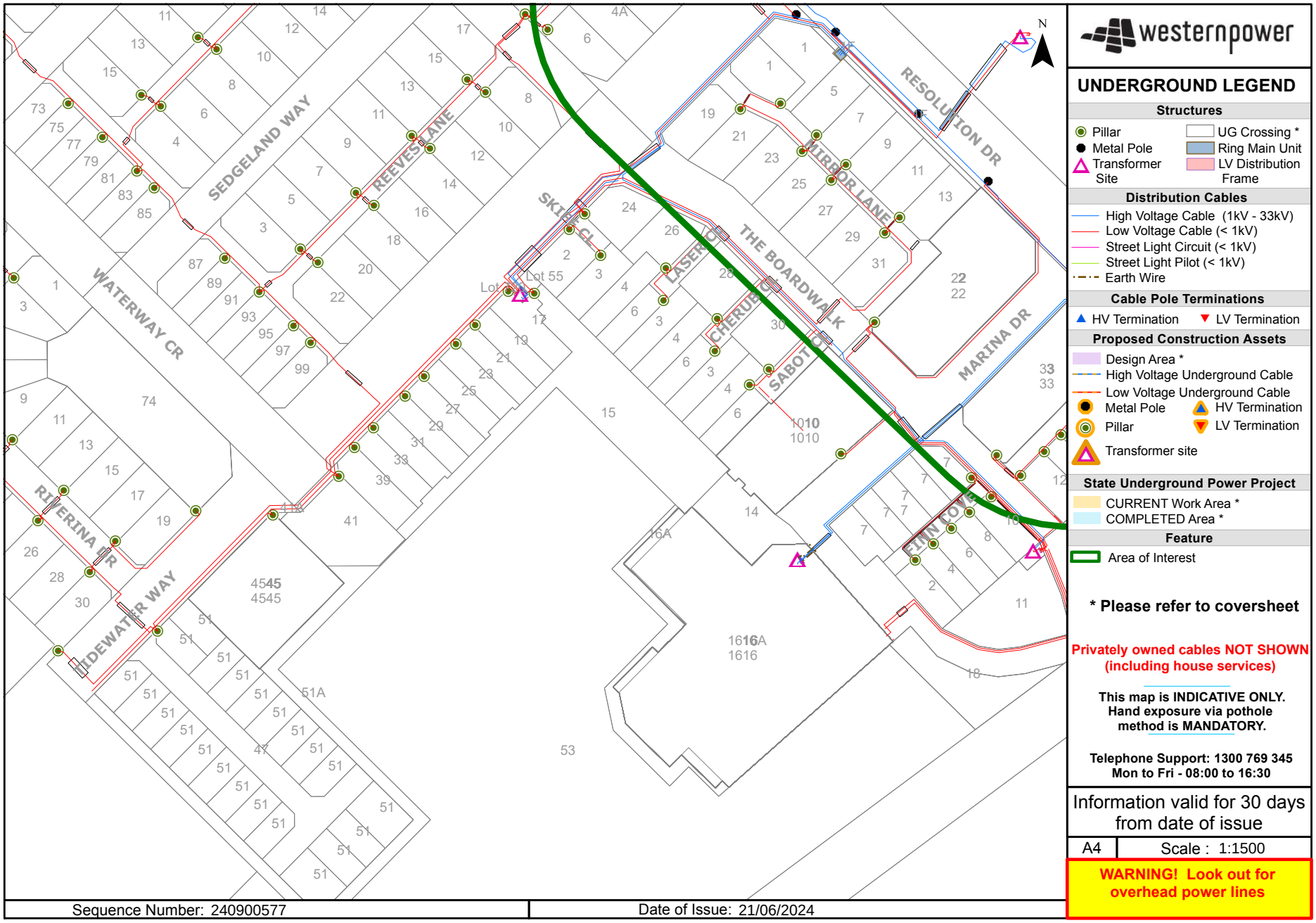
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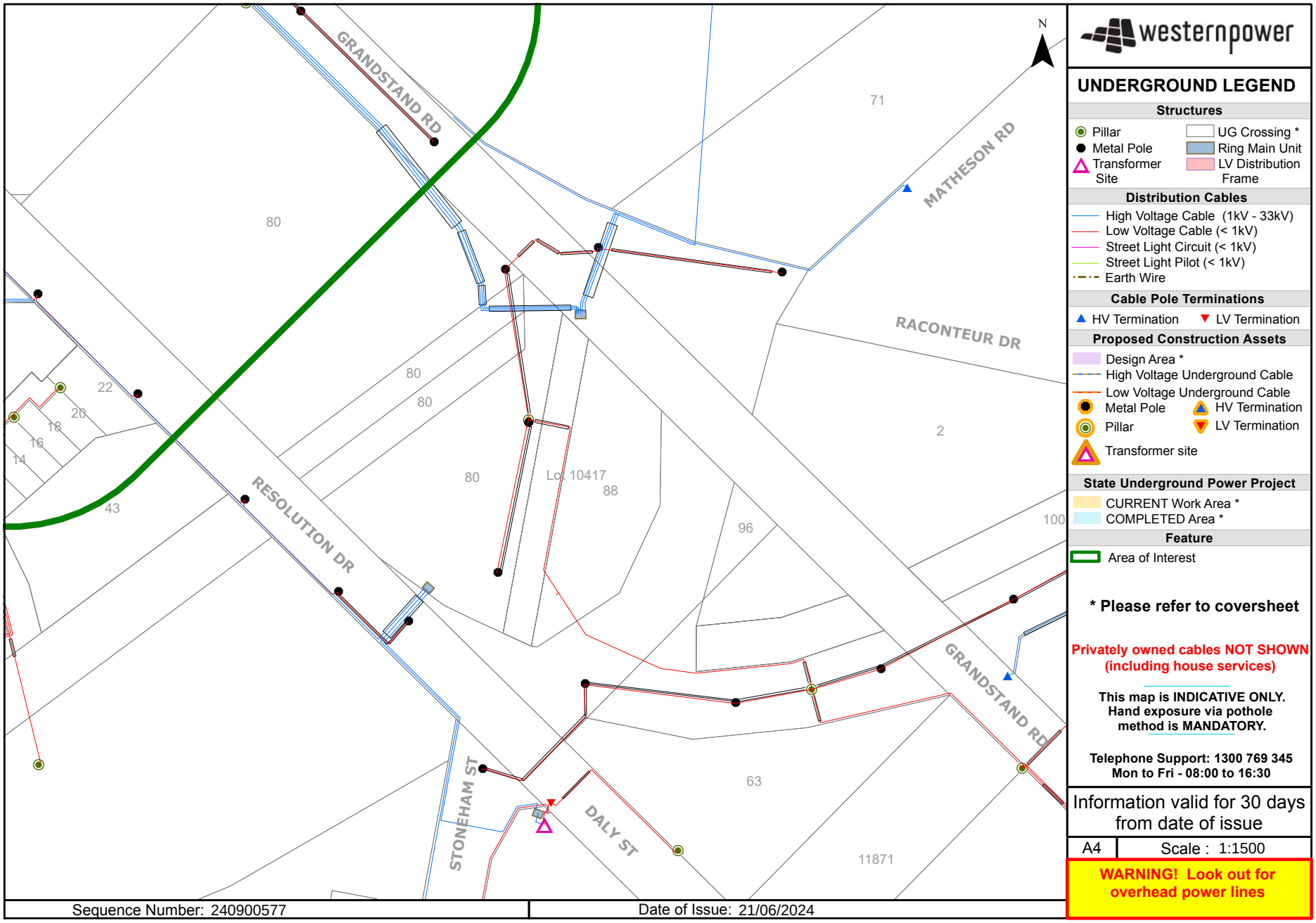
Information valid for 30 days from date of issue

A4 | Scale : 1:1500

**WARNING! Look out for overhead power lines**


N
GRANDSTAND RD
GRANDSTAND RD
Sequence Number: 240900577
Date of Issue: 21/06/2024
westernpower
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SEDGELAND WAY
REEVES LANE
WATERWAY CR
RIVERINA DR
TIDEWATER WAY
SKIFF CL
LASER CL
CHERUB CL
SABOT CL
THE BOARDWALK
MIRROR LANE
RESOLUTION DR
MARINA DR
TIN LOVE
Lot 55
Lot 56
4545
1010
1616
1616A
53
51A
N
westernpower
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GRANDSTAND RD
MATHESON RD
RACONTEUR DR
RESOLUTION DR
STONEHAM ST
DALY ST
GRANDSTAND RD
Lot 10417
80
71
2
96
100
63
11871
88
43
22
20
18
16
14
N
westernpower
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Job ID 36962238

## Preinct D

# End of document

**This document may exclude some files (eg. DWF or ZIP files)**

This document was automatically generated at a point-in-time. Be aware that the source information from which this document was created may have changed since it was produced. This document may contain incomplete or out-of-date information. Always check your enquiry details in the BYDA Referral Service for the most recent information. For copyright information refer to individual responses.

Job No 36962250

byda.com.au

## Contact Details

| Contact | Contact number | Company | Enquirer ID |
|---|---|---|---|
| Justin Zielinski | 0420 304 451 | - | 3140642 |

**Email**
jzielinski@tabec.com.au

**Address**
54 Havelock Street
West Perth WA 6005

## Job Site and Enquiry Details

**WARNING:** The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

| Enquiry date | Start date | End date | On behalf of | Job purpose | Locations | Onsite activities |
|---|---|---|---|---|---|---|
| 21/06/2024 | 24/06/2024 | 24/06/2024 | Private | Design | Both Road | Planning & Design |




Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

| User Reference | Address | Notes/description |
|---|---|---|
| Precinct C - 2 | 71 Matheson Road<br>Ascot WA 6104 | - |

## Your Responsibility and Duty of Care

- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the Privacy Policy and Term of Use.
- For more information on safe digging practices, visit www.byda.com.au

## Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

| Referral ID (Seq. no) | Authority Name | Phone | Status |
|---|---|---|---|
| 240900653 | ATCO Gas Australia | 1300 926 755 | NOTIFIED |
| 240900649 | NBN Co (WA) | 1800 687 626 | NOTIFIED |
| 240900651 | Telstra (WA) | 1800 653 935 | NOTIFIED |
| 240900652 | Water Corporation | 13 13 95 | NOTIFIED |
| 240900650 | Western Power | 13 10 87 | NOTIFIED |

END OF UTILITIES LIST

**Lodge your FREE enquiry online any time at byda.com.au**

ATCO

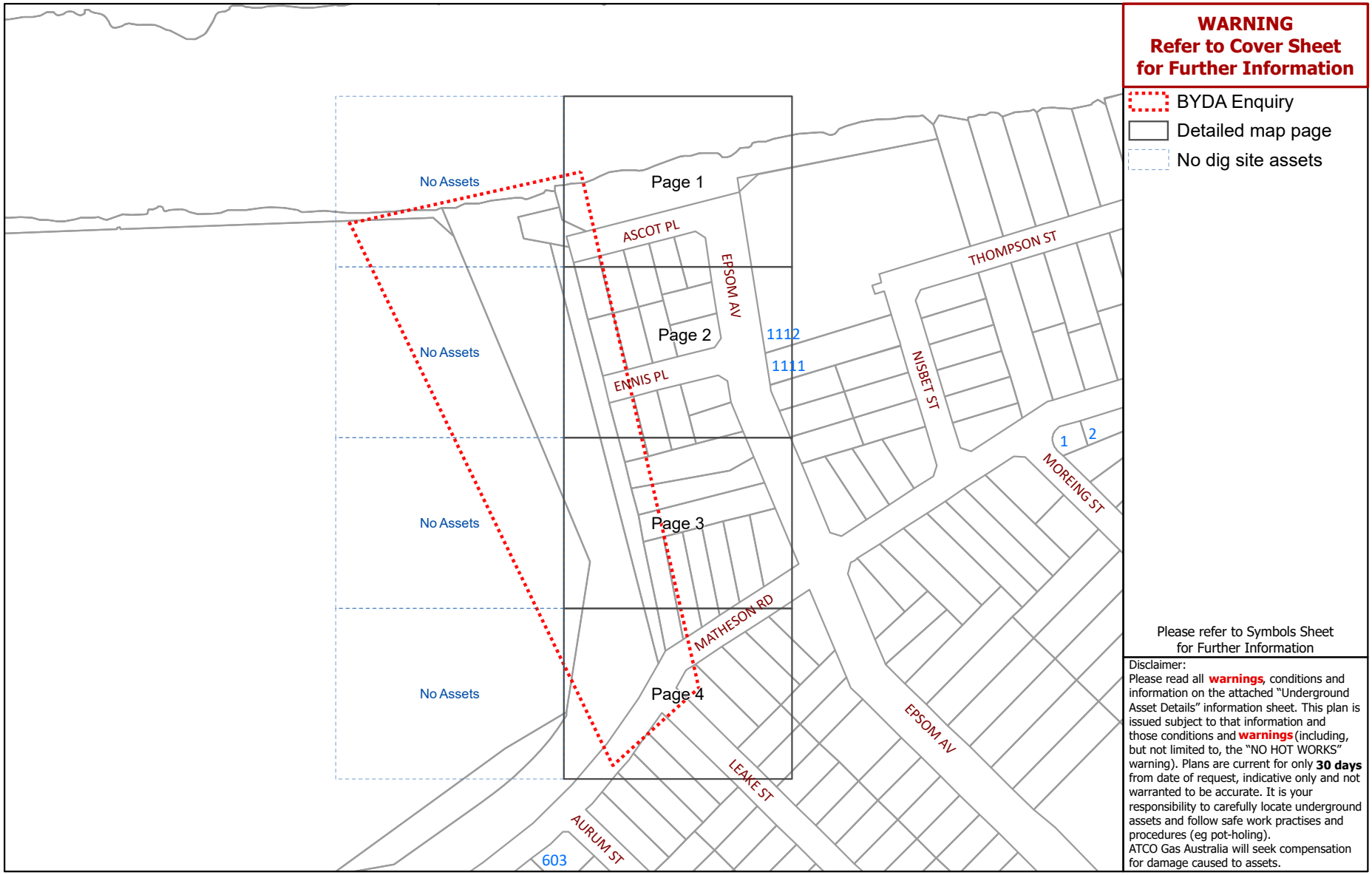
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ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)
Index Sheet

Seq # 240900653
Job # 36962250

BYDA Location: 71 Matheson Road Ascot 6104
Scale: 1:3,500

BEFORE YOU DIG www.byda.com.au




**WARNING**
**Refer to Cover Sheet for Further Information**

BYDA Enquiry
Detailed map page
No dig site assets

Please refer to Symbols Sheet for Further Information

Disclaimer:
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ATCO Gas Australia will seek compensation for damage caused to assets.

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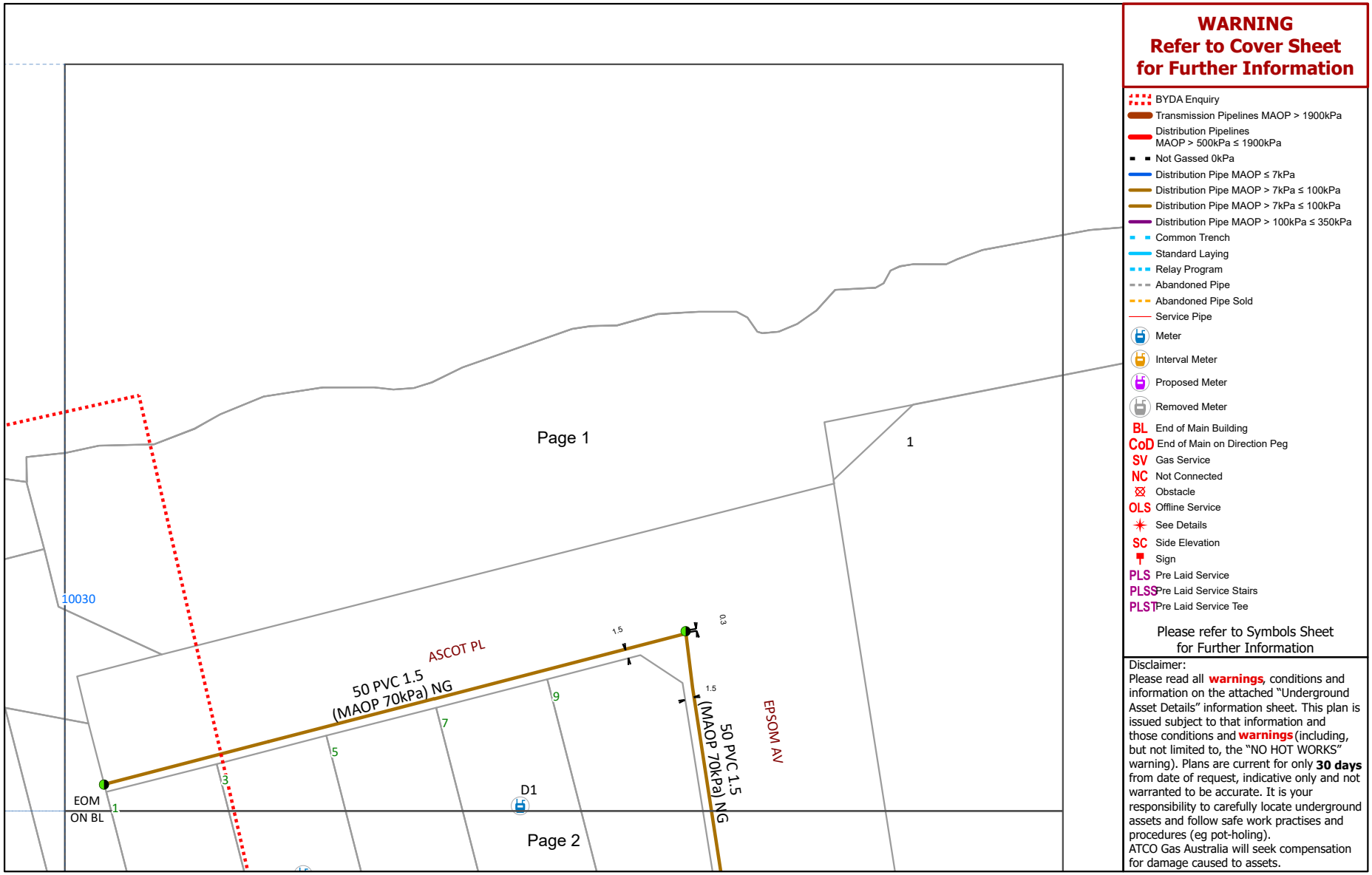
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ABN: 90 089 531 975

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Seq # 240900653
Job # 36962250

BYDA Location: 71 Matheson Road Ascot 6104
Scale: 1:800

BEFORE YOU DIG www.byda.com.au




**WARNING**
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- BYDA Enquiry
- Transmission Pipelines MAOP > 1900kPa
- Distribution Pipelines MAOP > 500kPa ≤ 1900kPa
- Not Gassed 0kPa
- Distribution Pipe MAOP ≤ 7kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 100kPa ≤ 350kPa
- Common Trench
- Standard Laying
- Relay Program
- Abandoned Pipe
- Abandoned Pipe Sold
- Service Pipe
- Meter
- Interval Meter
- Proposed Meter
- Removed Meter
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- CoD End of Main on Direction Peg
- SV Gas Service
- NC Not Connected
- Obstacle
- OLS Offline Service
- See Details
- SC Side Elevation
- Sign
- PLS Pre Laid Service
- PLSS Pre Laid Service Stairs
- PLST Pre Laid Service Tee

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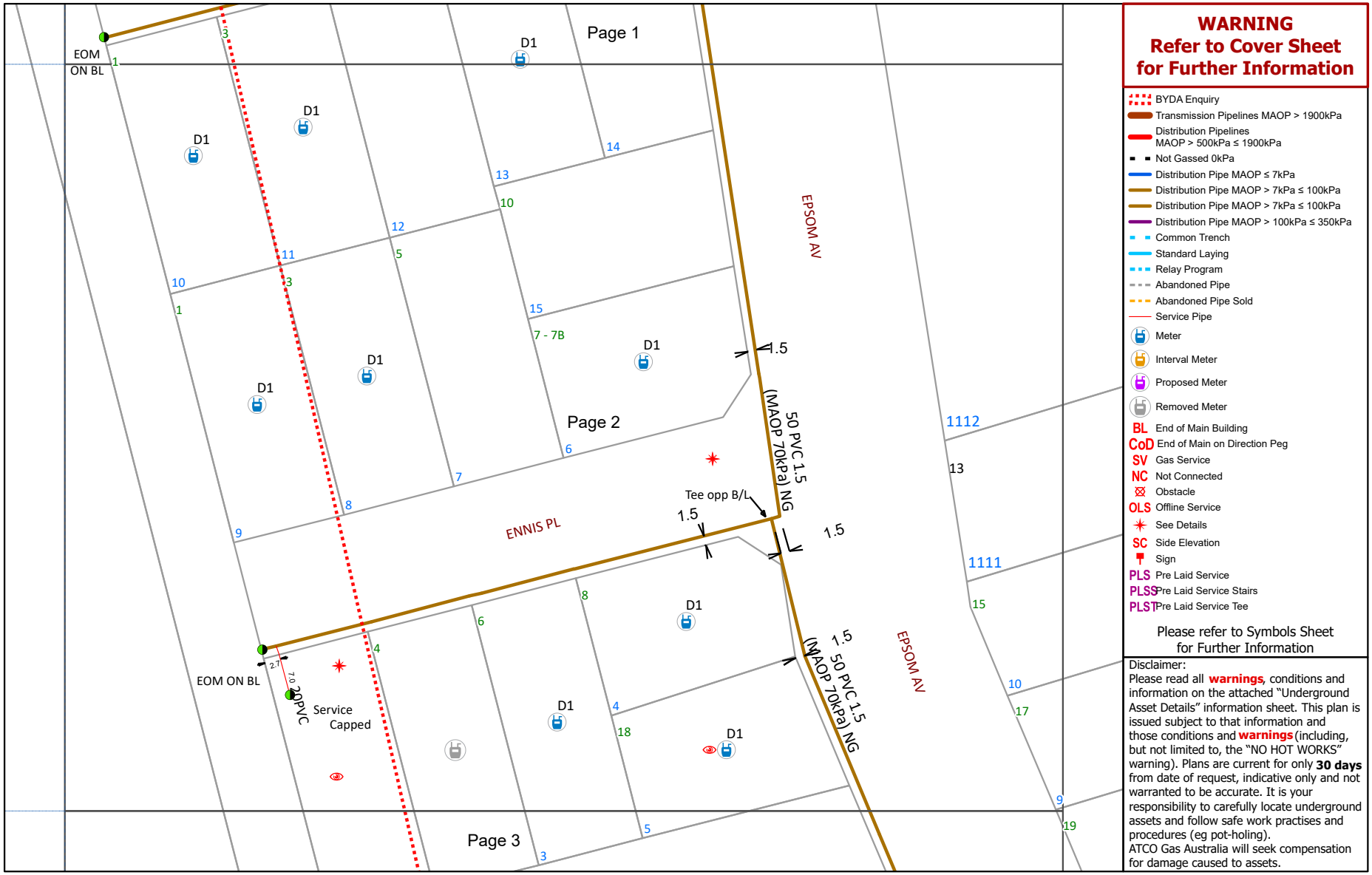
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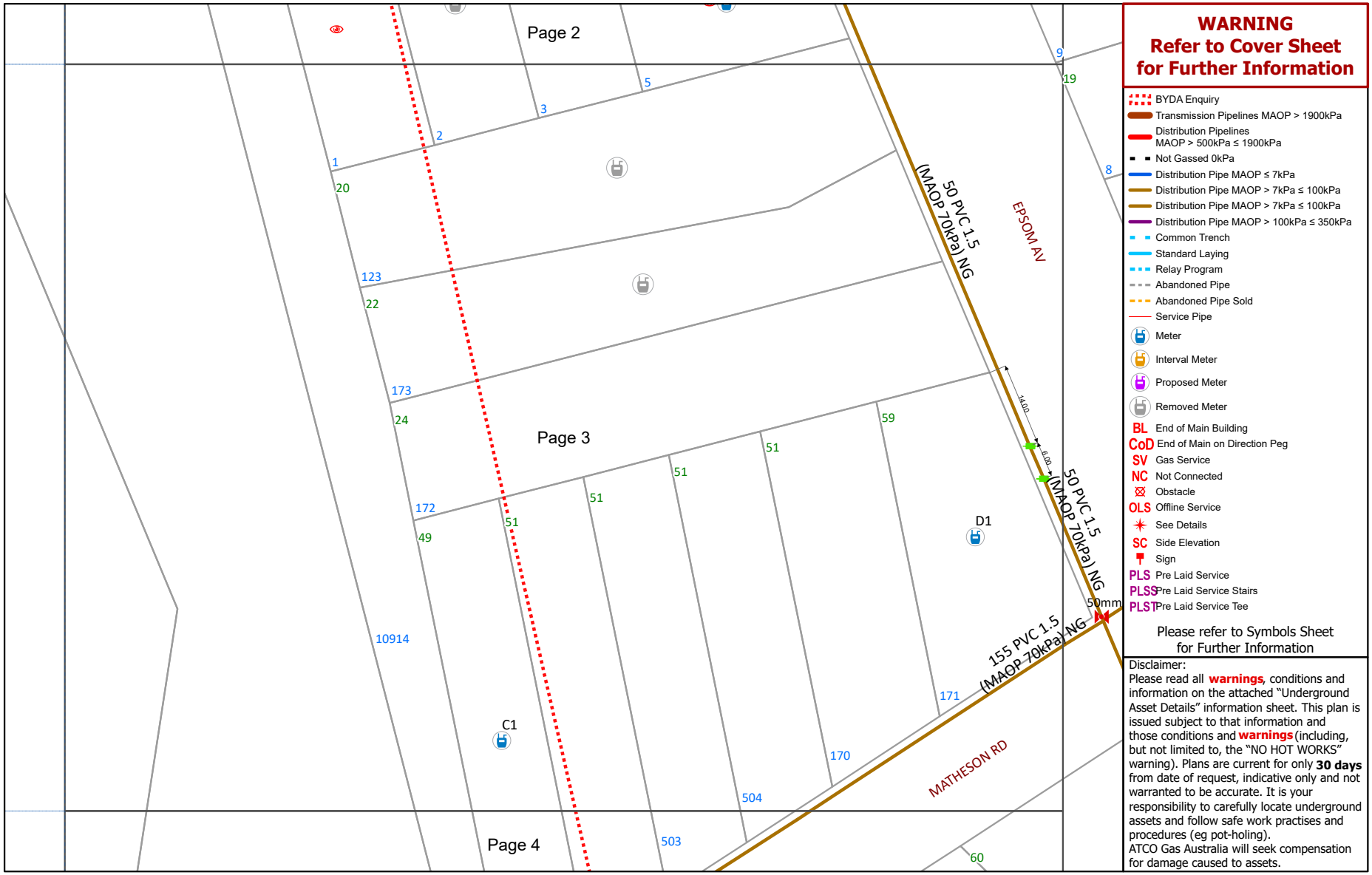
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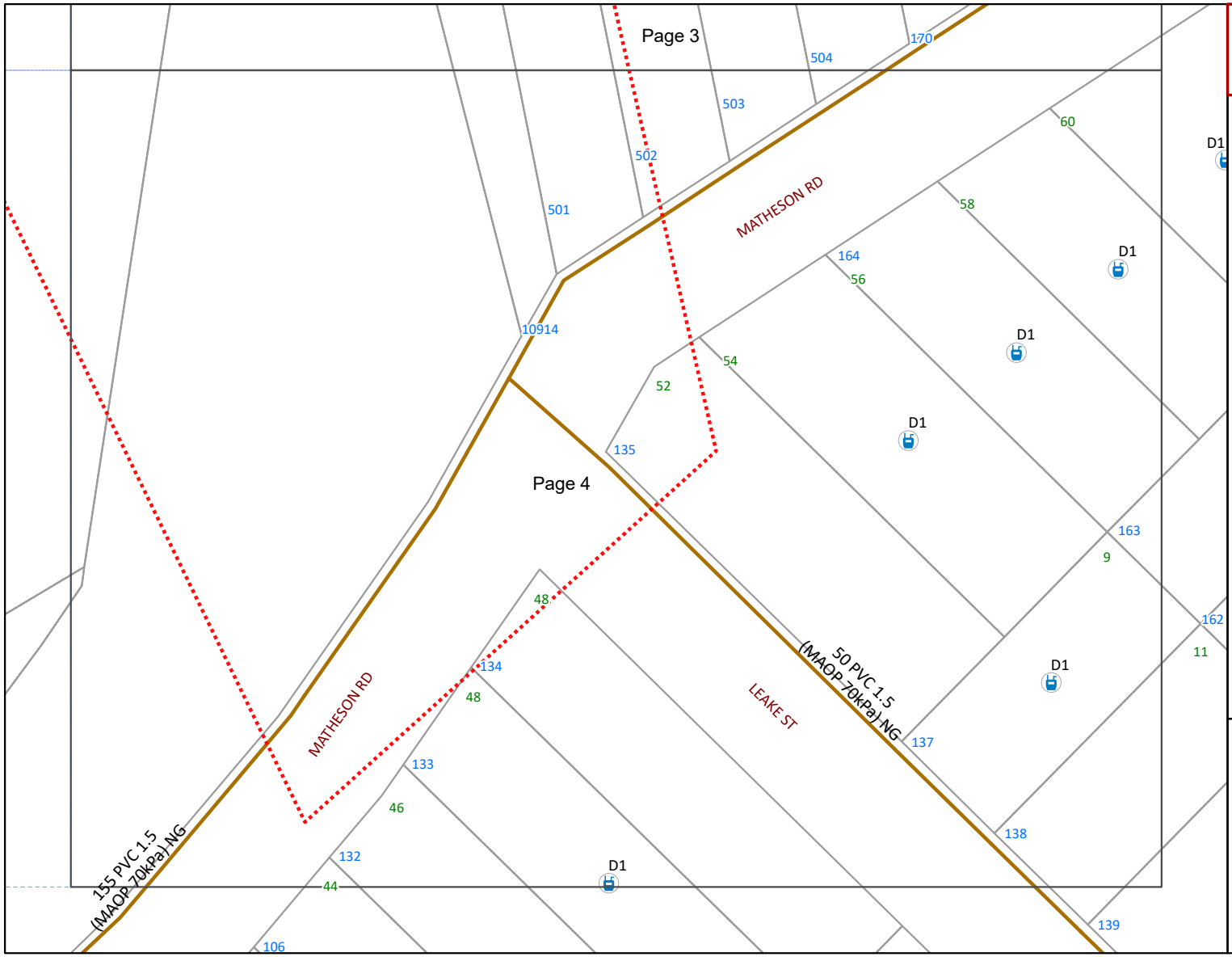
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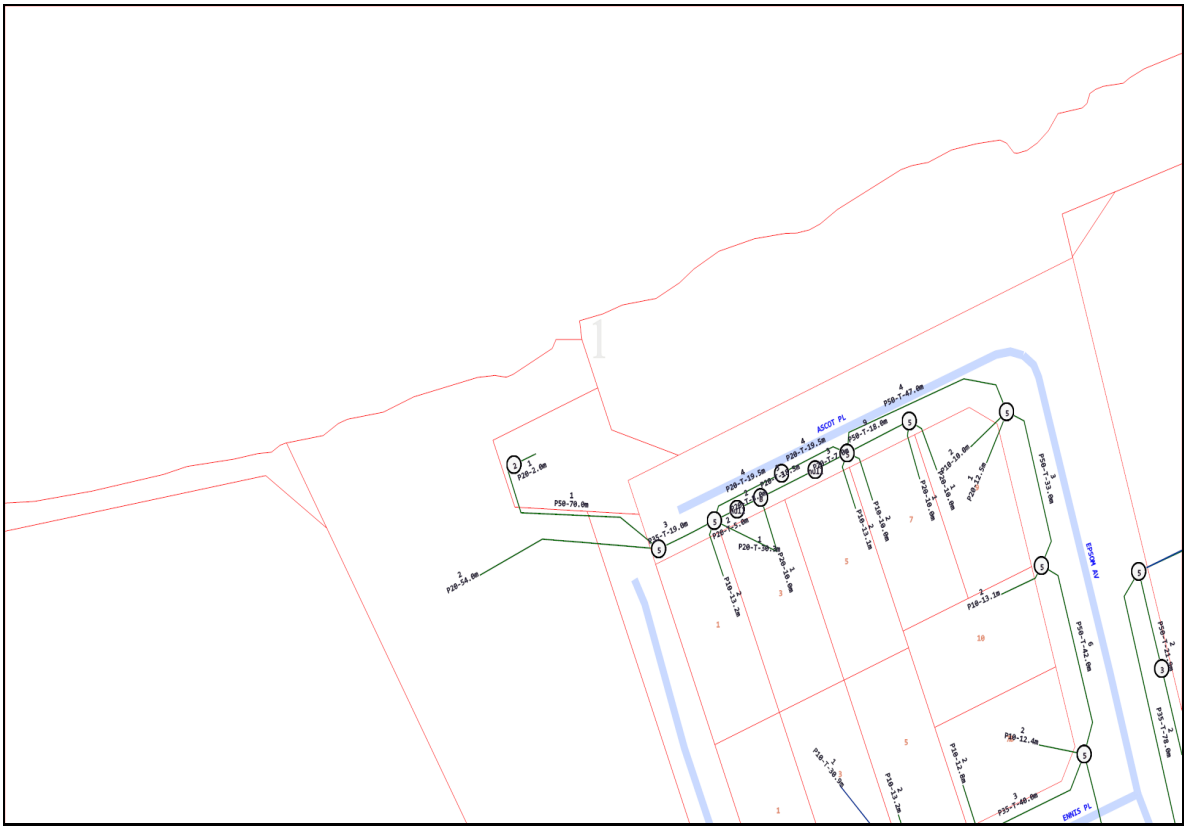
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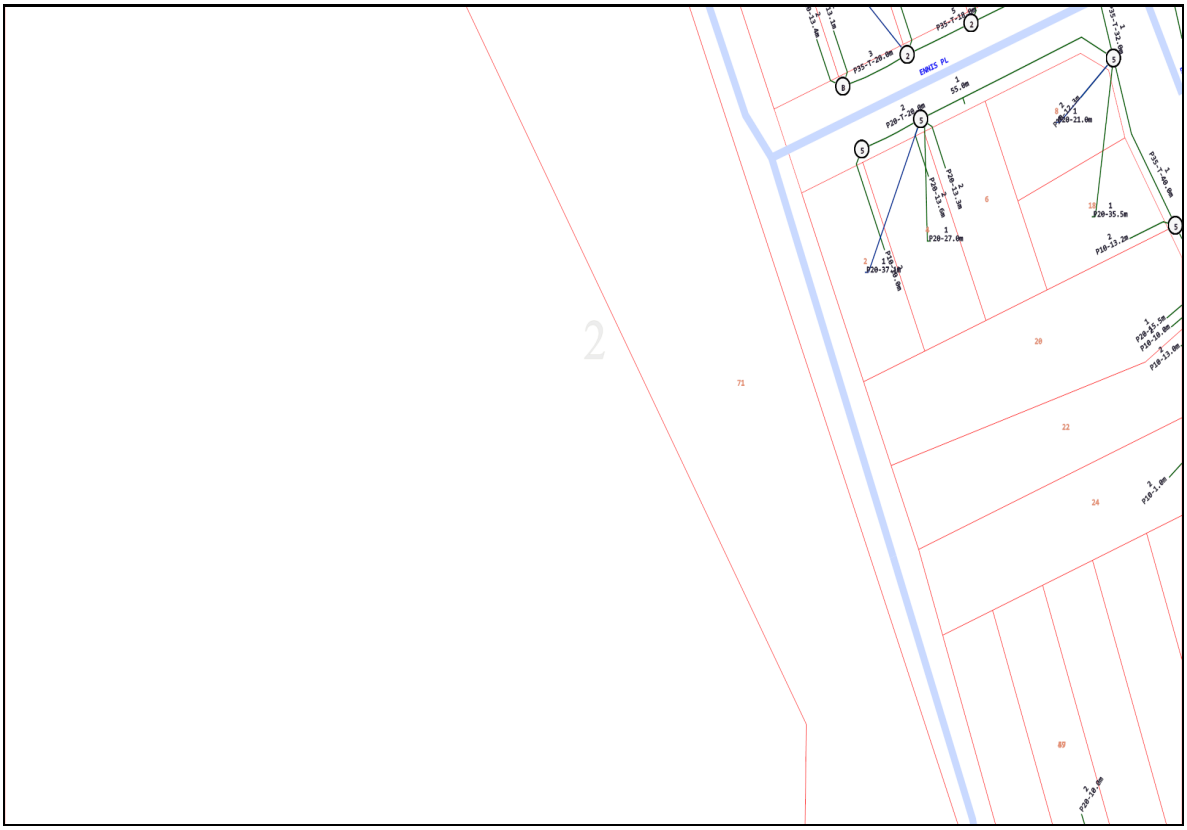
Please refer to Symbols Sheet for Further Information

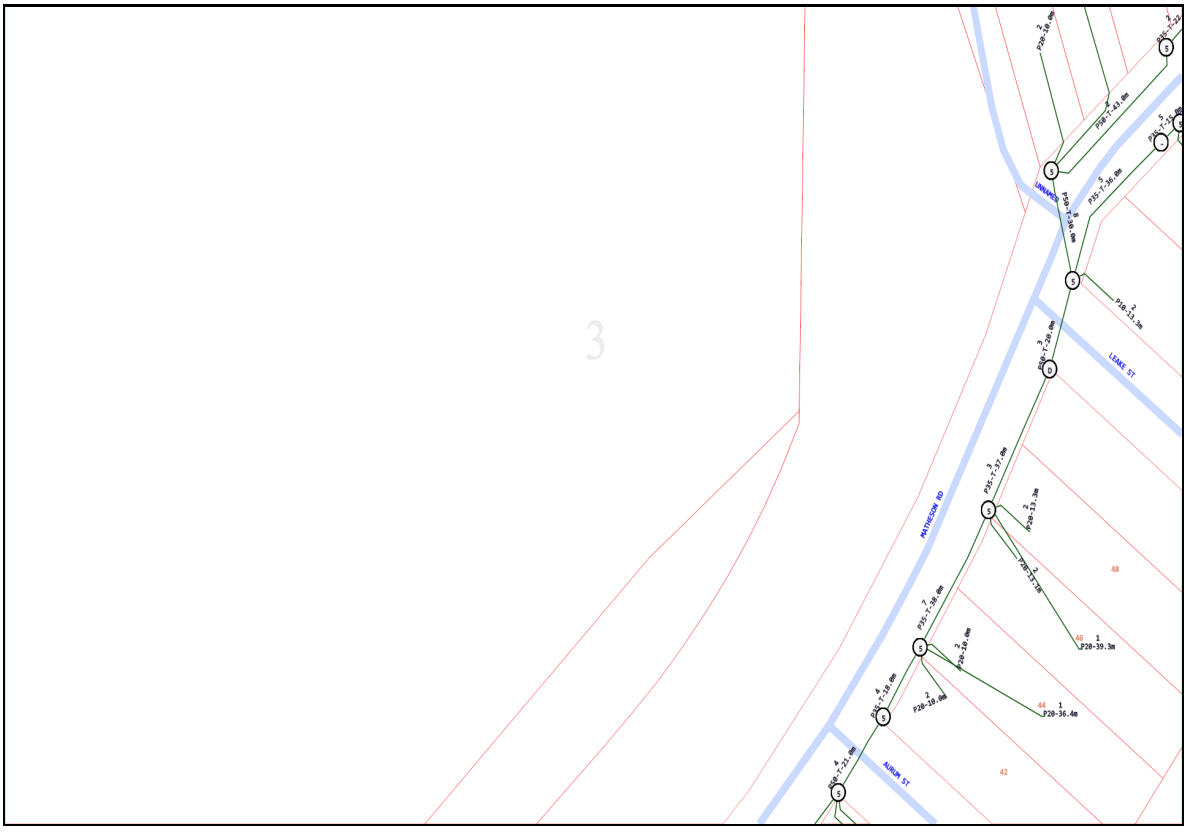
Disclaimer:
Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing).
ATCO Gas Australia will seek compensation for damage caused to assets.

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Plans generated by SmarterWX™ Automate


ASCOT PL
EPSOM AV
ENNIS PL

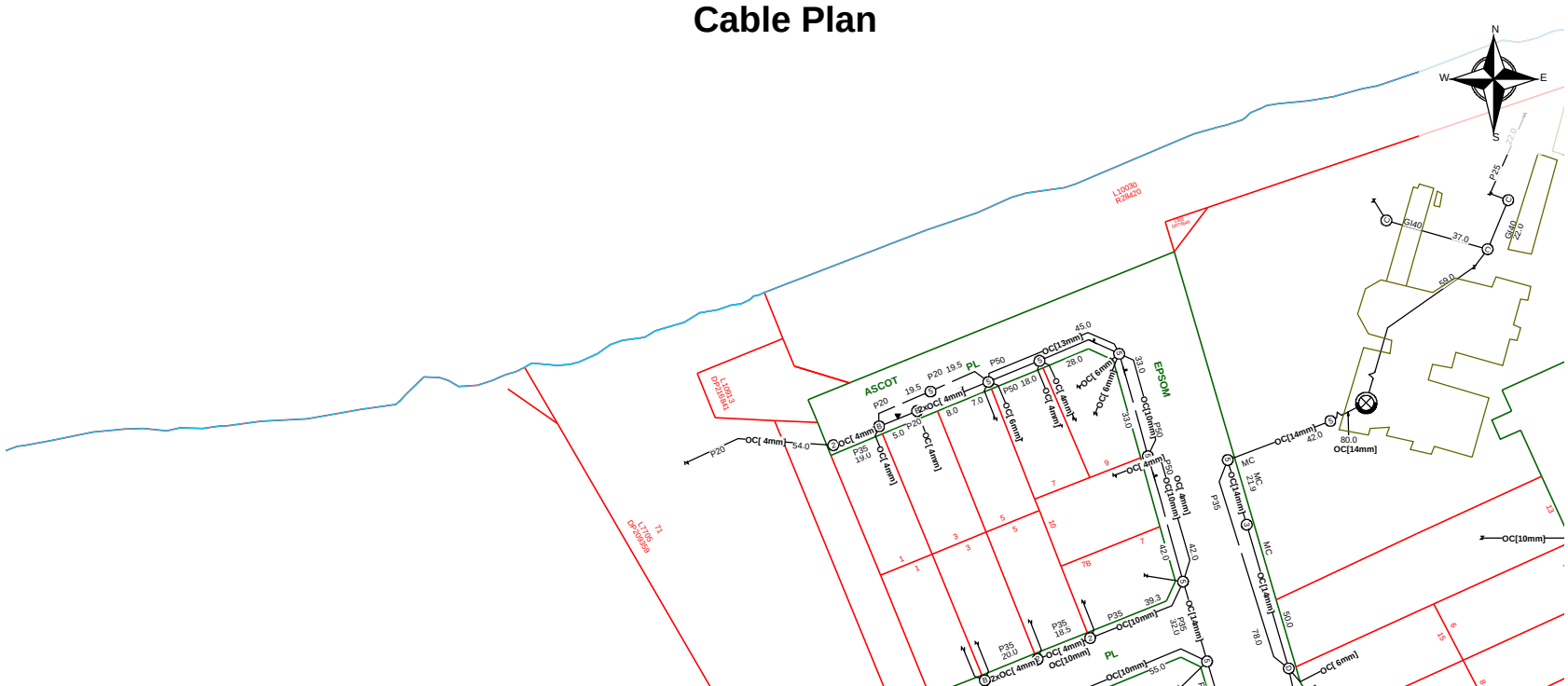

EWAIS PL
2
71
20
22
24
89




## Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

# Cable Plan




| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240900651 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 21/06/2024 19:09:58 | |

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

# Mains Cable Plan




| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240900651 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 21/06/2024 19:09:59 | |

WARNING
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See the Steps- Telstra Duty of Care that was provided in the email response.




## Overview

WATER CORPORATION

| | |
|---|---|
| Scale: | 1:3075 |
| Job No.: | 36962250 |
| Sequence No.: | 240900652 |
| Print Date: | 21 Jun 2024 |

N

Water

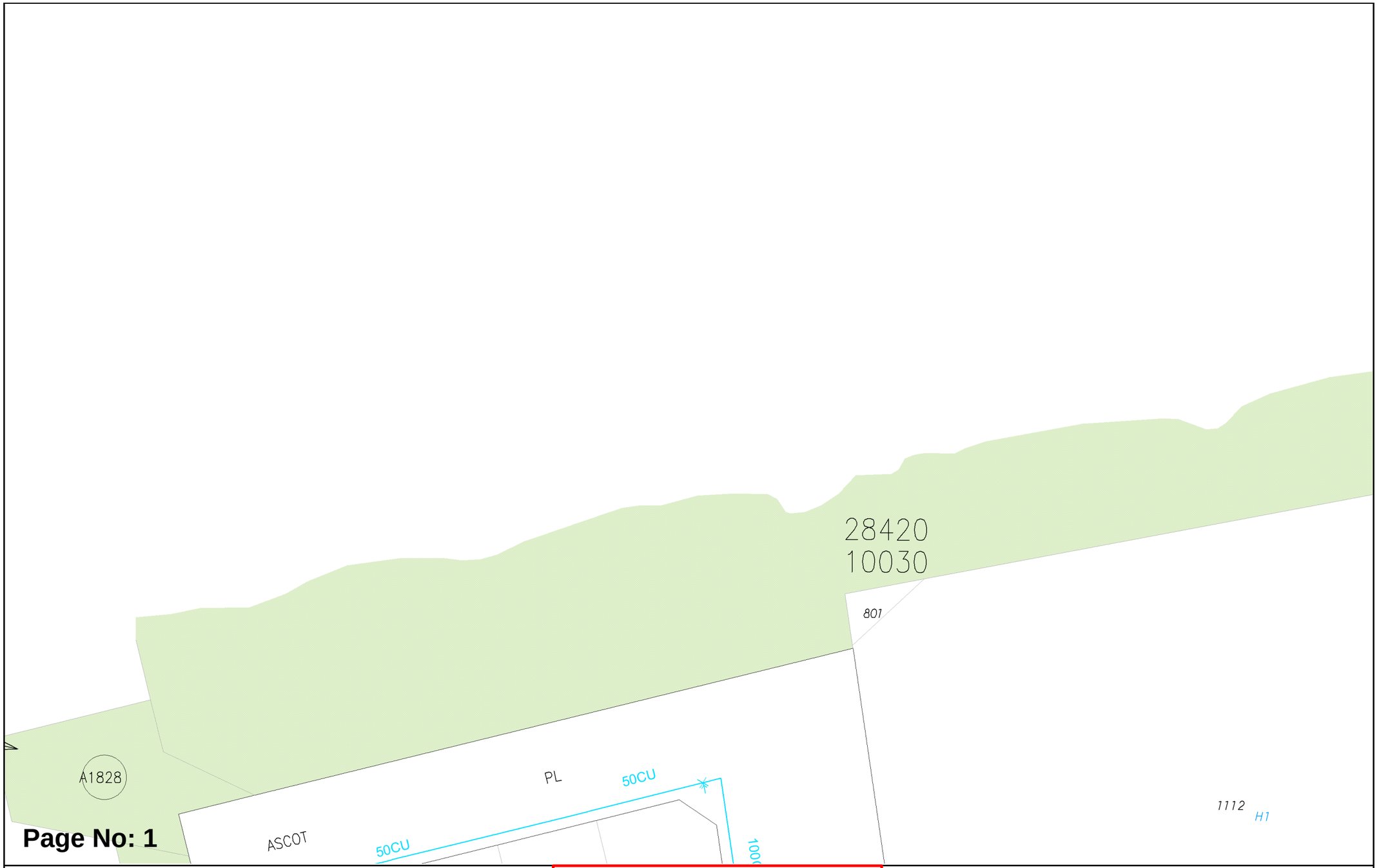
WARNING ASSET PROTECTION APPROVAL MAY BE REQUIRED

Apply for approval to work near our assets at:

Working near assets (watercorporation.com.au)

Unauthorised work within prescribed proximities of Water Corporation Assets is prohibited.

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WATER CORPORATION

Scale: 1:750
Job No.: 36962250
Sequence No.: 240900652
Print Date: 21 Jun 2024

N
Water

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Plans generated 21 Jun 2024 by PelicanCorp TicketAccess Software | www.pelicancorp.com

Water Corp - Critical Plan.docx (21 May 2024)




WATER CORPORATION

Scale: 1:750
Job No.: 36962250
Sequence No.: 240900652
Print Date: 21 Jun 2024

N
Water

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**Page No: 3**

WATER CORPORATION

Scale: 1:750
Job No.: 36962250
Sequence No.: 240900652
Print Date: 21 Jun 2024

N

Water

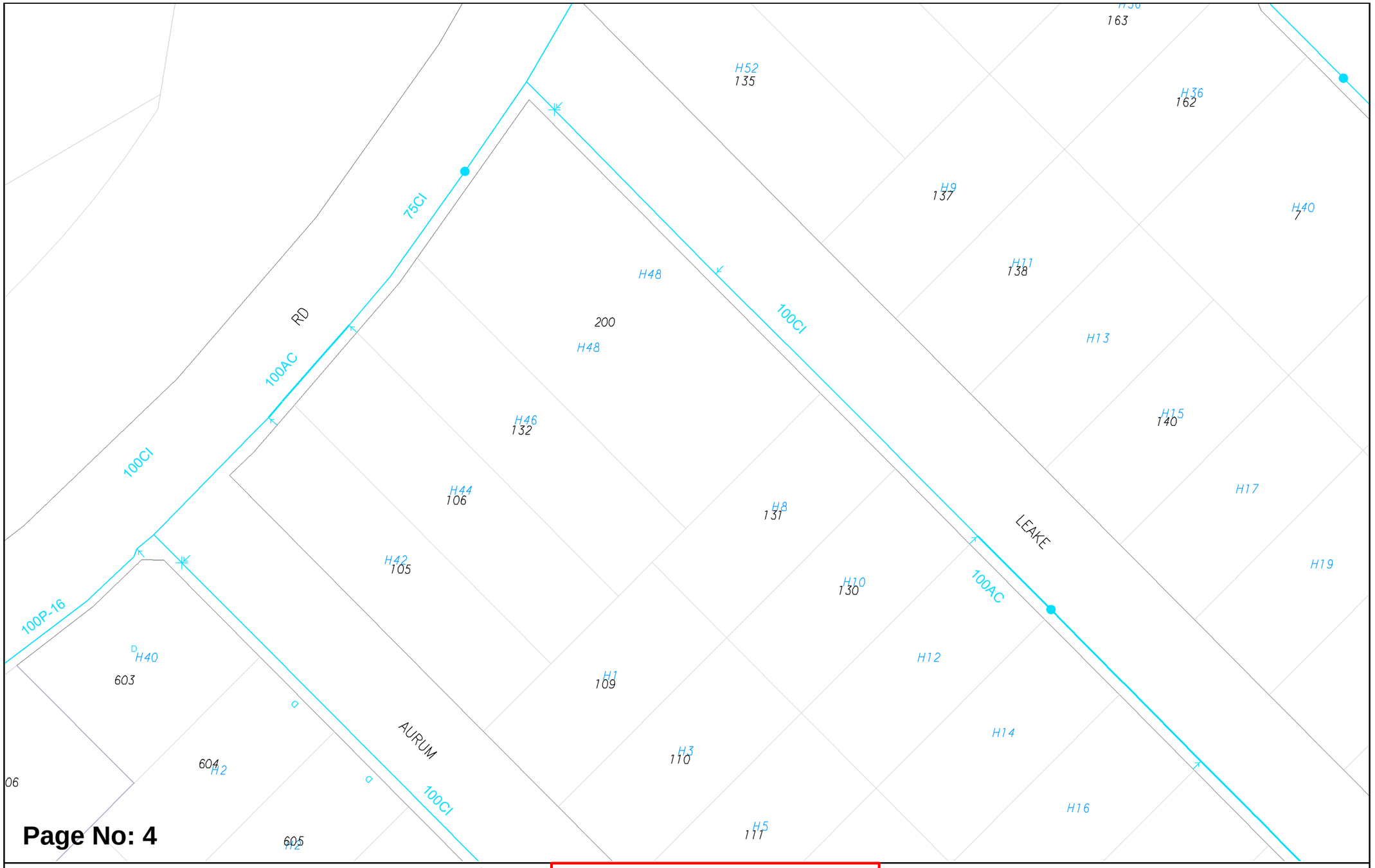
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| | | | |
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| | Print Date: | 21 Jun 2024 | |

Water

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## Overview

WATER CORPORATION

Scale: 1:3075
Job No.: 36962250
Sequence No.: 240900652
Print Date: 21 Jun 2024

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Sewer

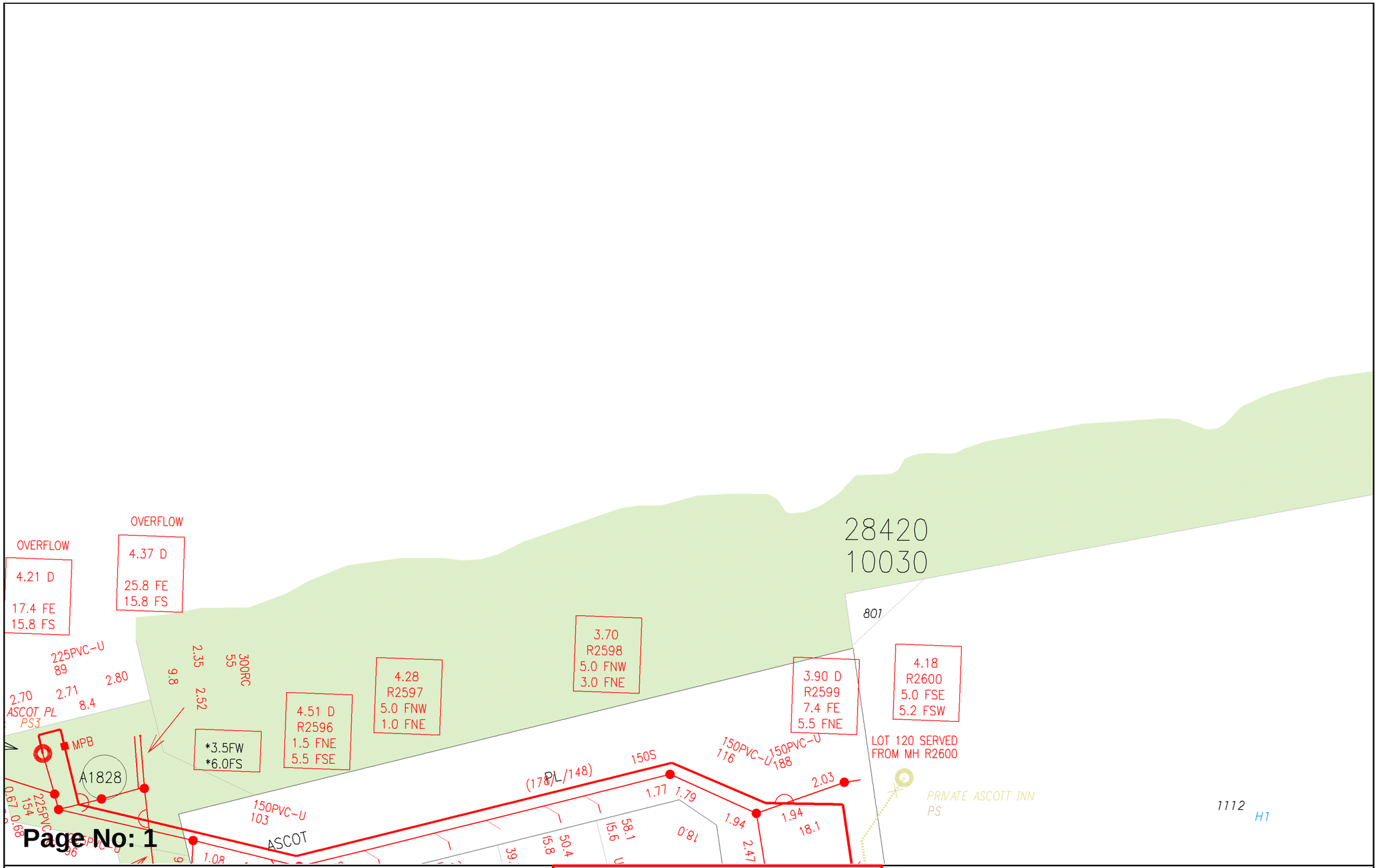
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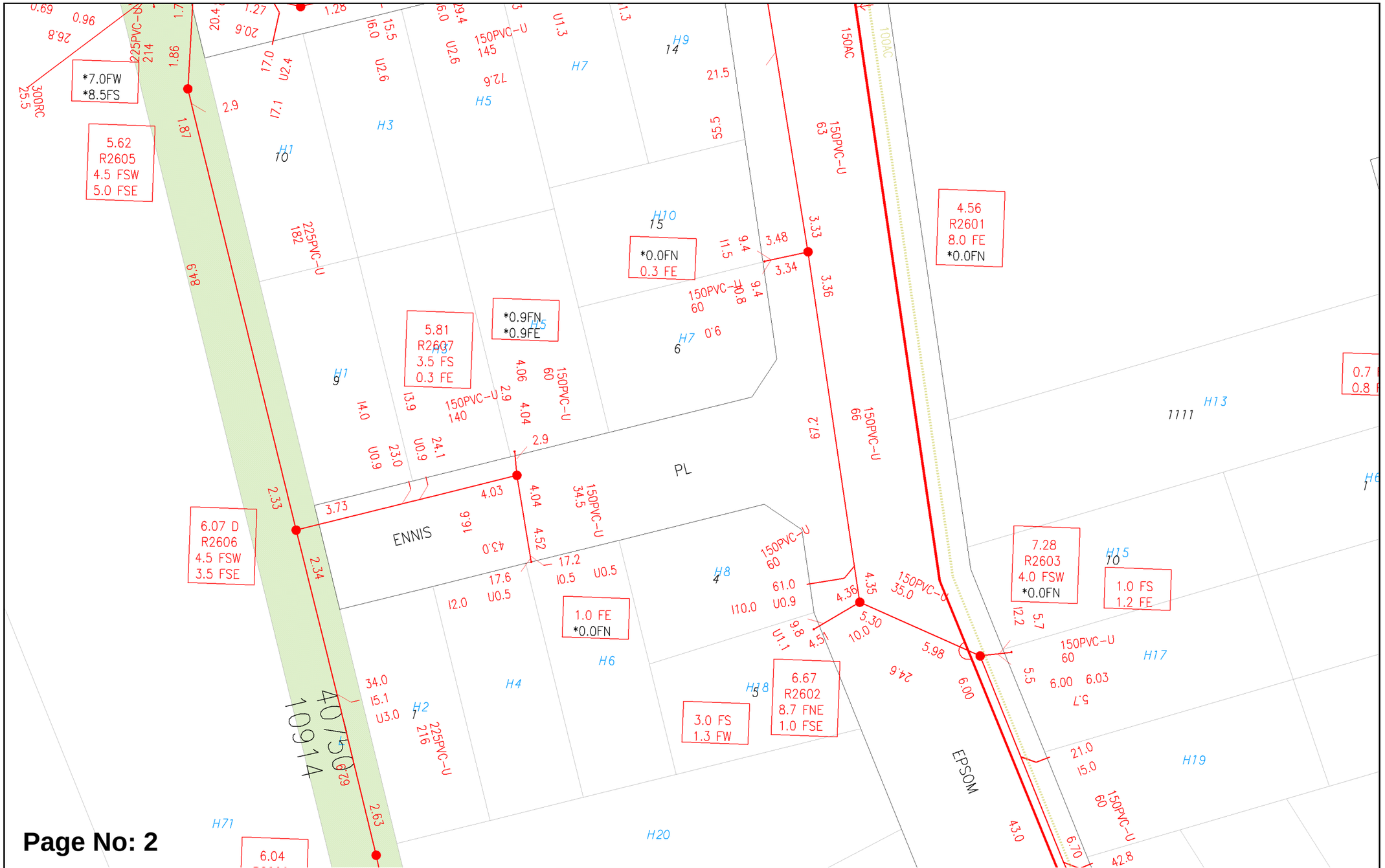
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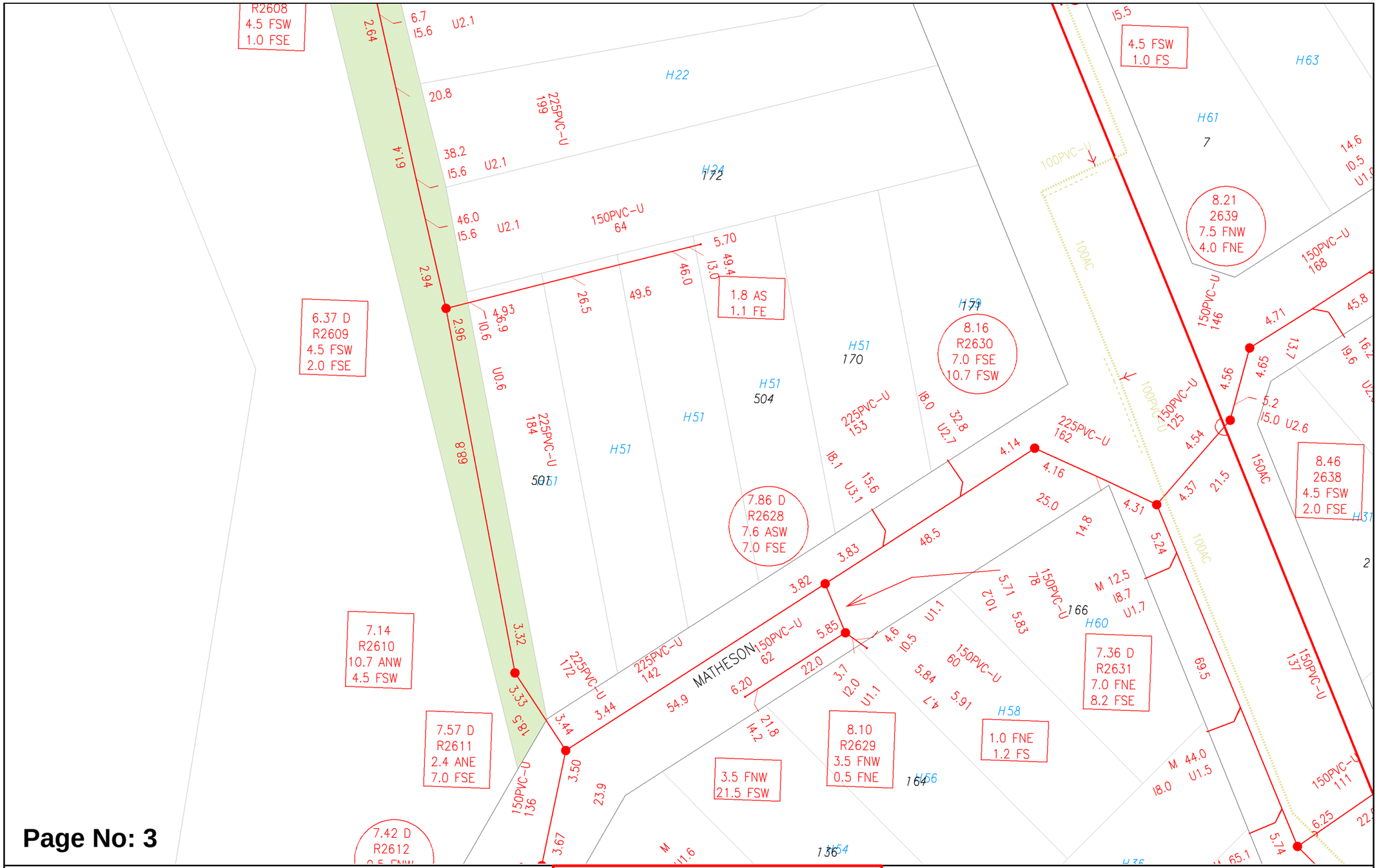
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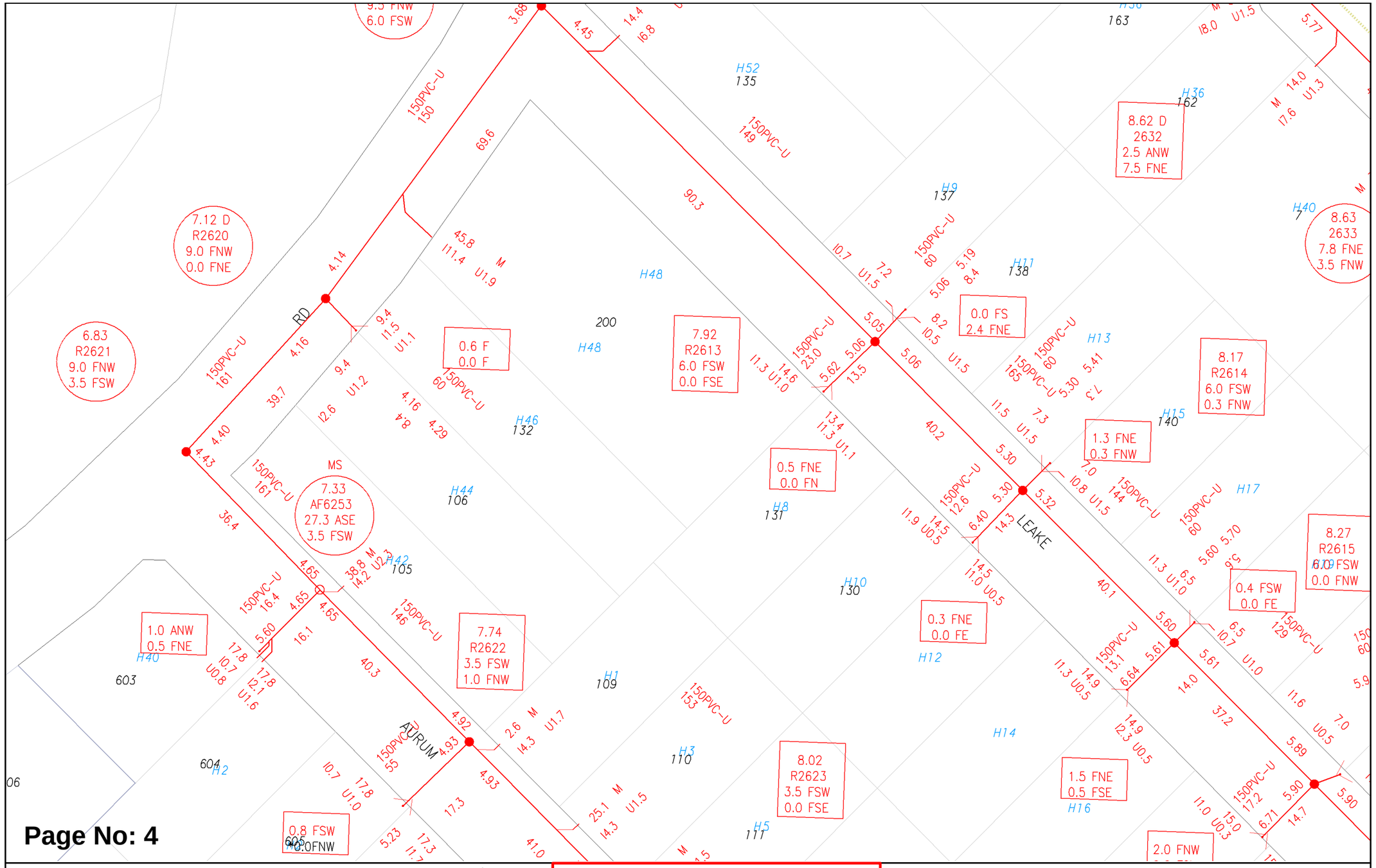
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**Page No: 4**

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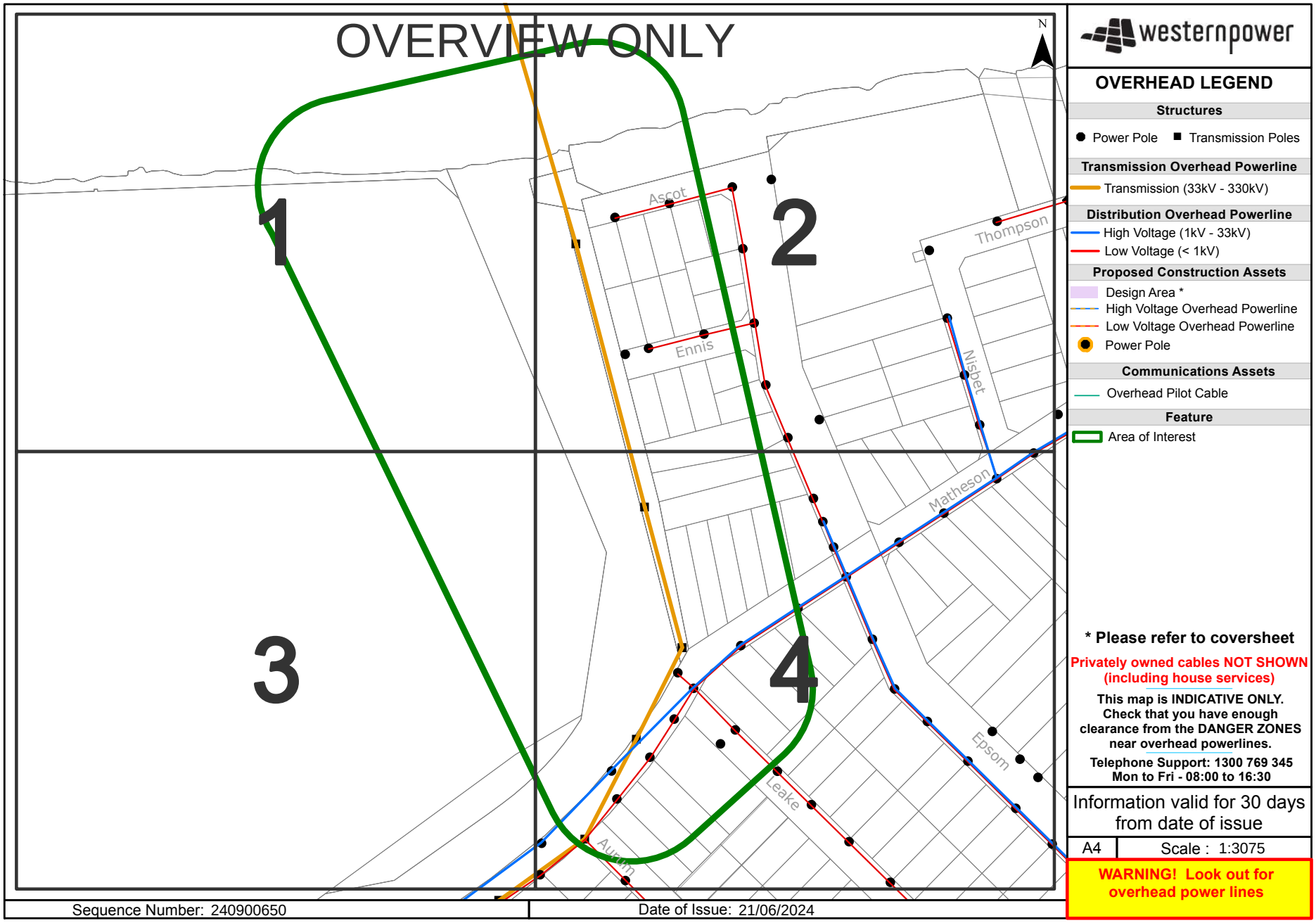
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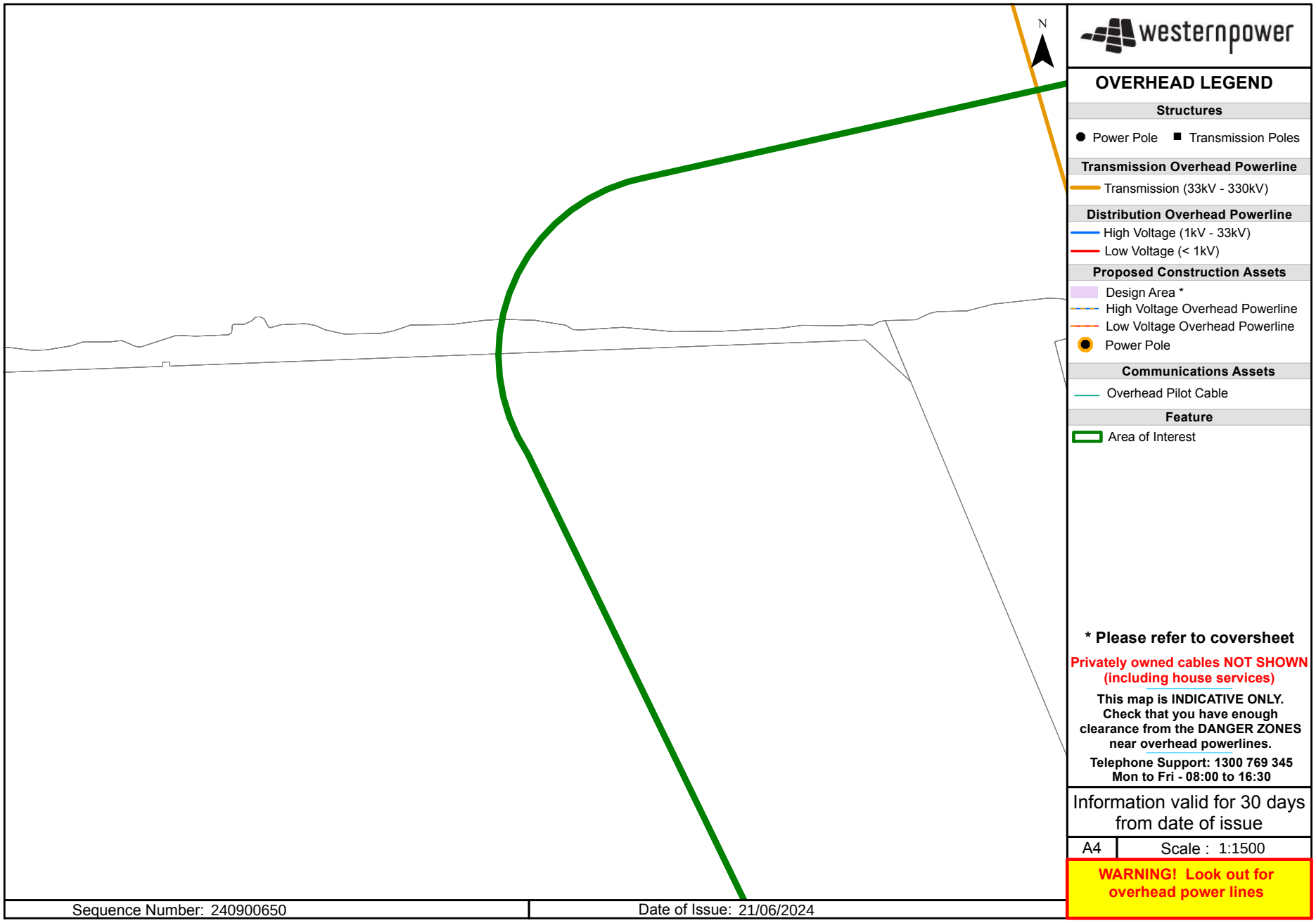
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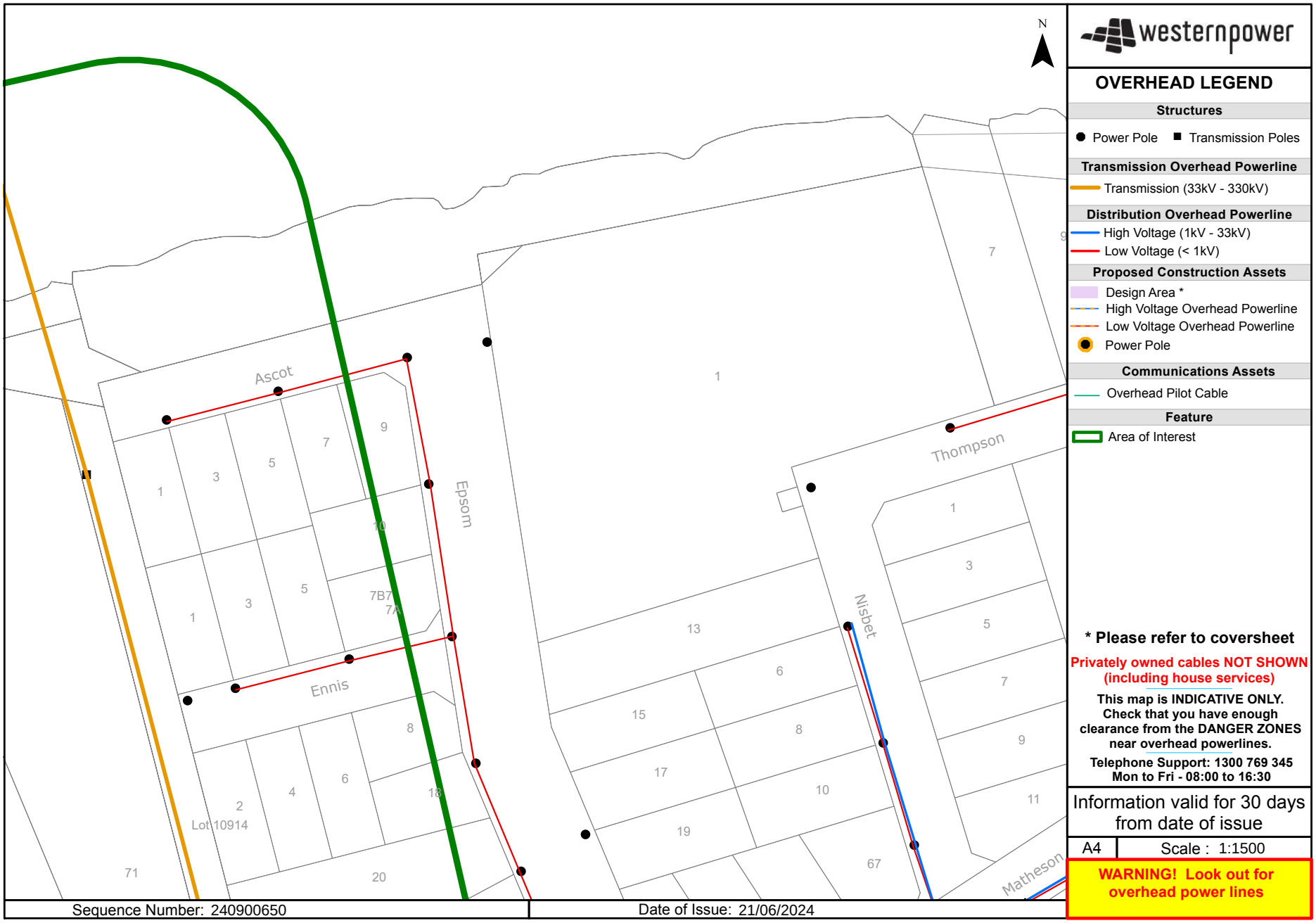
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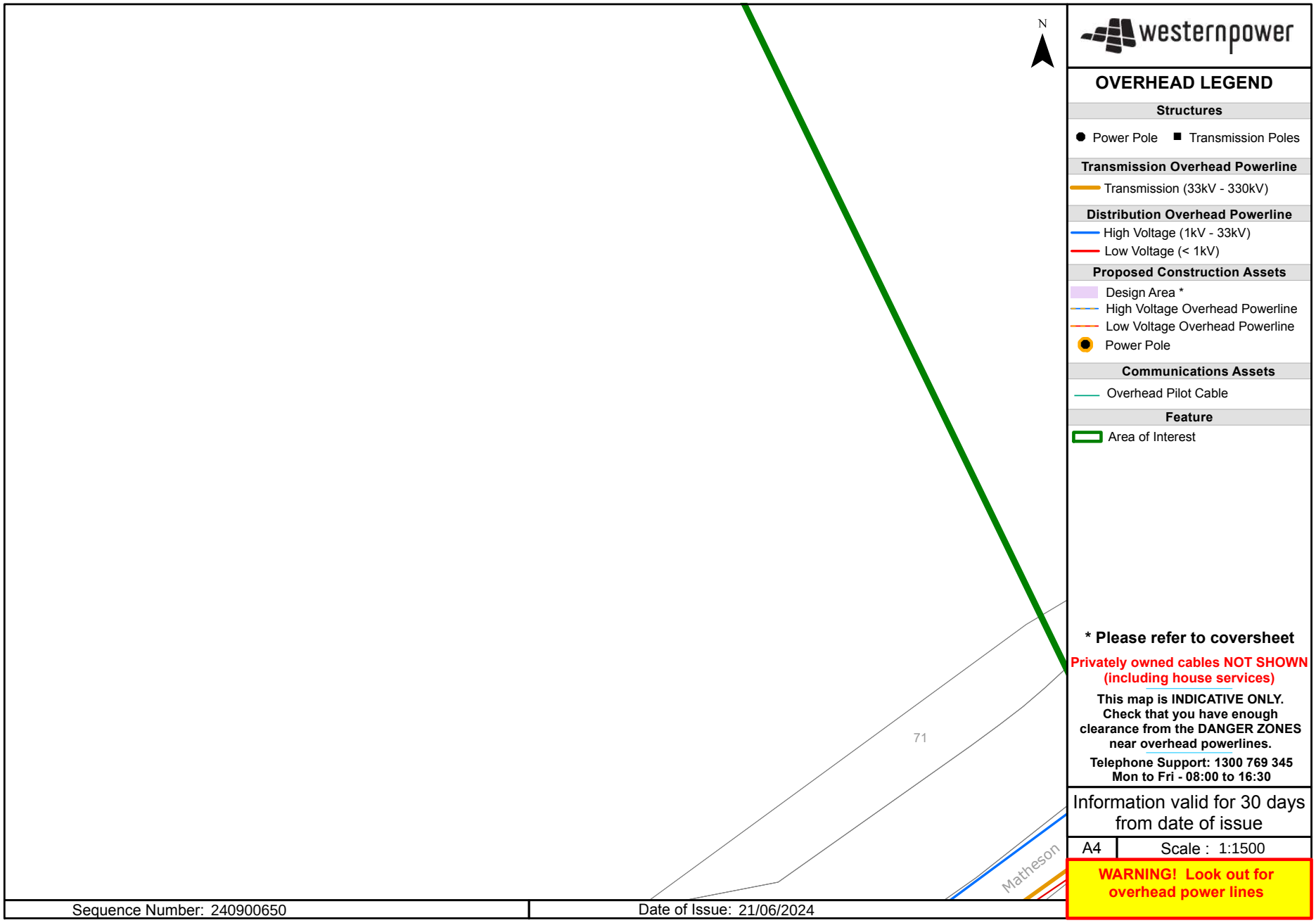
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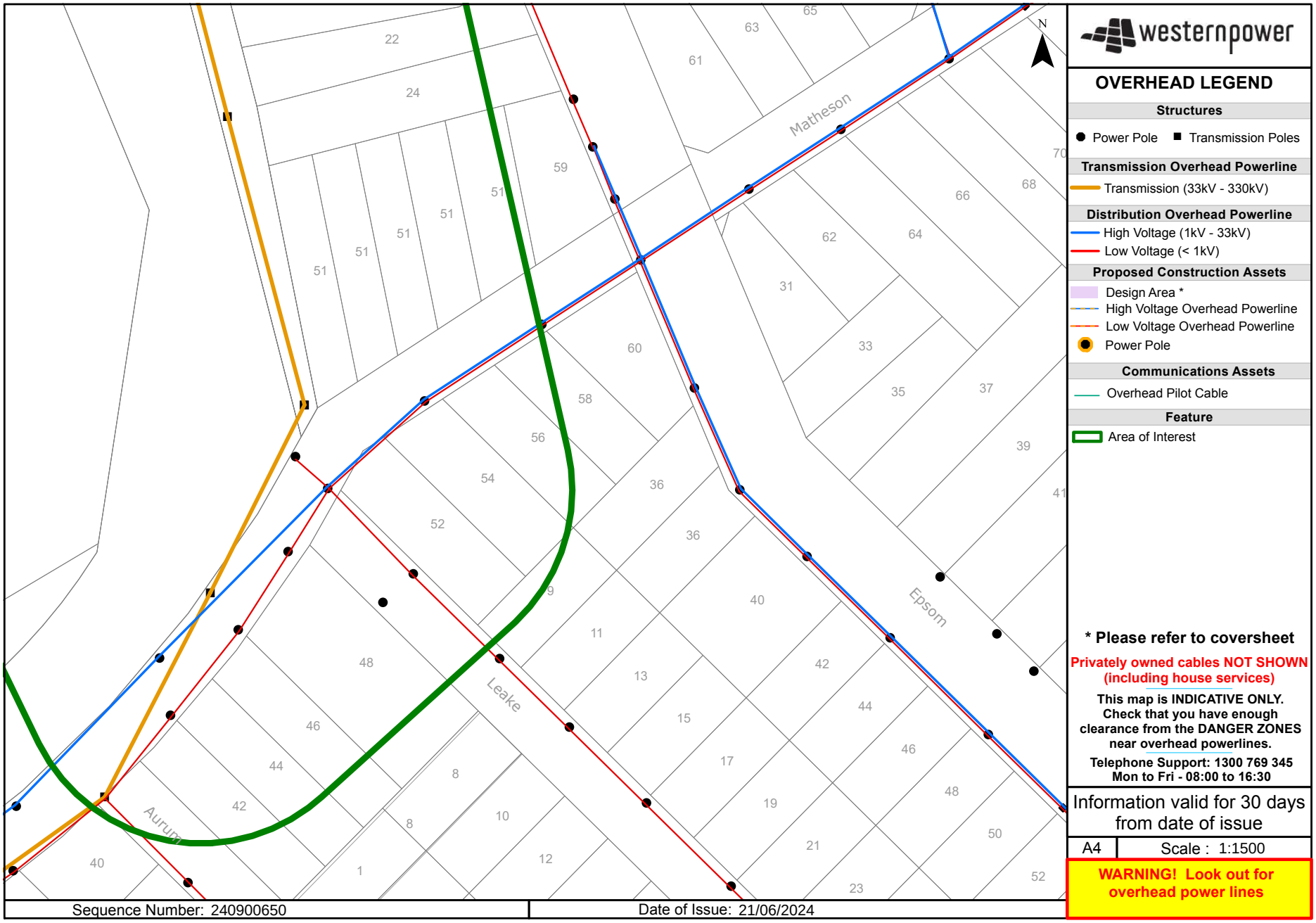
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OVERVIEW ONLY
N
1
2
3
4
Ascot
Ennis
Thompson
Nisbet
Matheson
Epsom
Leake
Aurum
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
Low Voltage (< 1kV)
Proposed Construction Assets
Design Area *
High Voltage Overhead Powerline
Low Voltage Overhead Powerline
Power Pole
Communications Assets
Overhead Pilot Cable
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Check that you have enough clearance from the DANGER ZONES near overhead powerlines.
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:3075
WARNING! Look out for overhead power lines
Sequence Number: 240900650
Date of Issue: 21/06/2024


N
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
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Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines
Sequence Number: 240900650
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N
Ascot
Epsom
Ennis
Nisbet
Thompson
Matheson
Lot 10914
Sequence Number: 240900650
Date of Issue: 21/06/2024
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
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Information valid for 30 days from date of issue
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westernpower
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Transmission Poles
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Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines
71
Matheson
Sequence Number: 240900650
Date of Issue: 21/06/2024




westernpower

## OVERHEAD LEGEND

**Structures**

- Power Pole
- Transmission Poles

**Transmission Overhead Powerline**

- Transmission (33kV - 330kV)

**Distribution Overhead Powerline**

- High Voltage (1kV - 33kV)
- Low Voltage (< 1kV)

**Proposed Construction Assets**

- Design Area *
- High Voltage Overhead Powerline
- Low Voltage Overhead Powerline
- Power Pole

**Communications Assets**

- Overhead Pilot Cable

**Feature**

- Area of Interest

*** Please refer to coversheet**

**Privately owned cables NOT SHOWN (including house services)**

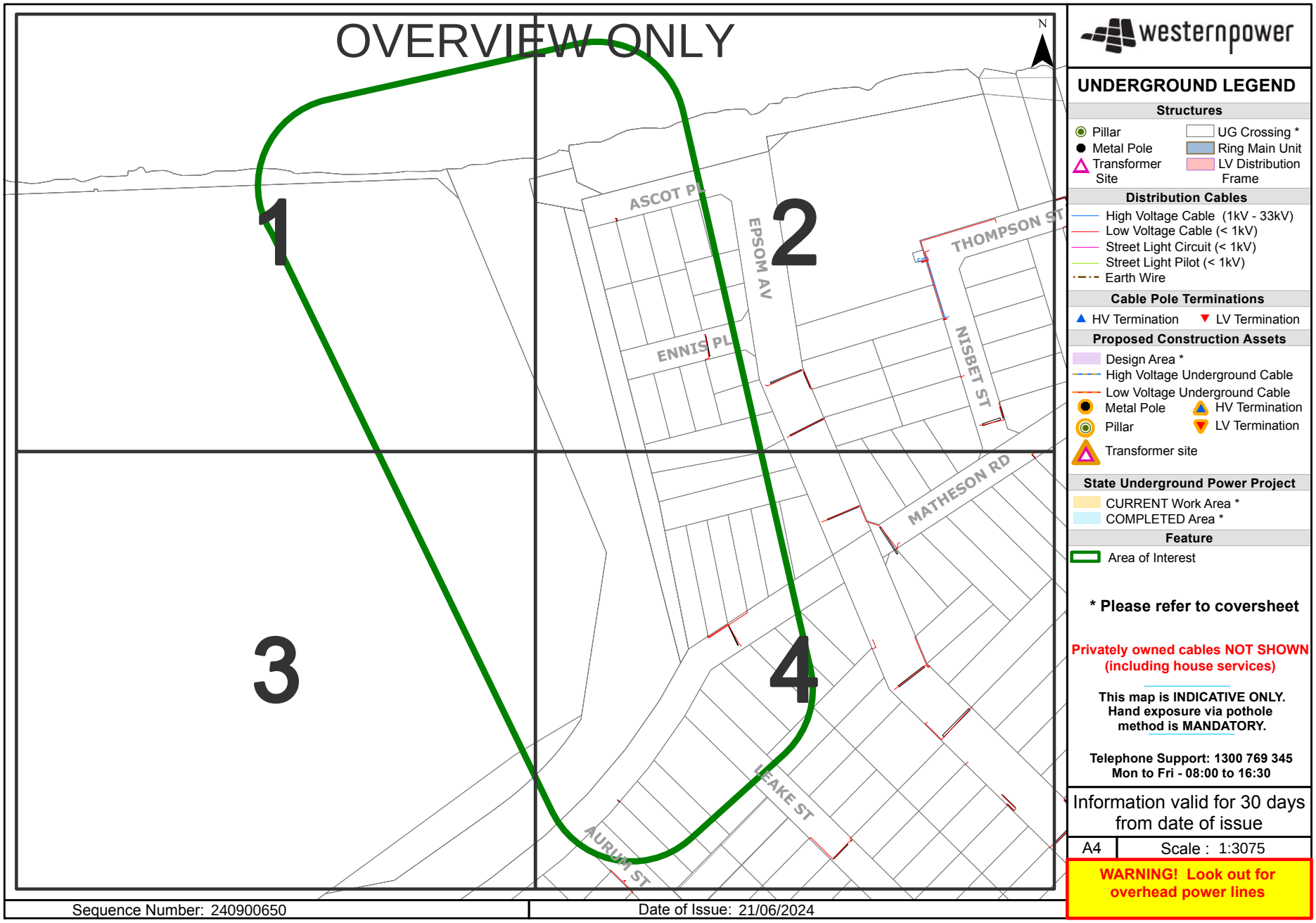
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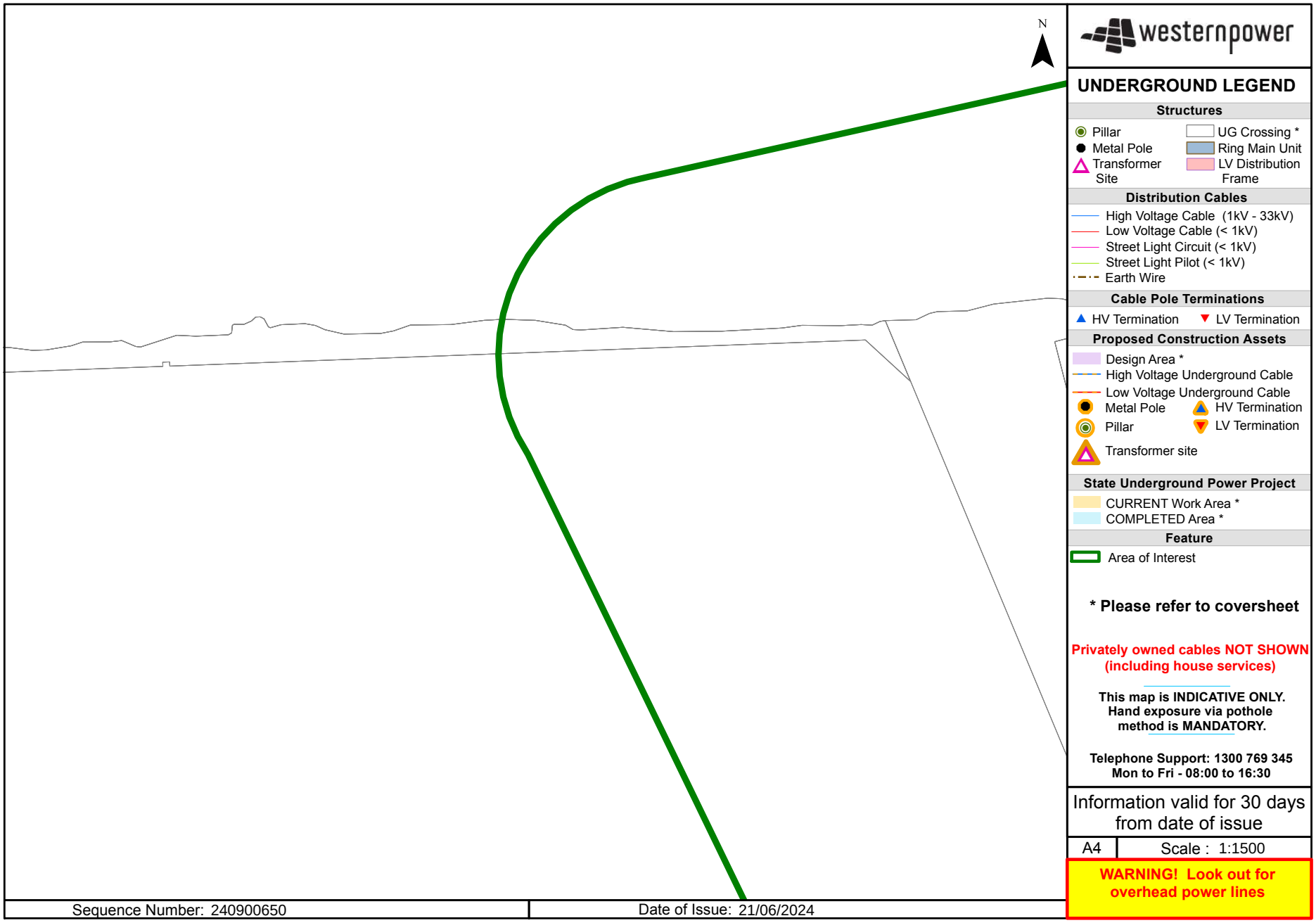
**Telephone Support: 1300 769 345**
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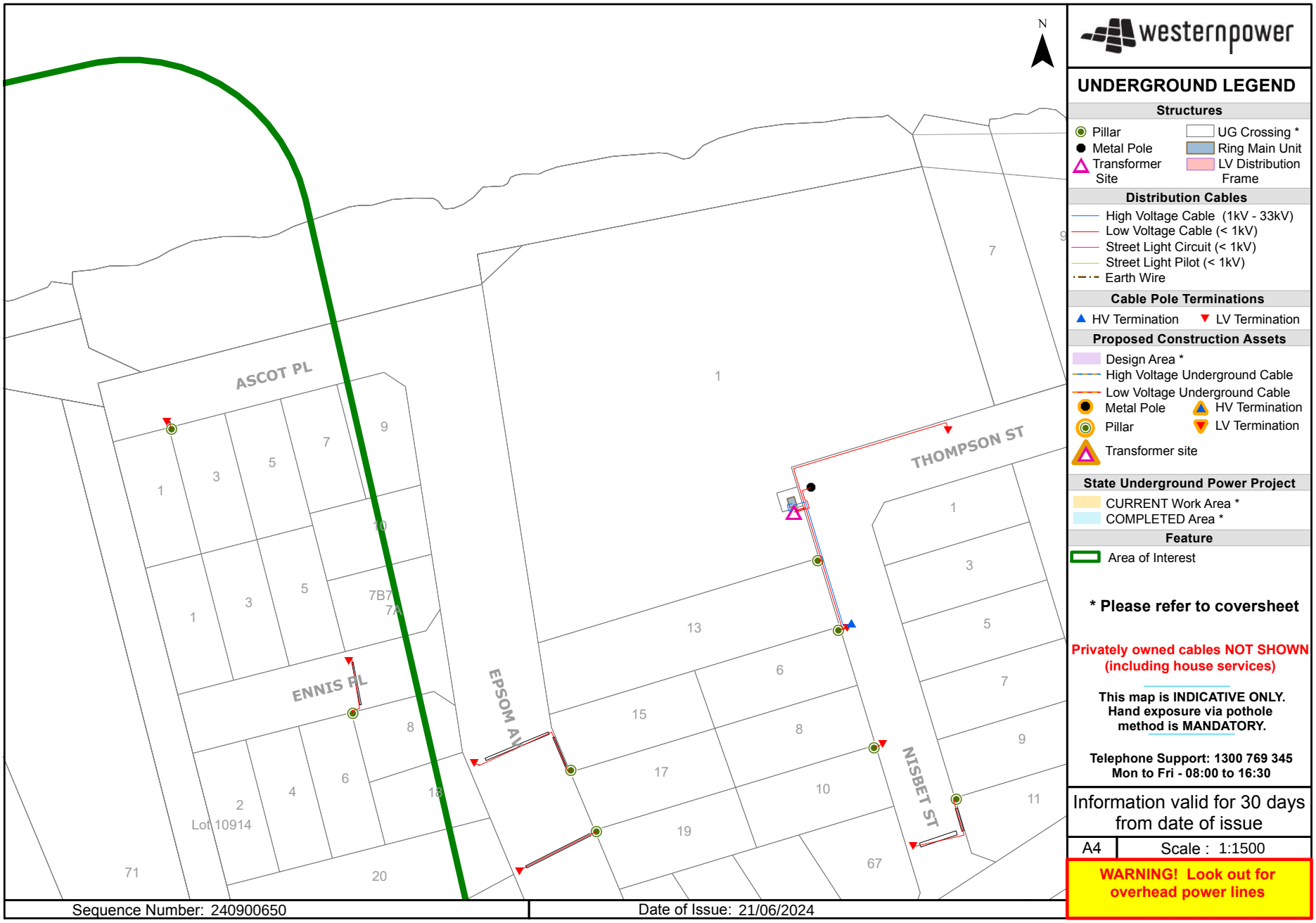
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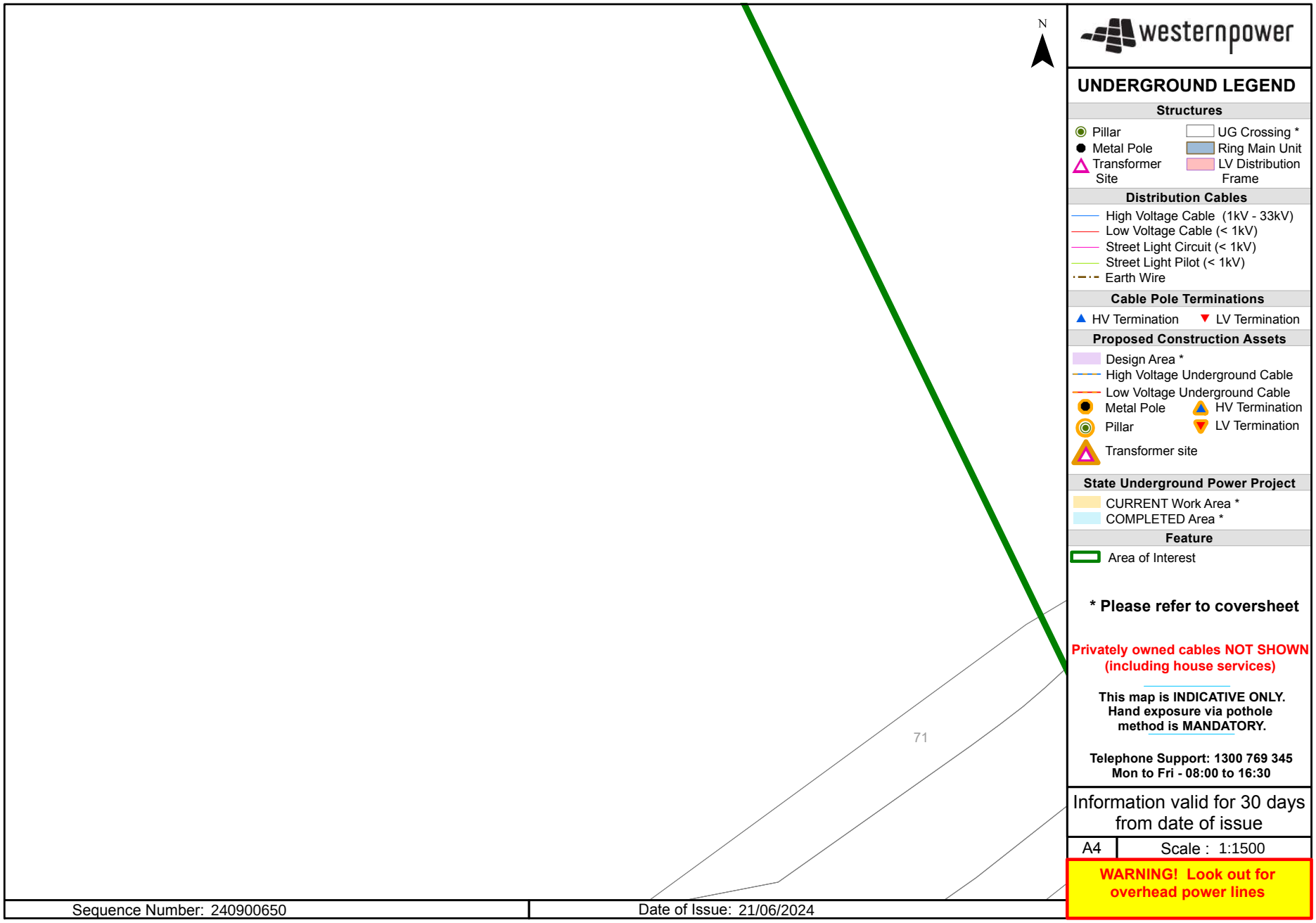
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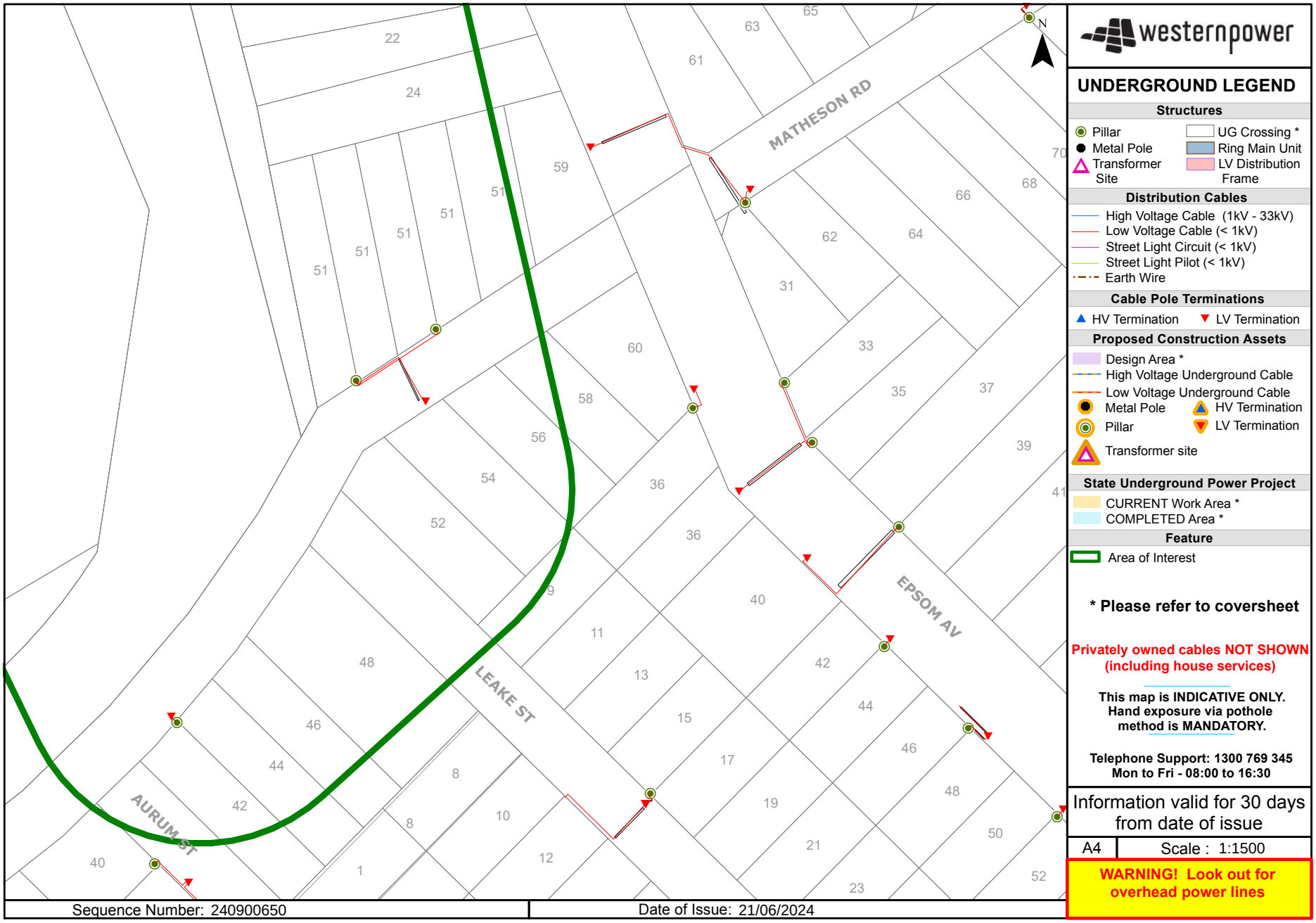
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OVERVIEW ONLY
N
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ASCOT PL
EPSOM AV
ENNIS PL
THOMPSON ST
NISBET ST
MATHESON RD
LEAKE ST
AURUM ST
westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
Low Voltage Cable (< 1kV)
Street Light Circuit (< 1kV)
Street Light Pilot (< 1kV)
Earth Wire
Cable Pole Terminations
HV Termination
LV Termination
Proposed Construction Assets
Design Area *
High Voltage Underground Cable
Low Voltage Underground Cable
Metal Pole
Pillar
Transformer site
HV Termination
LV Termination
State Underground Power Project
CURRENT Work Area *
COMPLETED Area *
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.
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N
westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
Low Voltage Cable (< 1kV)
Street Light Circuit (< 1kV)
Street Light Pilot (< 1kV)
Earth Wire
Cable Pole Terminations
HV Termination
LV Termination
Proposed Construction Assets
Design Area *
High Voltage Underground Cable
Low Voltage Underground Cable
Metal Pole
Pillar
Transformer site
HV Termination
LV Termination
State Underground Power Project
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COMPLETED Area *
Feature
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Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines
Sequence Number: 240900650
Date of Issue: 21/06/2024


N
ASCOT PL
ENNIS PL
EPSOM AV
THOMPSON ST
NISBET ST
Lot 10914
Sequence Number: 240900650
Date of Issue: 21/06/2024
westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
Low Voltage Cable (< 1kV)
Street Light Circuit (< 1kV)
Street Light Pilot (< 1kV)
Earth Wire
Cable Pole Terminations
HV Termination
LV Termination
Proposed Construction Assets
Design Area *
High Voltage Underground Cable
Low Voltage Underground Cable
Metal Pole
Pillar
Transformer site
HV Termination
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State Underground Power Project
CURRENT Work Area *
COMPLETED Area *
Feature
Area of Interest
* Please refer to coversheet
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westernpower
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Job No 36962248

byda.com.au

## Contact Details

| Contact | Contact number | Company | Enquirer ID |
|---|---|---|---|
| Justin Zielinski | 0420 304 451 | - | 3140642 |

**Email**
jzielinski@tabec.com.au

**Address**
54 Havelock Street
West Perth WA 6005

## Job Site and Enquiry Details

**WARNING:** The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

| Enquiry date | Start date | End date | On behalf of | Job purpose | Locations | Onsite activities |
|---|---|---|---|---|---|---|
| 21/06/2024 | 24/06/2024 | 24/06/2024 | Private | Design | Both Road | Planning & Design |




Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

| User Reference | Address | Notes/description |
|---|---|---|
| Precinct C - 1 | 30 Matheson Road<br>Ascot WA 6104 | - |

## Your Responsibility and Duty of Care

- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the Privacy Policy and Term of Use.
- For more information on safe digging practices, visit www.byda.com.au

## Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

| Referral ID (Seq. no) | Authority Name | Phone | Status |
|---|---|---|---|
| 240900641 | ATCO Gas Australia | 1300 926 755 | NOTIFIED |
| 240900637 | NBN Co (WA) | 1800 687 626 | NOTIFIED |
| 240900639 | Telstra (WA) | 1800 653 935 | NOTIFIED |
| 240900640 | Water Corporation | 13 13 95 | NOTIFIED |
| 240900638 | Western Power | 13 10 87 | NOTIFIED |

END OF UTILITIES LIST

**Lodge your FREE enquiry online any time at byda.com.au**

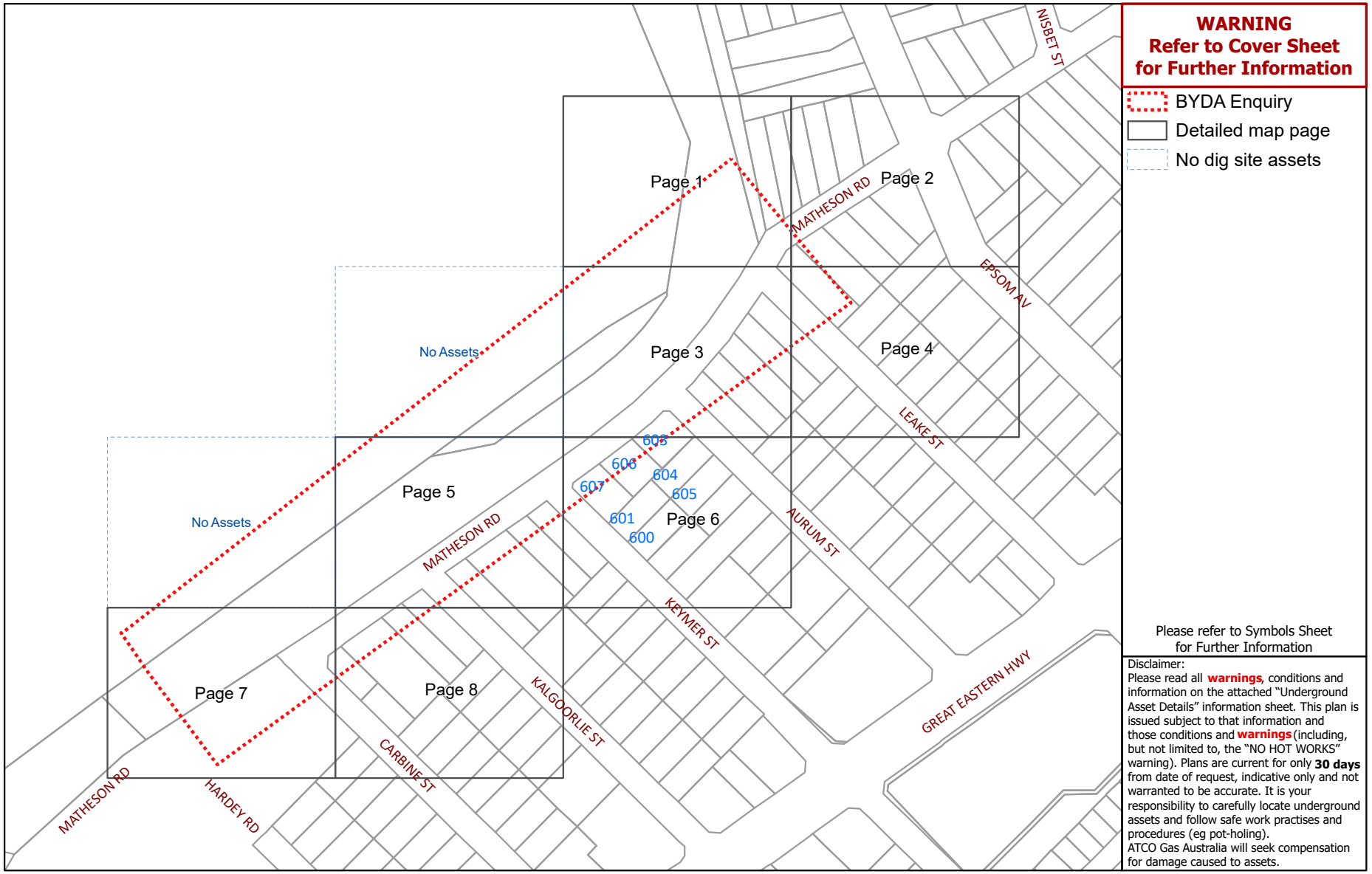
ATCO
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ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)
Index Sheet

Seq # 240900641
Job # 36962248

BYDA Location: 30 Matheson Road Ascot 6104
Scale: 1:3,500

BEFORE YOU DIG www.byda.com.au




**WARNING**
**Refer to Cover Sheet for Further Information**

- BYDA Enquiry
- Detailed map page
- No dig site assets

Please refer to Symbols Sheet for Further Information

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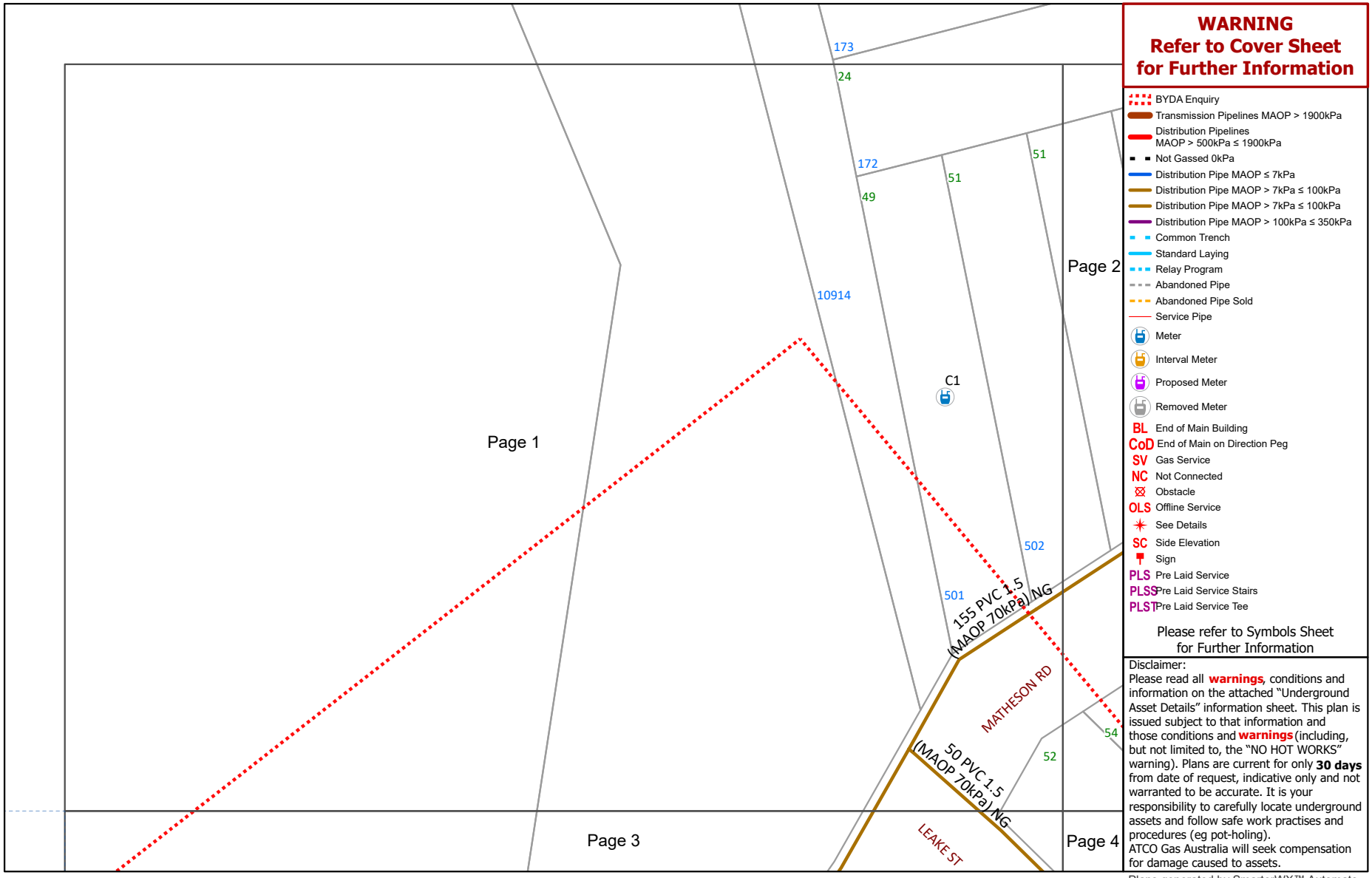
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Date: 21/06/24 (valid for 30 days)

Seq # 240900641
Job # 36962248

BYDA Location: 30 Matheson Road Ascot 6104
Scale: 1:800




**WARNING**
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- Distribution Pipe MAOP ≤ 7kPa
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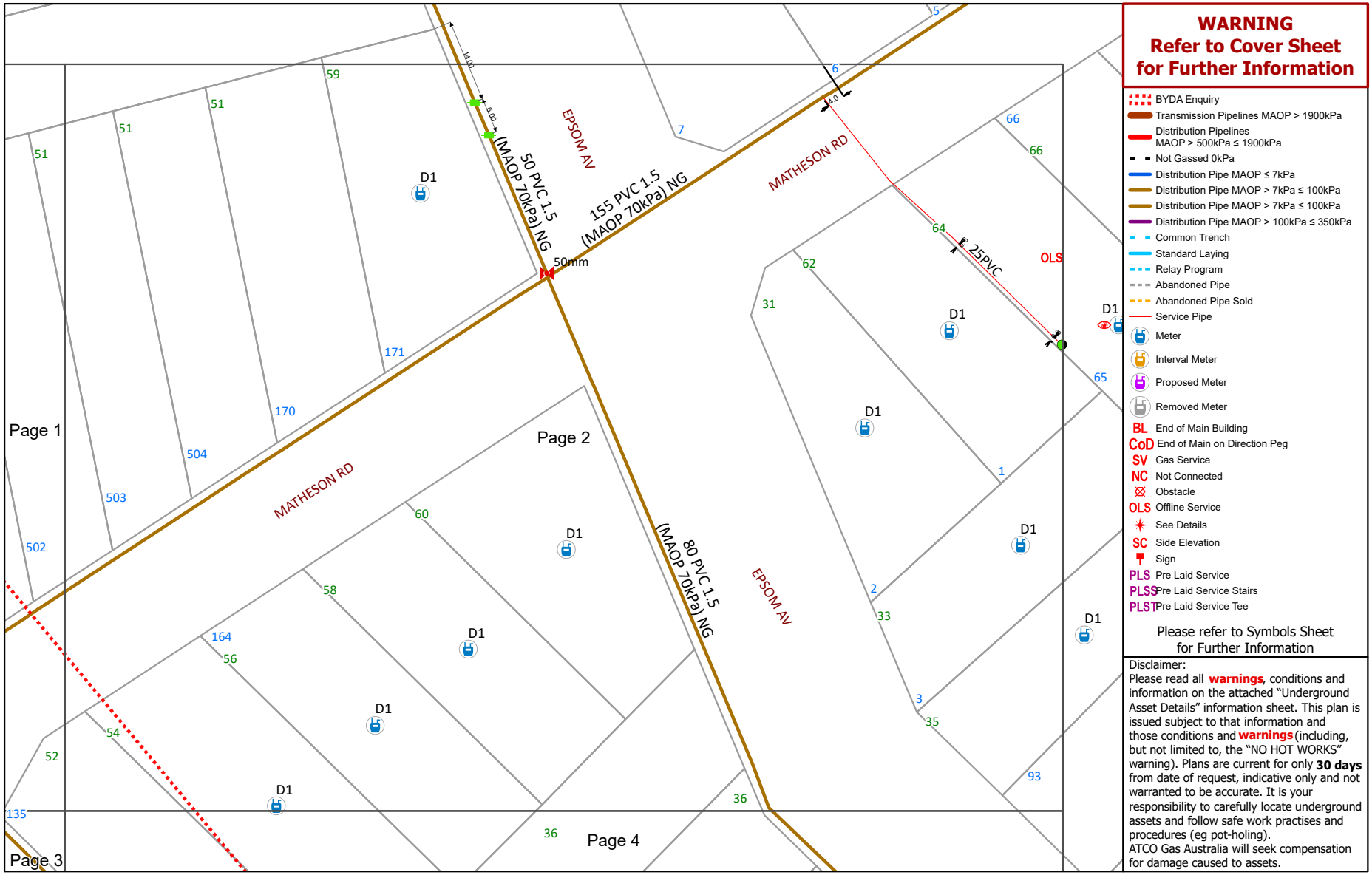
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BYDA Location: 30 Matheson Road Ascot 6104
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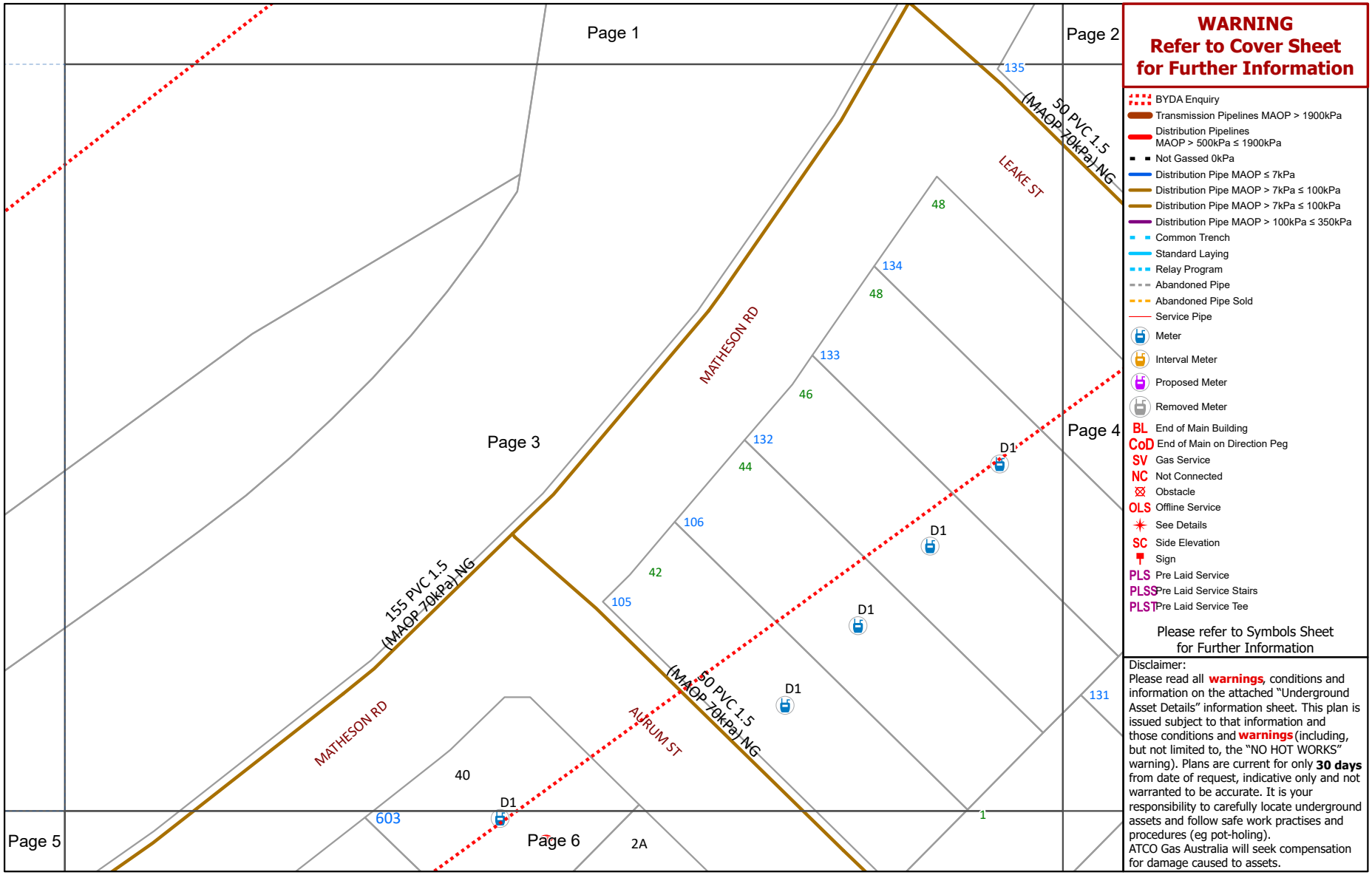
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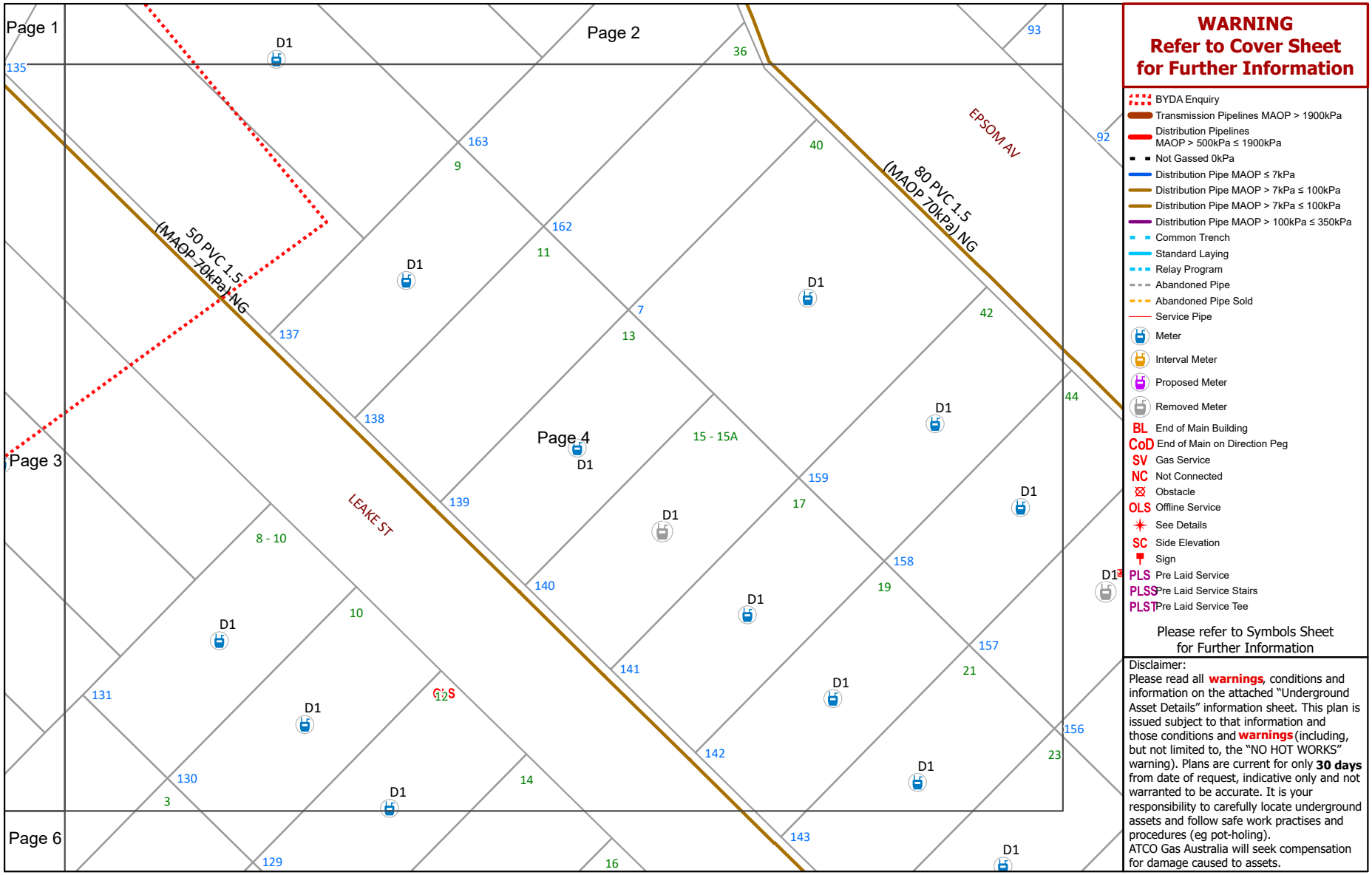
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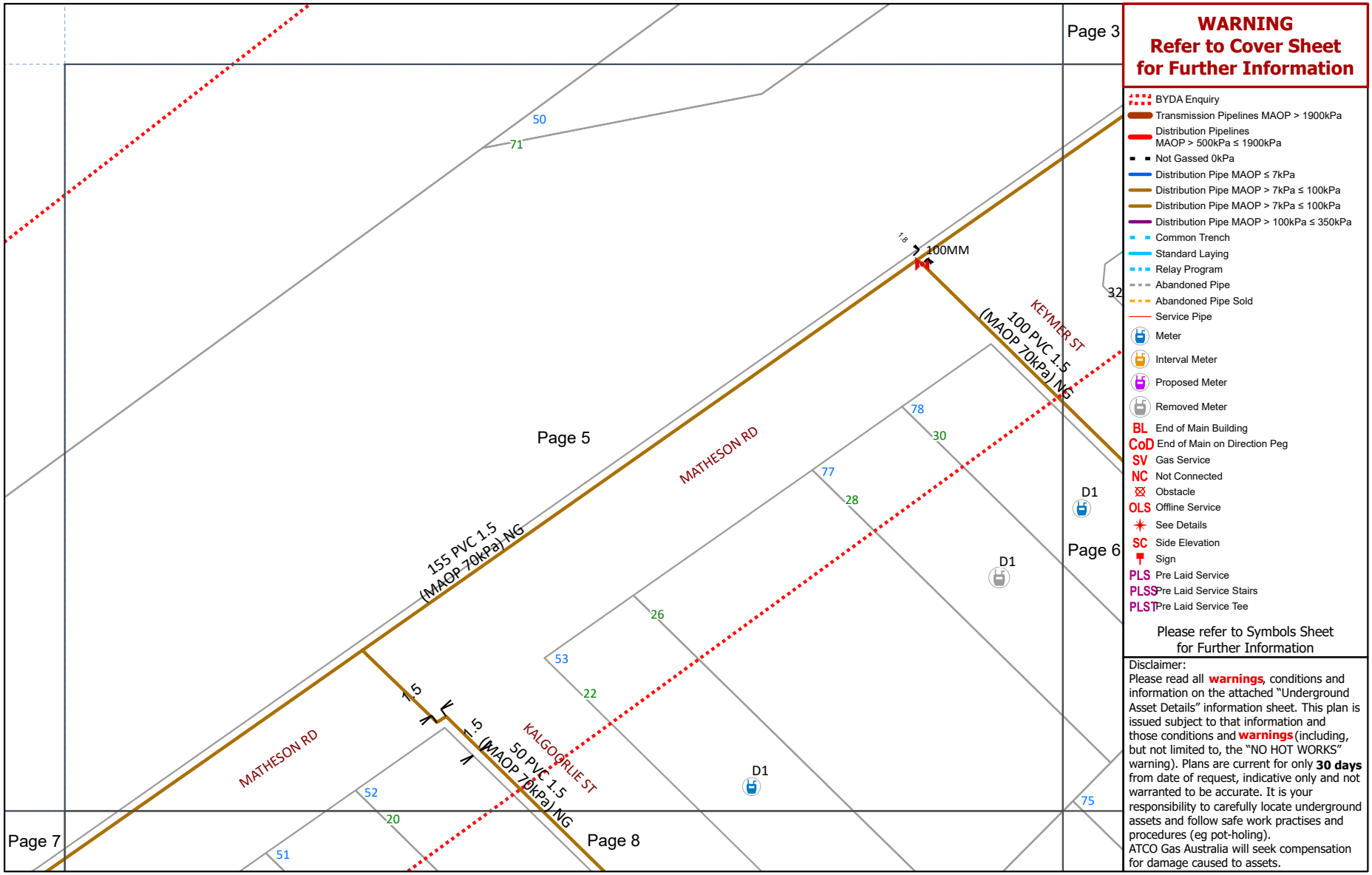
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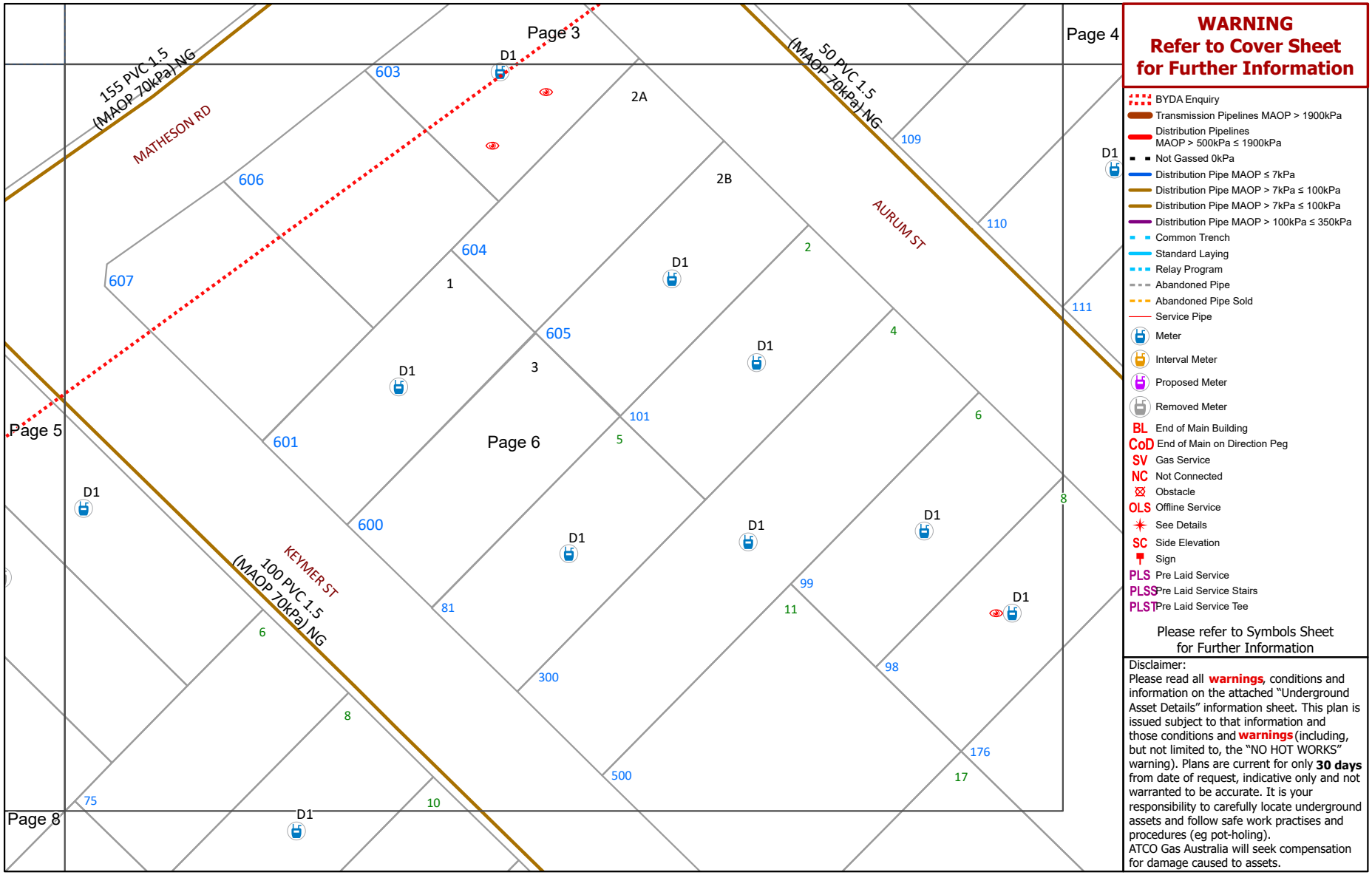
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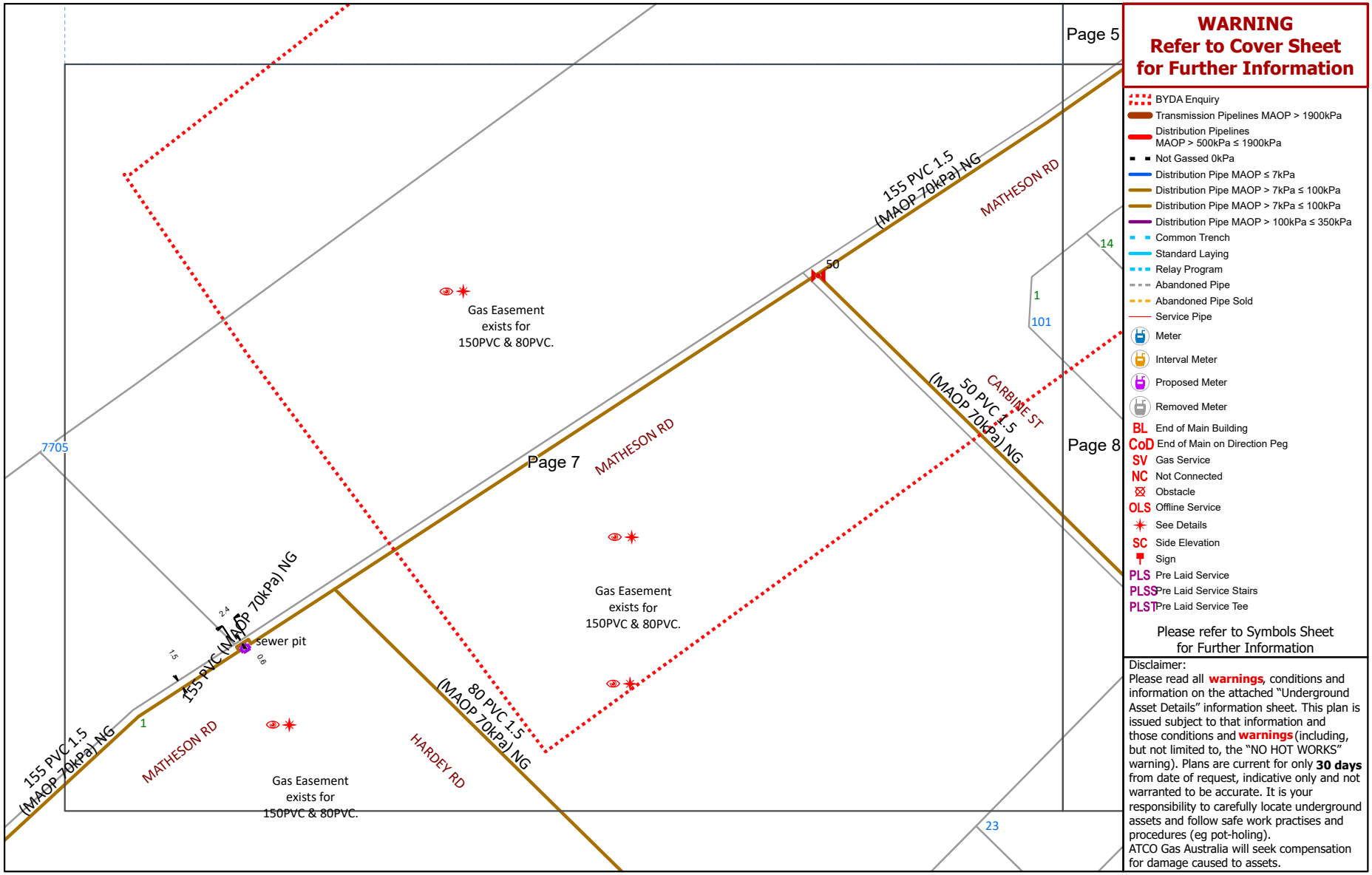
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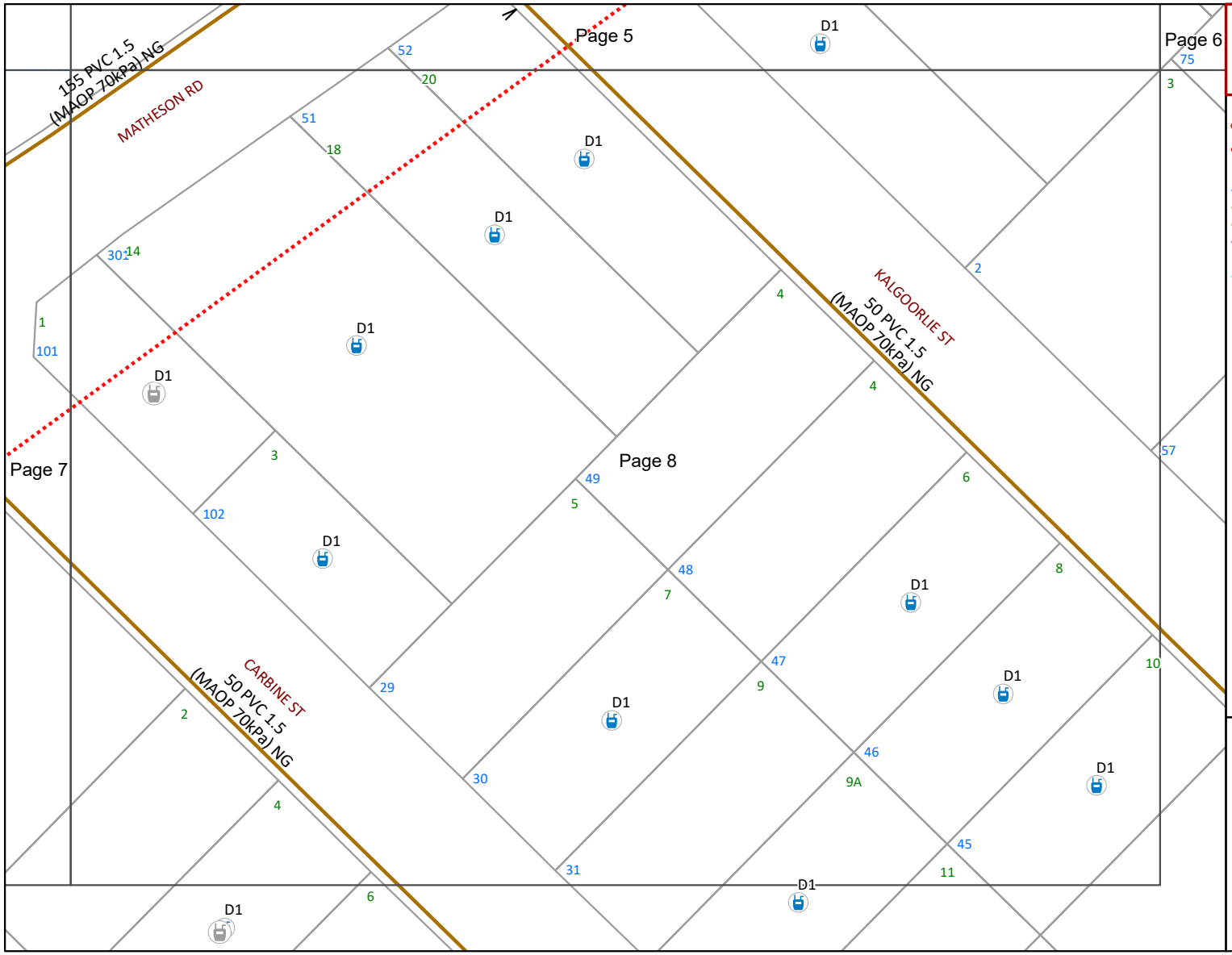
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# ATCO UNDERGROUND ASSET DETAILS ASSETS AFFECTED
GAS DIVISION

**ASSETS AFFECTED – see accompanying Plan**

**Job No:** **36962248**
**Sequence No:** **240900641**
Date of Issue: 21 June 2024
Phone: **1300 926 755**

**Justin Zielinski**
**ATCO Gas Australia**
54 Havelock Street
West Perth
WA 6005

**BYDA Utility Registration Name:** Private
**BYDA Location:** **30 Matheson Road Ascot WA 6104**

**ATTENTION:** This response to your enquiry has been interpreted from details in your requested DBYD picture location request only (not any street address you gave). It is your duty to ensure the accompanying plan/s match your geographical area of works.

**IF YOU SEE, HEAR, SMELL OR OTHERWISE DETECT GAS,**
**LEAVE THE IMMEDIATE AREA AND THEN CALL 13 13 52**

Our records indicate that ATCO gas infrastructure ***IS PRESENT*** in the vicinity of and/or surrounding area of the above enquiry. This response relates only to ATCO assets. Your Duty of Care requires that personnel **Must** at all times comply with, and have on site, this information sheet and the accompanying plan(s). All plans are subject to this information sheet. You should refer to the ATCO Self-service Portal (Link Here) or if unsure, contact ATCO on **1300 926 755** during business hours.

All information provided is to be used as a guide only (see Disclaimer item **5**). It does not absolve you or third parties from your Duty of Care obligations, including to take additional precautions where work has the potential to impact on gas assets, public safety or the environment, or from your duties at law (including Reg 3.21 of the Occupational Safety and Health Regulations 1996).

## WARNINGS

- No works of any type within 15 metres of any **CRITICAL GAS ASSET** infrastructure without prior approval from ATCO
- **NO HOT WORK** within 15 metres of any gas infrastructure except in compliance with applicable laws & *Australian Standard 1674.* **Do Not** let heat sources or hot works impact on any gas infrastructure and take into consideration that the ground or adjacent structures may also be capable of transmitting heat so as to circumvent protection afforded by a heat shield or barrier
- **DANGER** - Gas can cause asphyxiation and is flammable. Keep all ignition sources well away (e.g., flames, matches/ lighters, sparks, electrical devices, vehicles or engines, mobile phones, cameras)
- Gas pipes **Must Not** be unsupported or left without adequate cover or protection without prior approval from ATCO
- Damage to the pipe coating or pipe itself can be very dangerous if not given immediate attention. Report any damage to ATCO immediately on **13 13 52**. **Do Not** attempt to repair any damaged gas infrastructure
- No alteration or removal of live or abandoned gas infrastructure without prior written approval from ATCO
- Any abandoned or proposed gas infrastructure indicated on the gas plans **Must** be treated as live
- Never assume the location or depth of any gas infrastructure. Pipes may not follow straight lines or maintain a constant depth. Always check carefully (e.g., by careful hand digging of potholes)
- Unauthorised repairs or tampering with gas infrastructure may result in prosecution under the *Energy Operators (Powers) Act 1979*. ATCO Gas Australia reserves all rights to recover compensation for loss or damage to its gas infrastructure or other property including for indirect or consequential losses.

**PLANS:**

Plans provided are current for **30 days only** from date of request. You must use current plans at all times.

Plans do not show all gas service lines (which connect gas mains to individual meter positions). See condition **3.c)** below.

If plan shows **additional detail** symbols ( * ) or ( ) in the area of proposed works it is **your duty** to obtain that further detail from the number below.

Plans (including the location of pipes, services, infrastructure and boundaries) are **approximate only**. You **Must** use safe and proper procedures – including **potholing** (see condition **4** below).

Plans are not a guide as to gas availability for connection purposes.

**To call ATCO:** **Weekdays from 7.30am to 3.30pm, call – 1300 926 755 After hours, weekends and emergencies, call – 13 13 52**

**CONDITIONS FOR WORKS IN THE VICINITY OF ATCO ASSETS**

**1. Compliance with Warnings**

You **Must** comply with the Warnings contained in this information sheet and the accompanying plan(s).

**2. Compliance with 'Working around Gas Infrastructure' Document (Link Here) applicable laws and duty of care**

All work (including but not limited to using Excavator's Augers, Directional, drilling machines, 'Ditch Witch' type trenching machine, Loader, Dozer, Skid Steer (Bob Cat)) **Must** comply with all applicable requirements in the 'Working around Gas Infrastructure' Document and with all applicable laws and Australian Standards. All due care must be exercised to locate any gas infrastructure in the vicinity and when conducting any works near them.

**3. All Gas Infrastructure**

All work that may have any impact upon any gas infrastructure (see **3.a)**, **b)** and **c)** below for examples) should be carefully planned with notification to ATCO well in advance of commencement. Contact ATCO on **1300 926 755** or visit Atco's online self-service portal (Link Here). Amongst other things, this includes excavation of or near gas pipelines, boring/drilling, crossings of pipelines (including by other underground infrastructure e.g. drains, power cables, etc.), road works and structural installations. In addition:

a) Critical Asset

No works of any type are permitted within 15 meters of these pipelines without prior approval from ATCO. For approvals contact ATCO on **1300 926 755** or visit the Atco online Self-service portal (Link Here)

You **Must** ascertain the location of any Critical Asset, in relation to your proposed work by:

- Locating a straight line between two marker danger signs, and
- Assessing the distance from this line to your proposed work area.

ATCO may require stand-by supervision during your works and will advise of attendance requirements.

b) Non Critical Assets

These pipelines are installed in most streets throughout the Perth metro area and several country centers. Main valves, regulator sets, and test points also exist at intervals along these pipelines. Where work may impact upon these pipelines or assets then ATCO **Must** be contacted as per item **3** above.

c) Gas Services and Meters

If a gas meter is installed on a property, an underground gas service pipe will run from the meter position to the gas main in the street. Plans do not show all gas service lines (with the exception of Critical Assets), but their presence must be anticipated. Most gas meter boxes installed since 1996 will include a sticker giving approximate guidelines for the gas service line location. All due care must be exercised to locate any gas services in the vicinity and when conducting any works near them.

**4. Compliance with Safe Work Practices**

It is your responsibility to have and comply with adequate safe work practices and procedures. Without limiting your obligations:

**PLAN** The complete & current Before you Dig Australia documentation and plans must always be on site & referred to for the duration of work. Refer to regulation 3.21 of the Occupational Safety and Health Regulations 1996 and the Utility Providers "Code of Practice" for further useful information.

**PREPARE** Prepare by reviewing the Before you Dig Australia Documentation and contacting ATCO if you need assistance. Look for onsite ATCO asset and infrastructure clues such as pit lids, marker posts and meters. No works of any type are permitted within 15 meters of a **CRITICAL ASSET** without prior approval from ATCO. For approvals contact ATCO on **1300 926 755** or visit the Atco website Self Service portal (Link Here) and allow suitable

processing time. Atco recommends engaging a BYDA Certified Locator which includes undertaking electronic location prior to potholing.

**POTHOLE** Using current Before you Dig Australia plans, all gas pipes should be located (including any deviation in the direction of a gas pipe) by exposing them by careful digging using a HAND SHOVEL. Where the proposed work is parallel to a gas pipeline, pothole every 10 meters along the entire route. Damage to the pipe coating or to the pipe itself can create a very dangerous situation if not given immediate attention. If damage does occur, it **Must** be reported to ATCO immediately on Ph. **13 13 52**.

**PROTECT** Supervise and monitor all excavations near gas infrastructure using a dedicated spotter. Where any gas infrastructure is required to be exposed, adequate protection of the gas infrastructure is required to prevent potential damage. Also implement appropriate controls when conducting 'hot work' (in accordance with AS 1674) in the vicinity of the ATCO infrastructure such as; isolation; separation distance; the placement of an effective non-combustible barrier of sufficient size and thermal resistance for the intensity, type and duration of heat exposure; gas monitoring; monitoring the environment surrounding the ATCO infrastructure to ensure it is not being impacted by the work, and other controls as necessary.

**PROCEED** You should **only proceed** with your excavation work after you have planned, prepared, potholed (unless prohibited) and have protective measures in place. All locations markers/pegs are to be removed on completion of works. If you are unsure, **DO NOT** Proceed. Call ATCO on **1300 926 755**

**5. Disclaimer and Further Terms**

a) Nothing in this document, any accompanying plan or the 'Additional Information for Working around Gas Infrastructure' (AGA-O&M-PR24) (together called "**Documents**") purports to exclude or modify any term, condition or warranty to the extent that by law it cannot lawfully be excluded or modified by agreement or notice, including but not limited to those contained in Schedule 2 of the *Competition and Consumer Act* 2010 (Cth) and corresponding provisions of any state legislation.

b) If any of ATCO, or their respective related entities, officers, employees, agents, contractors or advisers (together called "**Associates**") is liable for a breach of a term, condition or warranty described in paragraph **5.a)** above, its liability is, to the fullest extent permitted by law, limited to any one or more of the
following as it determines in its absolute discretion:

i) in relation to goods supplied by them, replacing or repairing the goods, supplying an equivalent item, paying the cost of replacing or repairing the goods or paying the cost of acquiring or hiring an equivalent item; and

ii) in relation to services supplied by them, the re-supply of the services or the payment of the cost of having the services re-supplied.

c) Subject to paragraphs **5.a)** and **b)**, but otherwise despite any other provision in the Documents, no representation or warranty is made or given (whether expressly or by implication) by any of ATCO or their respective Associates in respect of any information contained or referred to in any of the Documents or in any other communication from ATCO concerning any of the Documents or the subject matter of any of the
Documents ("Information"). In particular, but without limiting the generality of the foregoing limitation, none of ATCO or their respective Associates makes any warranty or representation as to the truth, accuracy, completeness, reliability, currency, timeliness, quality or fitness for any purpose of or the standard of care taken in the preparation of any Document or Information (including, but not limited to, the accuracy of the scale of, or the location of anything or symbol shown on, any plan or diagram).

d) Subject to paragraphs **5.a)** and **b)**, to the maximum extent permitted by law, none of ATCO or their respective Associates is liable to any person or other body ("**Recipient**") who receives or otherwise obtains access to all or any part or parts of the Documents or Information, in any way (including, but not limited to, liability for negligence, breach of statutory duty or lack of care) in respect of any cost, expense, damages, loss or liability, including, but not limited to:

i) any financial or economic loss, cost, expense or damage, including but not limited to loss of production, loss of profit, loss of revenue, loss of use, loss of contract, loss of goodwill or loss of business opportunity;

ii) any new or increased costs or expenses, including but not limited to financing or operating costs;

iii) any failure to achieve any actual or anticipated saving in respect of any cost or expense;

iv) any cost, expense, damage or loss resulting from any liability of the Recipient to any other person or body howsoever and whensoever arising, suffered or incurred by the Recipient in relation to, or in connection with, the disclosure to them of, or use of, or reliance on, all or any

part or parts of the Documents or Information.

e) By using any Document or Information, each Recipient is taken to represent and warrant to ATCO that the Recipient will comply with the conditions and other terms referred to in the Documents or Information, including but not limited to conditions that:

i) the Recipient **Must** comply with the conditions in numbered paragraphs **1** to **4** above and this paragraph **5**;

ii) as between ATCO and each Recipient, ATCO owns the Information and all rights and title in and to the Information are to remain vested in ATCO;

iii) no Recipient has any right, title or interest in the Information or, except as expressly provided for in the Documents, any license or right to copy, alter, modify, publish or otherwise use or deal with the Information without prior written approval from ATCO;

iv) ATCO makes no representation and gives no warranty as to its right to disclose any Information;

v) the Recipient relies on any Information entirely at its own risk and expense;

vi) the Recipient **Must** undertake its own independent due diligence and investigations in relation to the Information;

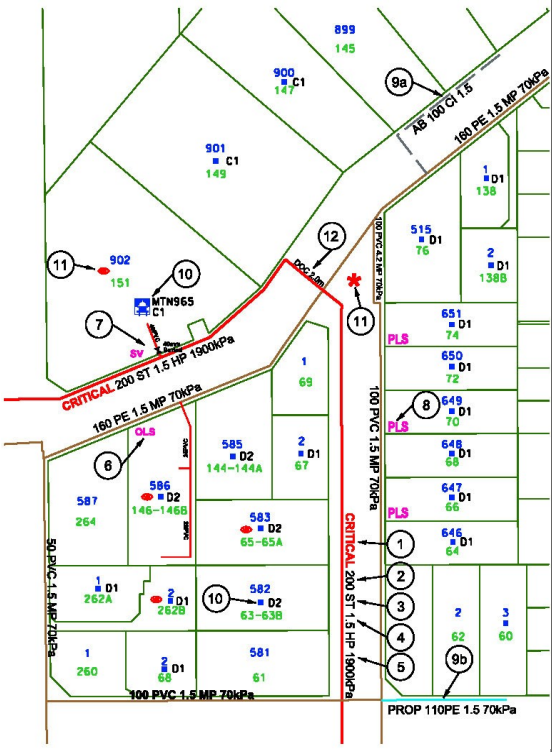
vii) none of ATCO or their respective Associates owes the Recipient any duty of care in respect of the Information; and

viii) none of ATCO or their respective Associates is under any obligation to correct, update or revise any Documents or Information.

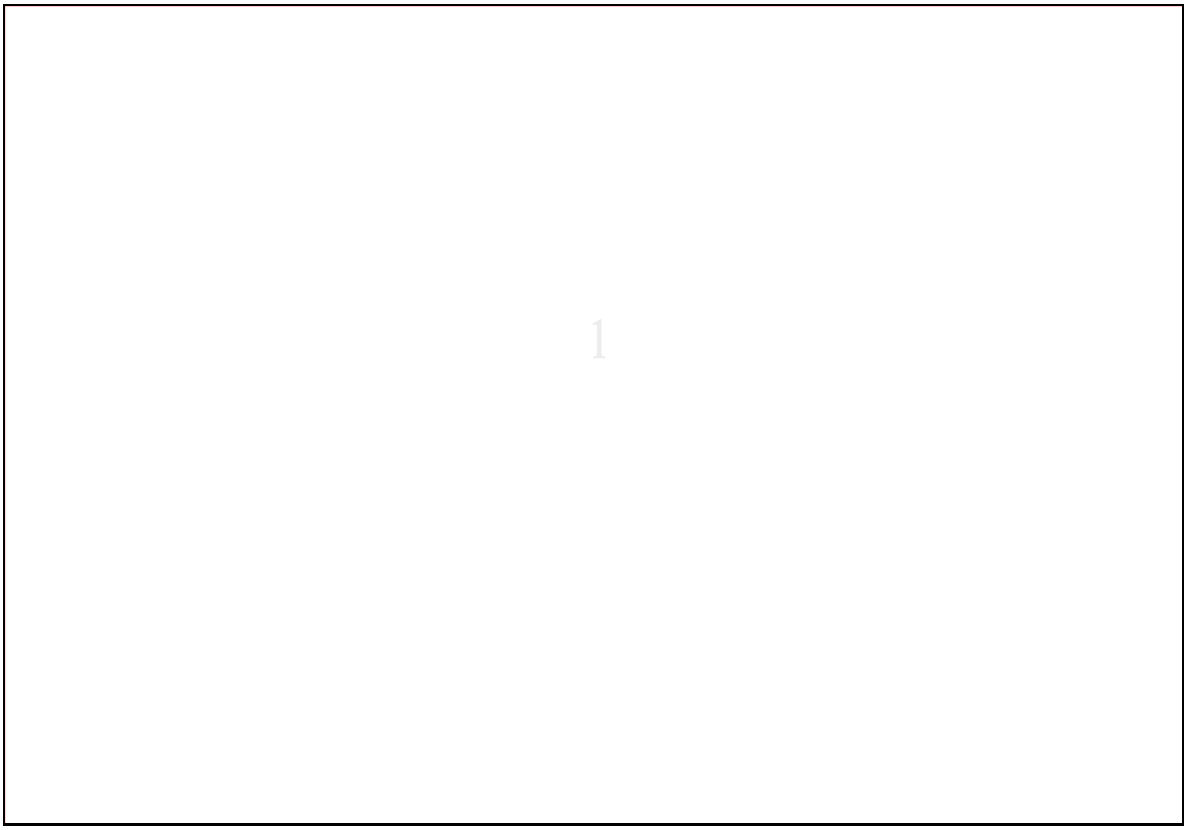
## GAS MAIN AND SERVICE IDENTIFICATION

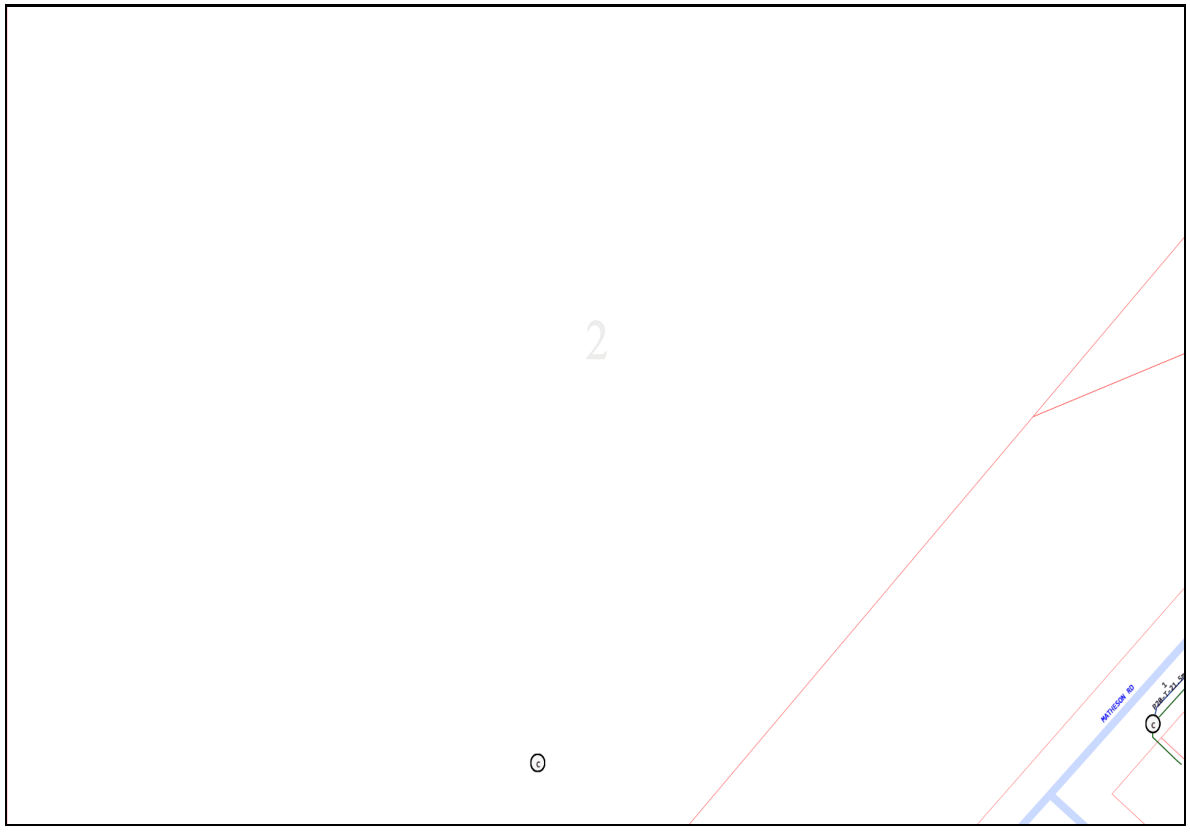
**LEGEND**

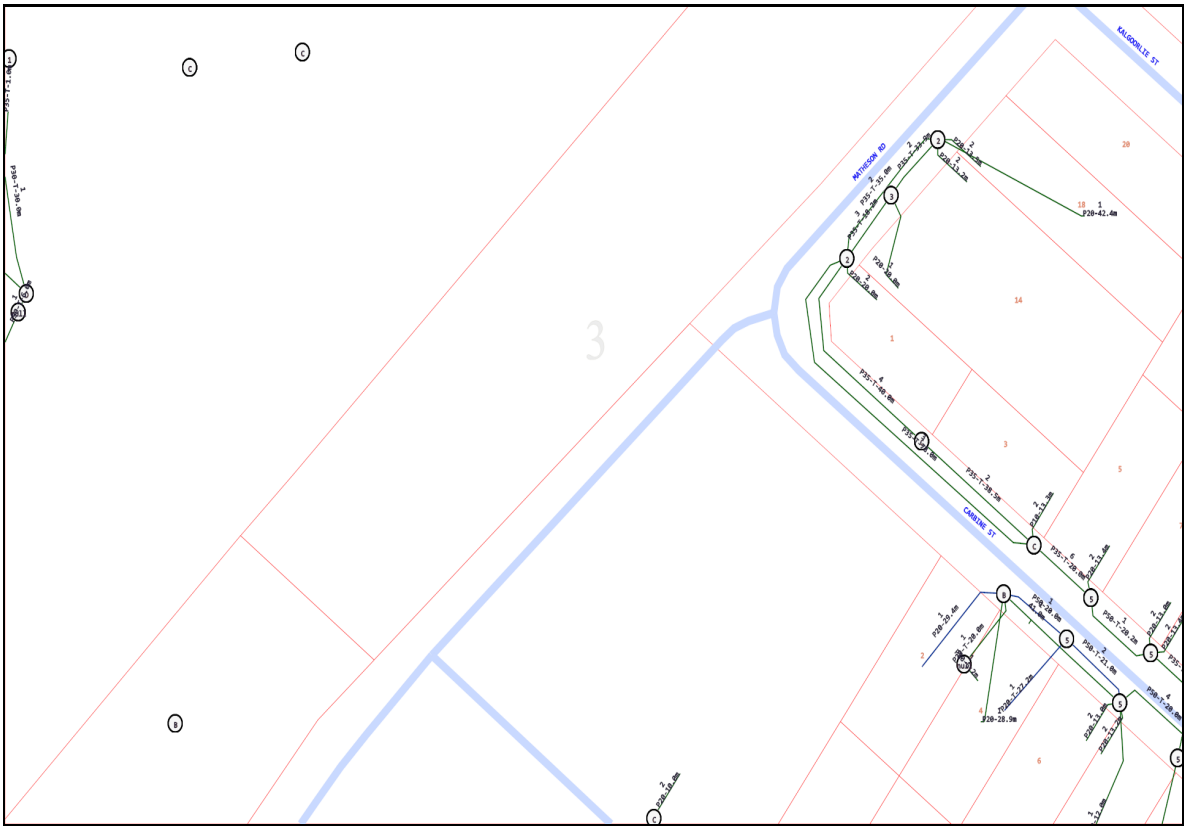
1. Critical Asset (See **WARNINGS** page 1)
2. Pipe Diameter (millimetres)
3. Pipe Material
   CI = Cast Iron PE = Polyethylene
   GI = Galvanised Iron PVC = PVC
   ST = Steel
4. Alignment (in metres from property line)
5. Pressure in main (MP 70 kPa = Medium Pressure and MAOP (Maximum Allowable Operating Pressure)
6. Off-line Service – service may not be straight line to meter. (**WARNING – OLS may not always be shown on plan**. See item **Error: Reference source not found** above)
7. Service Valve in the vicinity
   (**NOTE:** Service Valve may be **"BURIED"**)
8. Pre-laid Service laid in Common Trench
9. Main Status: (See **WARNINGS** page 1)
   9a. AB = Abandoned Mains
   9b. PROP = Proposed Mains
10. Customer Connection: Does not indicate actual location of Meter Position
    D2 (D = Domestic & 2 = Number of Meters)
    C1 (C = Commercial & 1 = Number of Meters)
11. **Additional detail available and Must be obtained if within area of proposed works – see page 2 above.**
12. Depth of Cover (DOC) in metres.

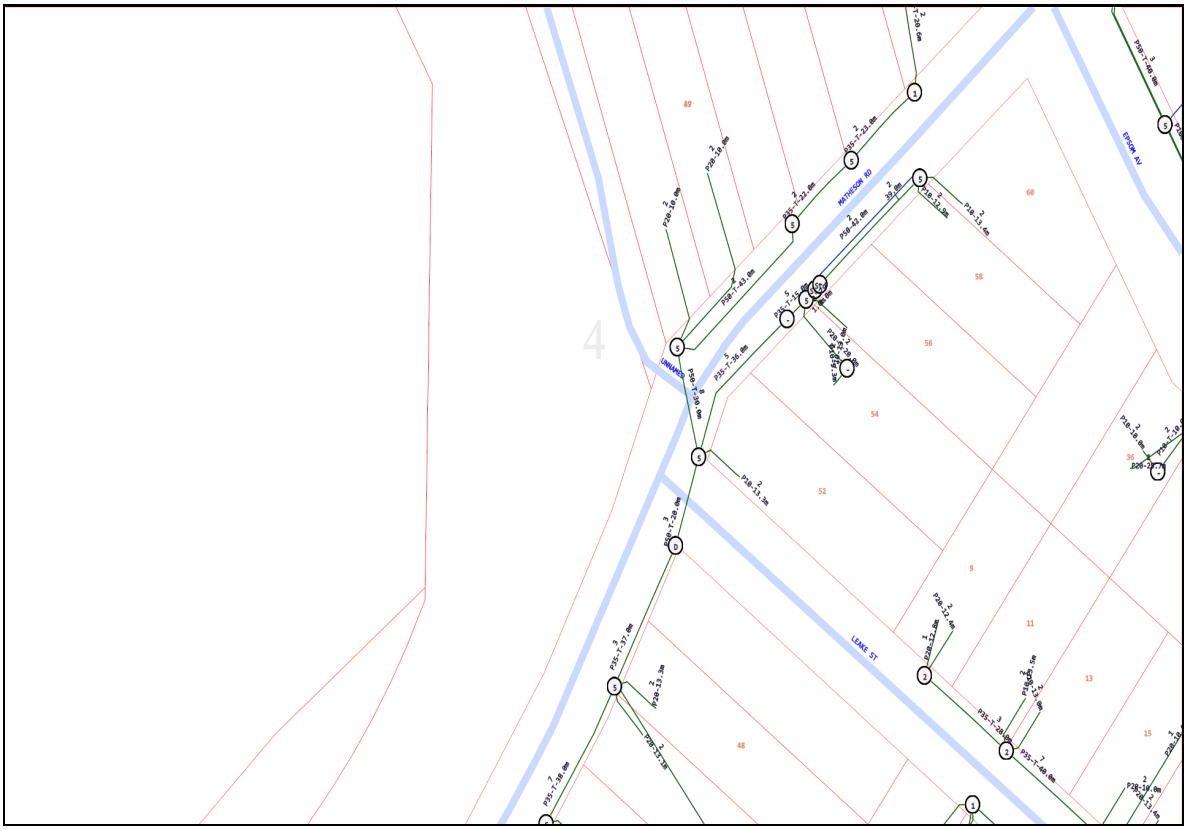


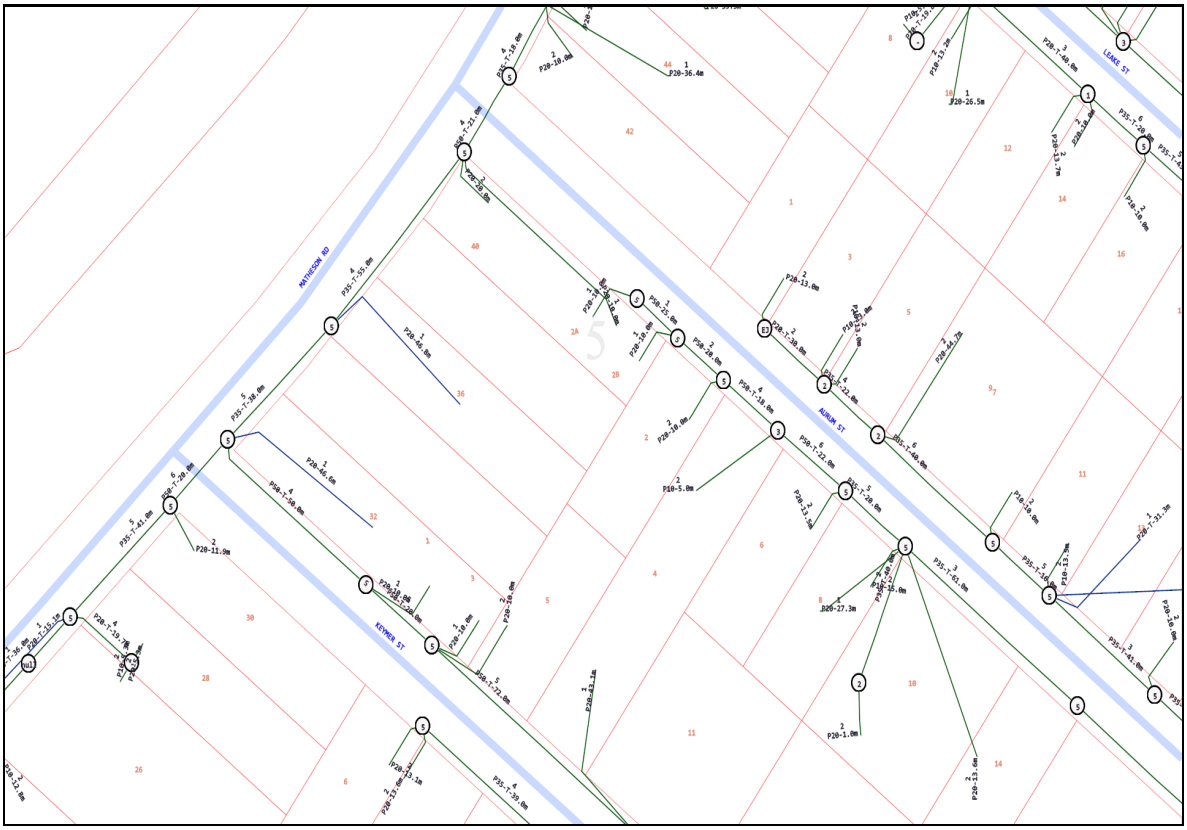

IF UNSURE, PLEASE CONTACT ATCO ON **1300 926 755**

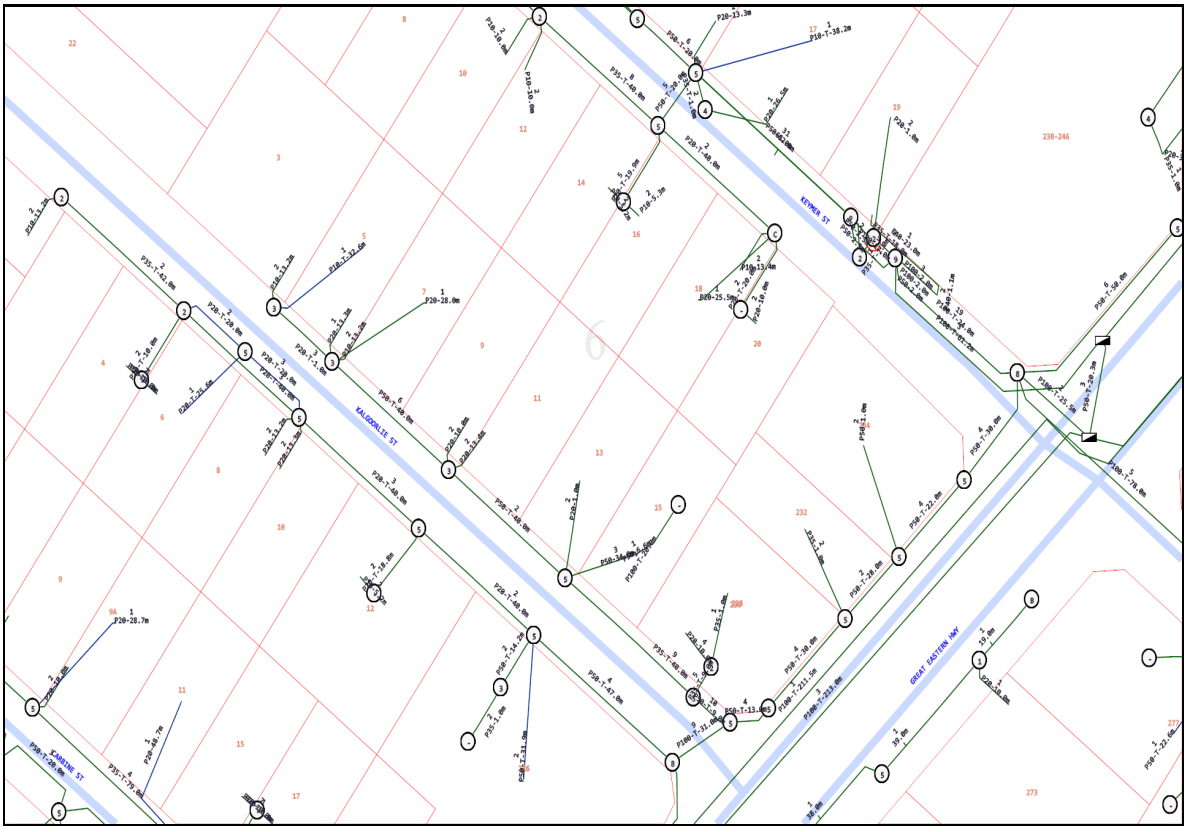



2
PATHESON RD


KALGOORLIE ST
MATHESON RD
CANNING ST
3

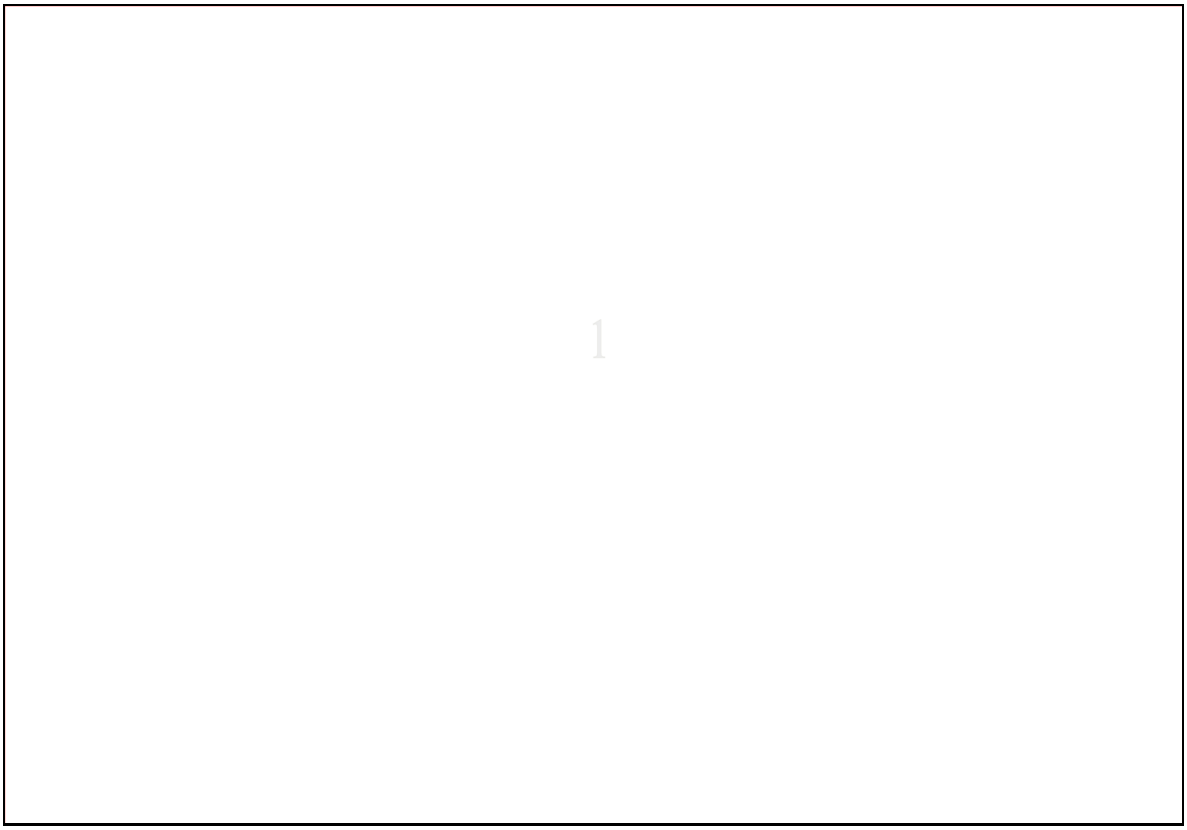

MATHESON RD
LEAKE ST
ETCOM AV

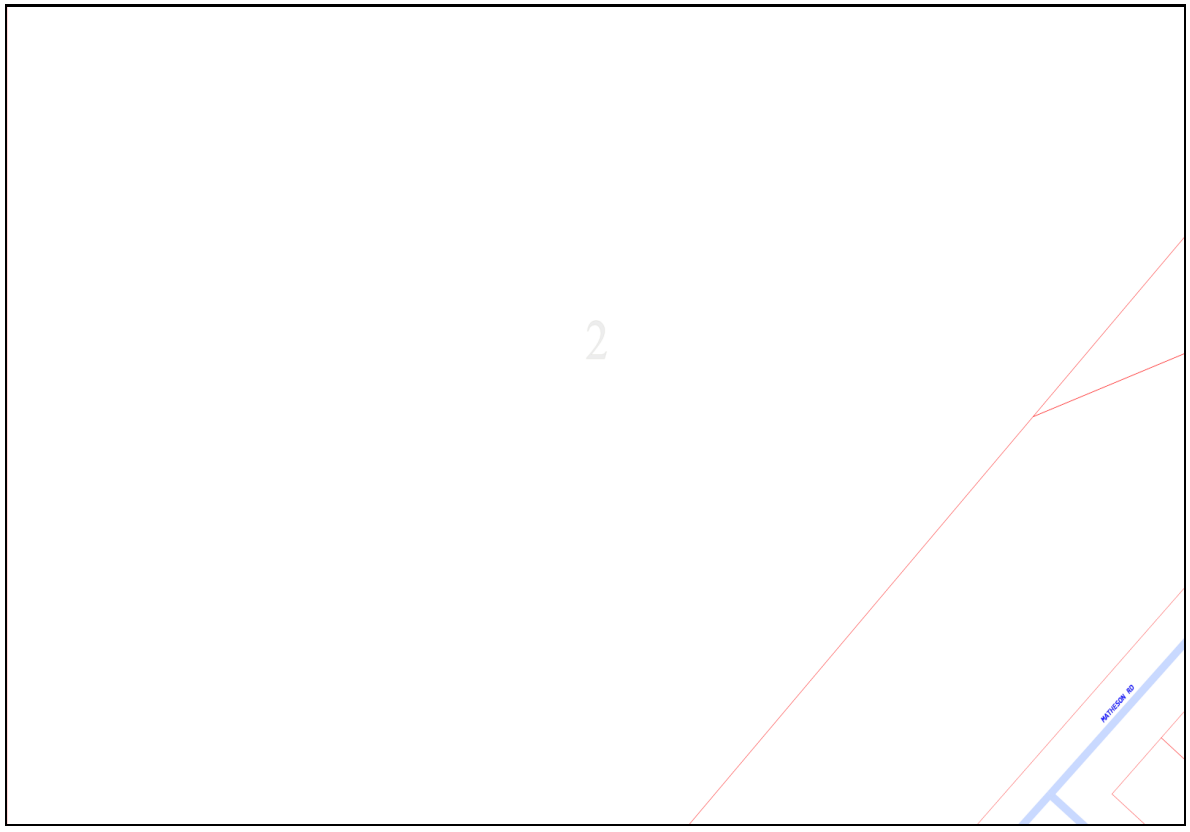

MATHESON RD
KEYMER ST
AUBURN ST
LEAKE ST

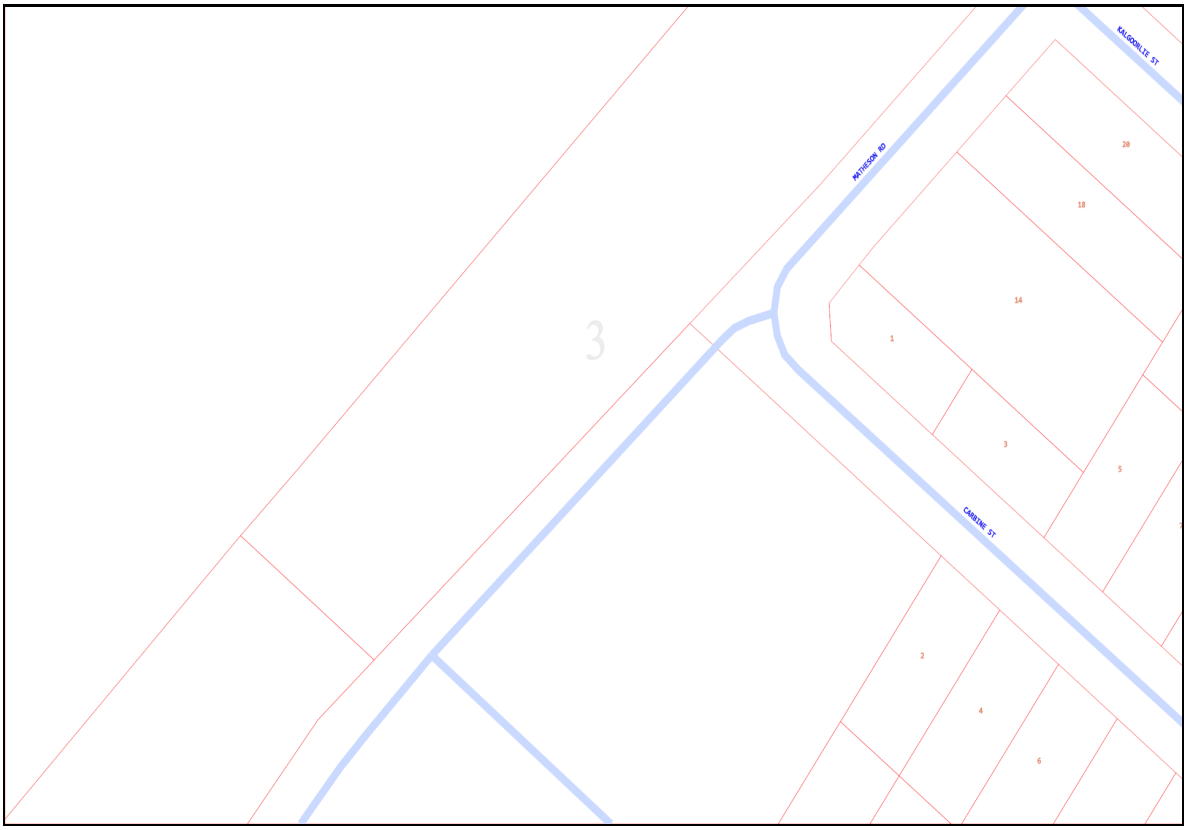


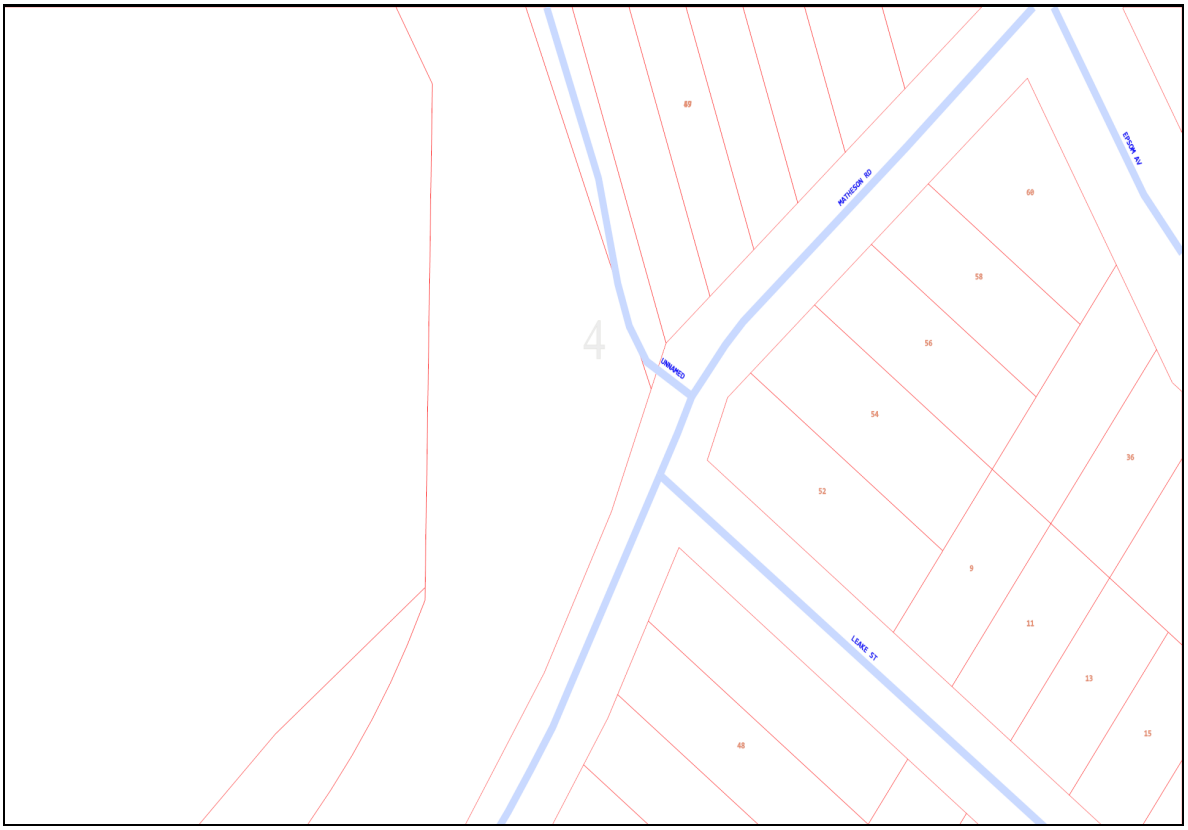

## Emergency Contacts

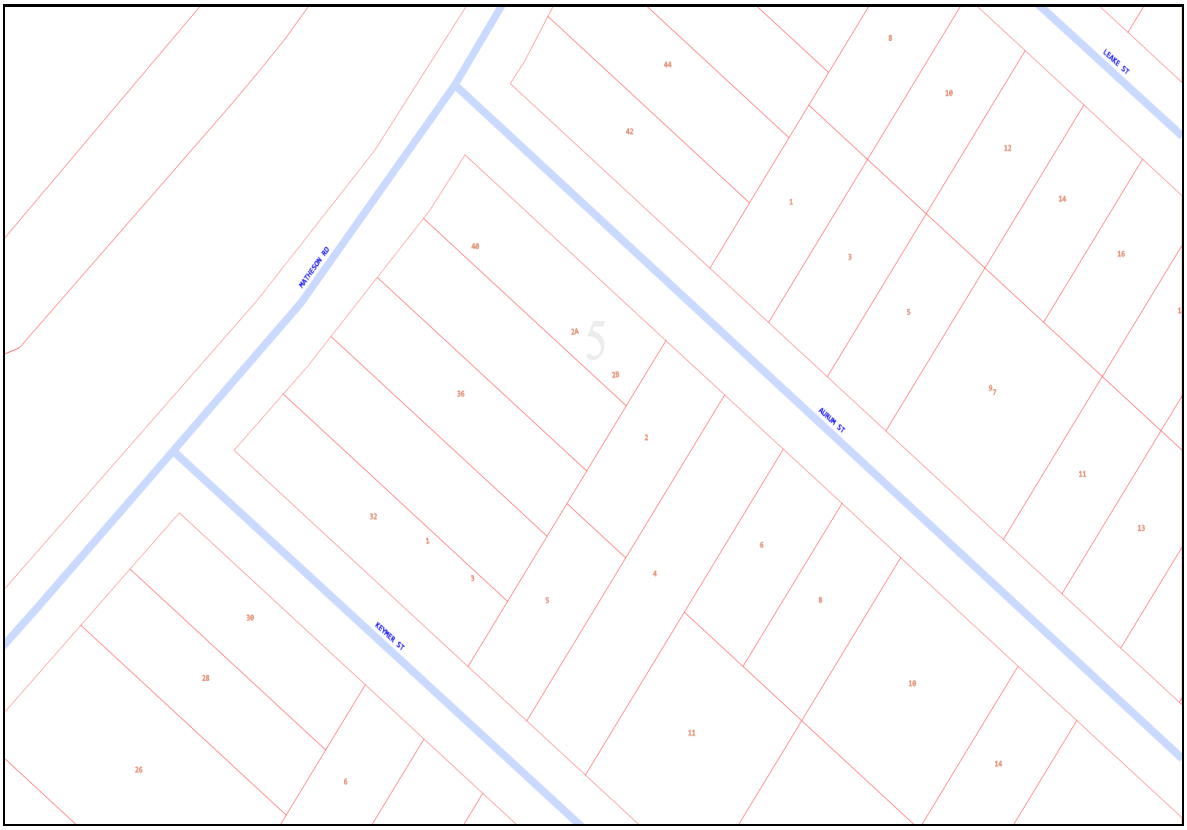
You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

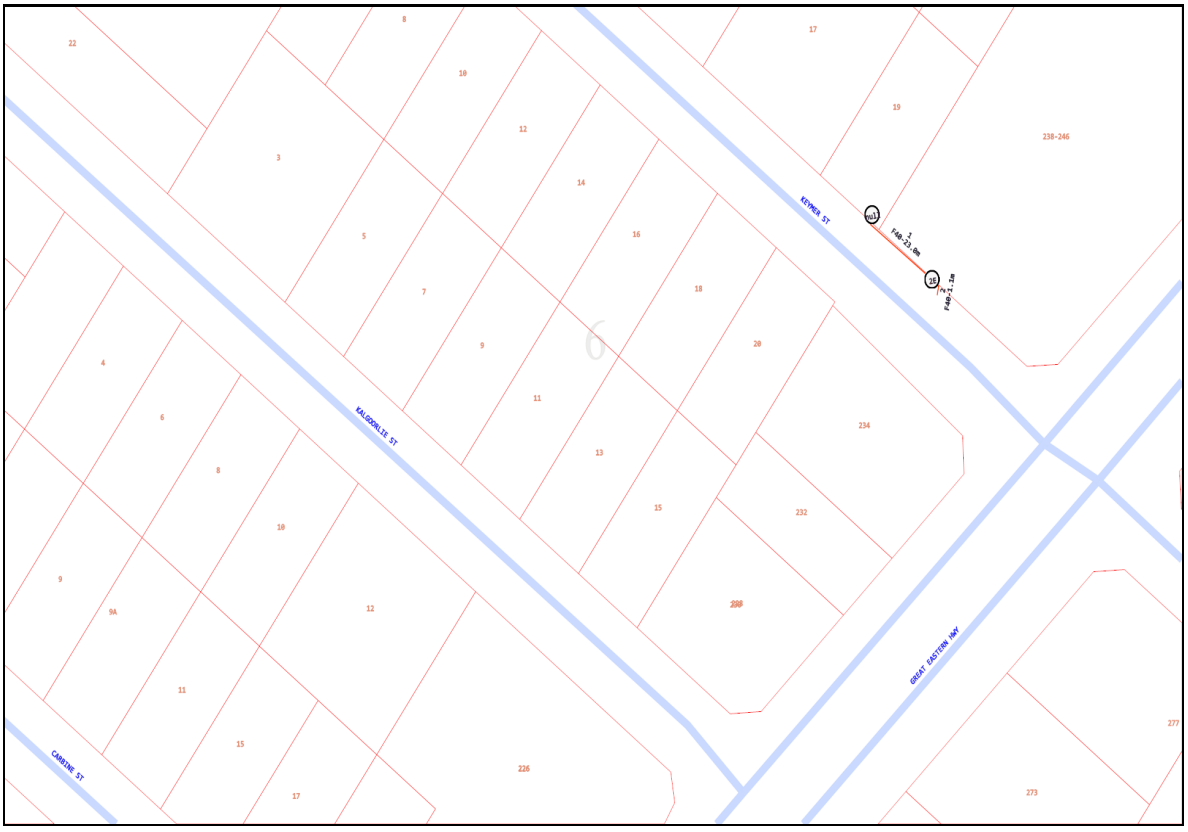



2
PATTERSON RD


KALGOORLIE ST
MATHESON RD
CARBINE ST
3
20
18
14
1
3
5
2
4
6


MATHESON RD
LEAKE ST
UNNAMED
4
89
60
58
56
54
52
36
9
11
13
15
48

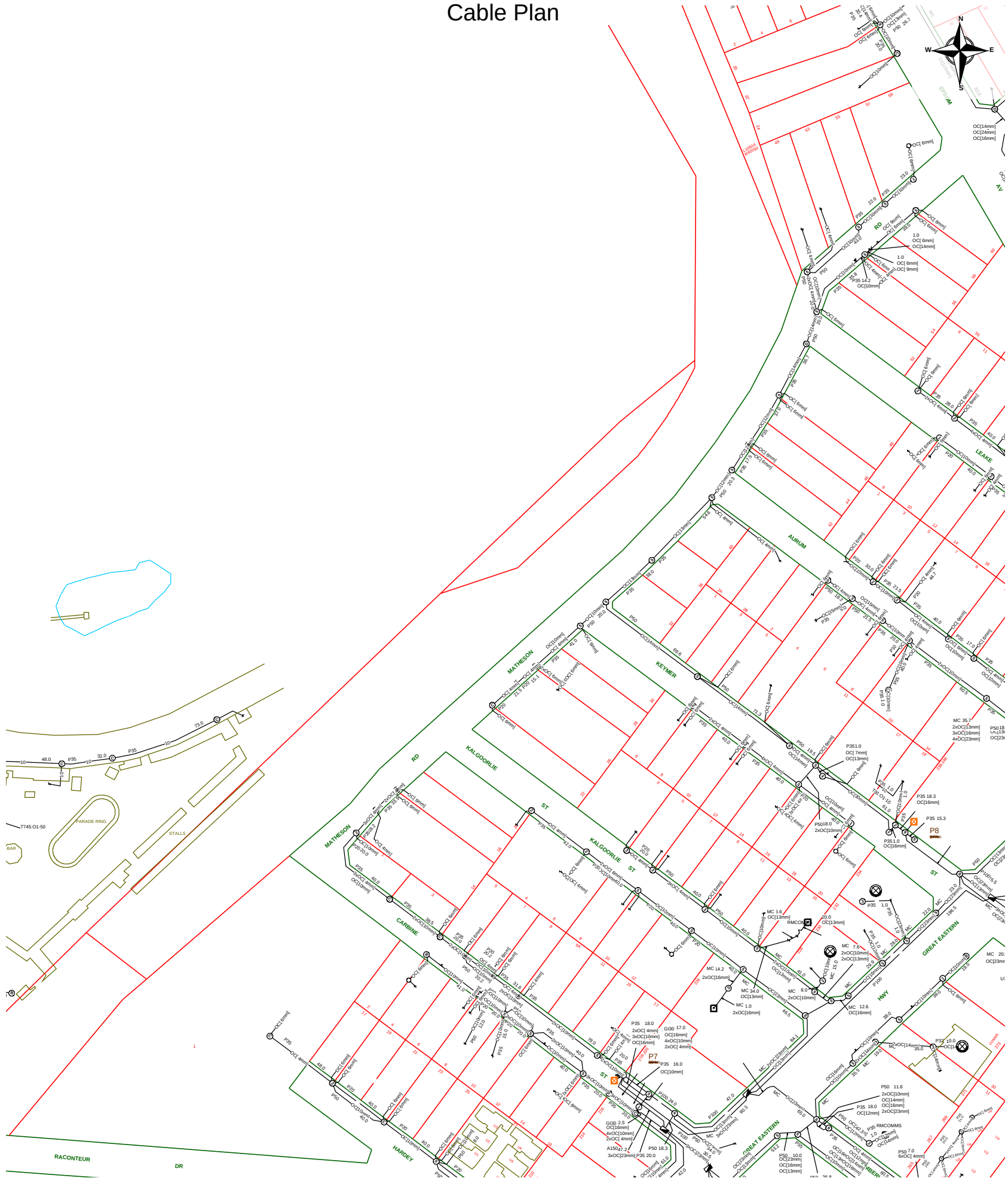

MATHESON RD
KEPPEL ST
AUBURN ST
LEAKE ST
5




## Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

# Cable Plan




| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240900639 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 21/06/2024 19:09:59 | |

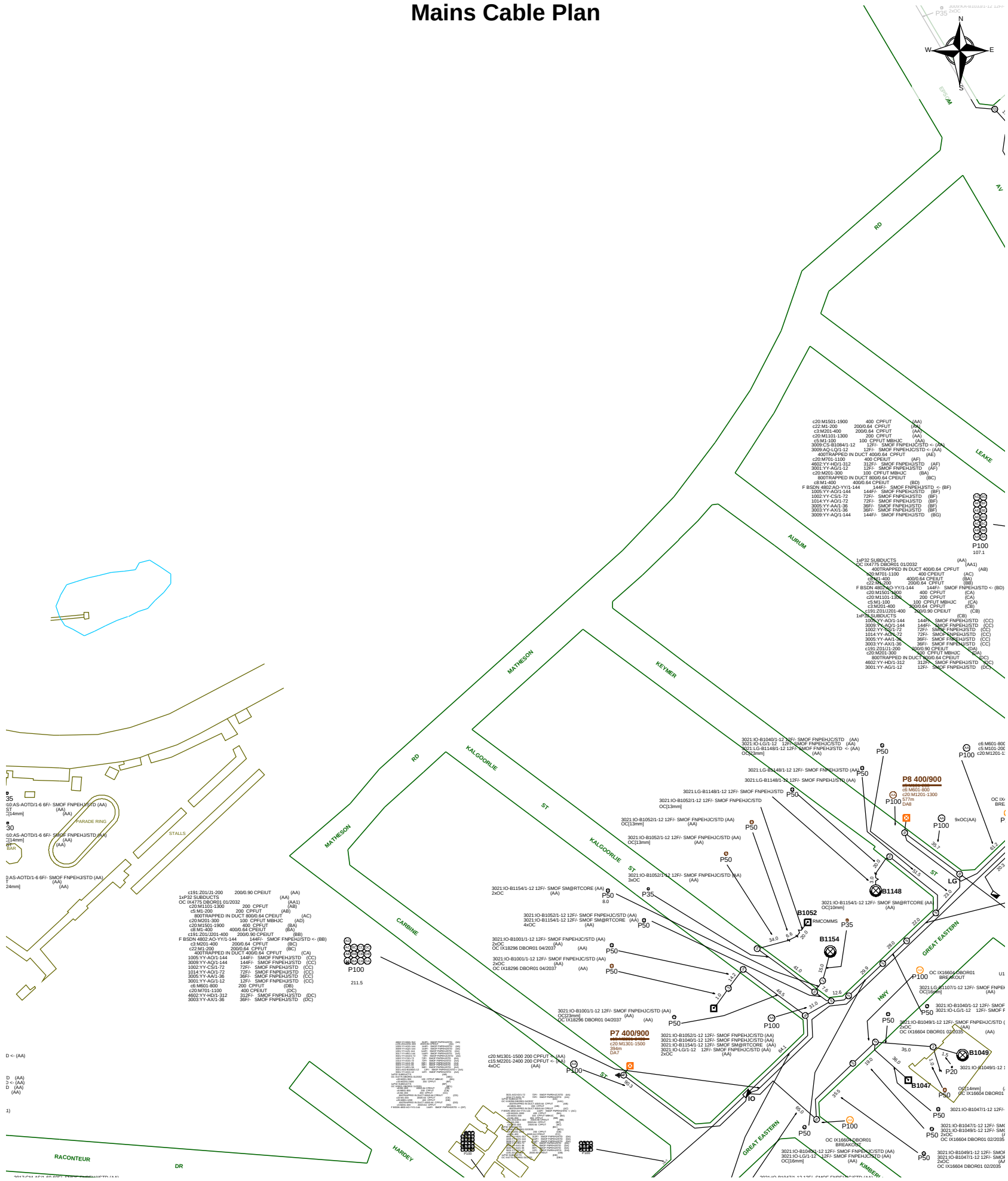
The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

**Page 1 of 2**

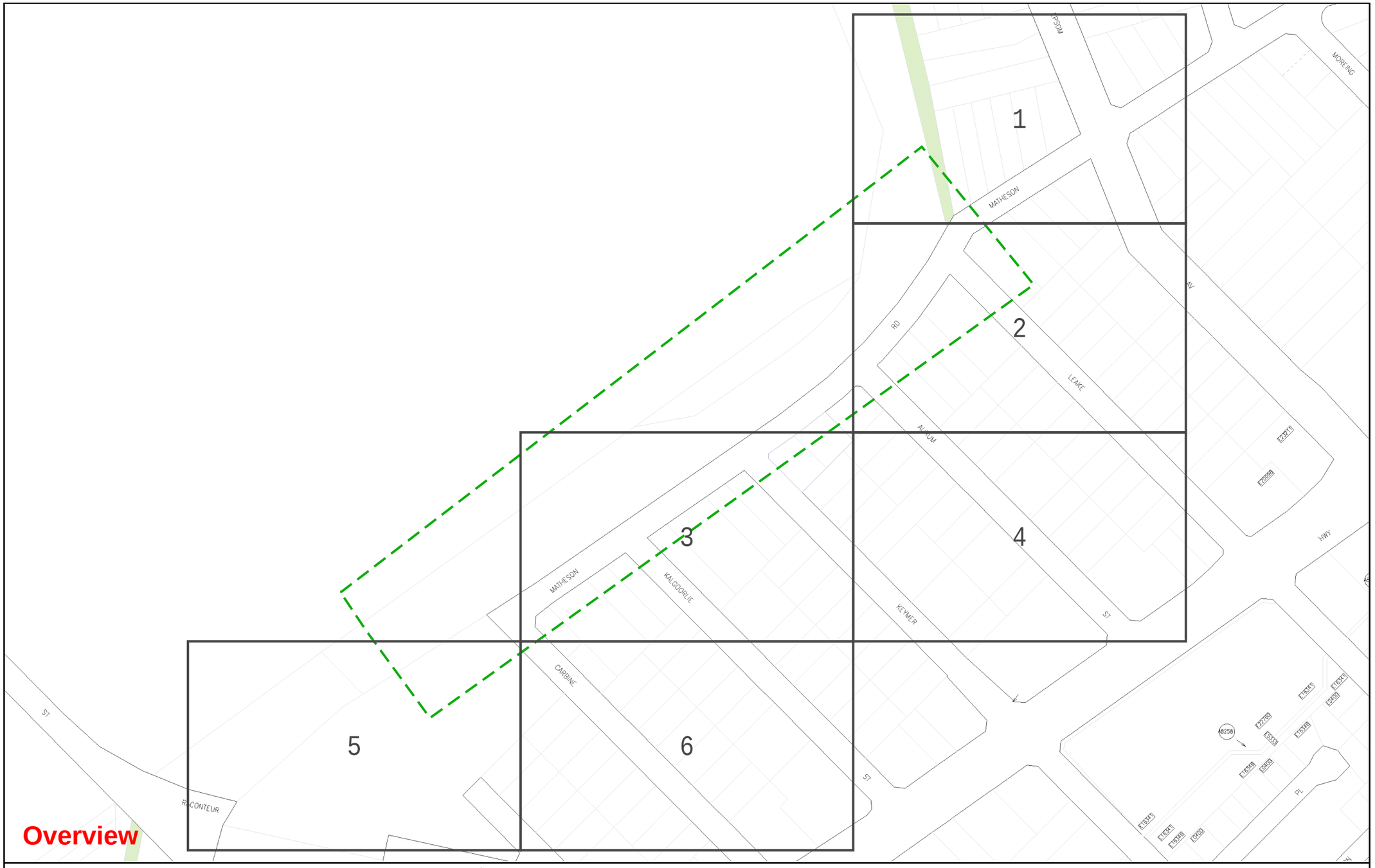
# Mains Cable Plan




| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240900639 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 21/06/2024 19:10:01 | |

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.




WATER CORPORATION

Scale: 1:3075
Job No.: 36962248
Sequence No.: 240900640
Print Date: 21 Jun 2024

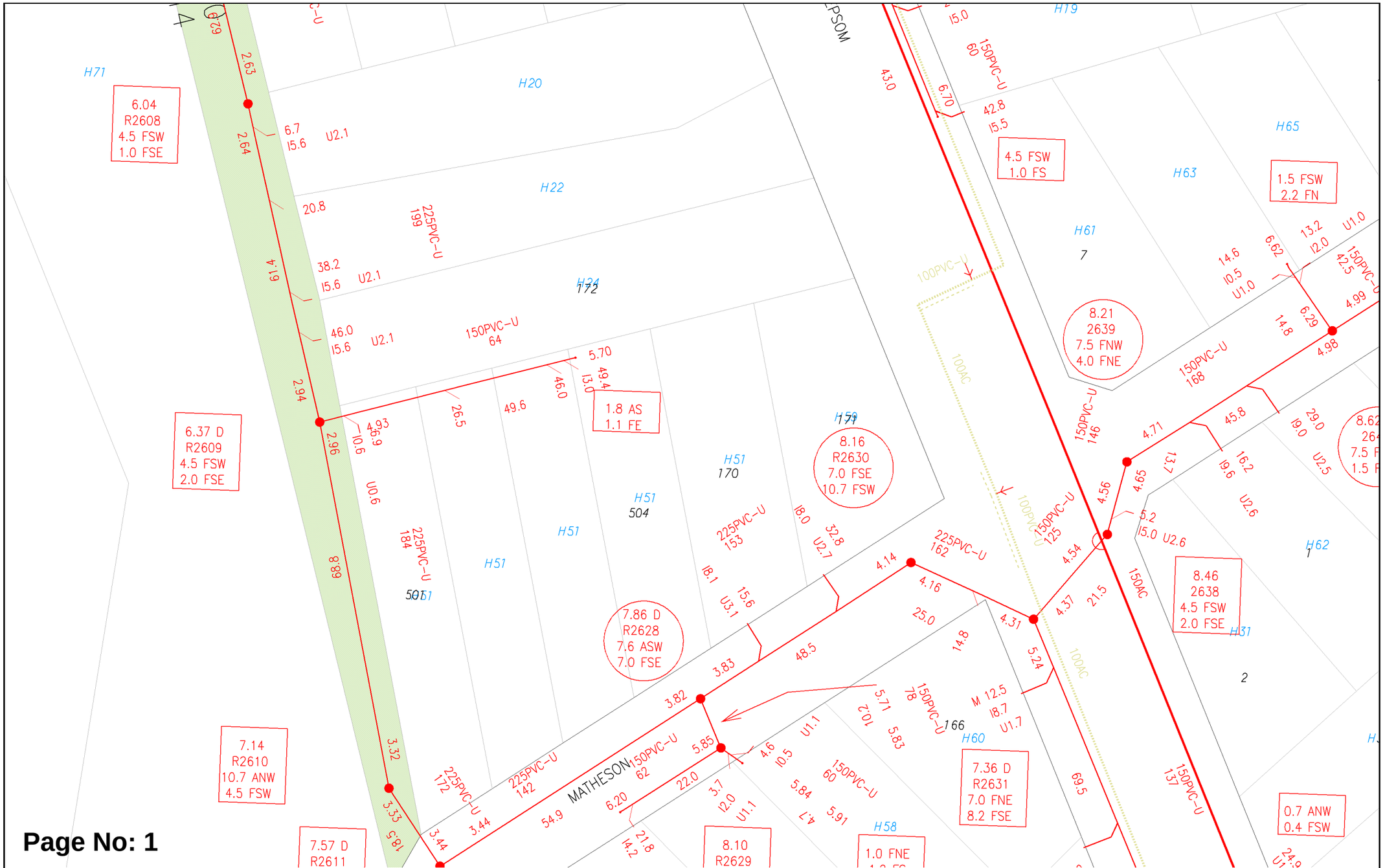
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Sewer

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Plans generated 21 Jun 2024 by PelicanCorp TicketAccess Software | www.pelicancorp.com

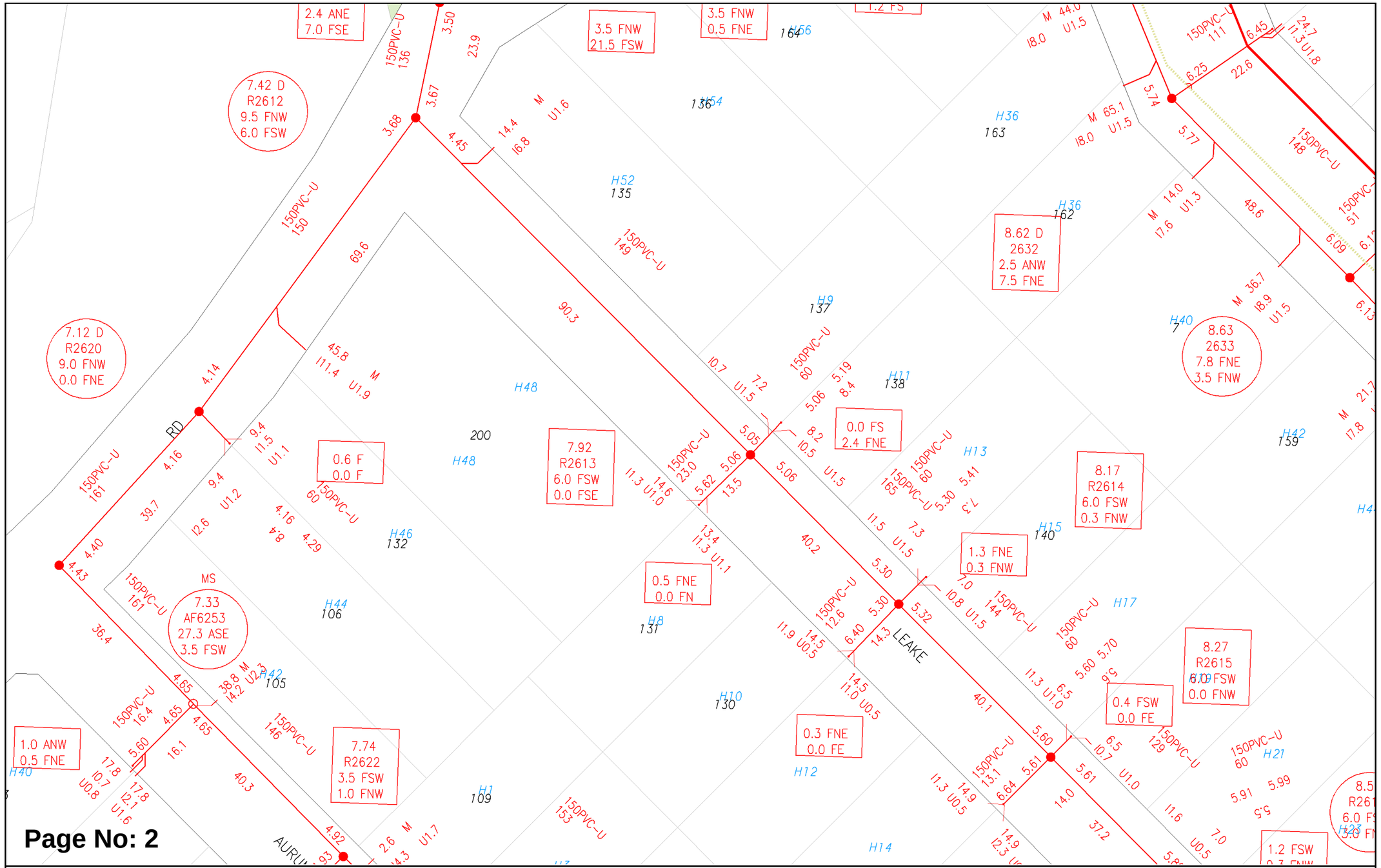
Water Corp - Non-critical Plan.docx (21 May 2024)




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| Job No.: | 36962248 |
| Sequence No.: | 240900640 |
| Print Date: | 21 Jun 2024 |

Sewer

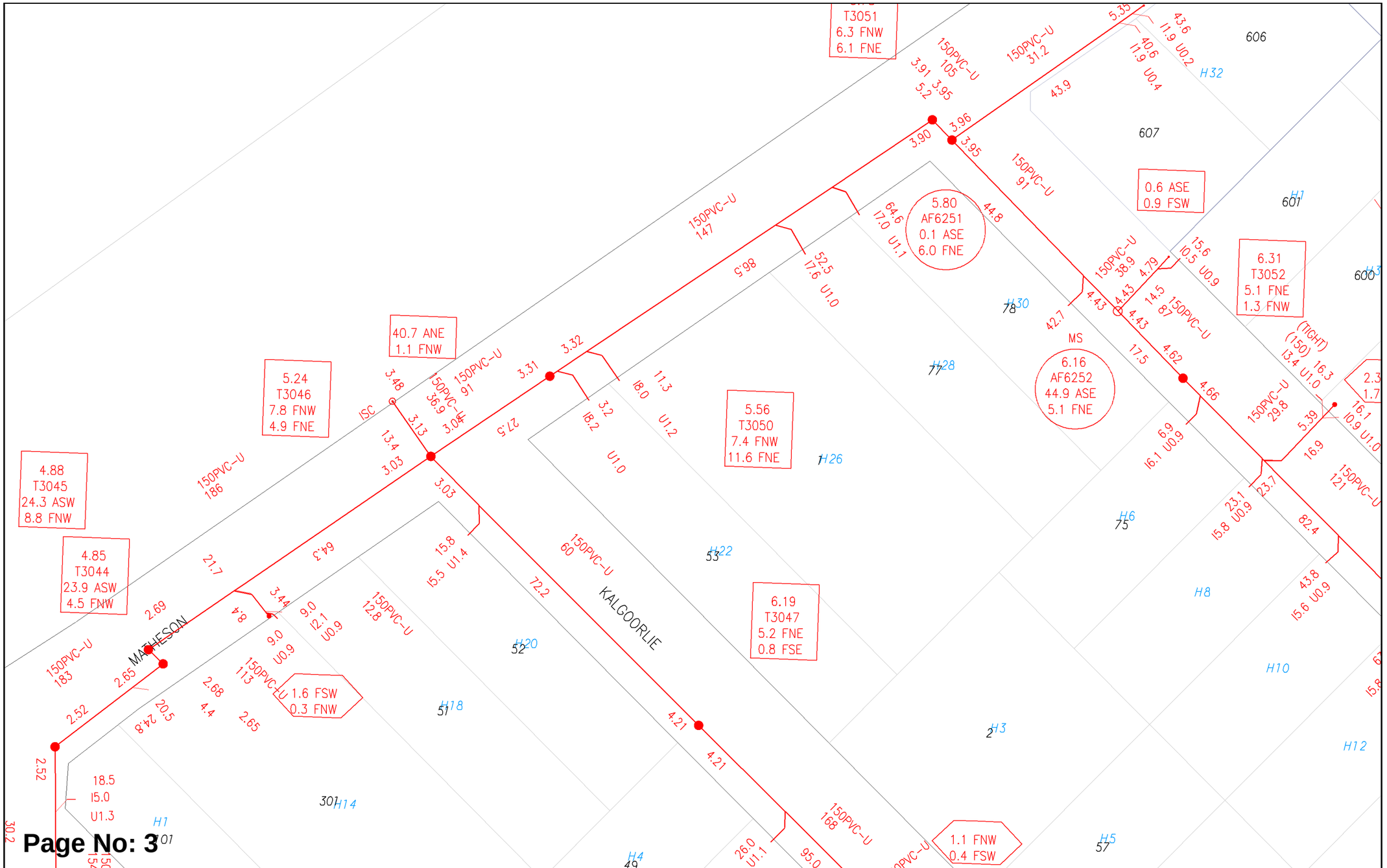
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| Scale: | 1:750 |
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| Sequence No.: | 240900640 |
| Print Date: | 21 Jun 2024 |

Sewer

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**Page No: 3**

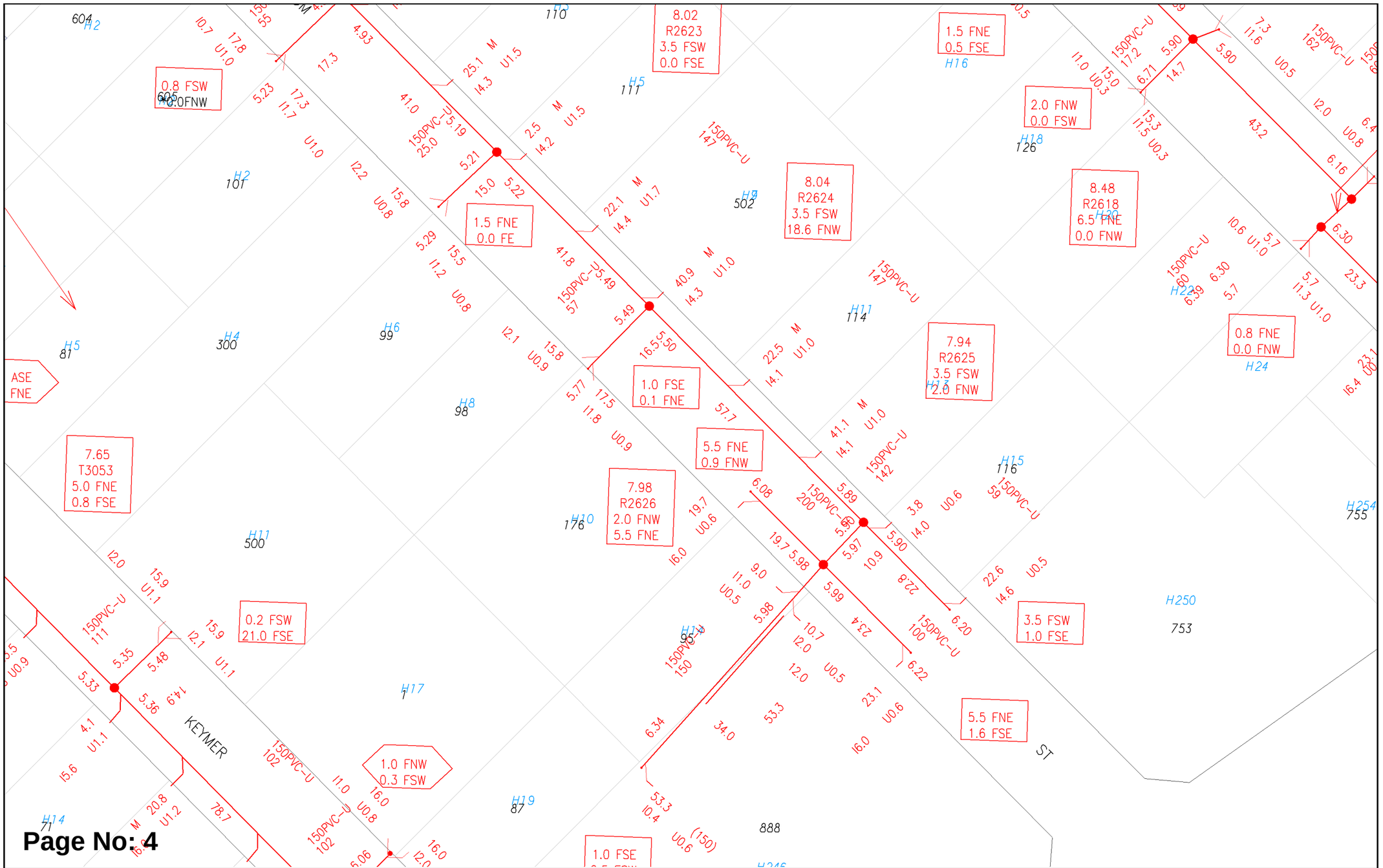
WATER CORPORATION

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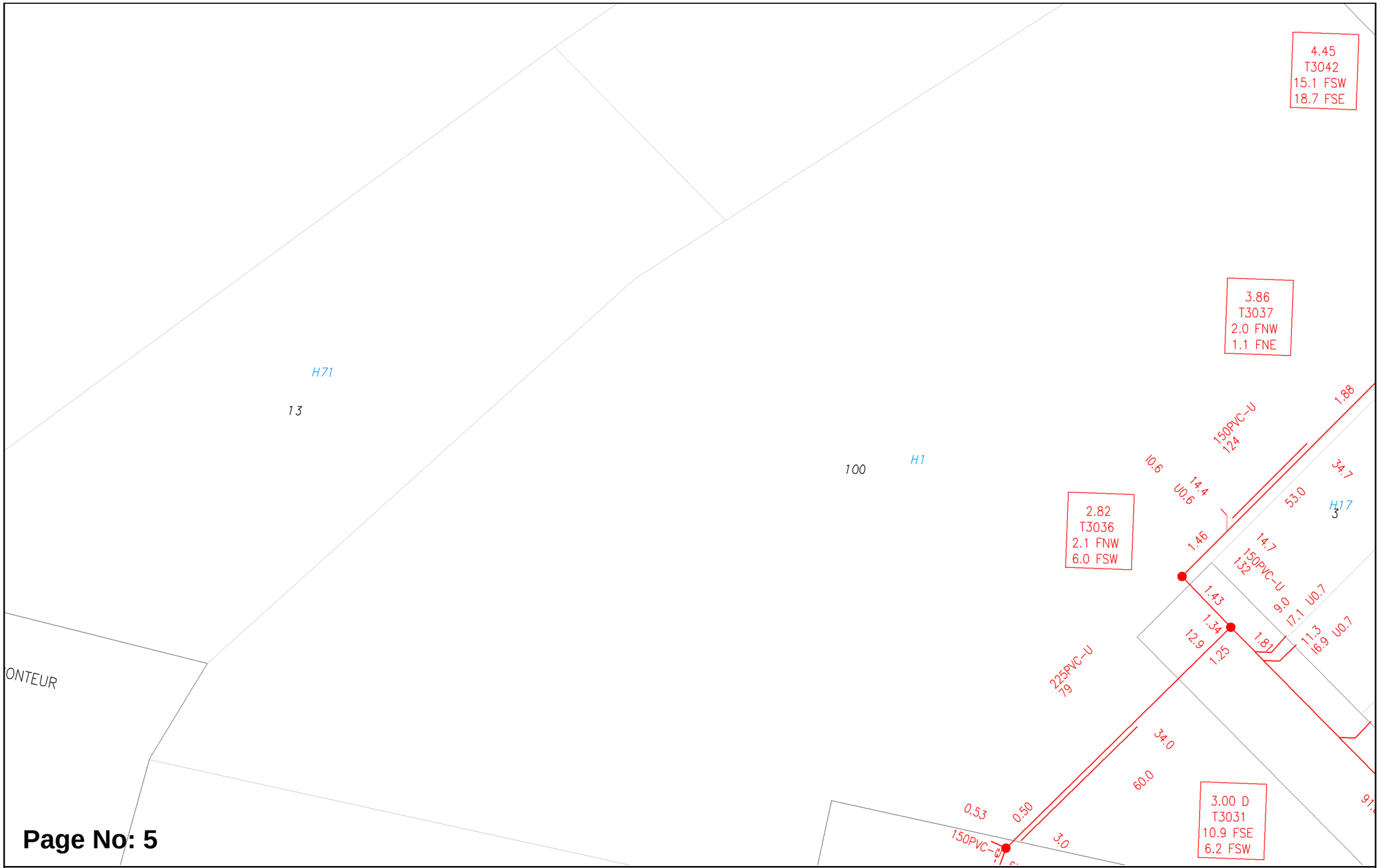
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**Sewer**

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**Page No: 5**

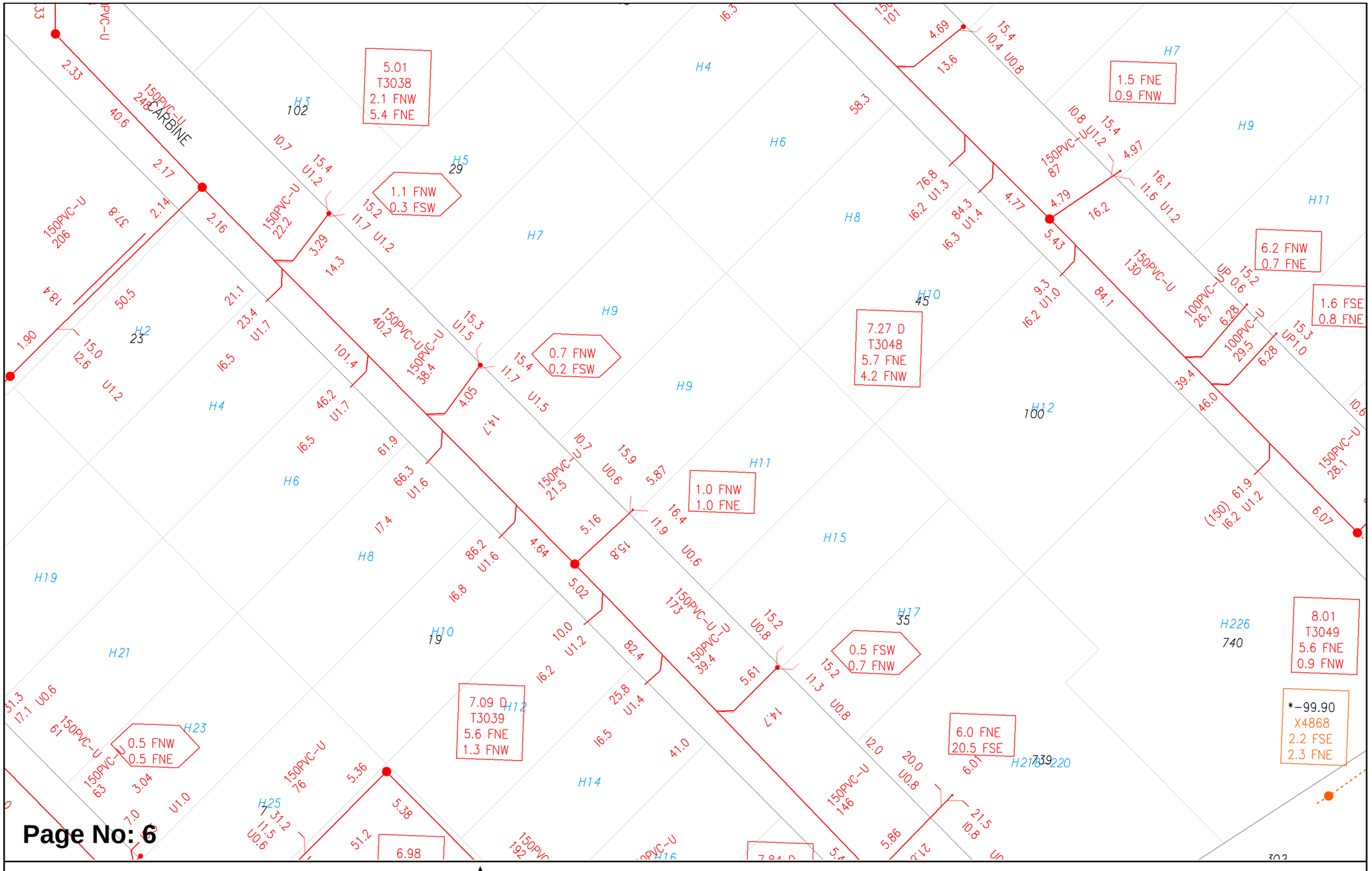
WATER CORPORATION

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| Scale: | 1:750 |
| Job No.: | 36962248 |
| Sequence No.: | 240900640 |
| Print Date: | 21 Jun 2024 |

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WATER CORPORATION

Scale: 1:3075
Job No.: 36962248
Sequence No.: 240900640
Print Date: 21 Jun 2024

N

Water

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Plans generated 21 Jun 2024 by PelicanCorp TicketAccess Software | www.pelicancorp.com

Water Corp - Critical Plan.docx (21 May 2024)




WATER CORPORATION

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9002

**Page No: 2**

WATER CORPORATION

Scale: 1:750
Job No.: 36962248
Sequence No.: 240900640
Print Date: 21 Jun 2024

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Water

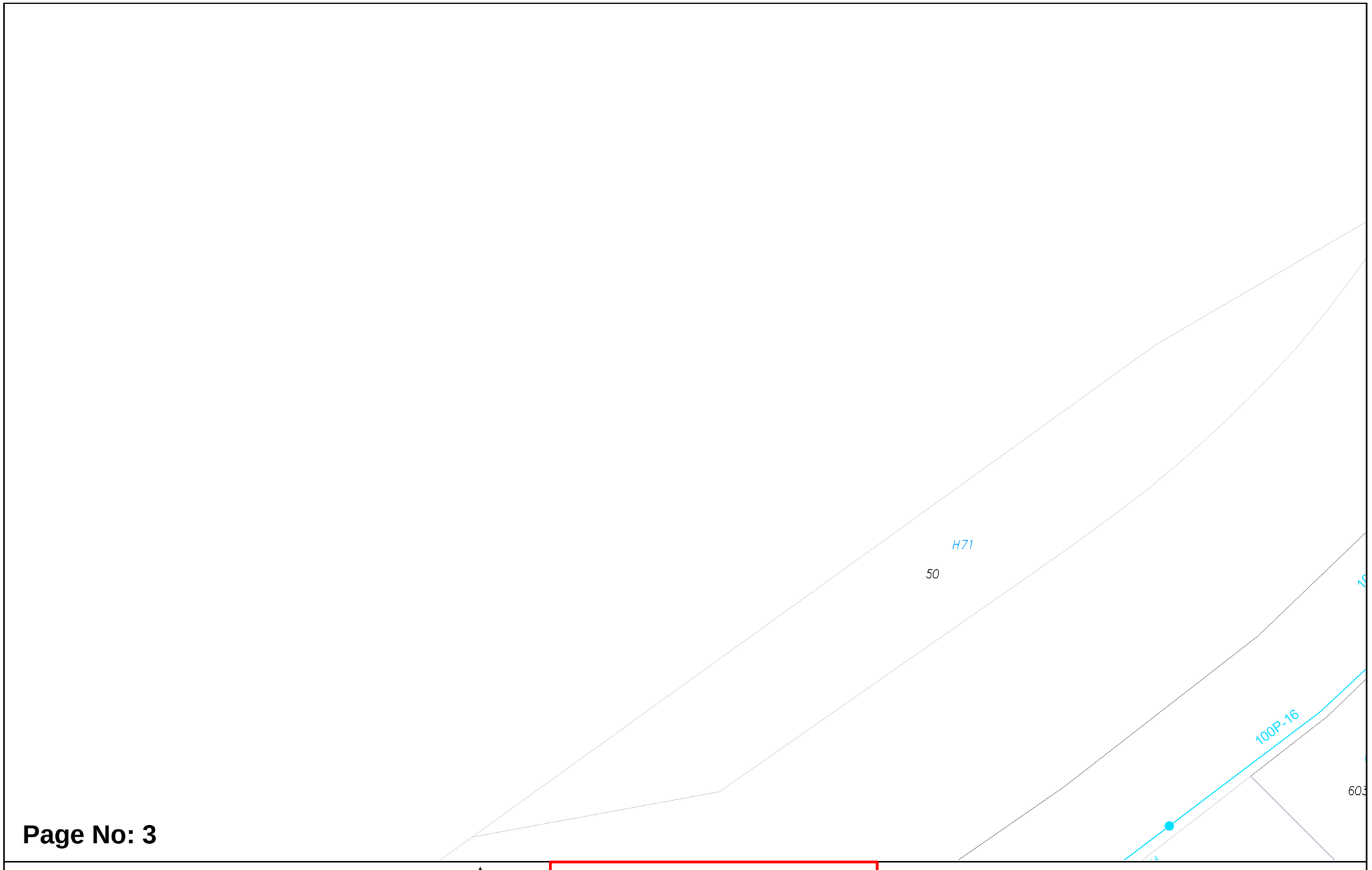
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**Page No: 3**

WATER CORPORATION

Scale: 1:750
Job No.: 36962248
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Print Date: 21 Jun 2024

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Water

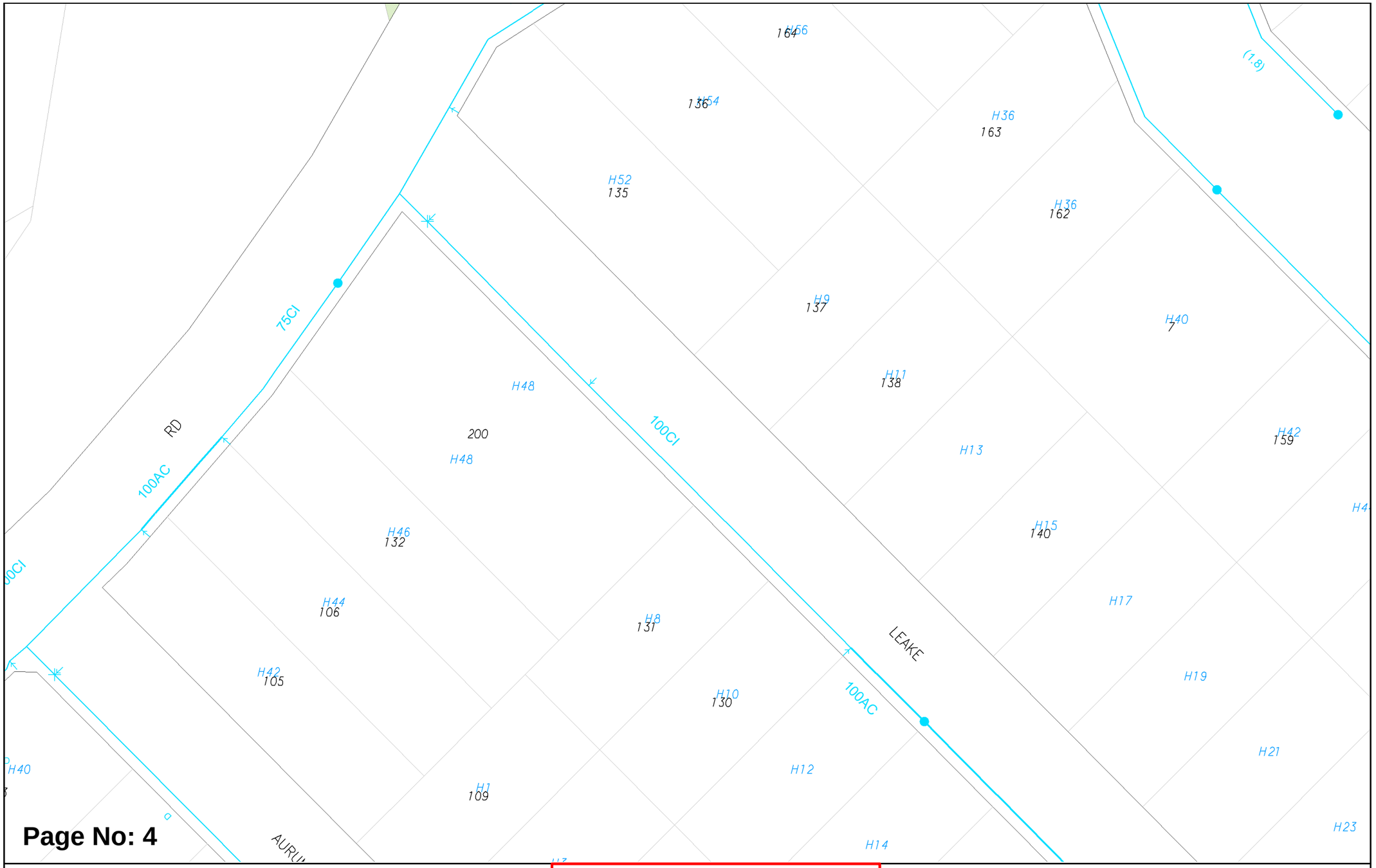
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Water

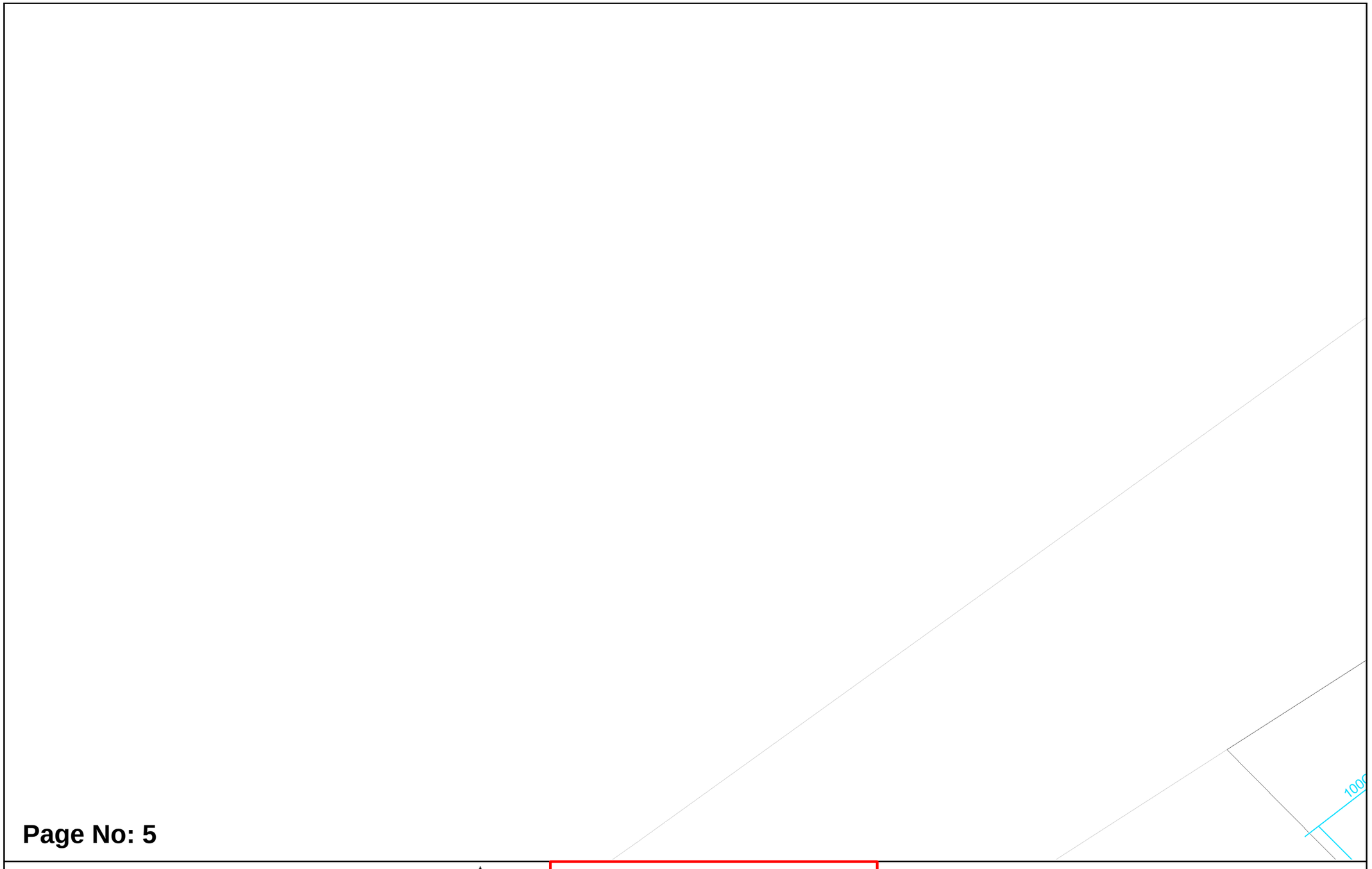
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**Page No: 5**

WATER CORPORATION

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Water

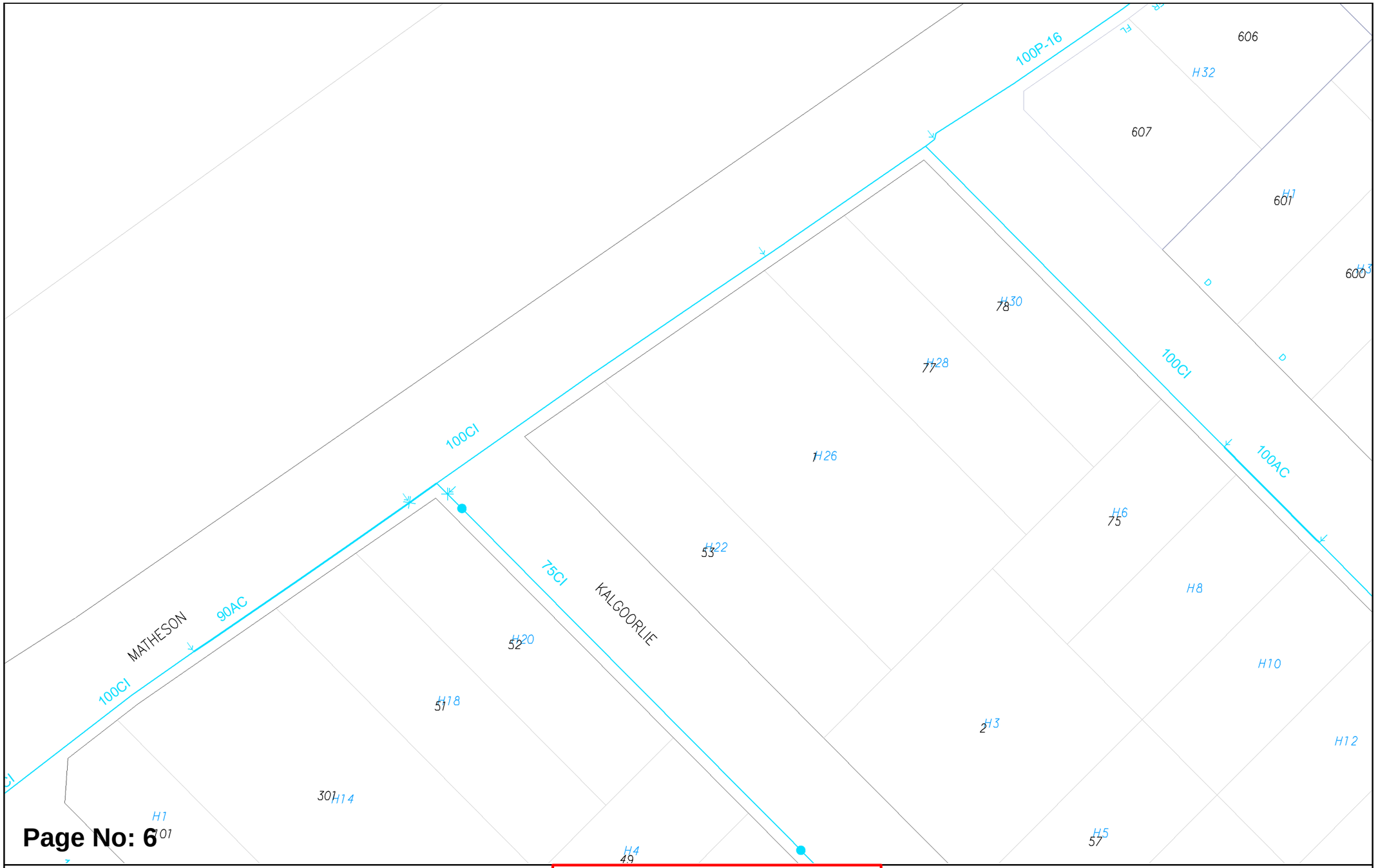
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Water

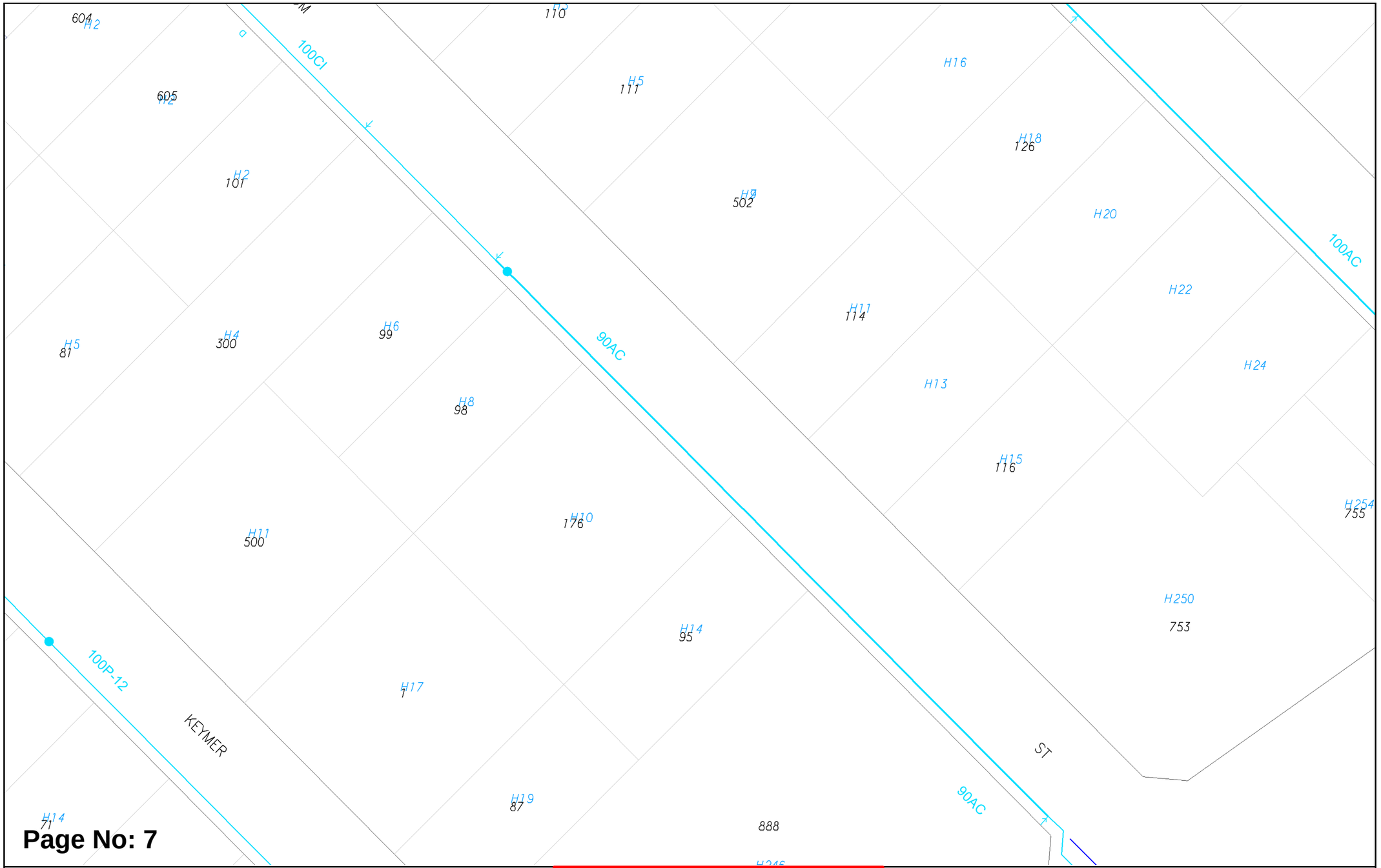
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**Page No: 7**

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Water

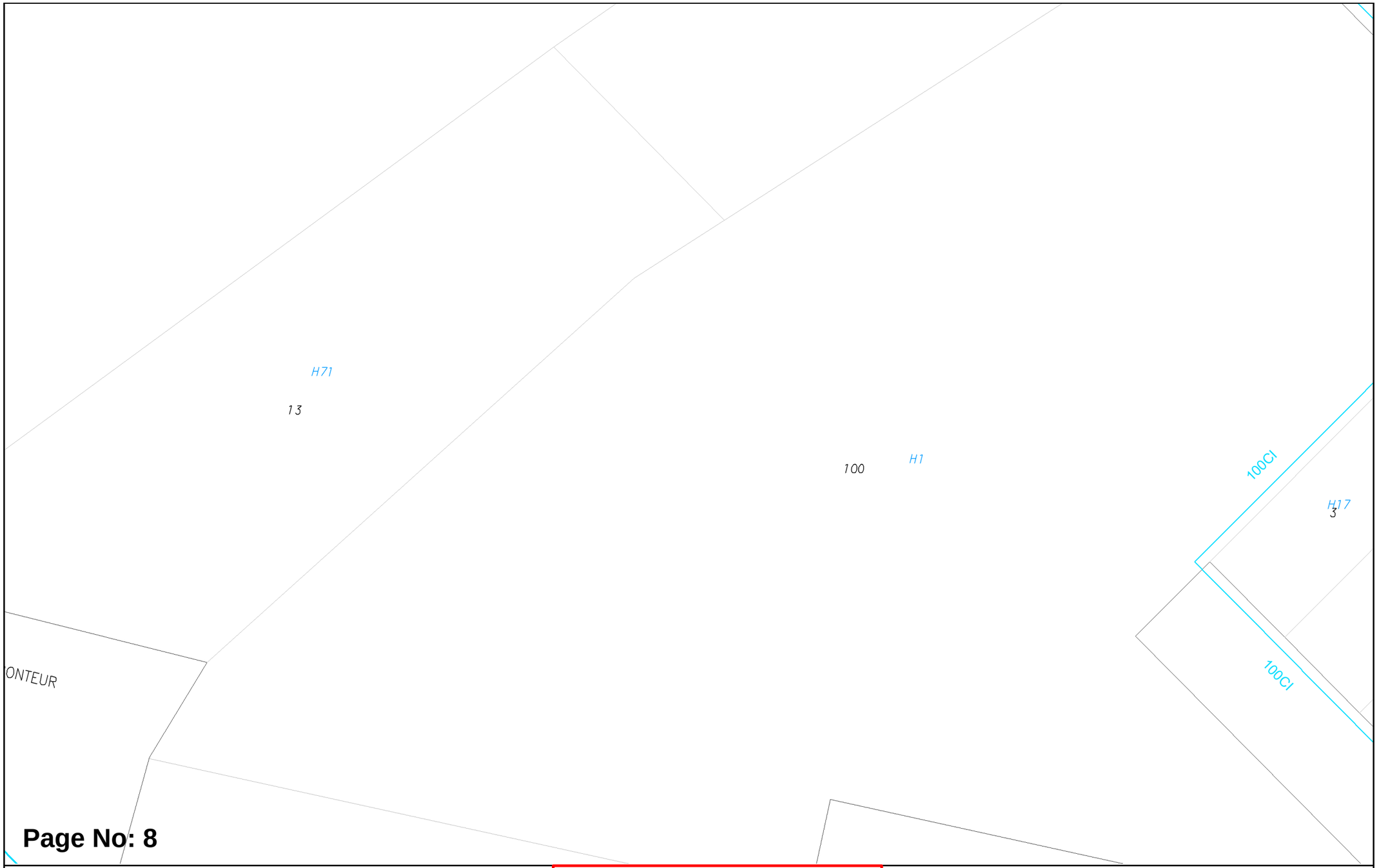
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**Page No: 8**

WATER CORPORATION

Scale: 1:750
Job No.: 36962248
Sequence No.: 240900640
Print Date: 21 Jun 2024

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**Water**

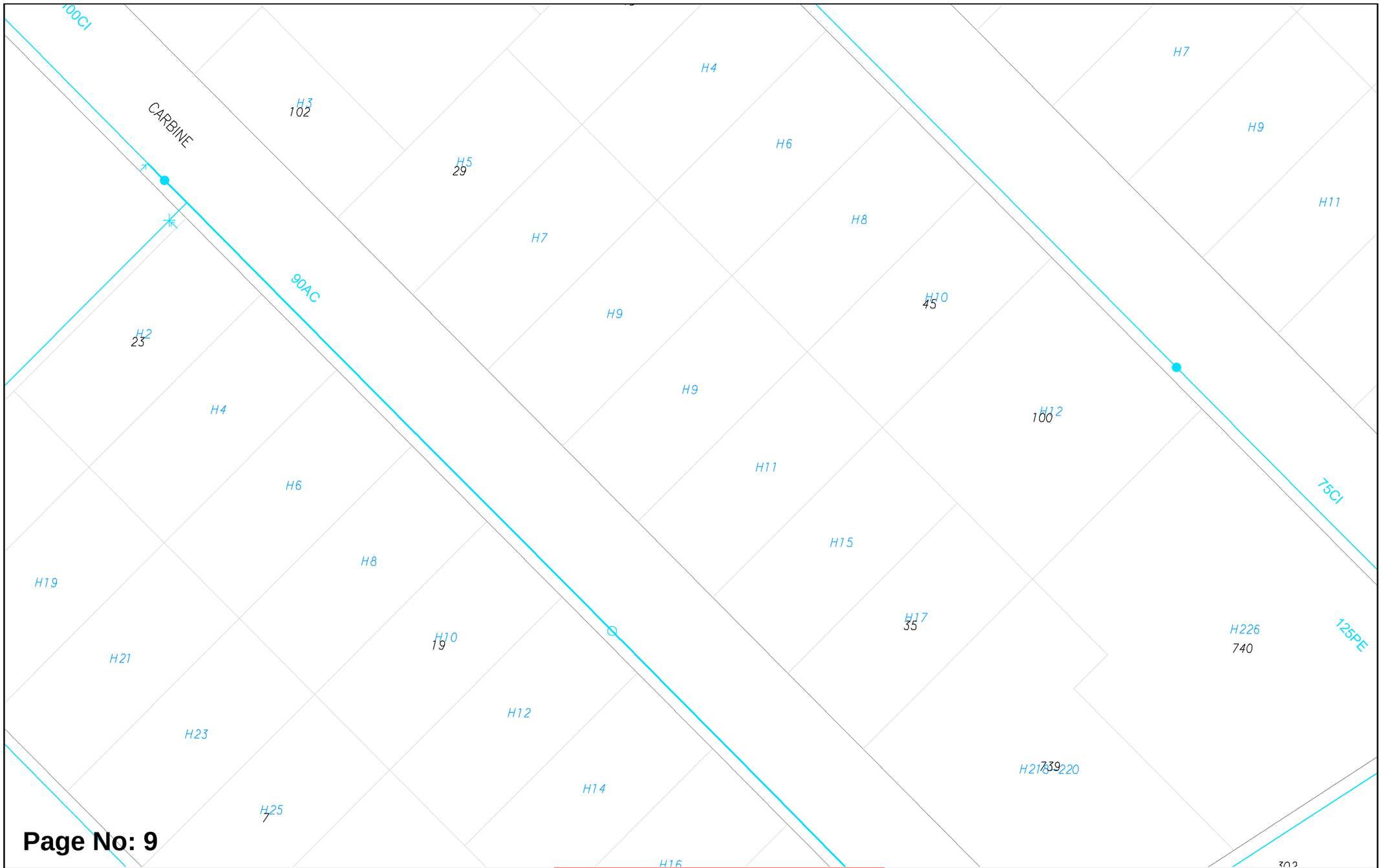
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**Page No: 9**

WATER CORPORATION

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**Water**

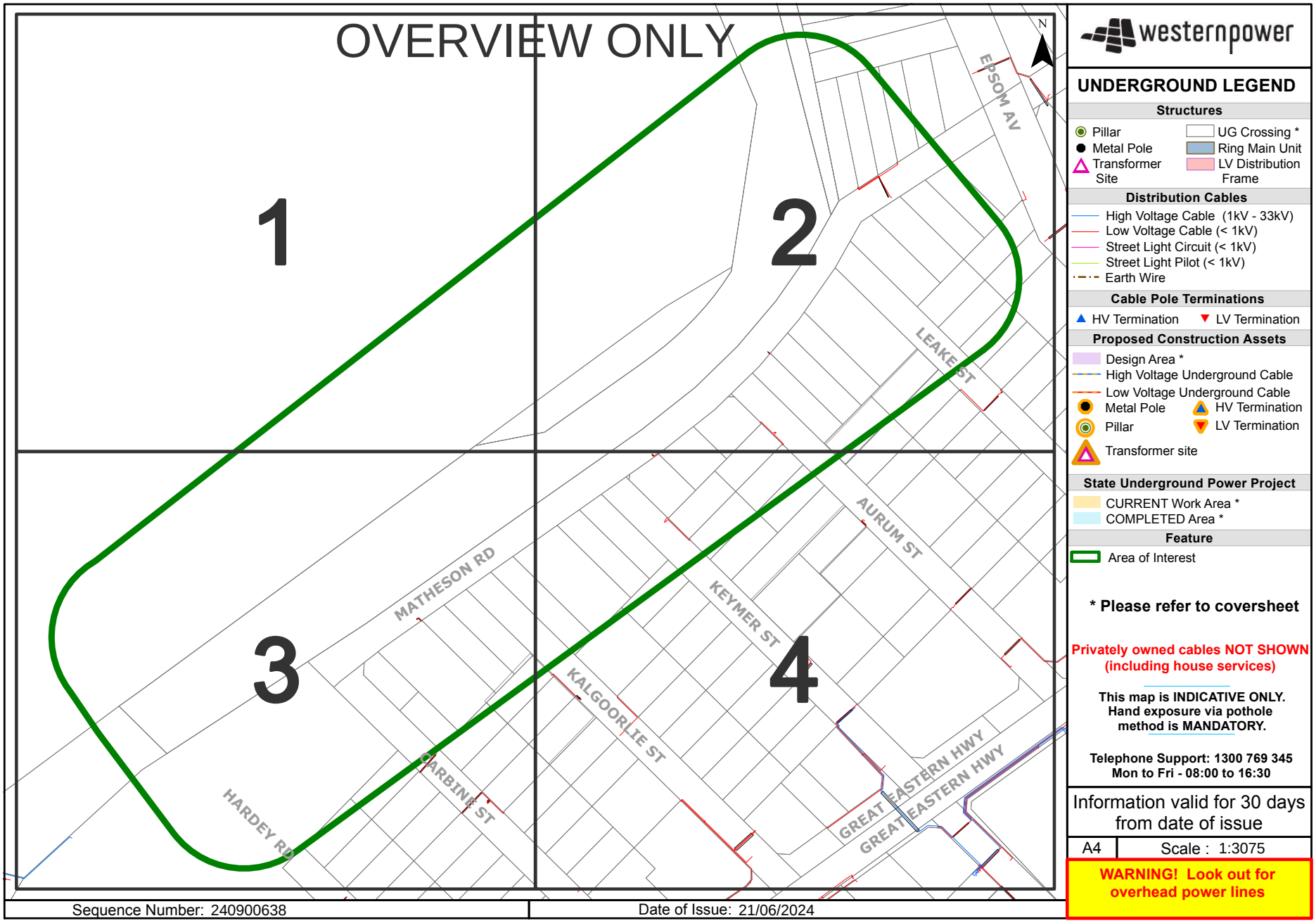
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westernpower

**UNDERGROUND LEGEND**

**Structures**
- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

**Distribution Cables**
- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

**Cable Pole Terminations**
- HV Termination
- LV Termination

**Proposed Construction Assets**
- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

**State Underground Power Project**
- CURRENT Work Area *
- COMPLETED Area *

**Feature**
- Area of Interest

*** Please refer to coversheet**

**Privately owned cables NOT SHOWN (including house services)**

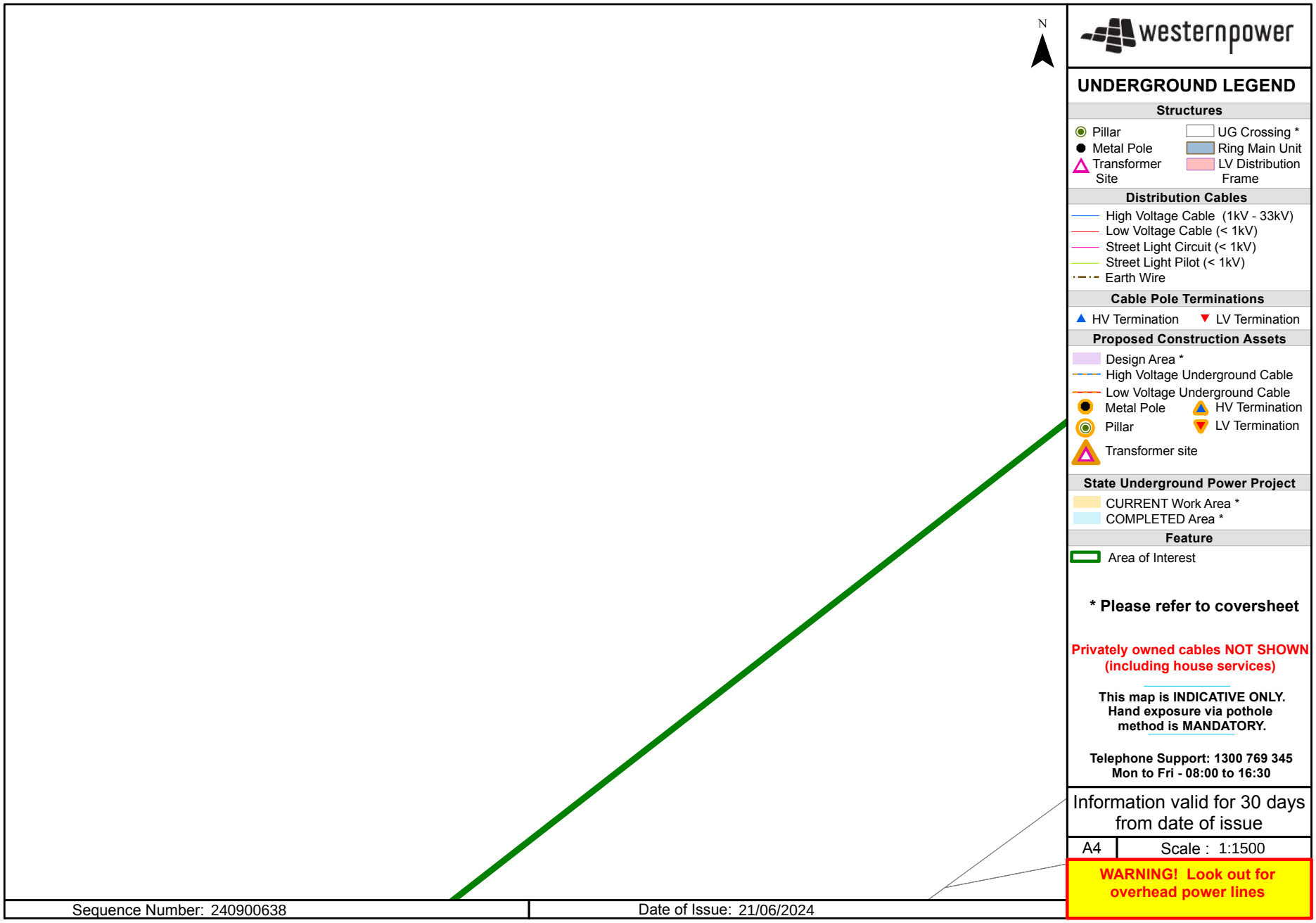
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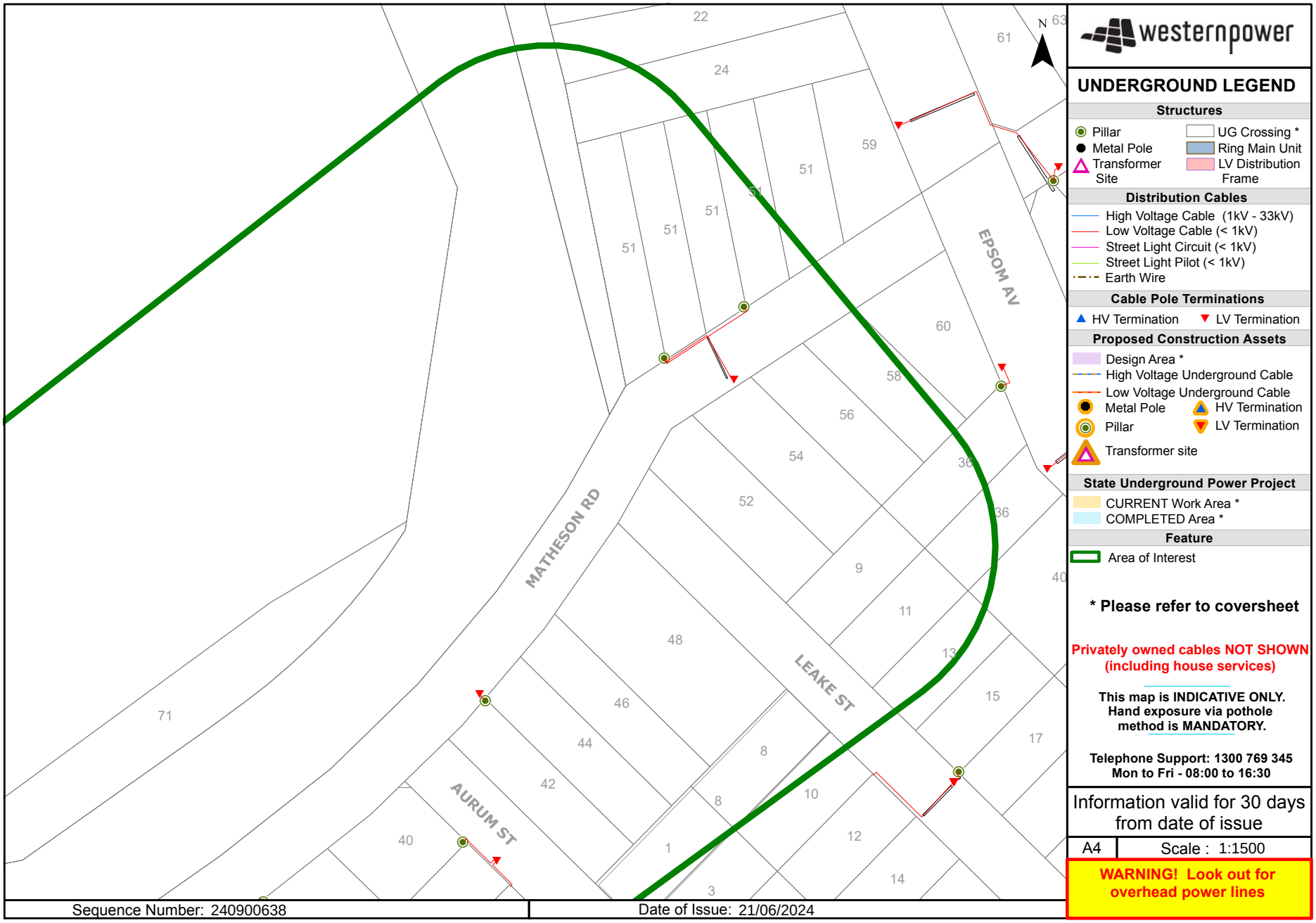
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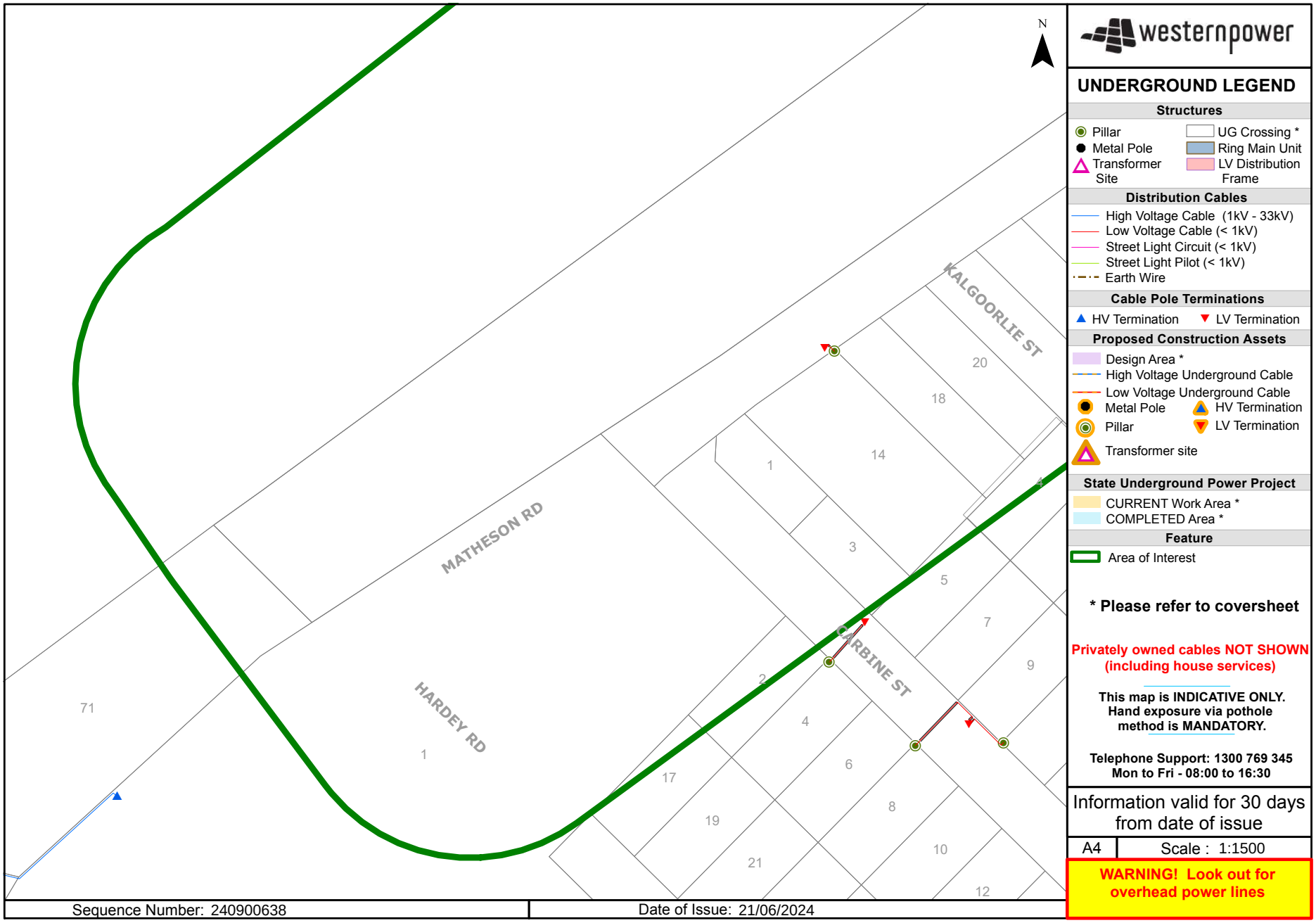
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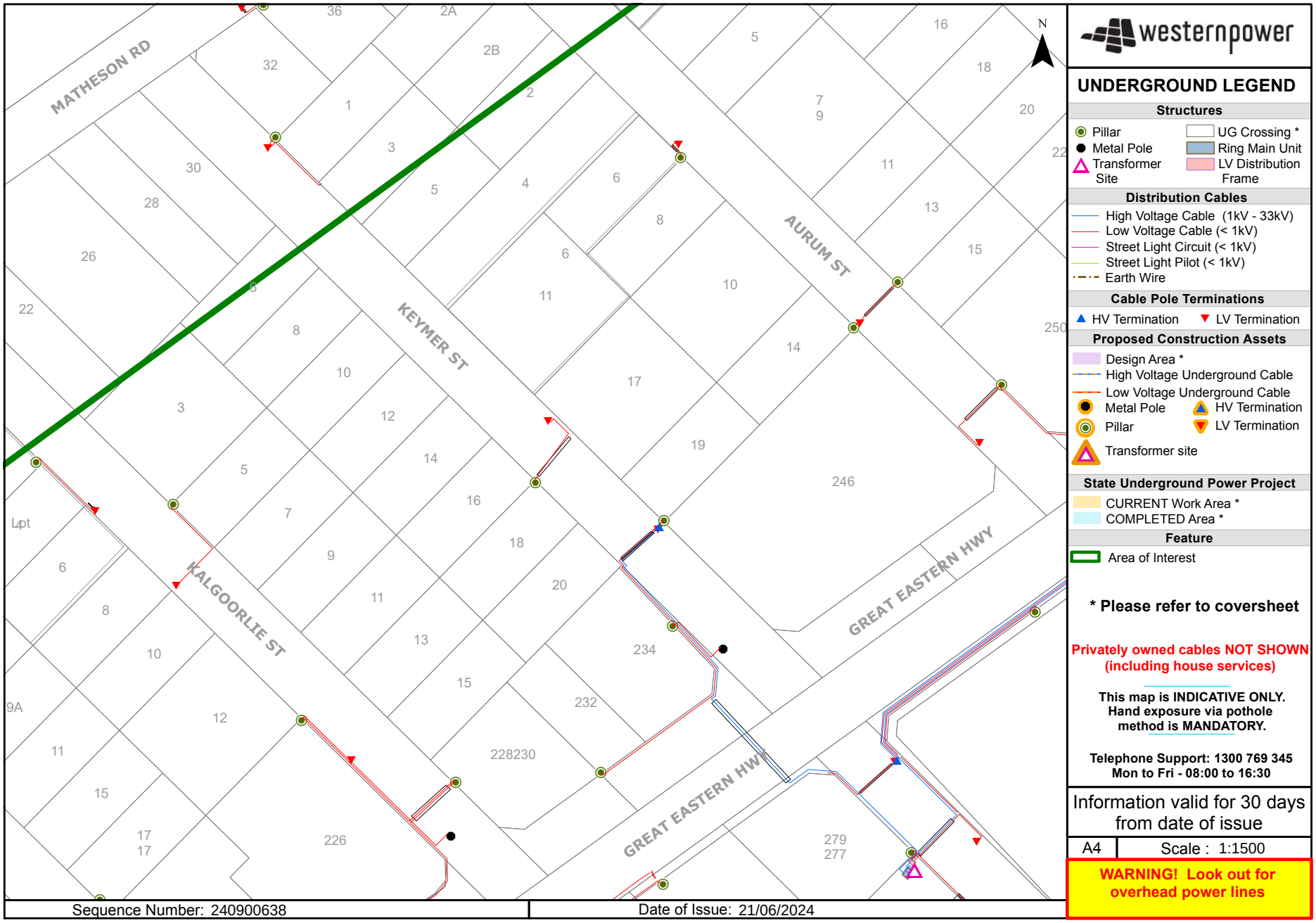
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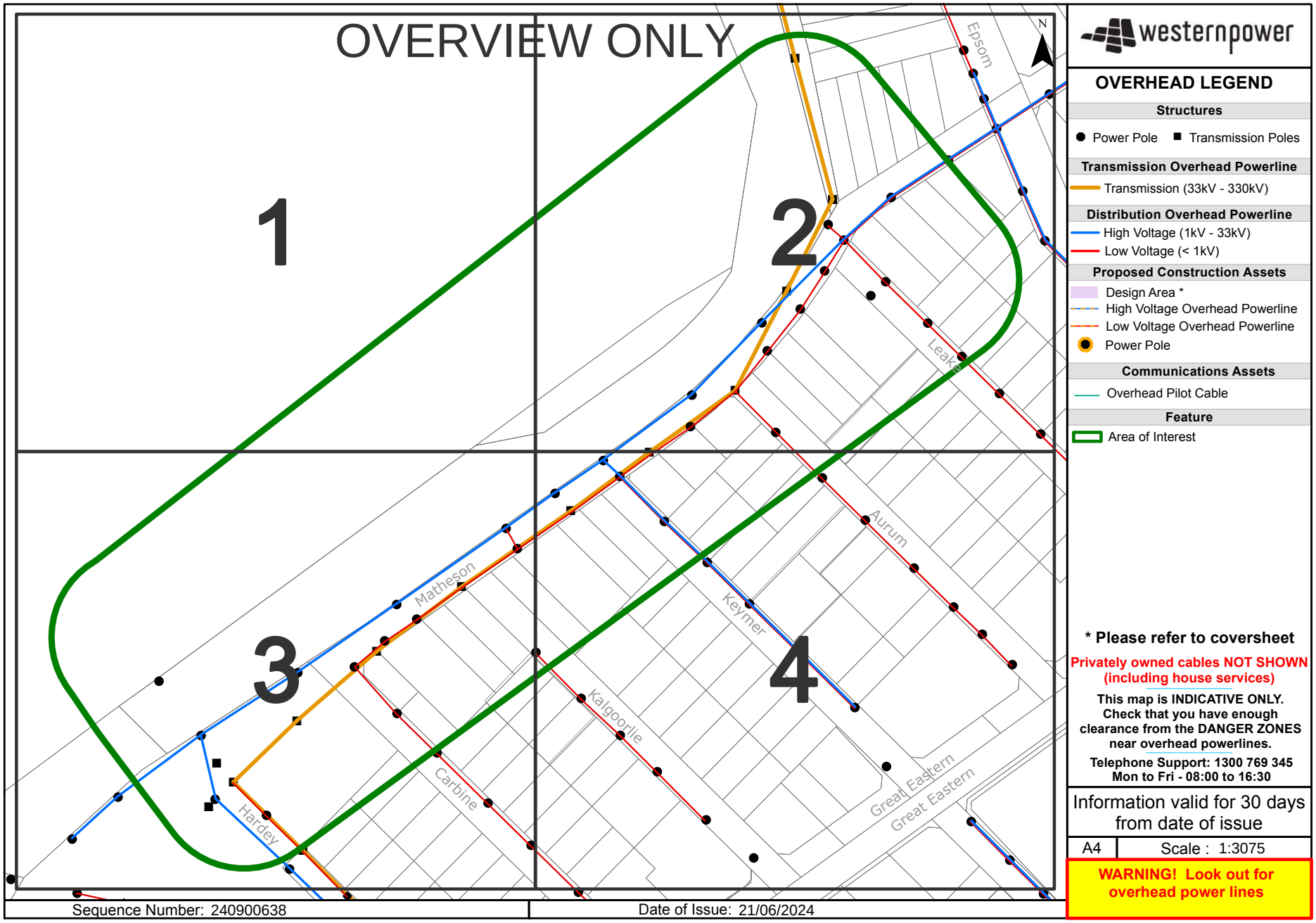
**WARNING! Look out for overhead power lines**

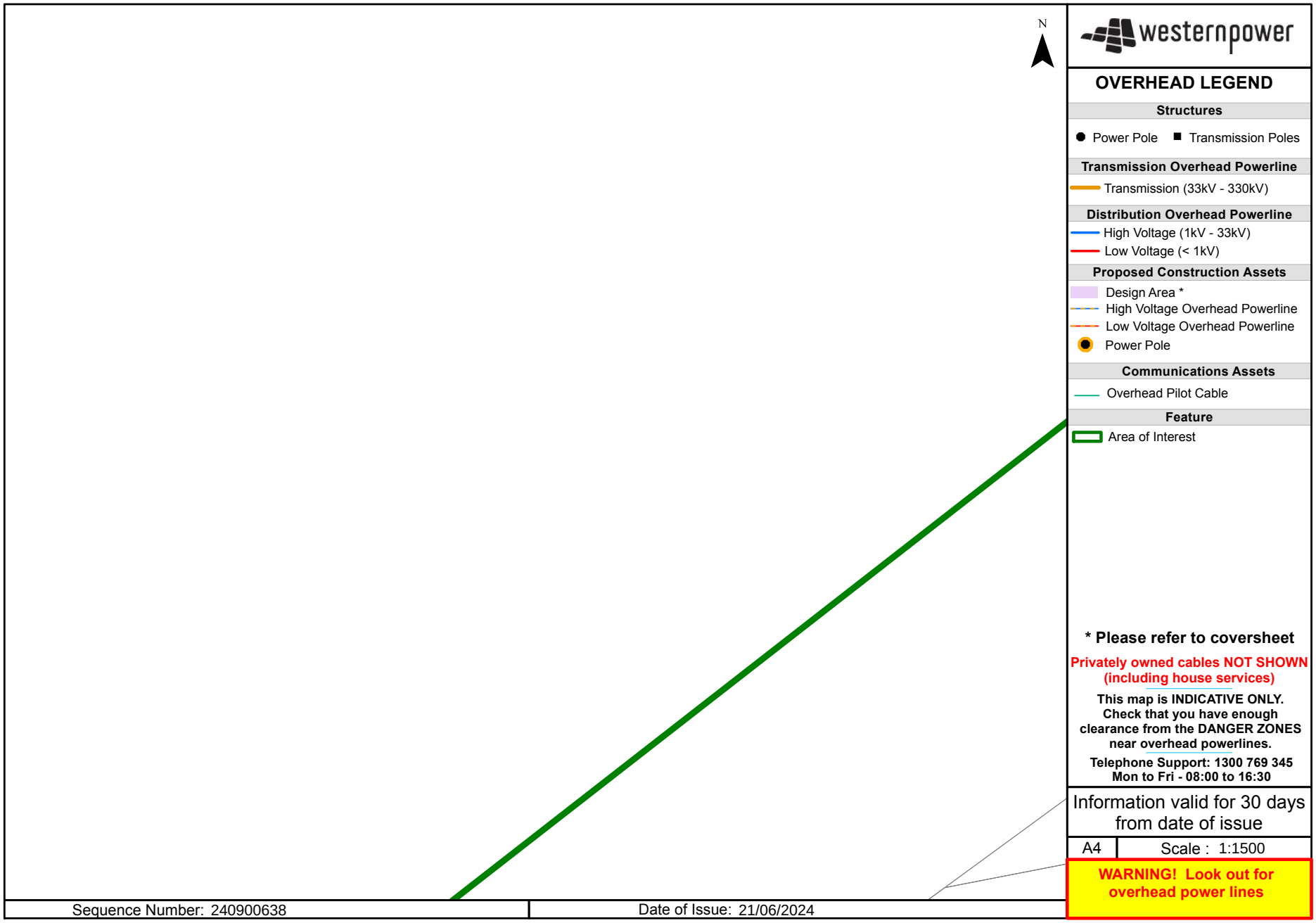

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UNDERGROUND LEGEND
Structures
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Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
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Cable Pole Terminations
HV Termination
LV Termination
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Low Voltage Underground Cable
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Transformer site
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LV Termination
State Underground Power Project
CURRENT Work Area *
COMPLETED Area *
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
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Scale : 1:1500
WARNING! Look out for overhead power lines
Sequence Number: 240900638
Date of Issue: 21/06/2024

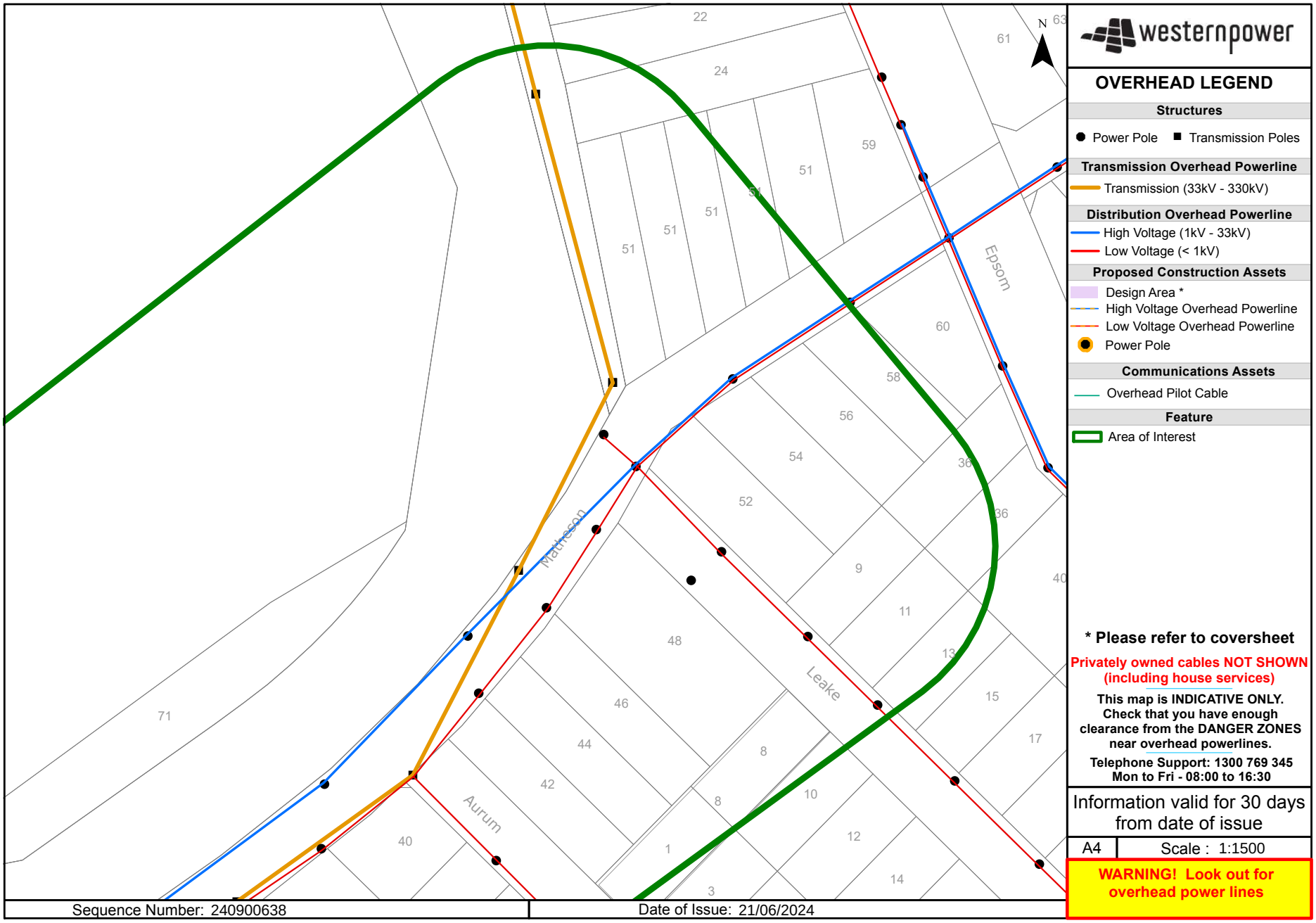

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MATHESON RD
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westernpower
UNDERGROUND LEGEND
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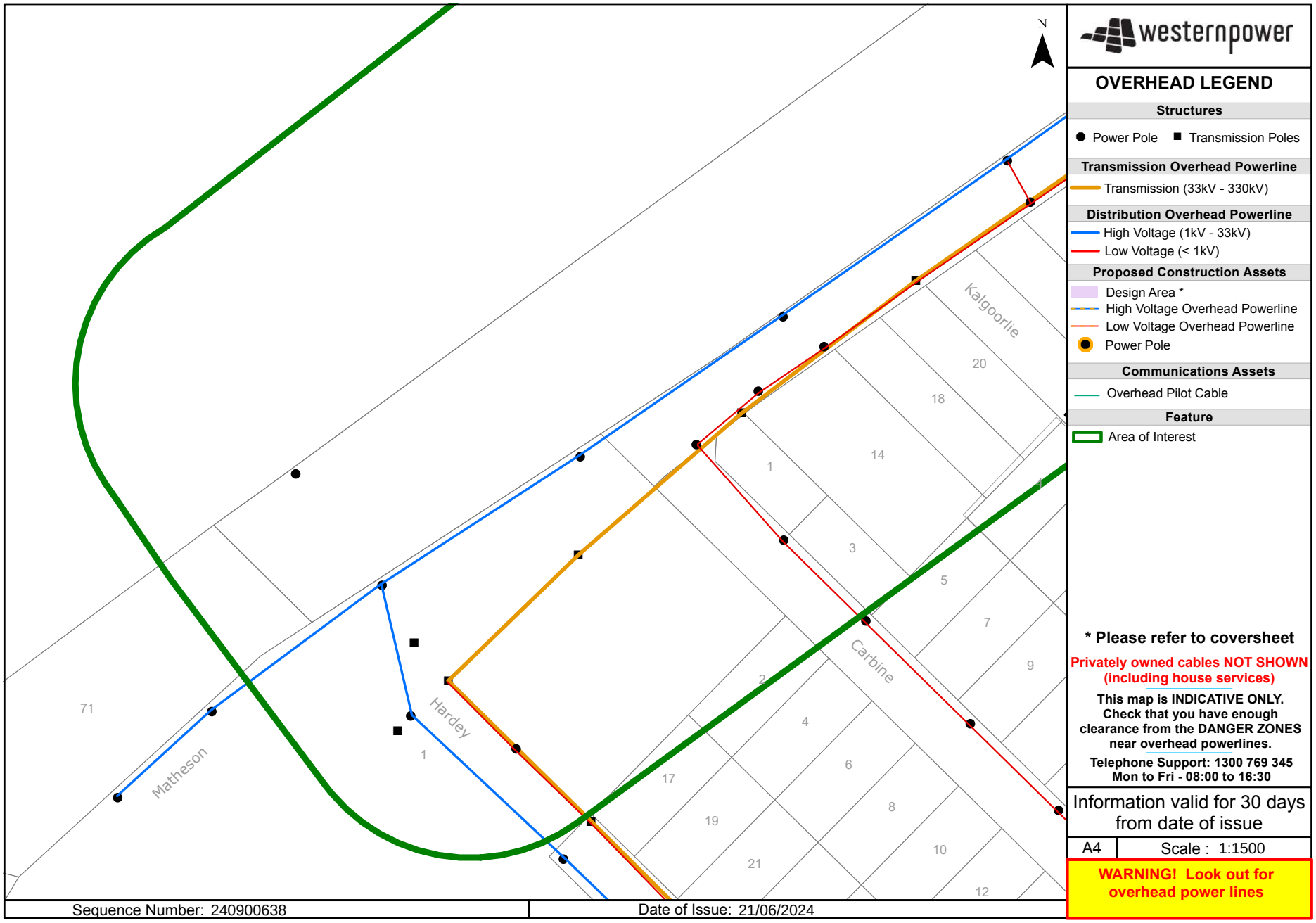

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Sequence Number: 240900638
Date of Issue: 21/06/2024
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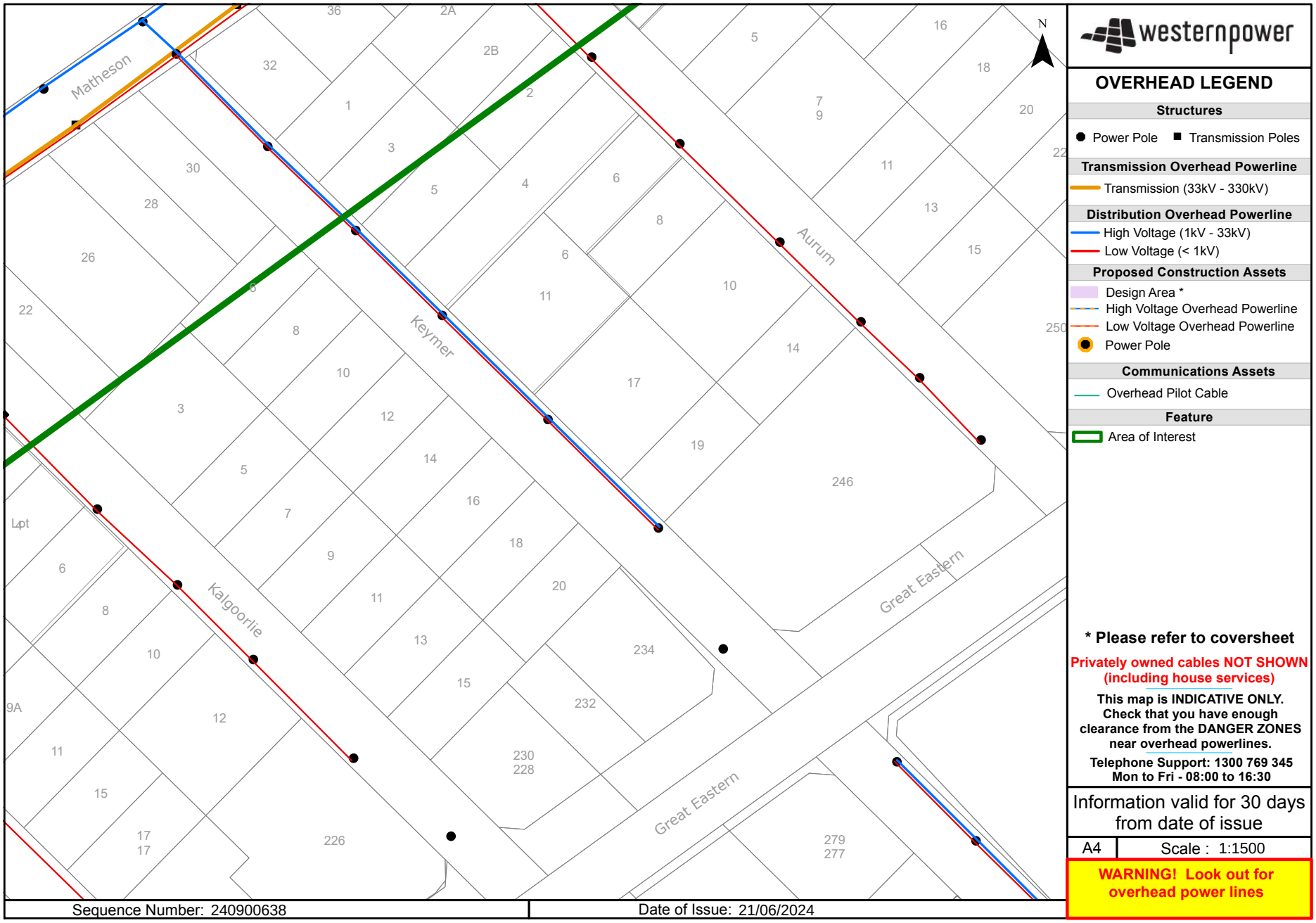

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AURUM ST
KALGOORLIE ST
GREAT EASTERN HWY
GREAT EASTERN HWY
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Sequence Number: 240900638
Date of Issue: 21/06/2024
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UNDERGROUND LEGEND
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Pillar
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OVERVIEW ONLY
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Keymer
Matheson
Kalgoorlie
Carbine
Hardey
Great Eastern
Great Eastern
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
Low Voltage (< 1kV)
Proposed Construction Assets
Design Area *
High Voltage Overhead Powerline
Low Voltage Overhead Powerline
Power Pole
Communications Assets
Overhead Pilot Cable
Feature
Area of Interest
* Please refer to coversheet
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OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
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Leake
Aurum
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
Low Voltage (< 1kV)
Proposed Construction Assets
Design Area *
High Voltage Overhead Powerline
Low Voltage Overhead Powerline
Power Pole
Communications Assets
Overhead Pilot Cable
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Check that you have enough clearance from the DANGER ZONES near overhead powerlines.
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines
Sequence Number: 240900638
Date of Issue: 21/06/2024


N
westernpower
OVERHEAD LEGEND
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Kalgoorlie
Hardey
Matheson
Carbine
71
1
14
18
20
3
5
7
9
2
4
6
8
10
12
17
19
21
Sequence Number: 240900638
Date of Issue: 21/06/2024


Matheson
Keymer
Aurum
Kalgoorlie
Great Eastern
Great Eastern
Lpt
N
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westernpower
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WARNING! Look out for overhead power lines

Job No 36968397

byda.com.au

## Contact Details

| Contact | Contact number | Company | Enquirer ID |
|---|---|---|---|
| Justin Zielinski | 0420 304 451 | - | 3140642 |

**Email**
jzielinski@tabec.com.au

**Address**
54 Havelock Street
West Perth WA 6005

## Job Site and Enquiry Details

**WARNING:** The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

| Enquiry date | Start date | End date | On behalf of | Job purpose | Locations | Onsite activities |
|---|---|---|---|---|---|---|
| 24/06/2024 | 25/06/2024 | 25/06/2024 | Private | Design | Both Road | Planning & Design |




Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

| User Reference | Address | Notes/description |
|---|---|---|
| Precinct B | 39 Northerly Avenue<br>Ascot WA 6104 | - |

## Your Responsibility and Duty of Care

- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the Privacy Policy and Term of Use.
- For more information on safe digging practices, visit www.byda.com.au

## Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

| Referral ID (Seq. no) | Authority Name | Phone | Status |
|---|---|---|---|
| 240936716 | ATCO Gas Australia | 1300 926 755 | NOTIFIED |
| 240936712 | NBN Co (WA) | 1800 687 626 | NOTIFIED |
| 240936708 | Optus (WA) | 1800 505 777 | NOTIFIED |
| 240936709 | Public Transport Authority - Bus Stops | 13 62 13 | NOTIFIED |
| 240936714 | Telstra (WA) | 1800 653 935 | NOTIFIED |
| 240936711 | TPG Telecom (WA) | 1800 786 306 | NOTIFIED |
| 240936710 | Vocus (WA) | 1800 262 663 | NOTIFIED |
| 240936715 | Water Corporation | 13 13 95 | NOTIFIED |
| 240936713 | Western Power | 13 10 87 | NOTIFIED |

END OF UTILITIES LIST

**Lodge your FREE enquiry online any time at byda.com.au**

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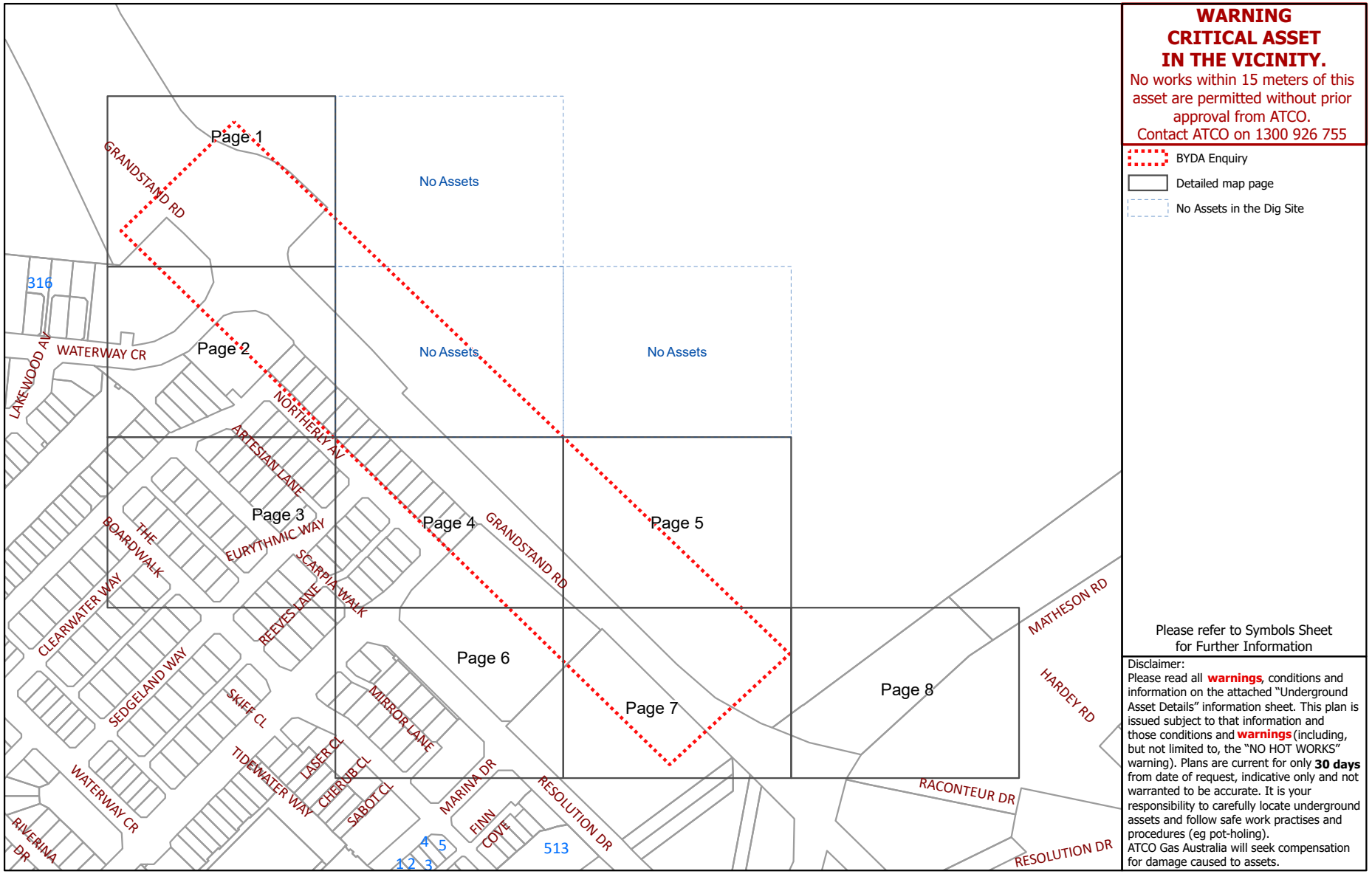
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ABN: 90 089 531 975

Date: 24/06/24 (valid for 30 days)
Index Sheet

Seq # 240936716
Job # 36968397

BYDA Location: 39 Northerly Avenue Ascot 6104
Scale: 1:3,500

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**WARNING**
**CRITICAL ASSET**
**IN THE VICINITY.**
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BYDA Enquiry
Detailed map page
No Assets in the Dig Site

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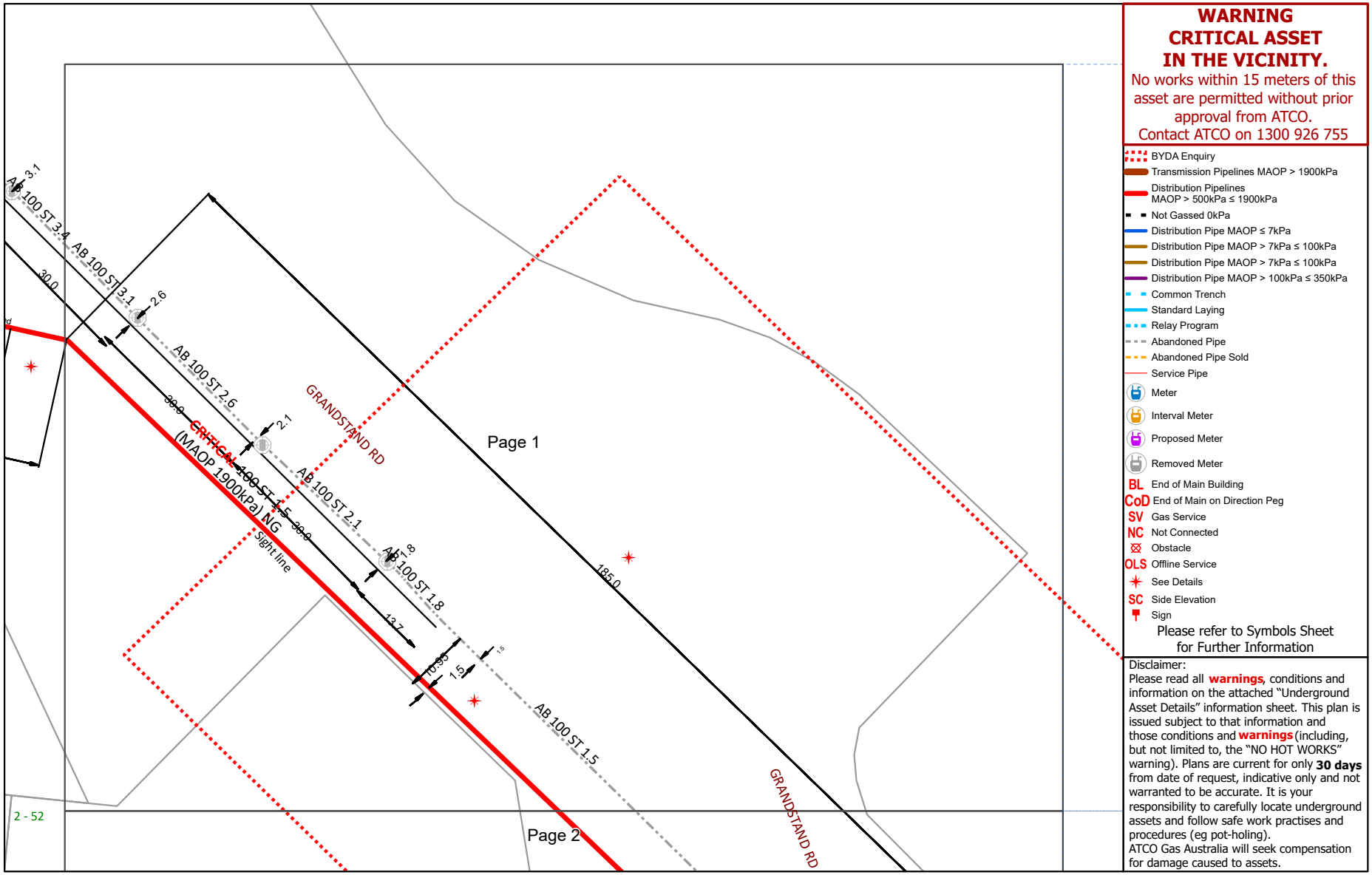
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BYDA Location: 39 Northerly Avenue Ascot 6104
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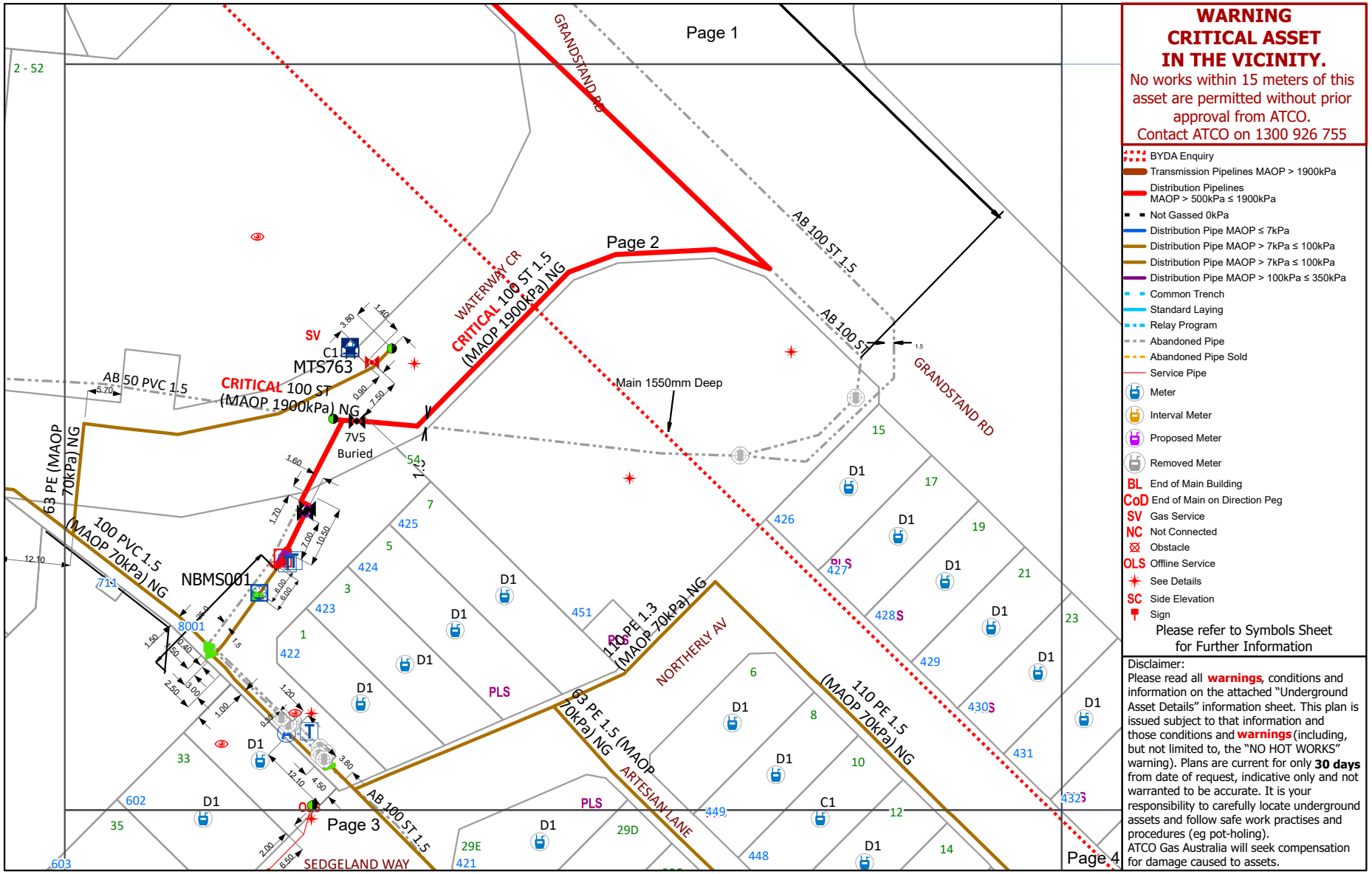
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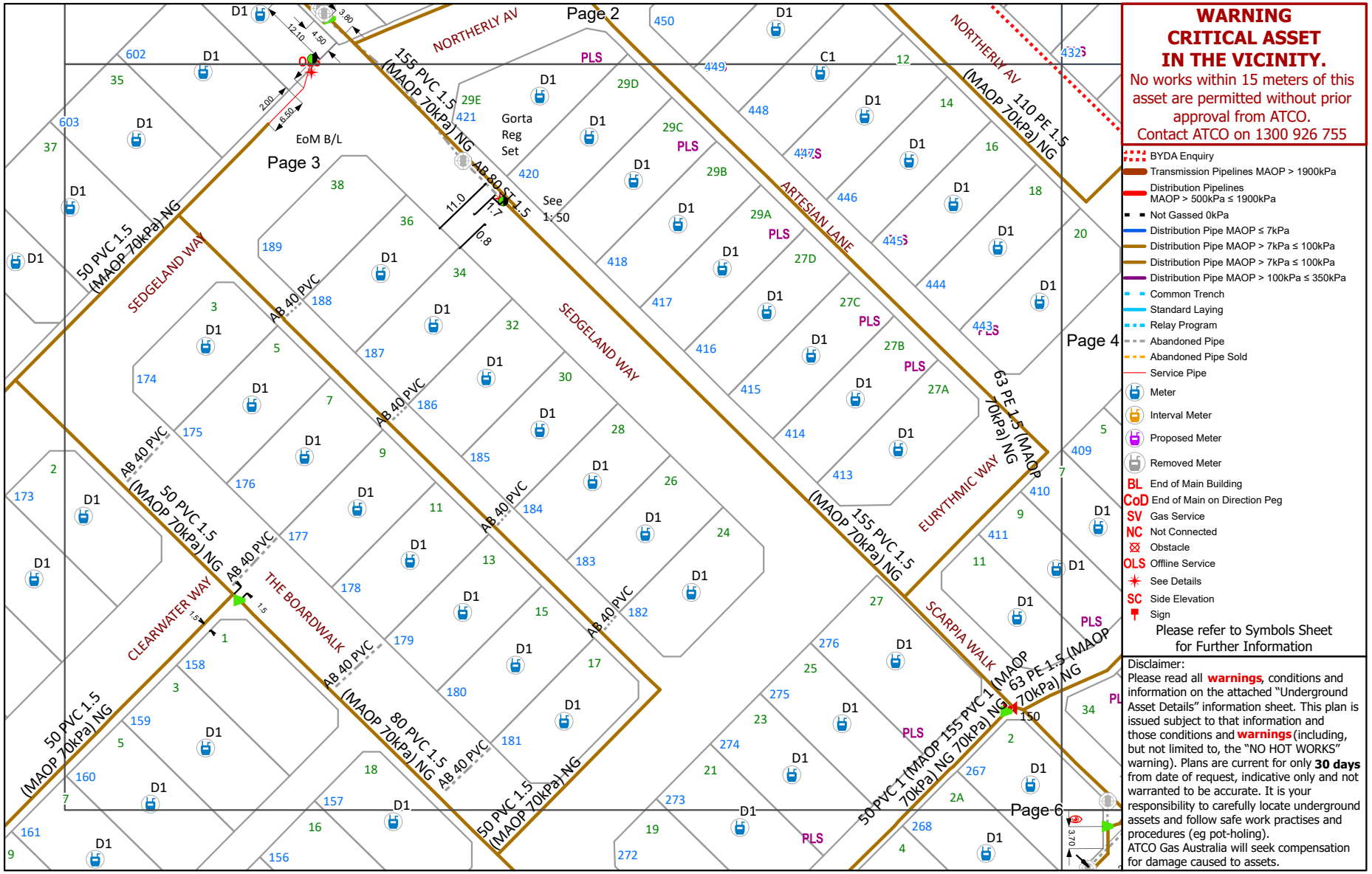
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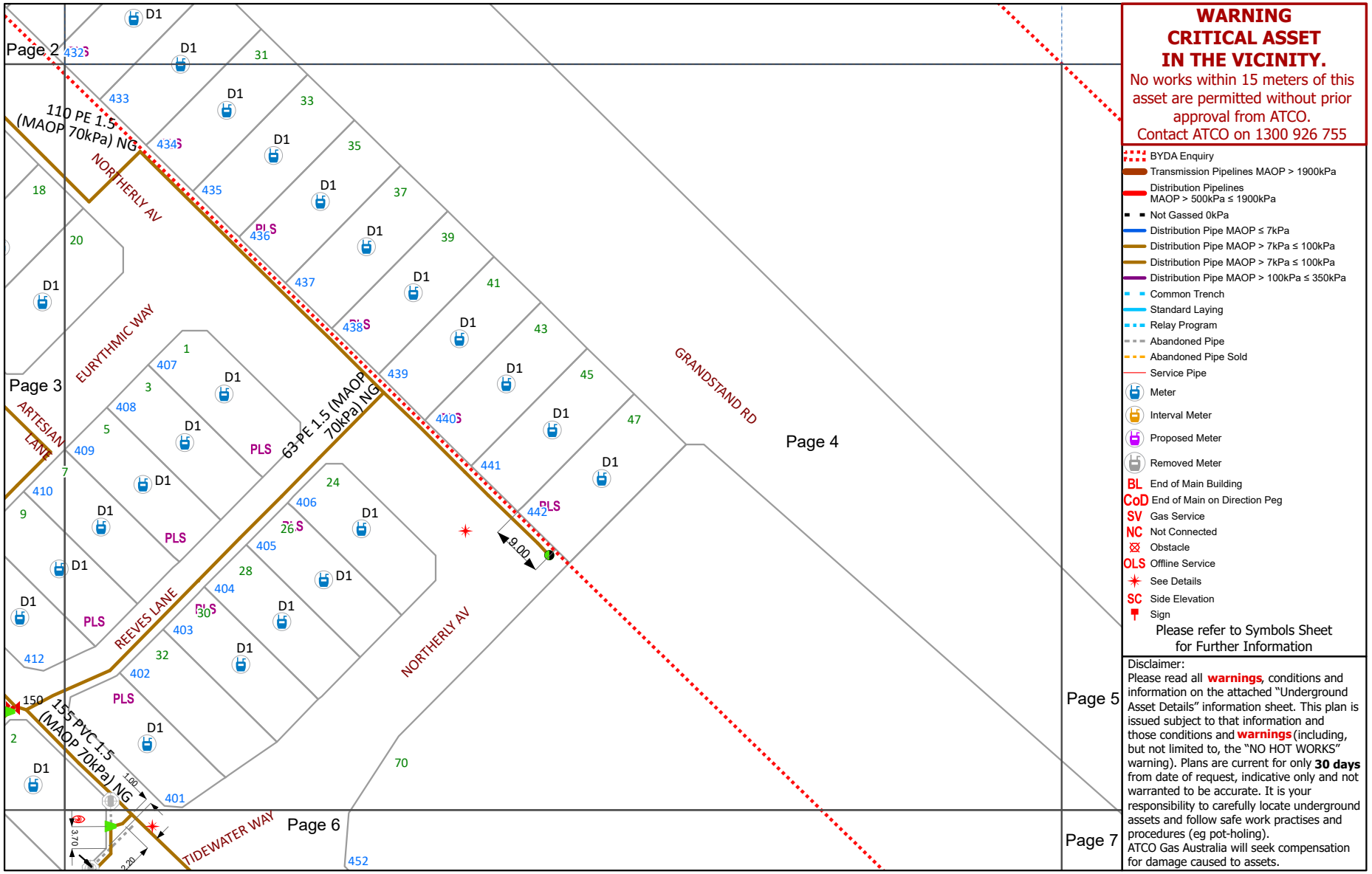
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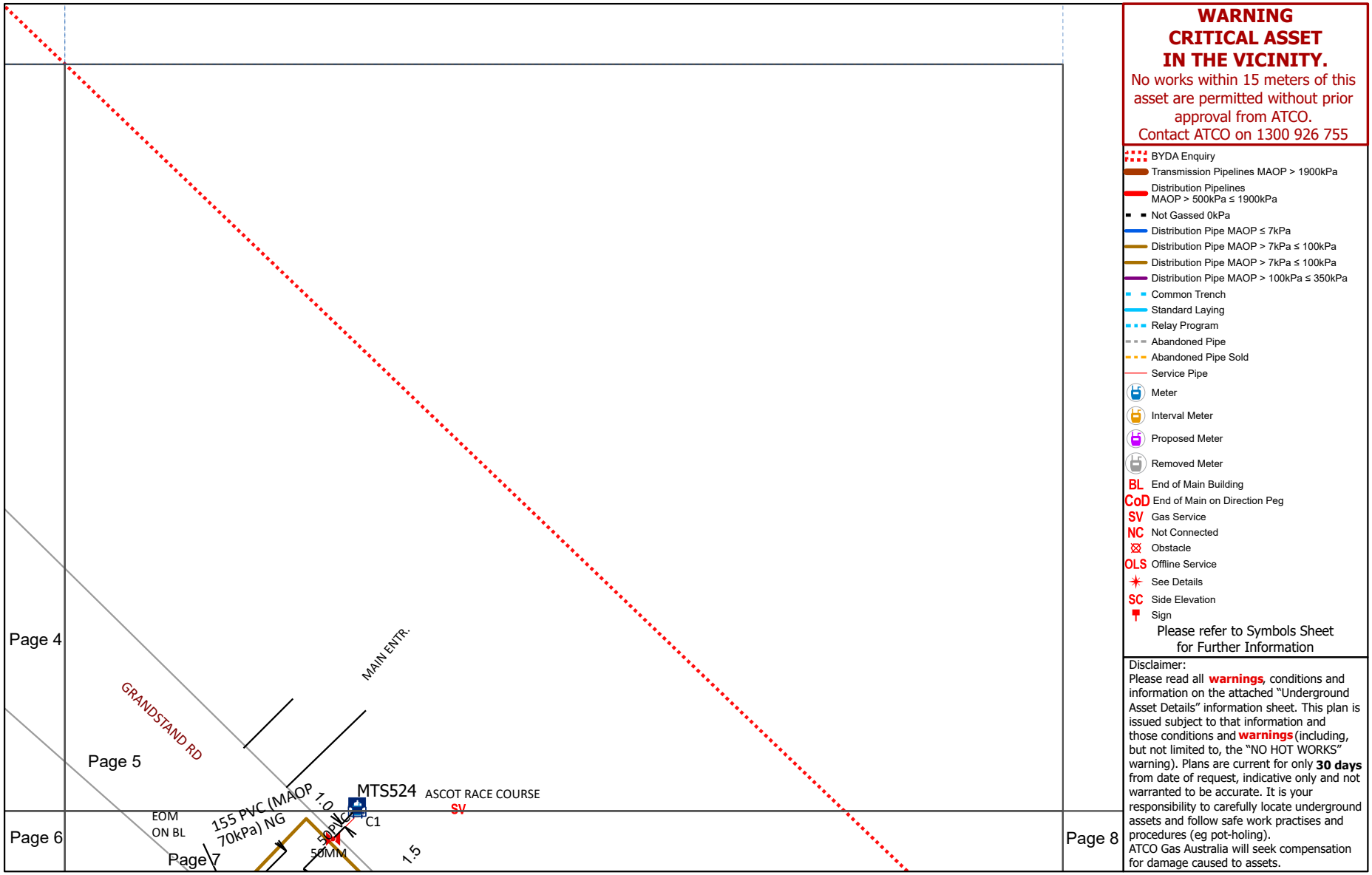
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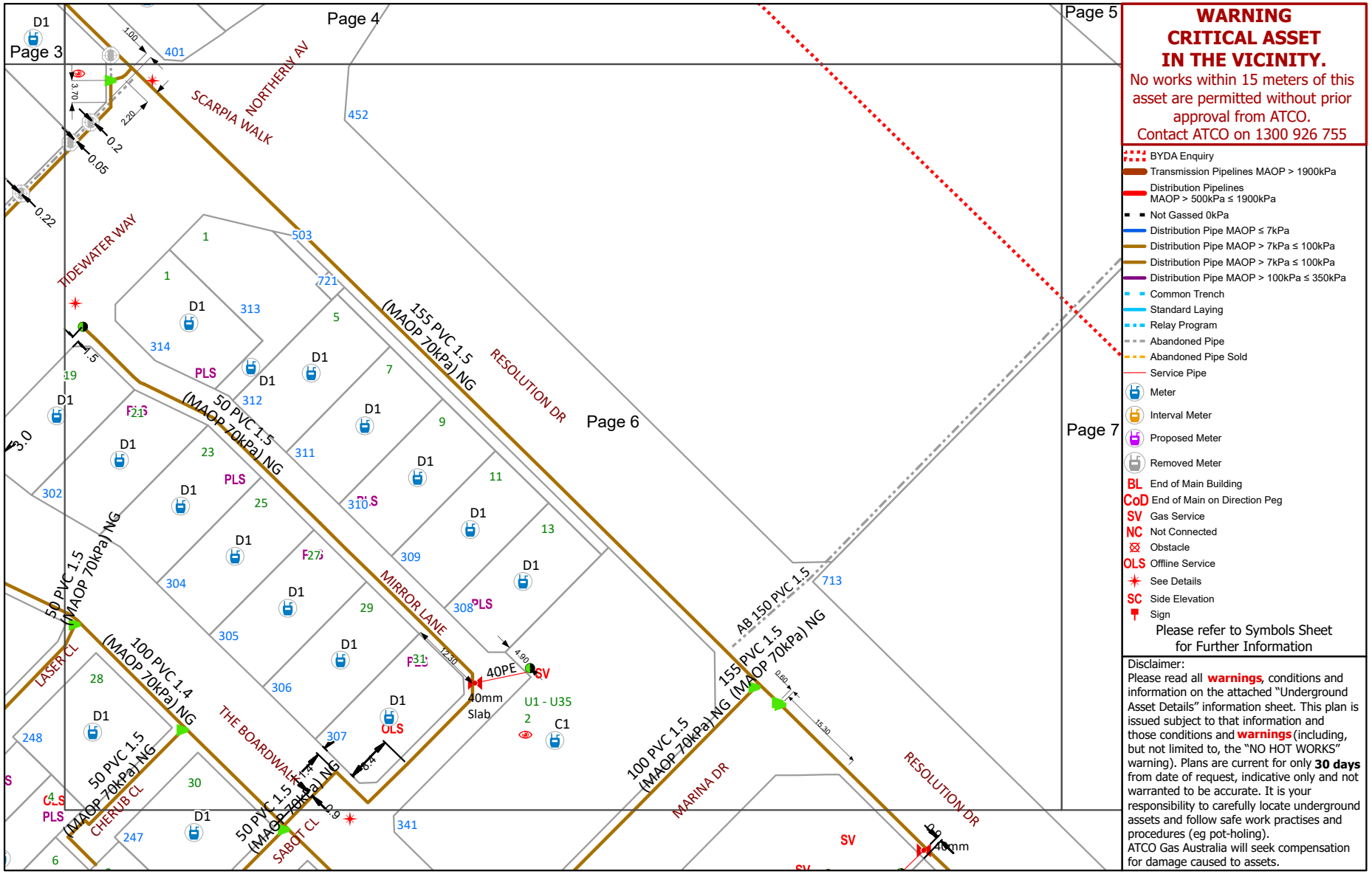
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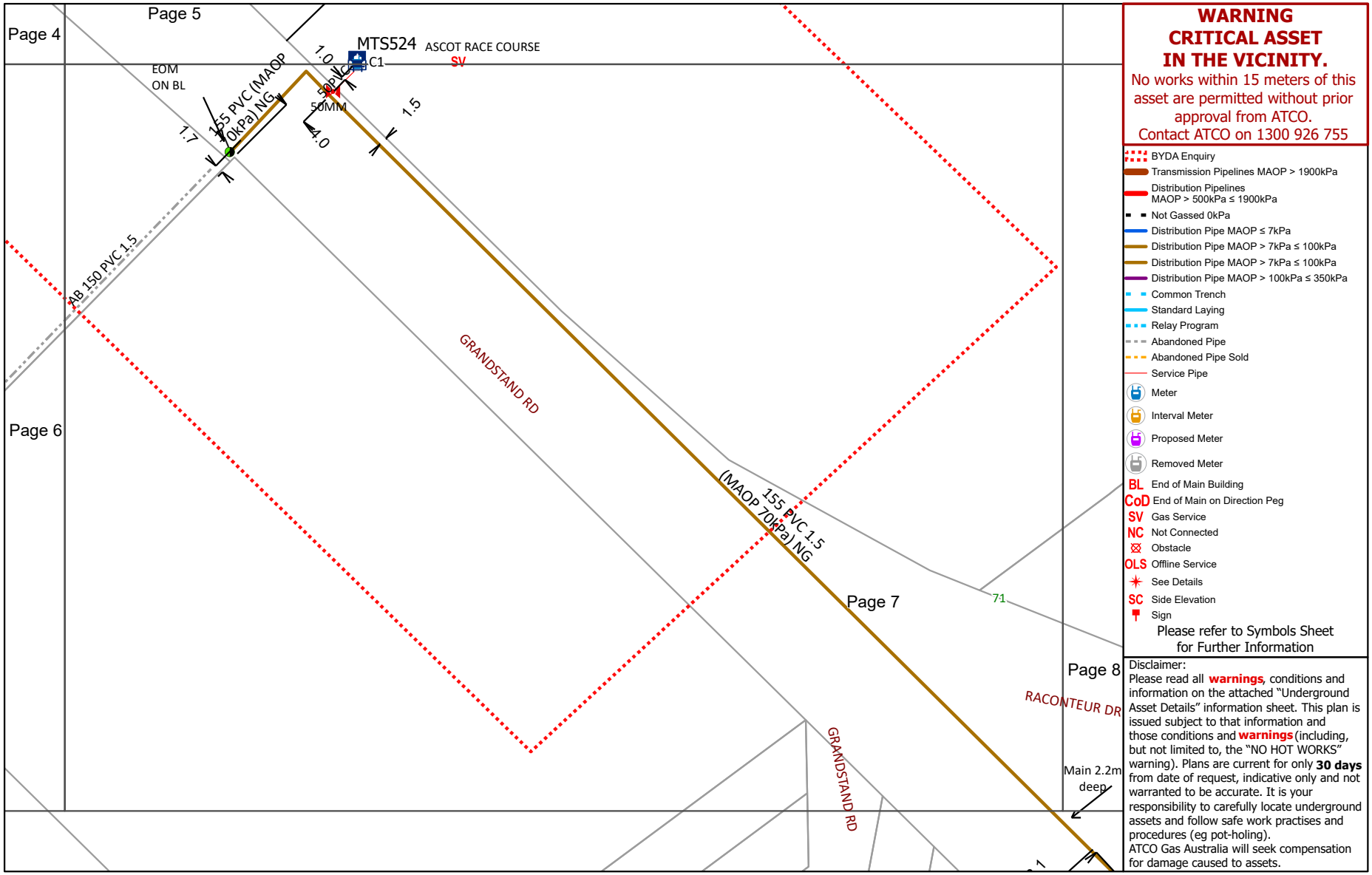
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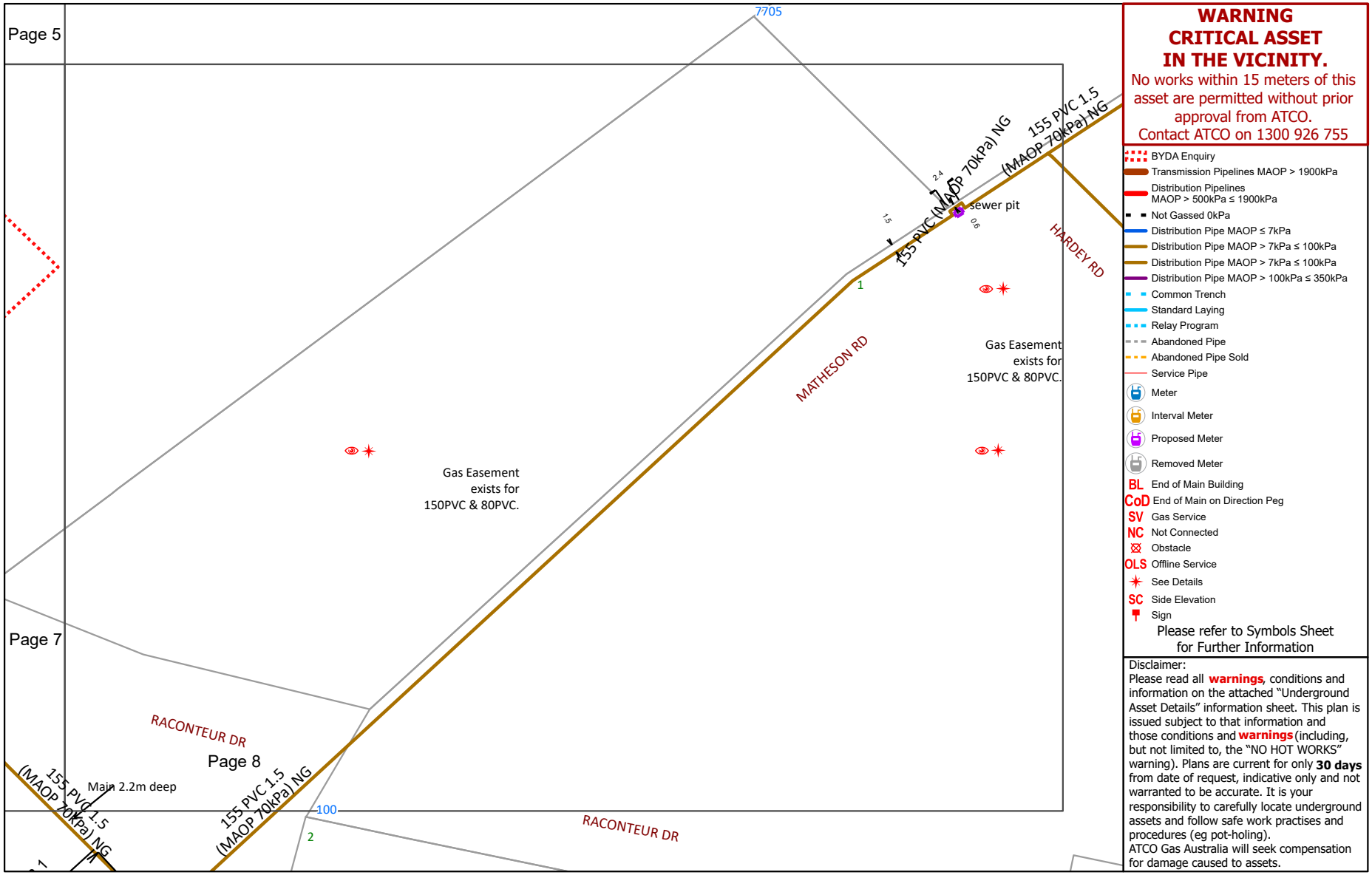
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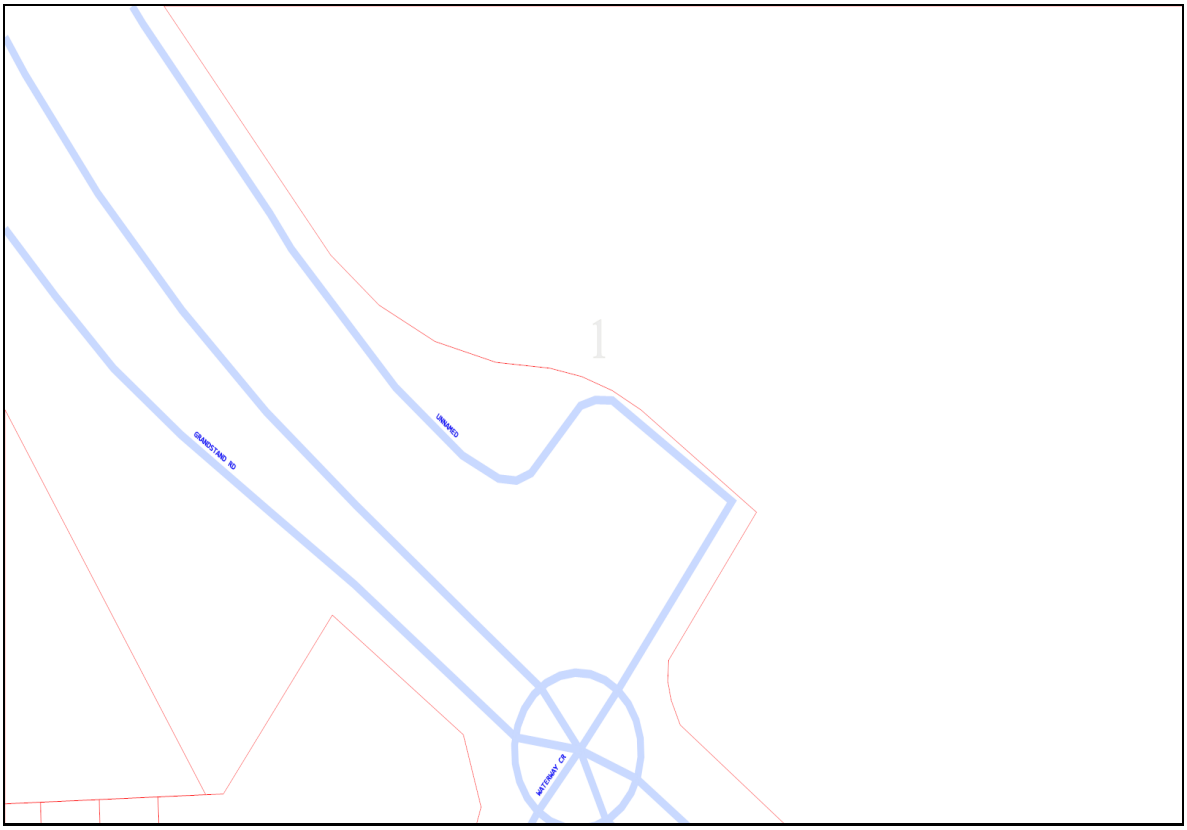
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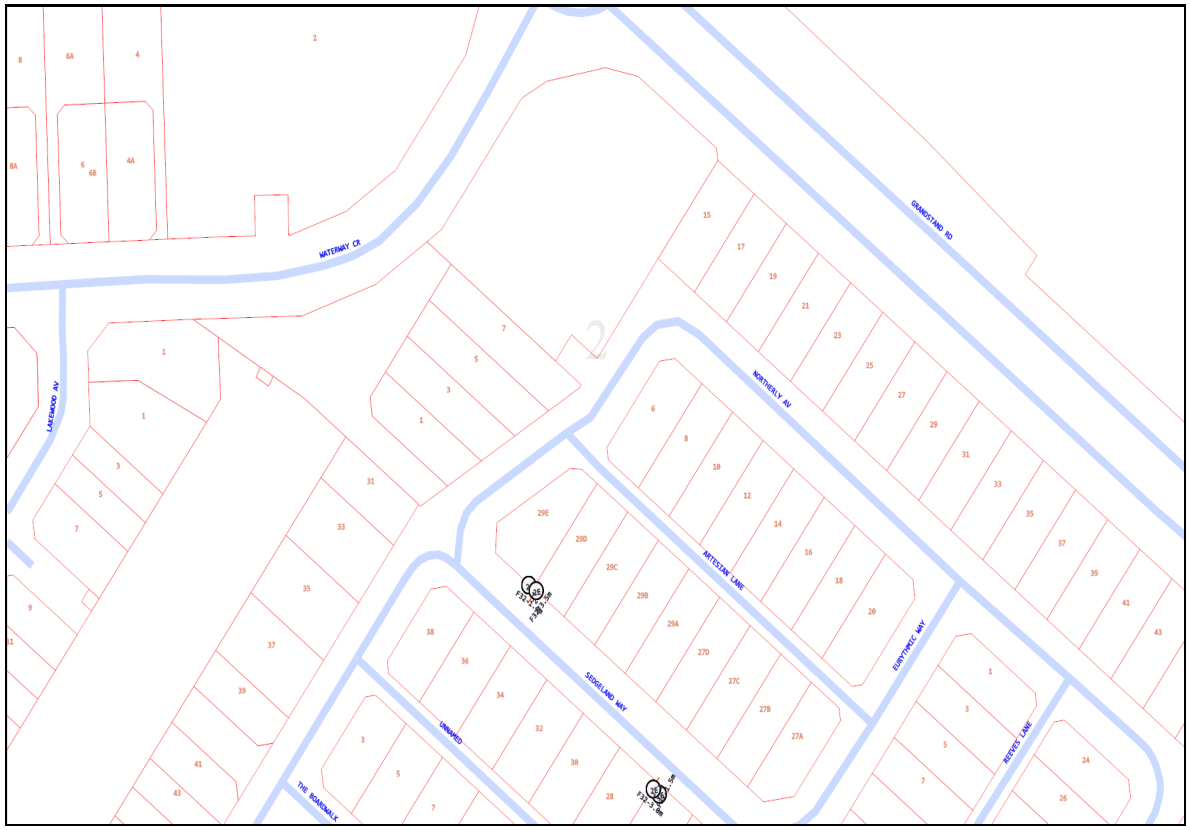
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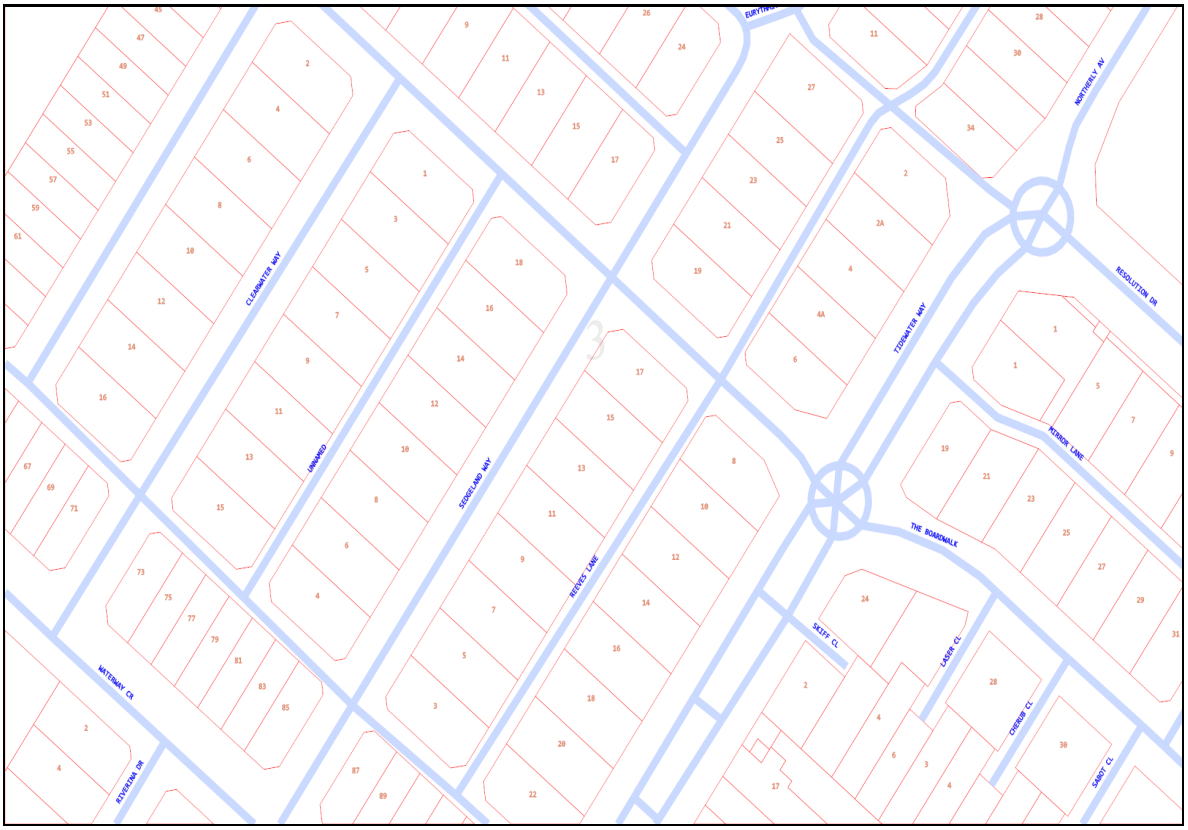
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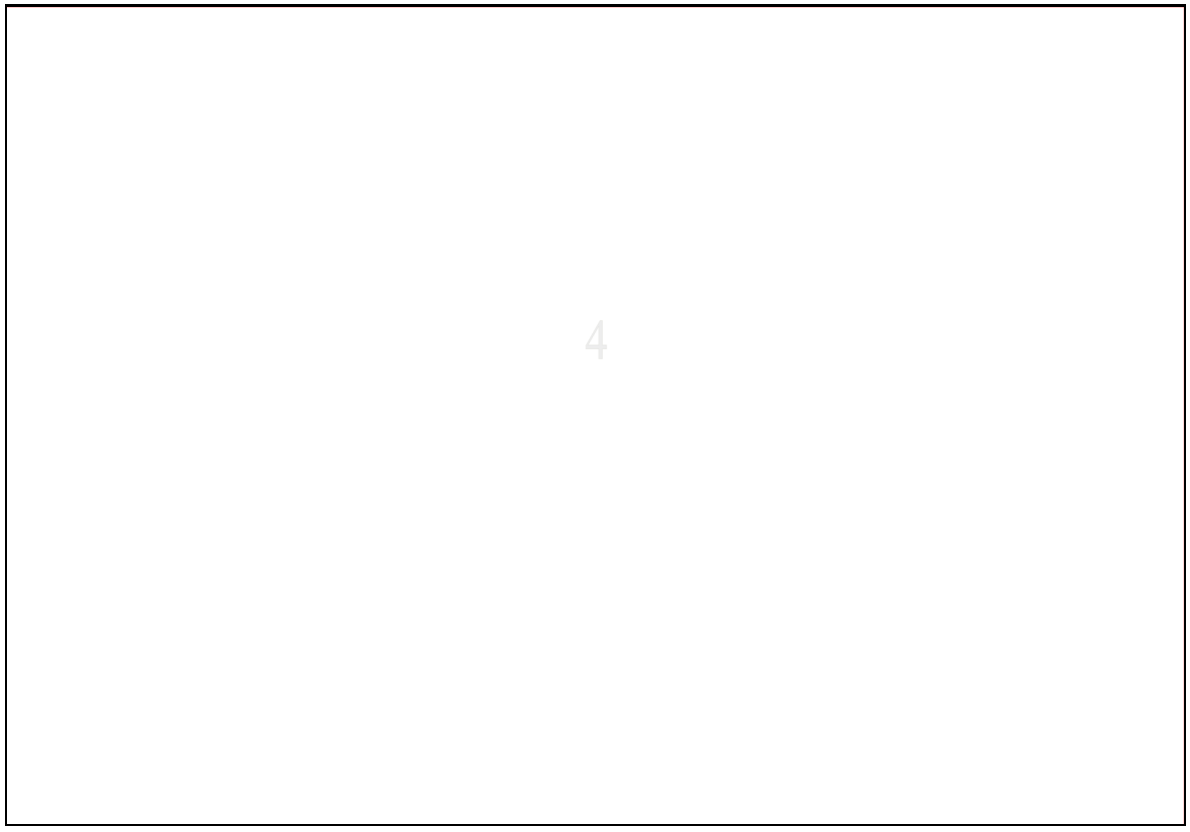


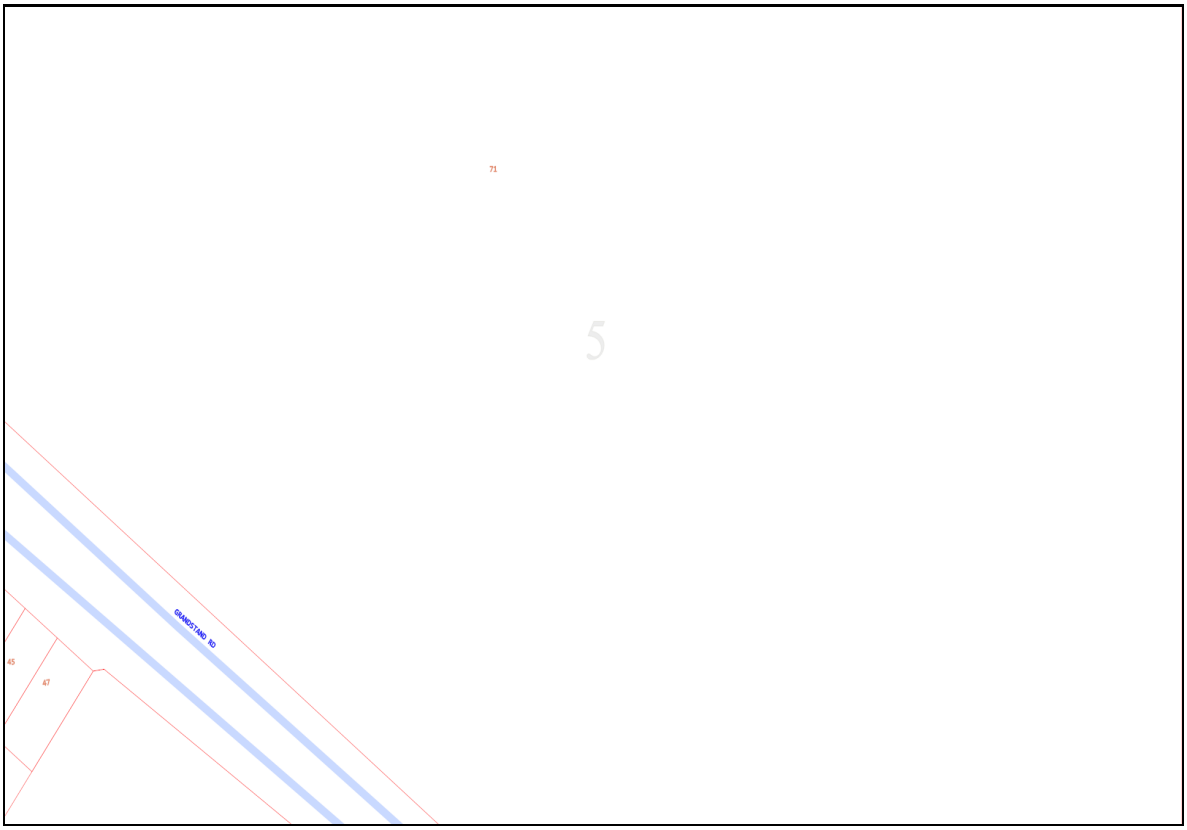

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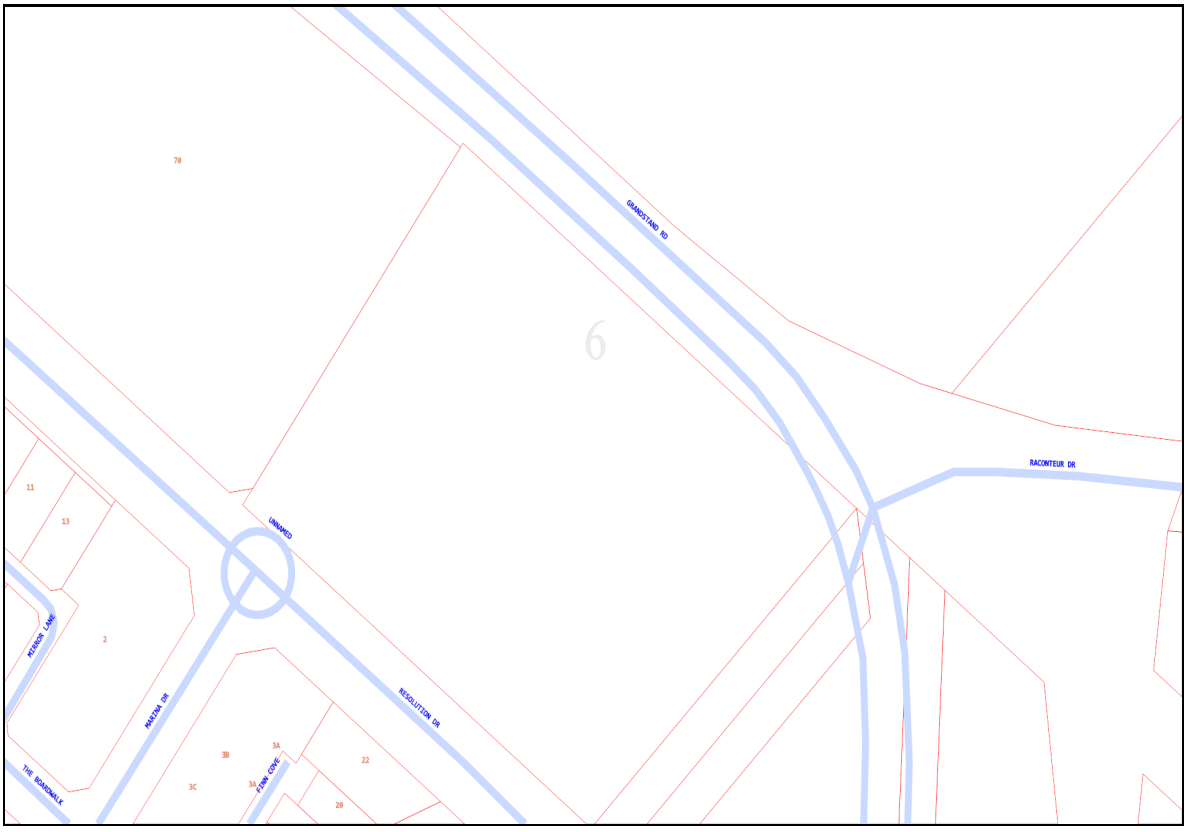

1
GRANGESTAND RD
UNNAMED
MATTERNEY CR


WATERWAY CR
LAKEWOOD AV
GRANDSTAND RD
NORTHERLY AV
ARTESIAN LANE
SUDERLAND WAY
UNNAMED
THE BOARDWALK
EURYTHMIC WAY
REEVES LANE


CLEARWATER WAY
UNNAMED
SEDGELAND WAY
REEVES LANE
TIDEWATER WAY
NORTHERLY AV
RESOLUTION DR
MIRROR LANE
THE BOARDWALK
SKIFF CL
LASER CL
CRUISER CC
SAILBOT CL
WATERWAY CR
RIVERSIDE DR

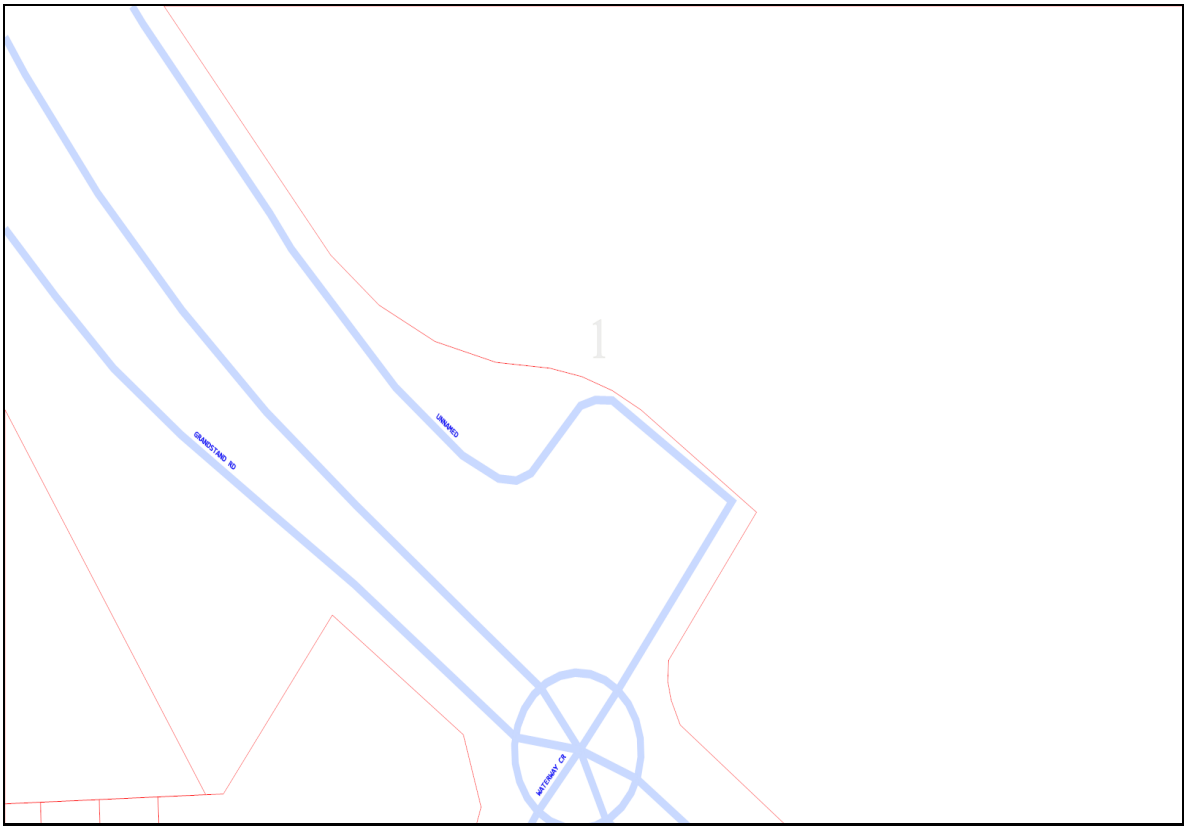

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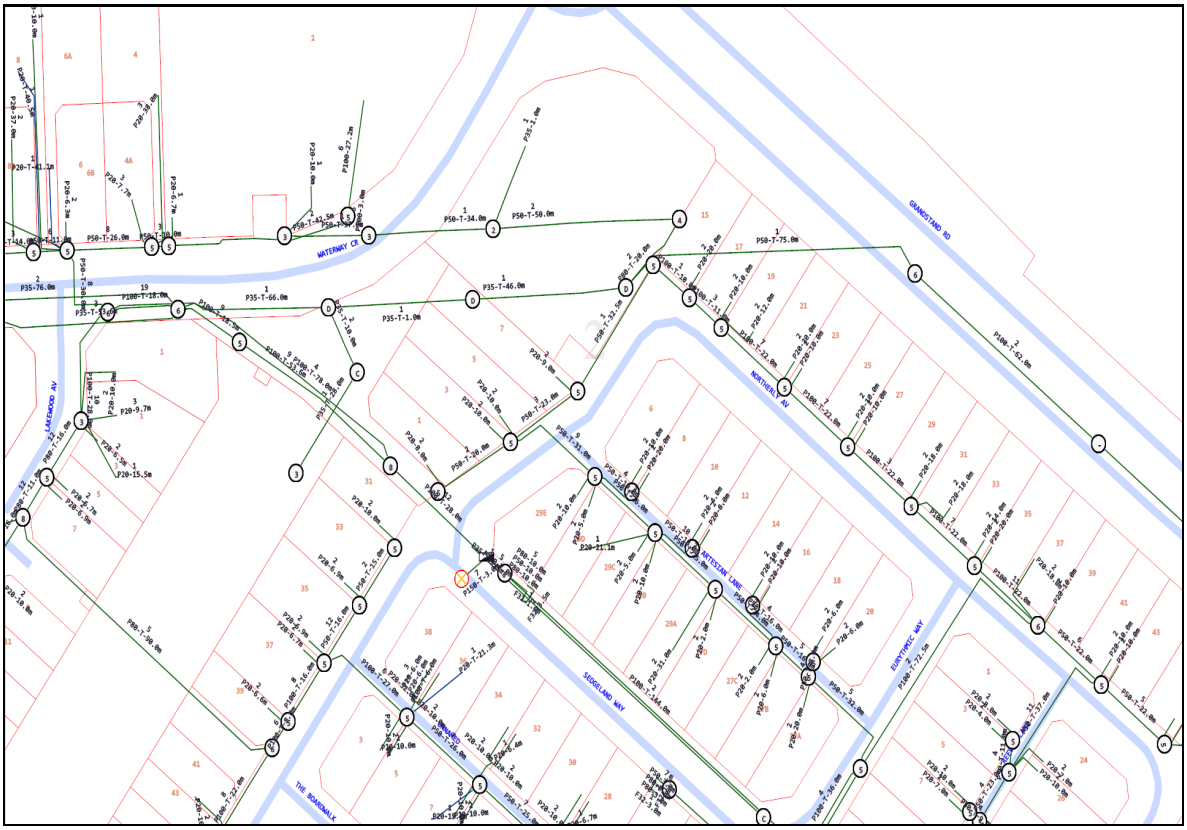

71
5
GRANDSTAND RD
45
47

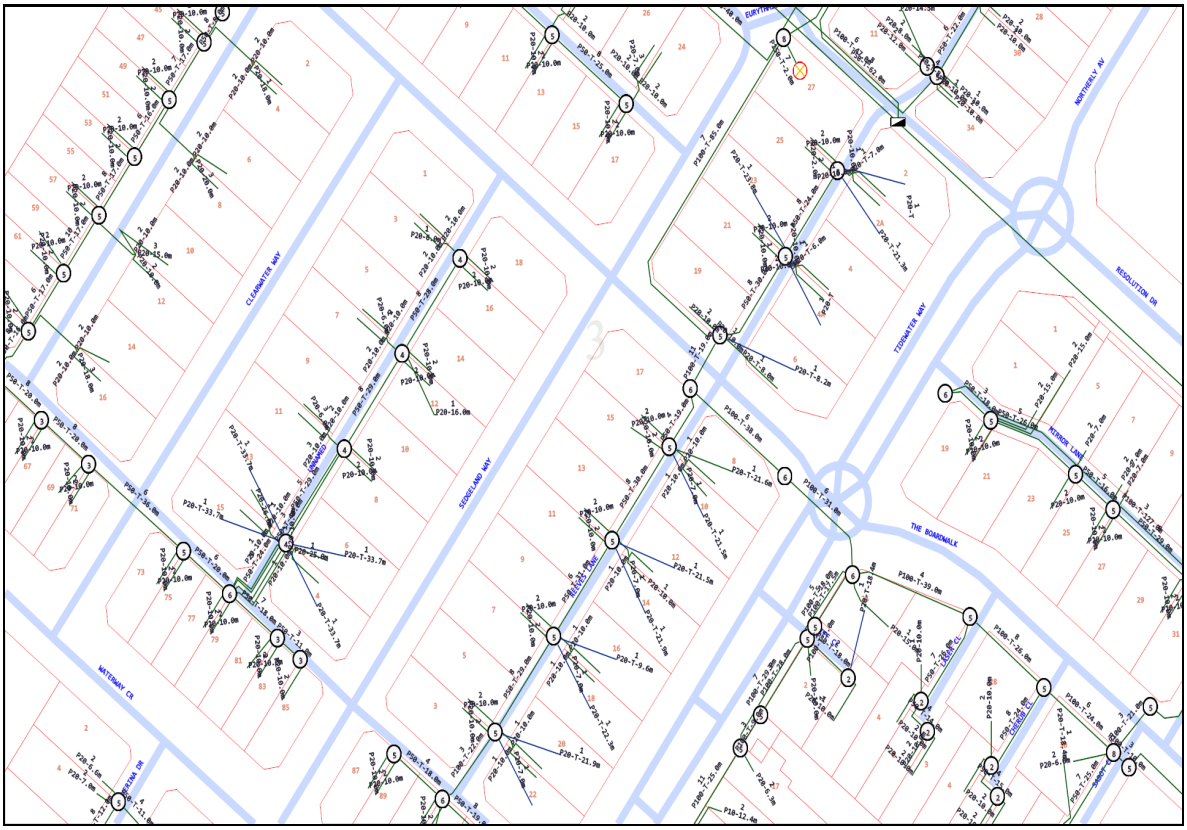


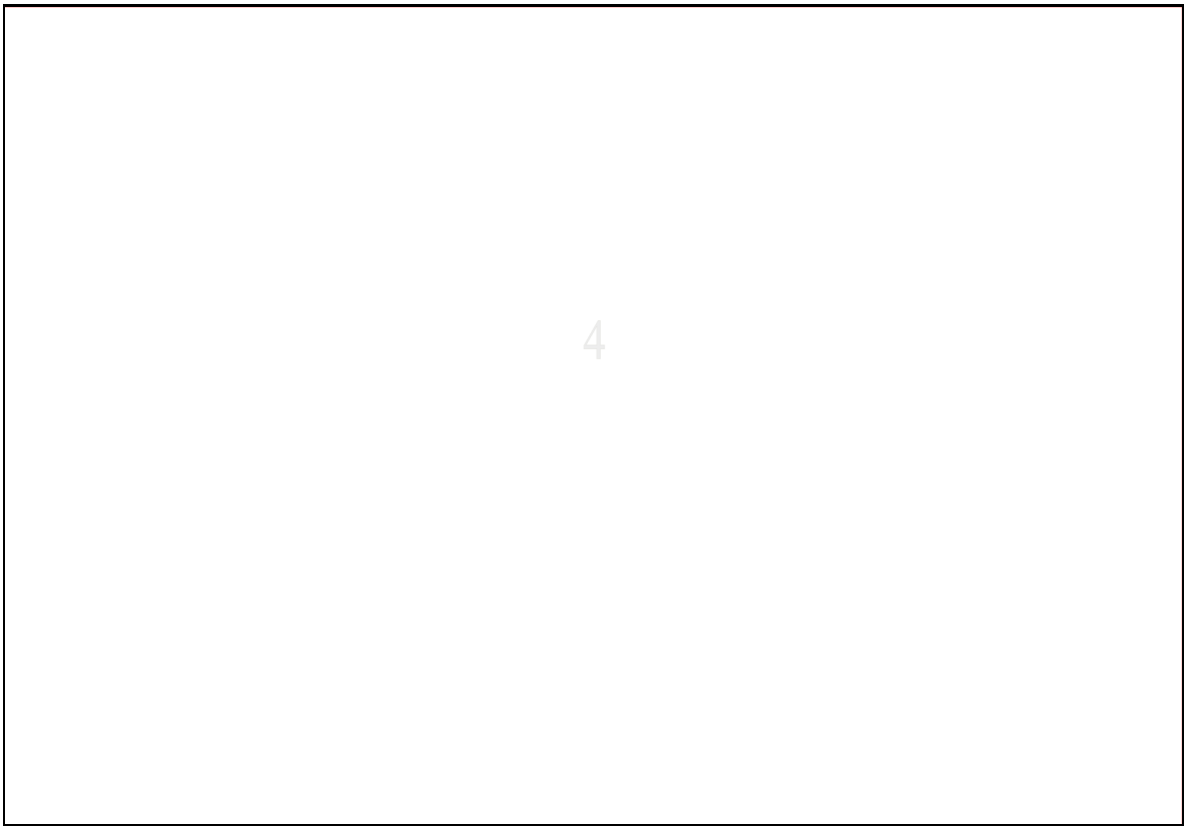

## Emergency Contacts

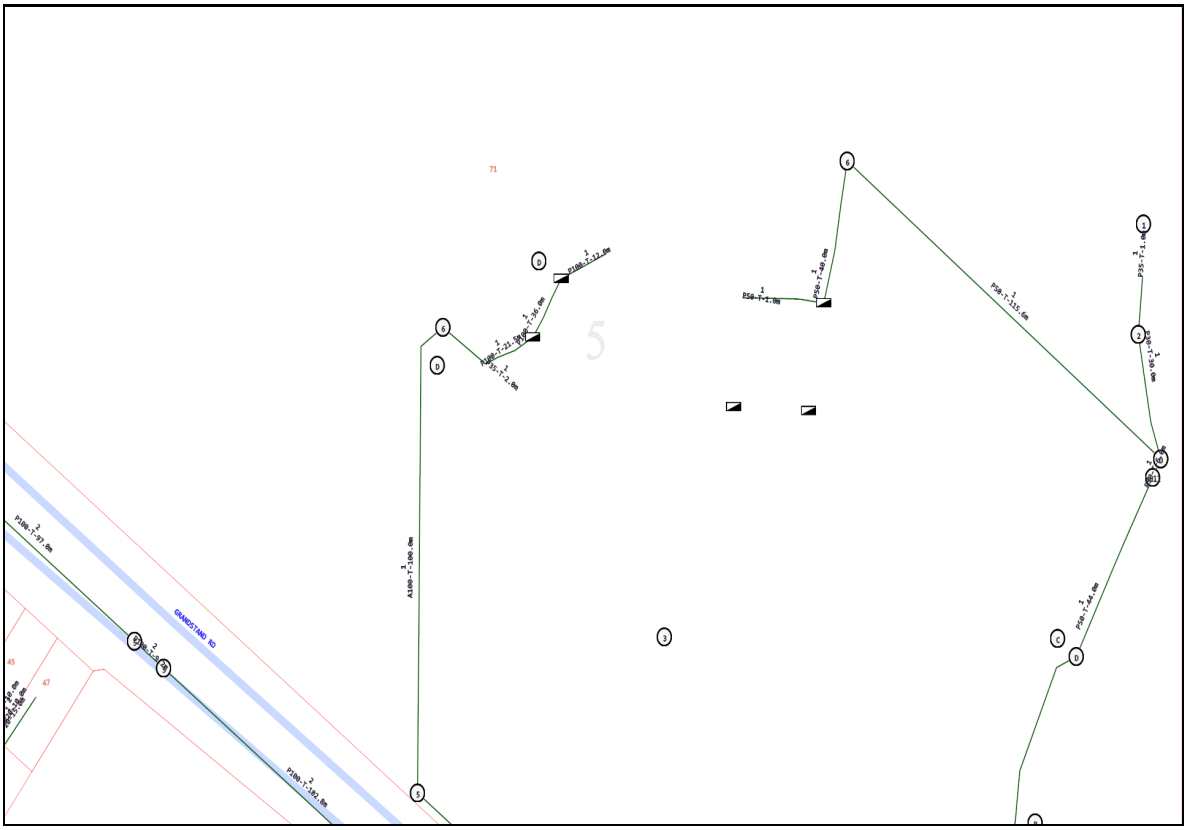
You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

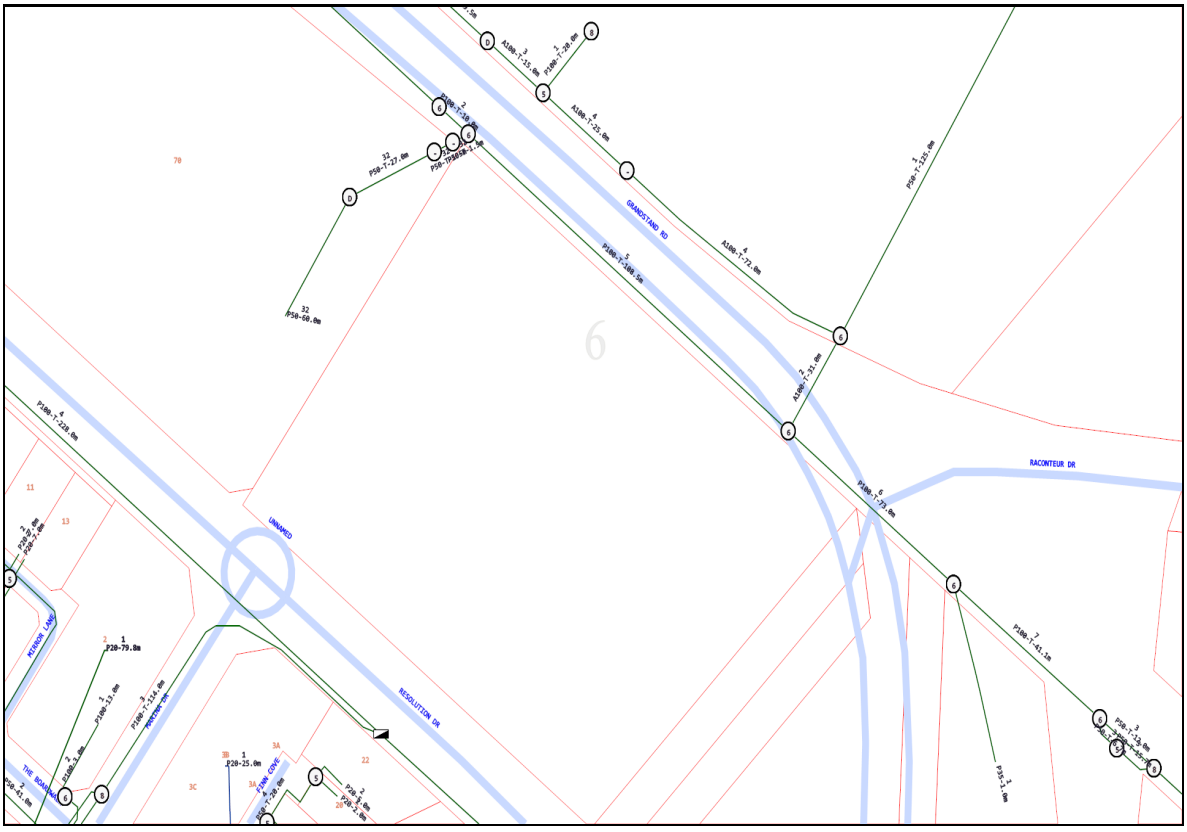

1
GRANDSTAND RD
UNNAMED
MATTERNET CR


WATERWAY CR
GRANDSTAND RD
LAKEWOOD AV
NORTHERLY AV
SUTHERLAND WAY
ELEVTHERIC WAY
THE BOARDWALK


CLEARWATER WAY
SEDGELAND WAY
TIDEWATER WAY
NORTHERLY AV
RESOLUTION DR
THE BOARDWALK
MARINA LINK
WATERWAY CR

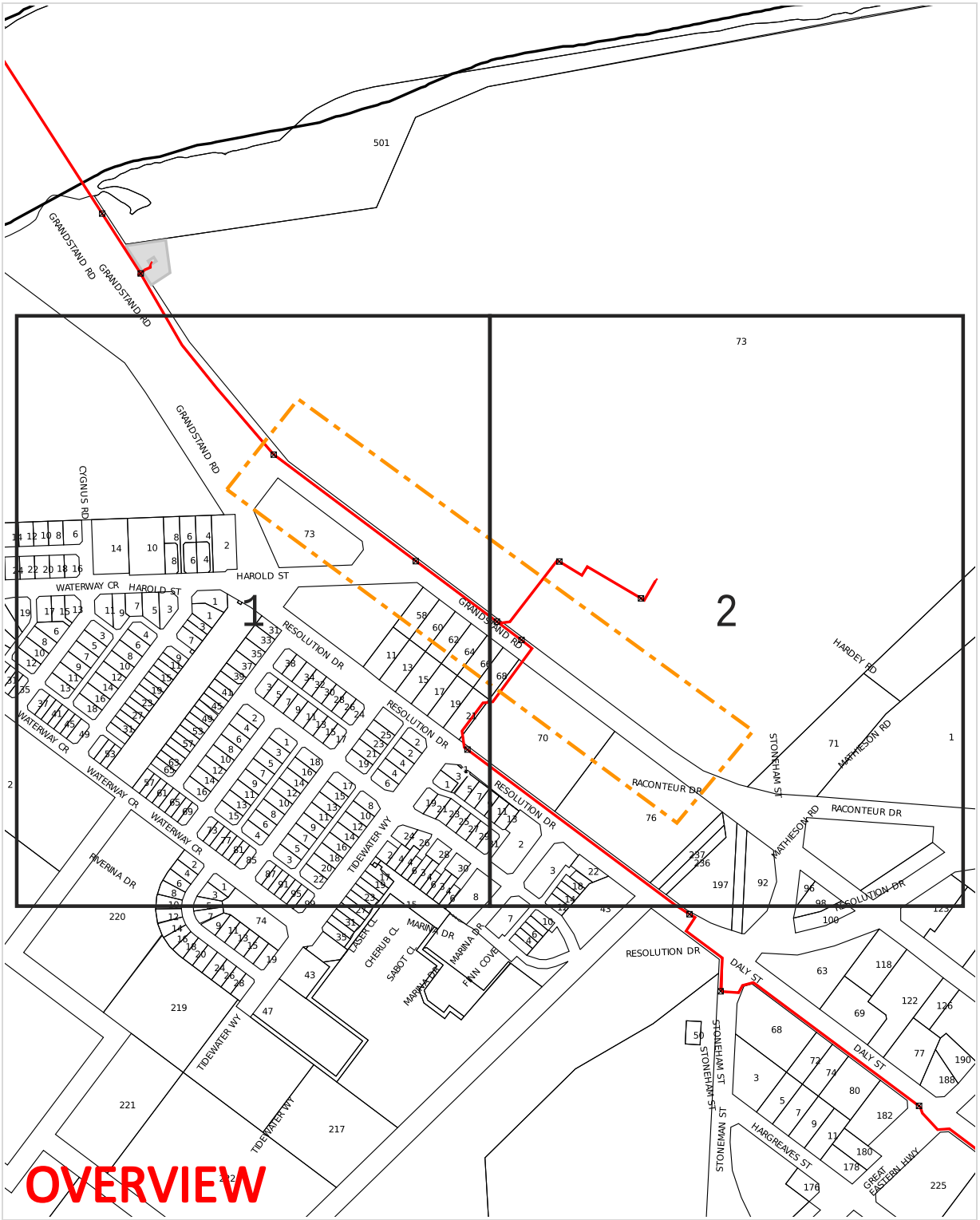

4


GRANGESTAND RD




## Emergency Contacts

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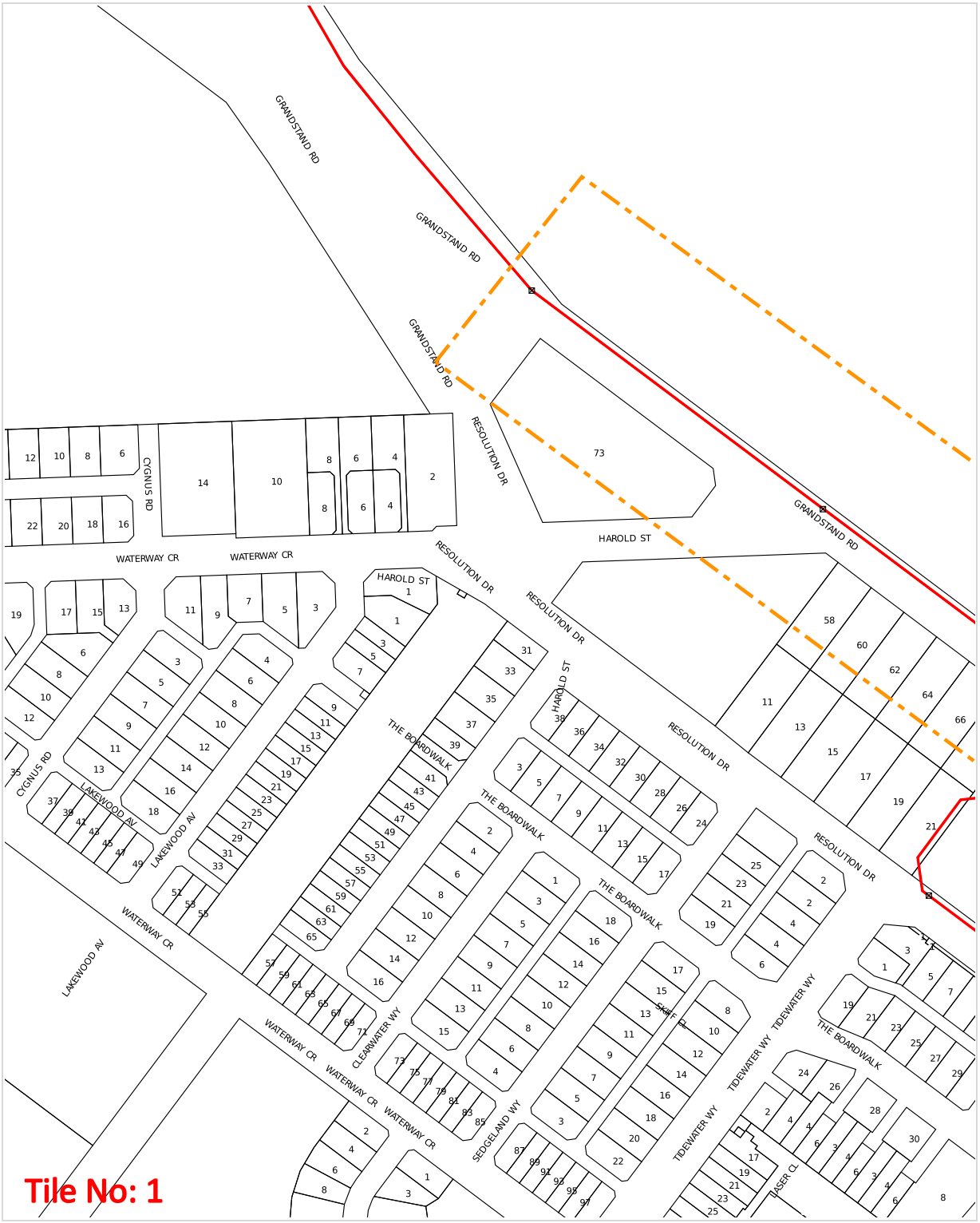

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Sequence Number: 240936708

Date Generated: 24 Jun 2024

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

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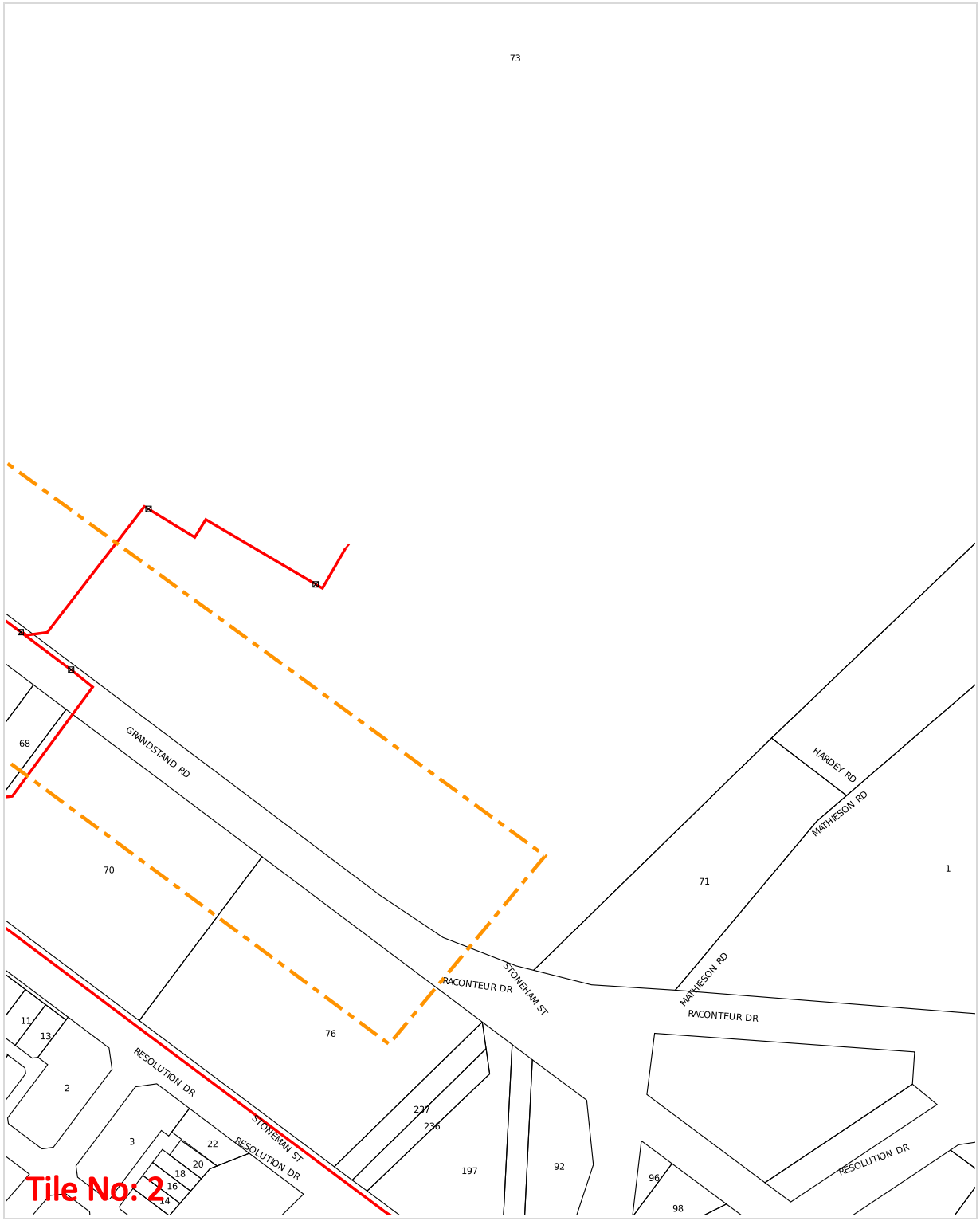

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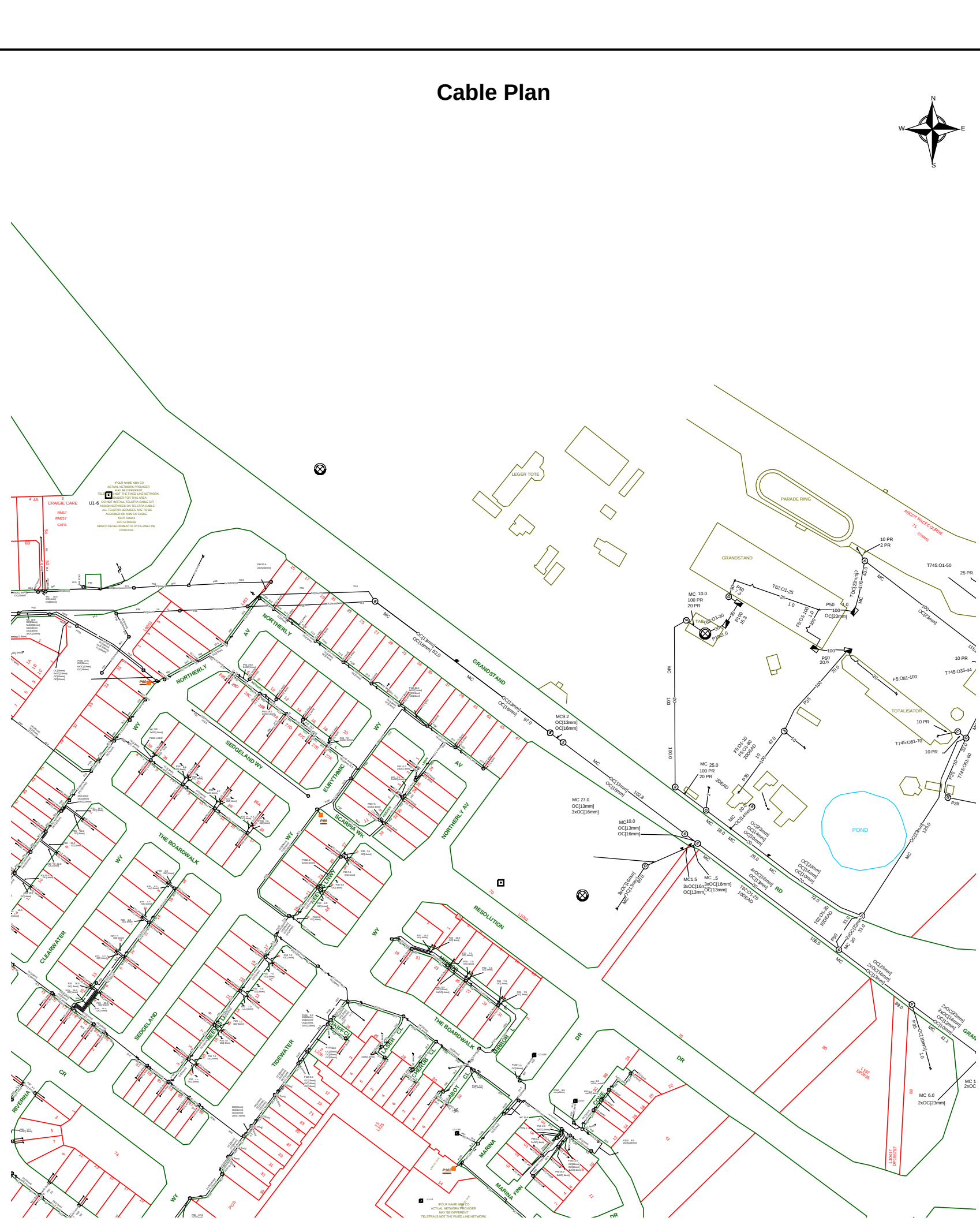
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Date Generated: 24 Jun 2024

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For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

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# Cable Plan



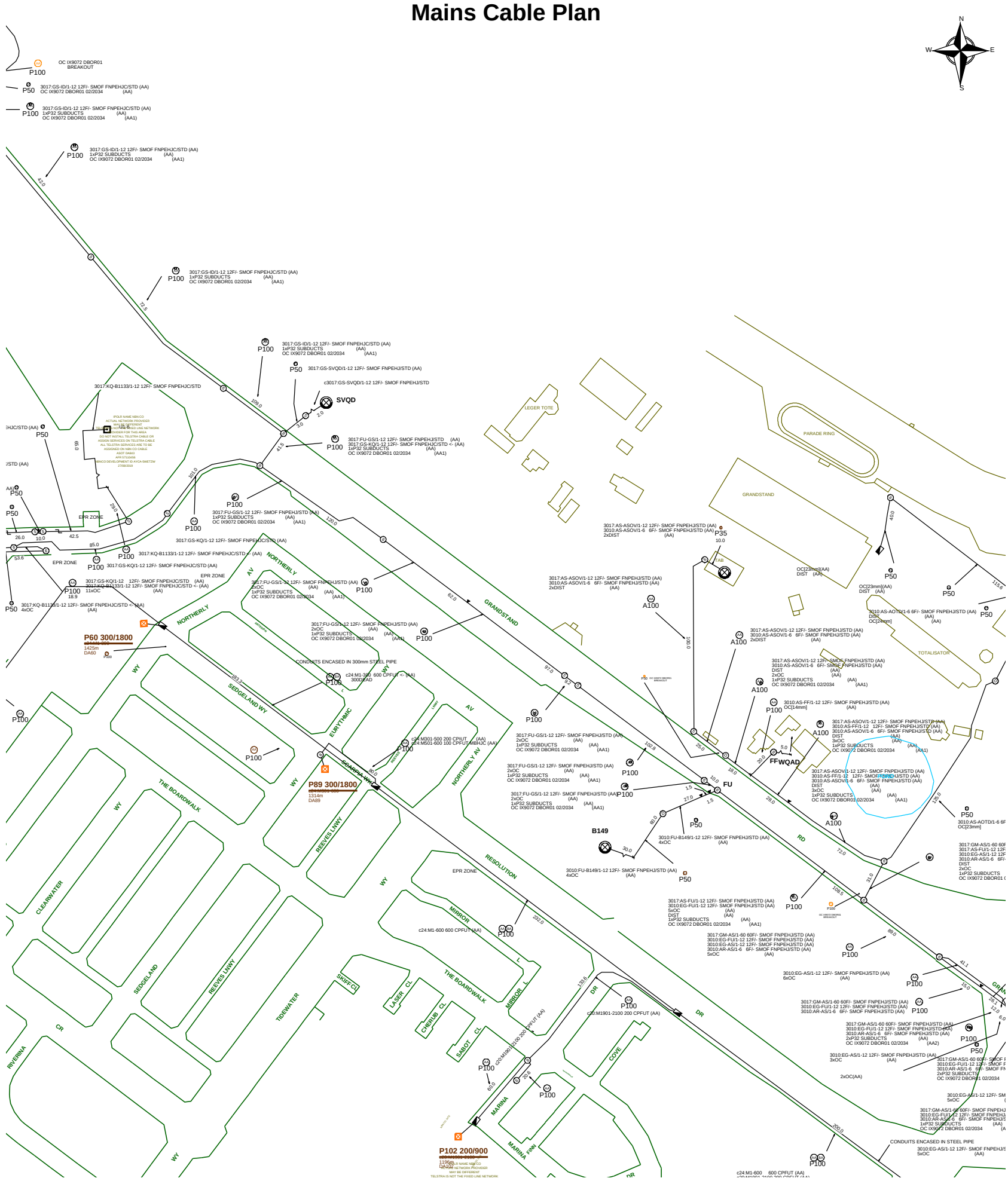

| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240936714 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 24/06/2024 09:36:36 | |

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

# Mains Cable Plan




| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240936714 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 24/06/2024 09:36:39 | |

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
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Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
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See the Steps- Telstra Duty of Care that was provided in the email response.




**Enquiry Number:** 240936711

**Map Sheet:** 1

**Scale:** 1: 750

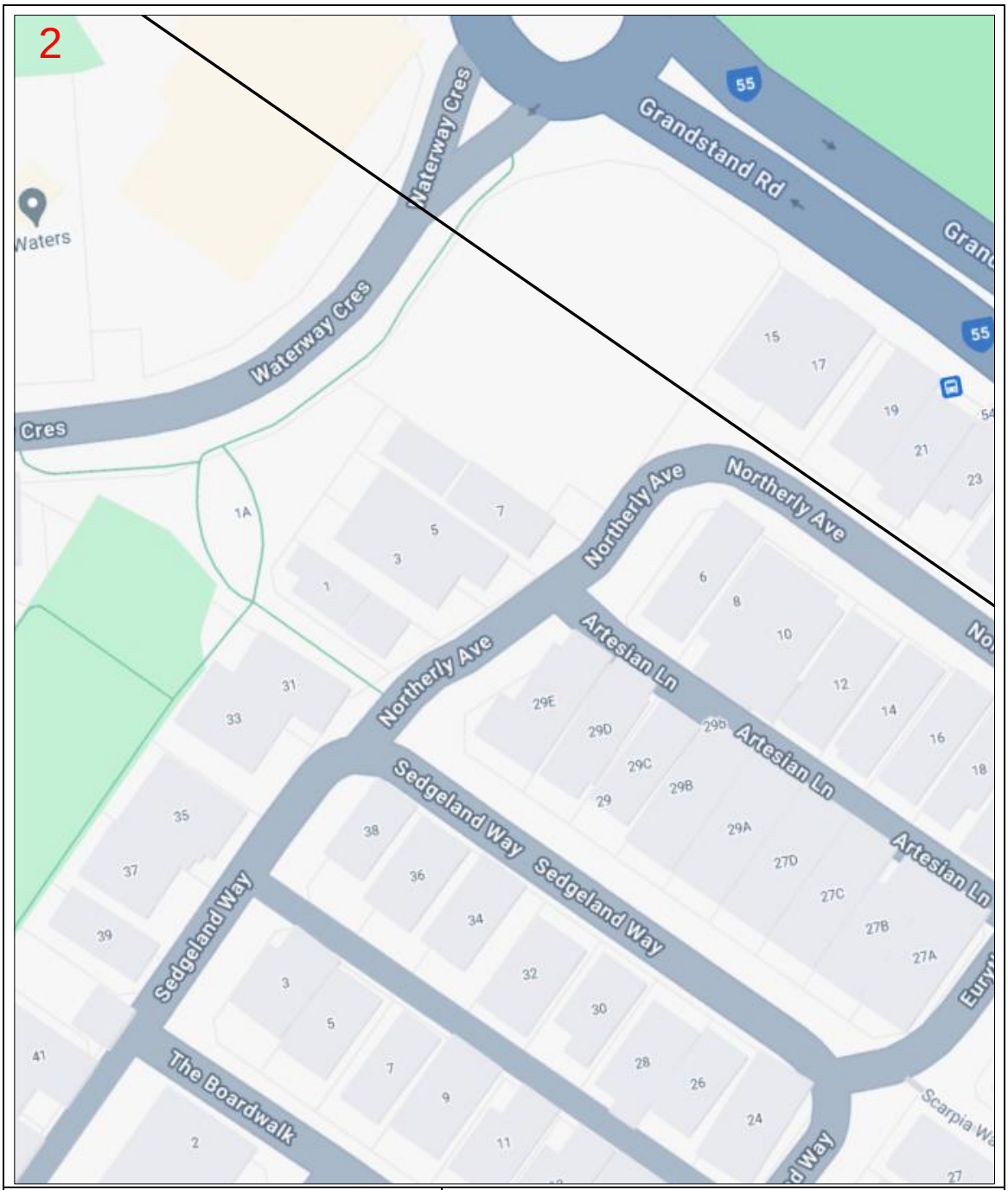
0 0.008km

N

**LEGEND**

| | |
|---|---|
| BYDA Work Area | |
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240936711

**Map Sheet:** 2

**Scale:** 1: 750

0 0.008km

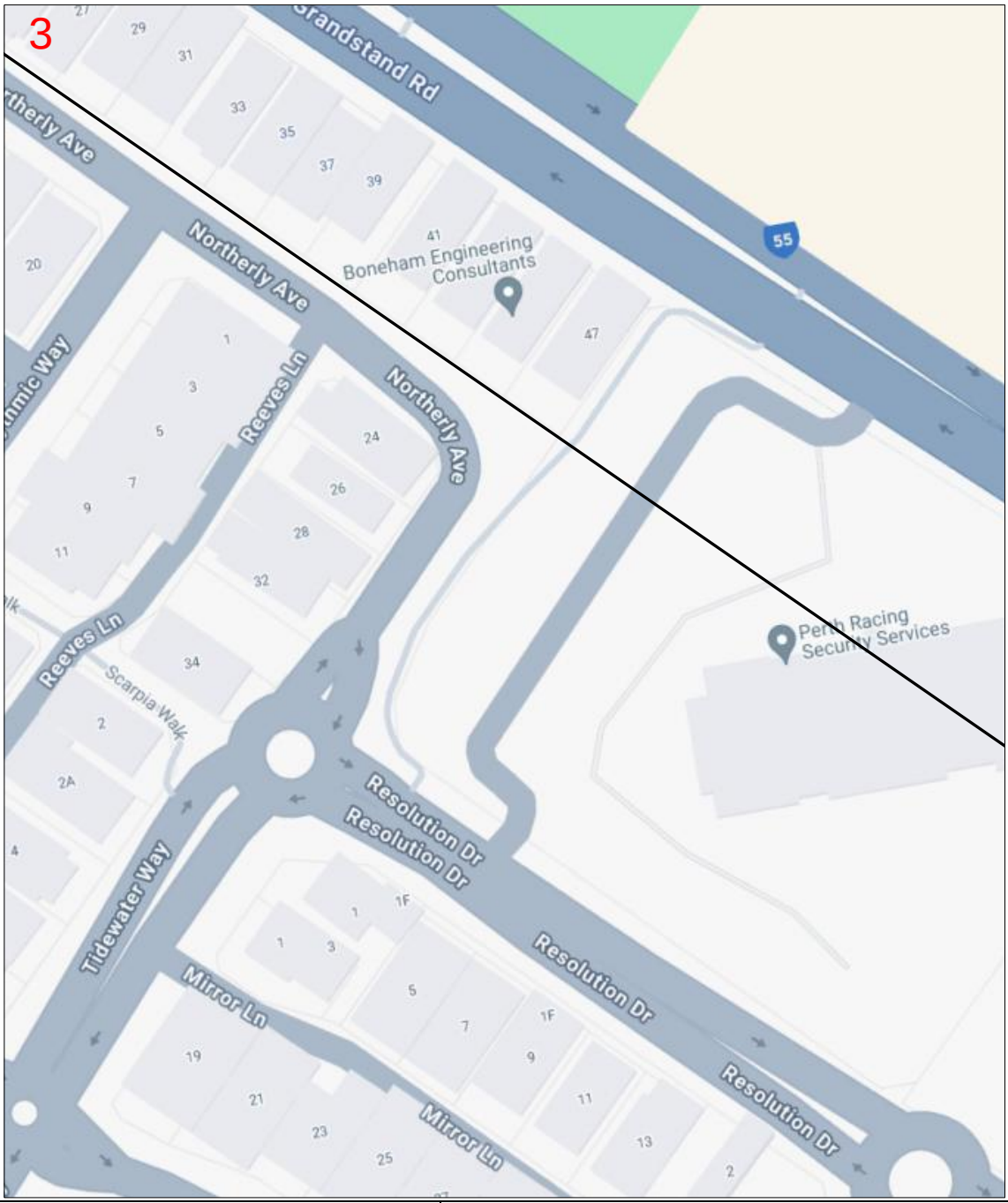
N

**LEGEND**

BYDA Work Area

| | |
|---|---|
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240936711

**Map Sheet:** 3

**Scale:** 1: 750

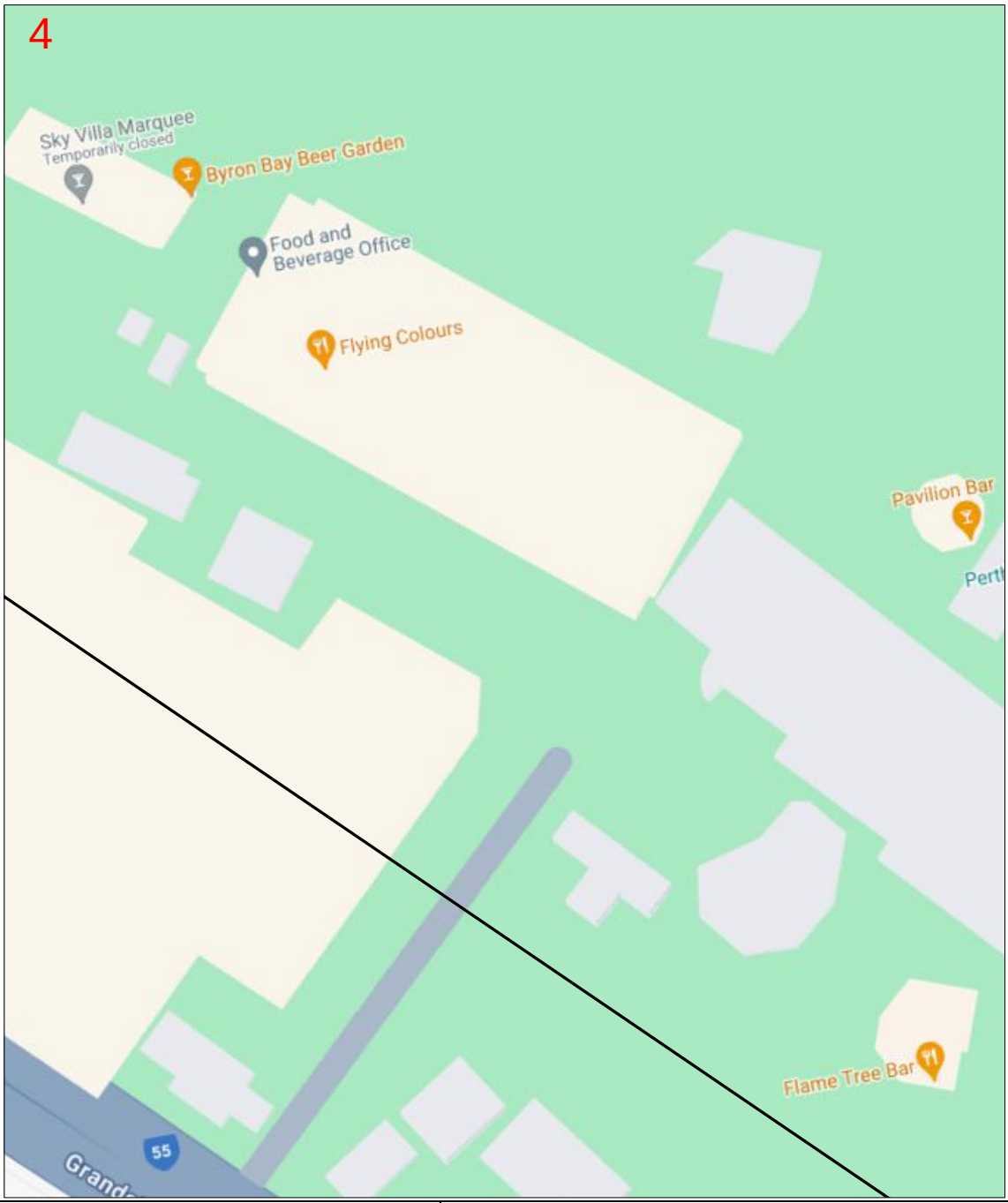
0 0.008km

N

**LEGEND**

| | |
|---|---|
| BYDA Work Area | |
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240936711

**Map Sheet:** 4

**Scale:** 1: 750

0 0.008km

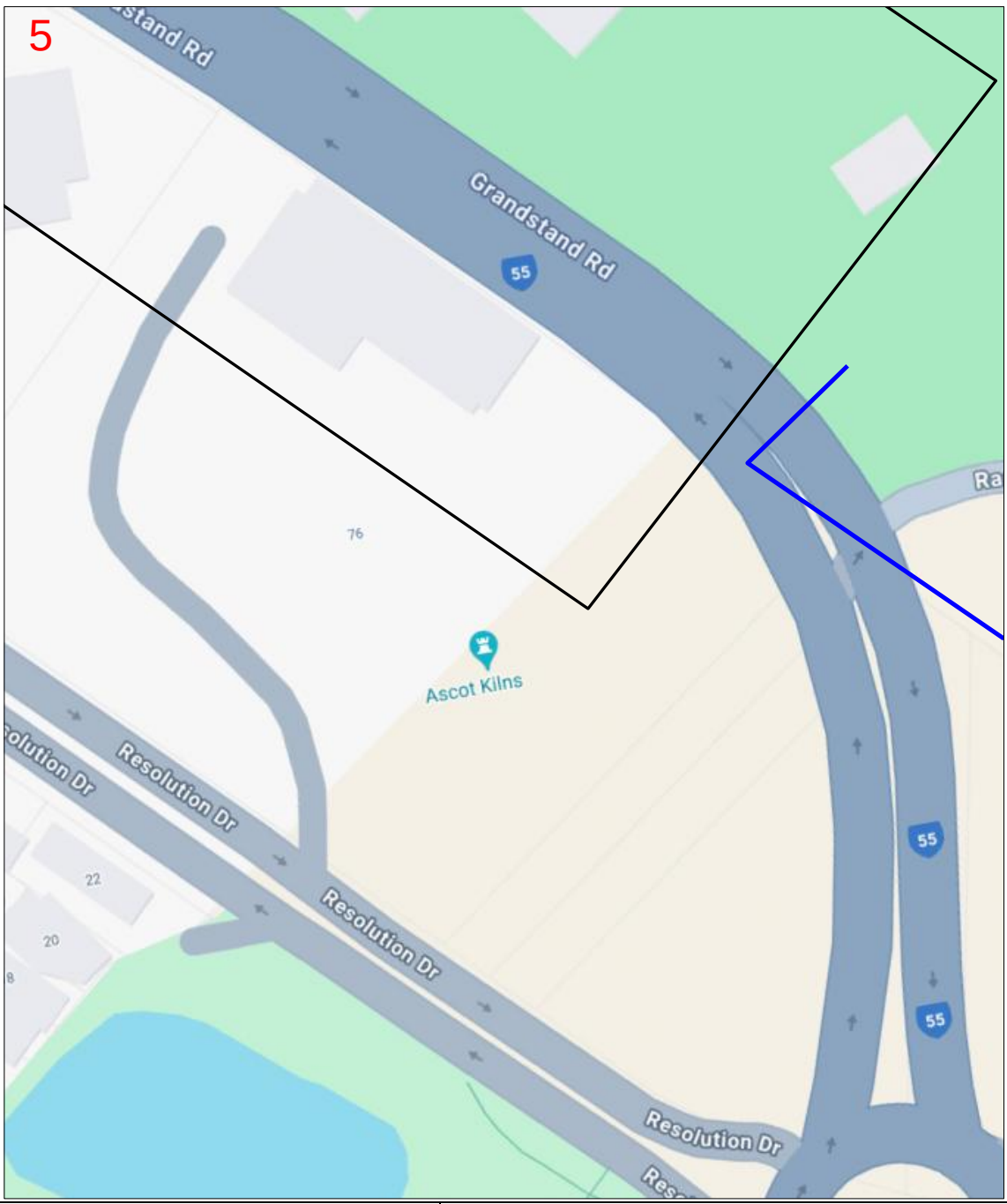
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**LEGEND**

BYDA Work Area

| | |
|---|---|
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240936711

**Map Sheet:** 5

**Scale:** 1: 750

0 0.008km

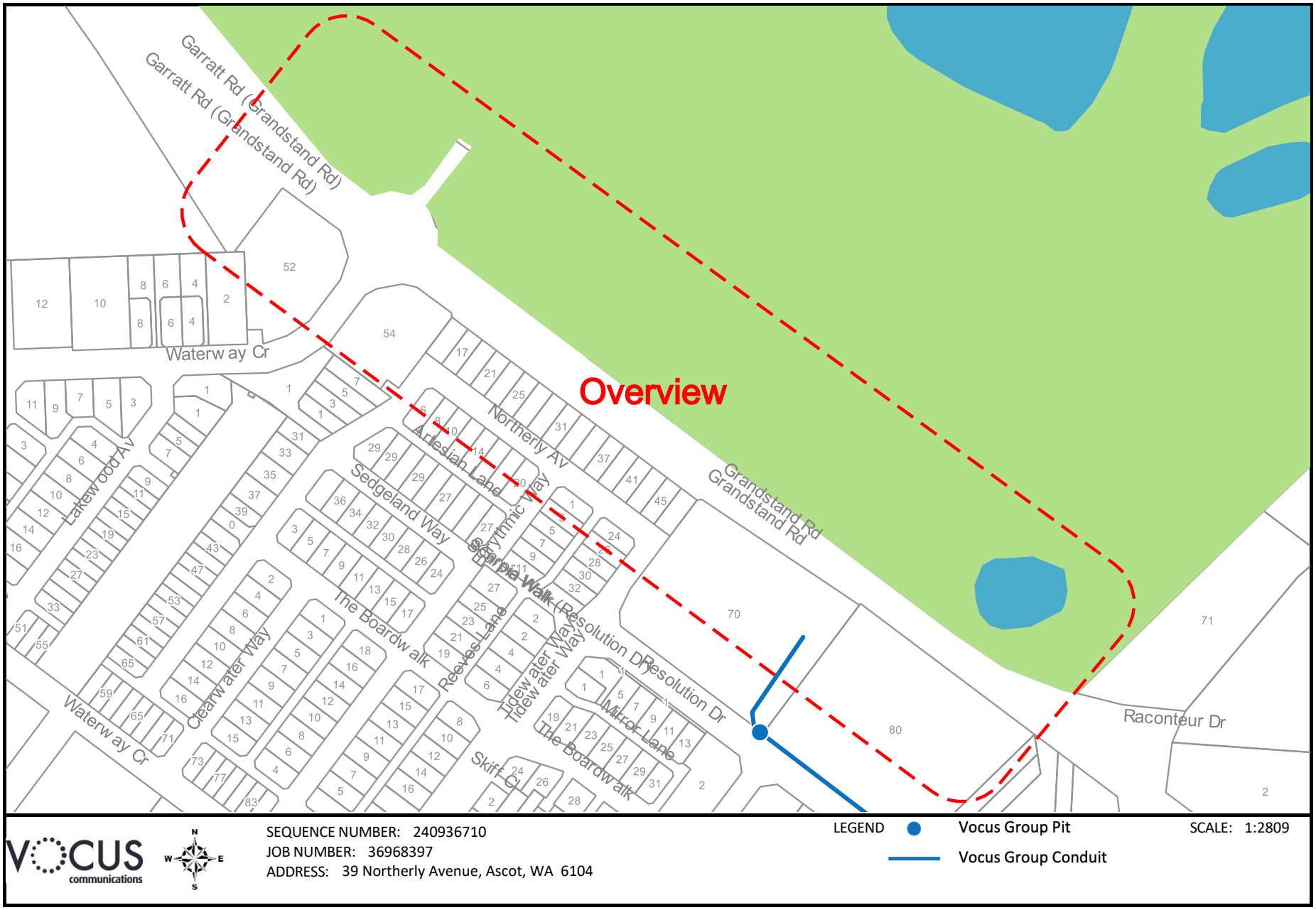
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LEGEND

BYDA Work Area

| | |
|---|---|
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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| | | | |
|---|---|---|---|
| WATER CORPORATION | Scale: | 1:3075 | N |
| | Job No.: | 36968397 | Water |
| | Sequence No.: | 240936715 | |
| | Print Date: | 24 Jun 2024 | |

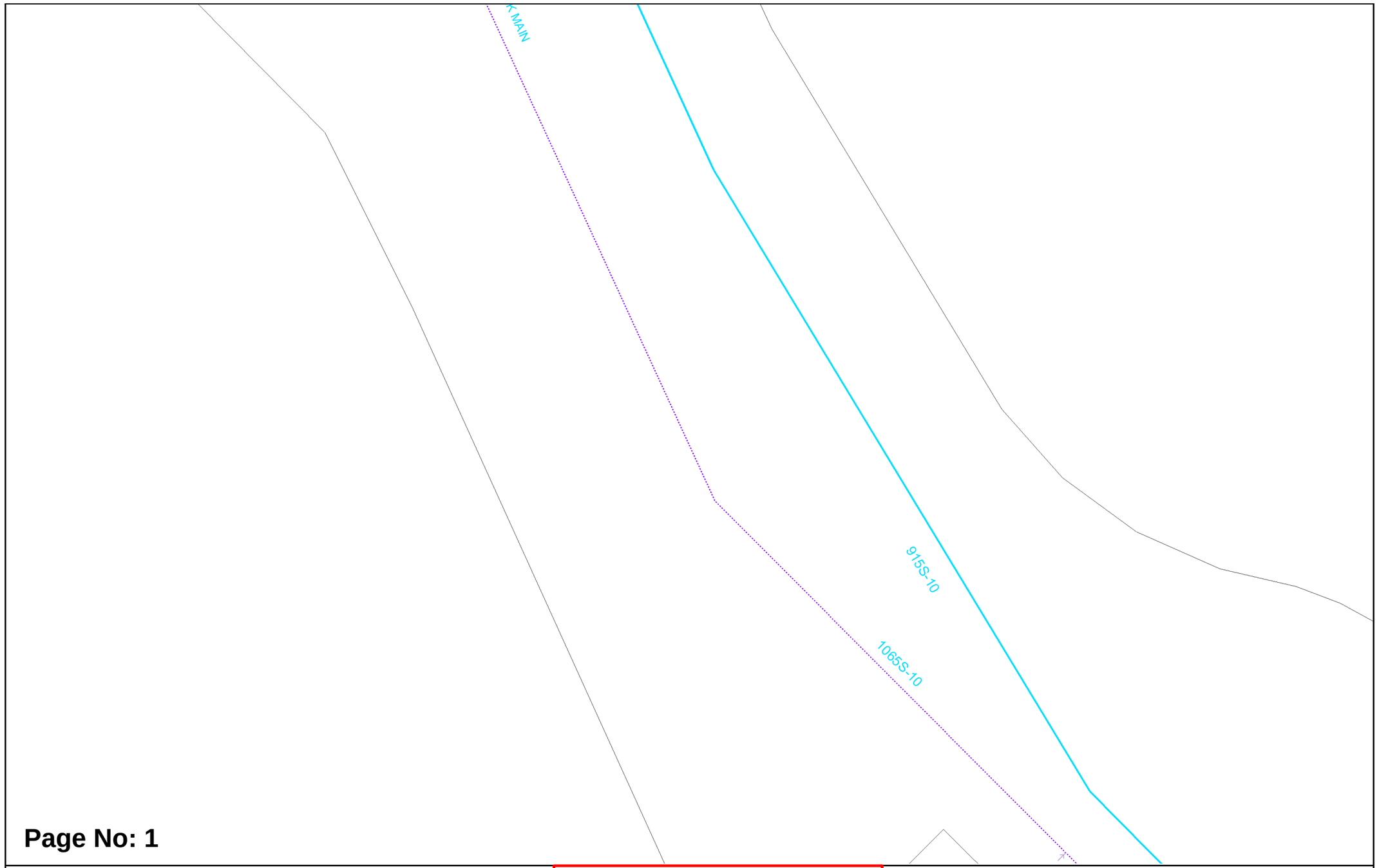
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**Page No: 1**

WATER CORPORATION

Scale: 1:750
Job No.: 36968397
Sequence No.: 240936715
Print Date: 24 Jun 2024

N

Water

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WATER CORPORATION

| | |
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| Scale: | 1:750 |
| Job No.: | 36968397 |
| Sequence No.: | 240936715 |
| Print Date: | 24 Jun 2024 |

Water

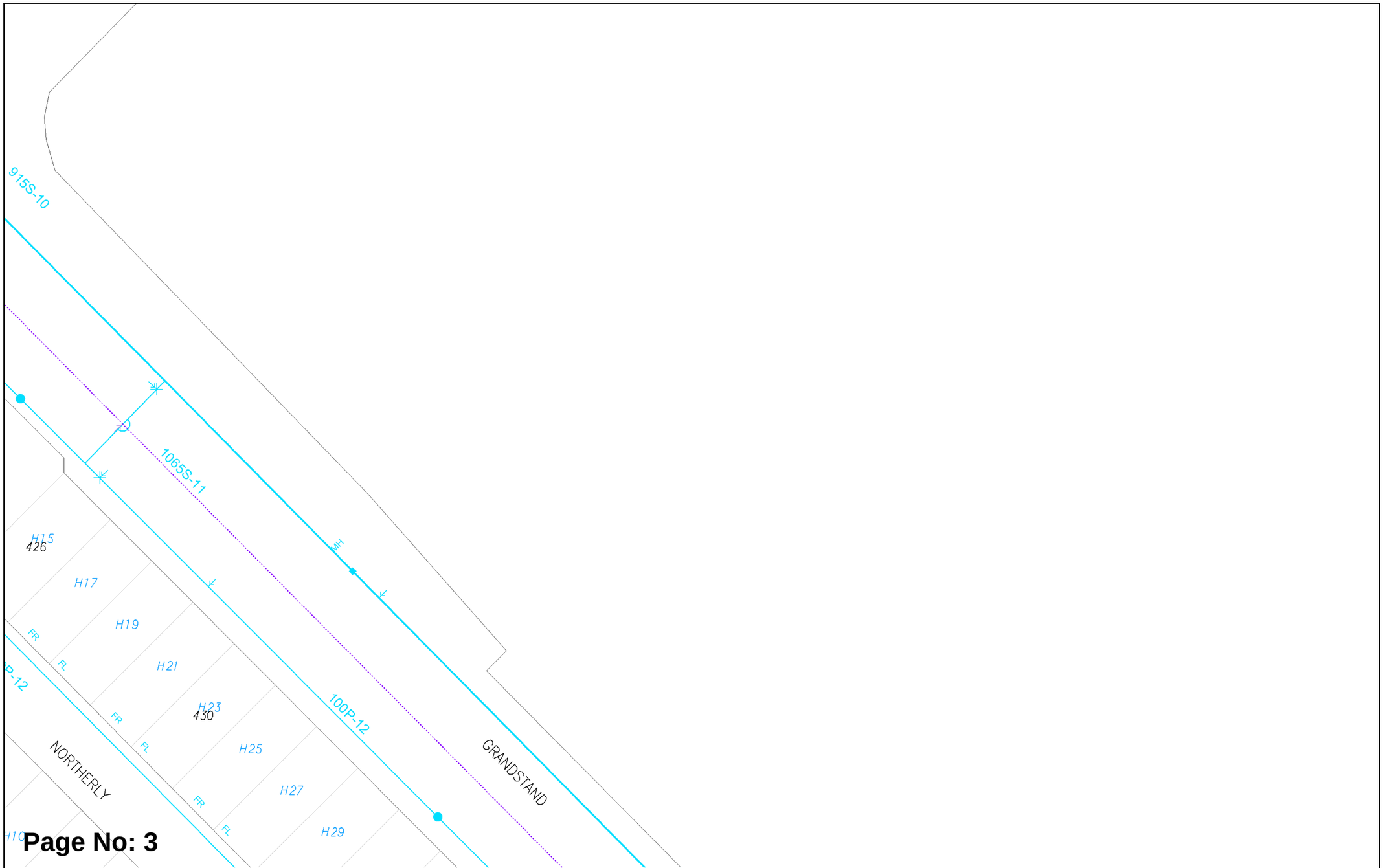
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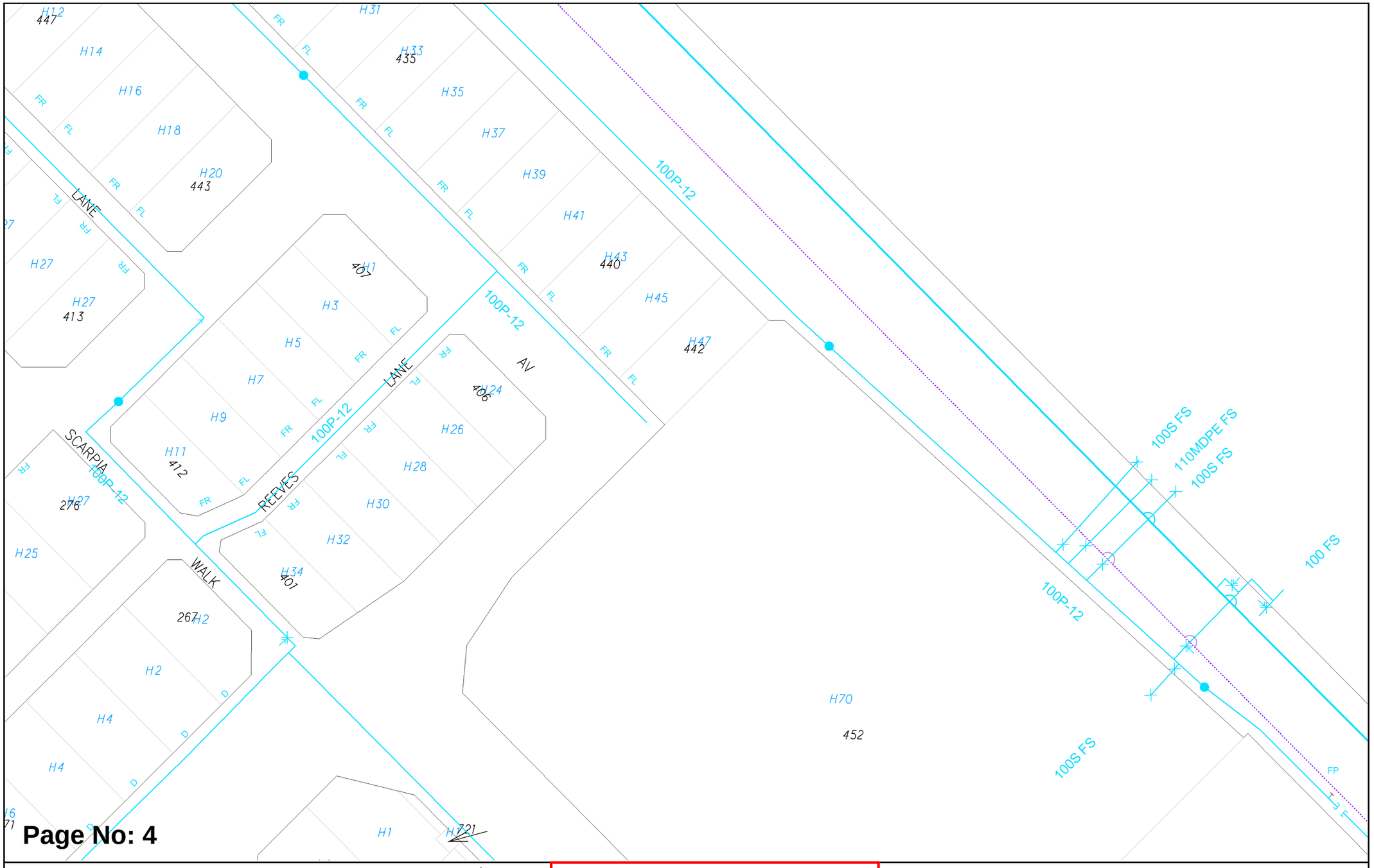

WATER CORPORATION

Scale: 1:750
Job No.: 36968397
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N
Water

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**Page No: 4**

WATER CORPORATION

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| Job No.: | 36968397 |
| Sequence No.: | 240936715 |
| Print Date: | 24 Jun 2024 |

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**Water**

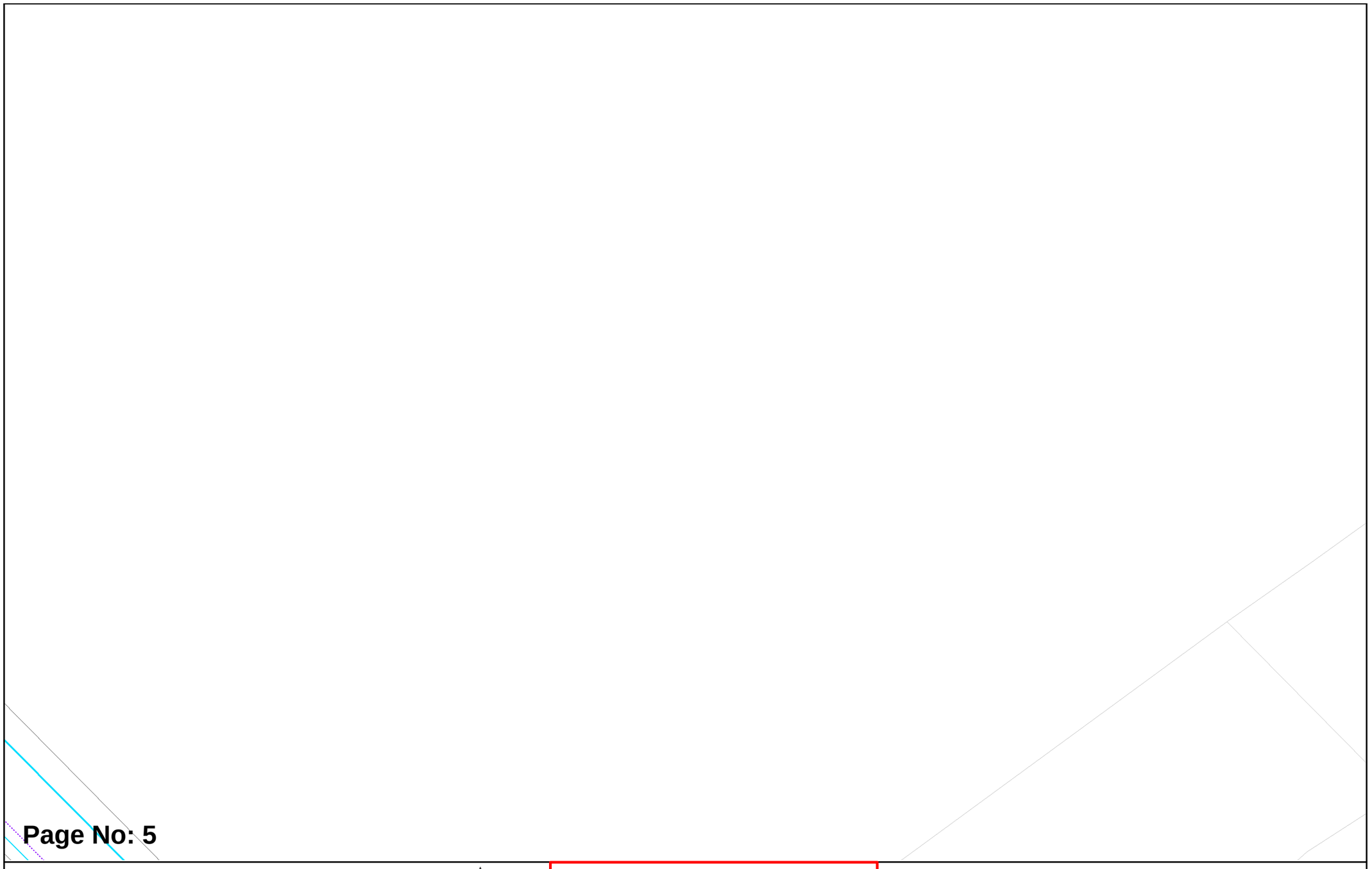
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**Page No: 5**

WATER CORPORATION

Scale: 1:750
Job No.: 36968397
Sequence No.: 240936715
Print Date: 24 Jun 2024

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Water

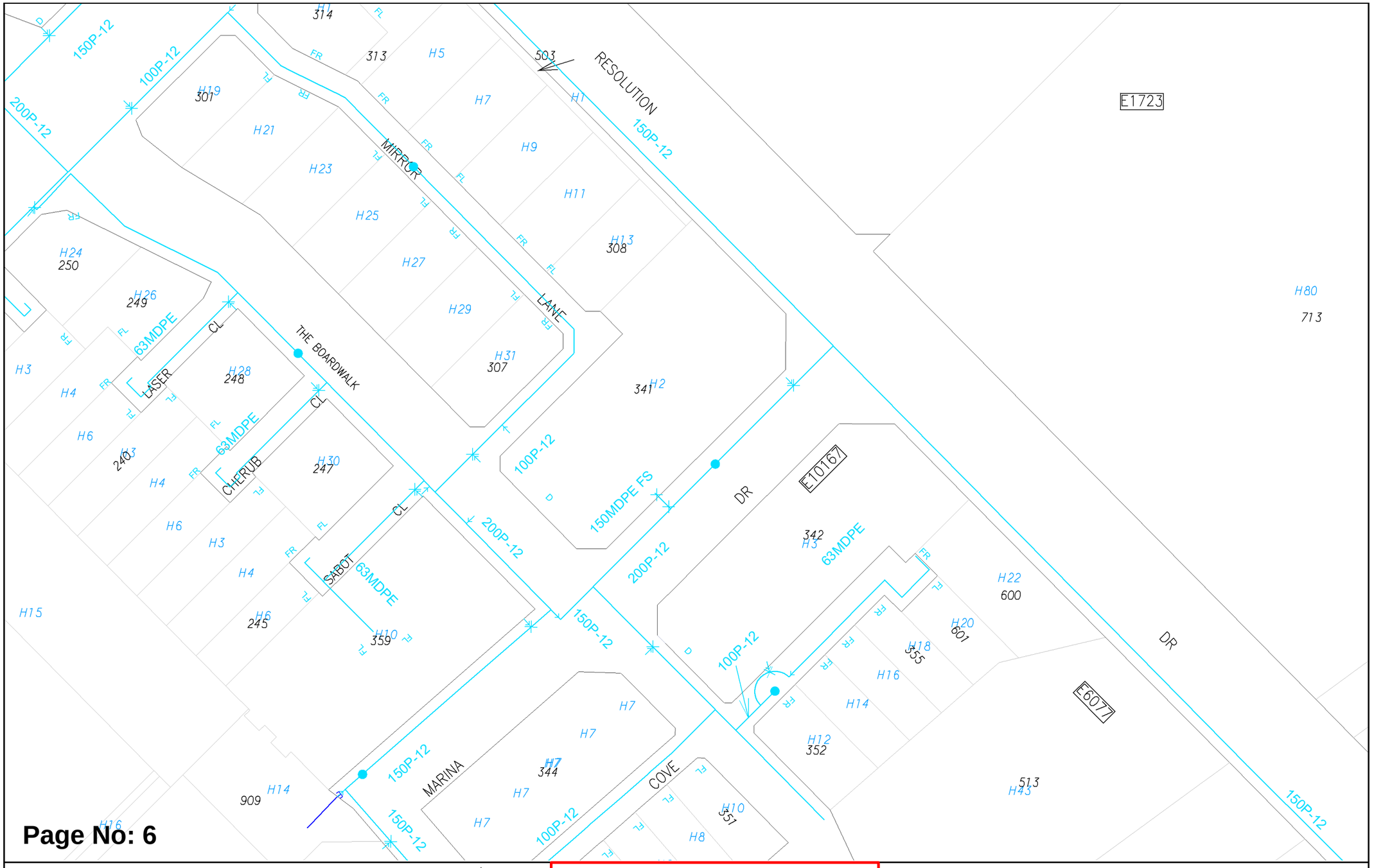
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**Page No: 6**

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| Sequence No.: | 240936715 |
| Print Date: | 24 Jun 2024 |

Water

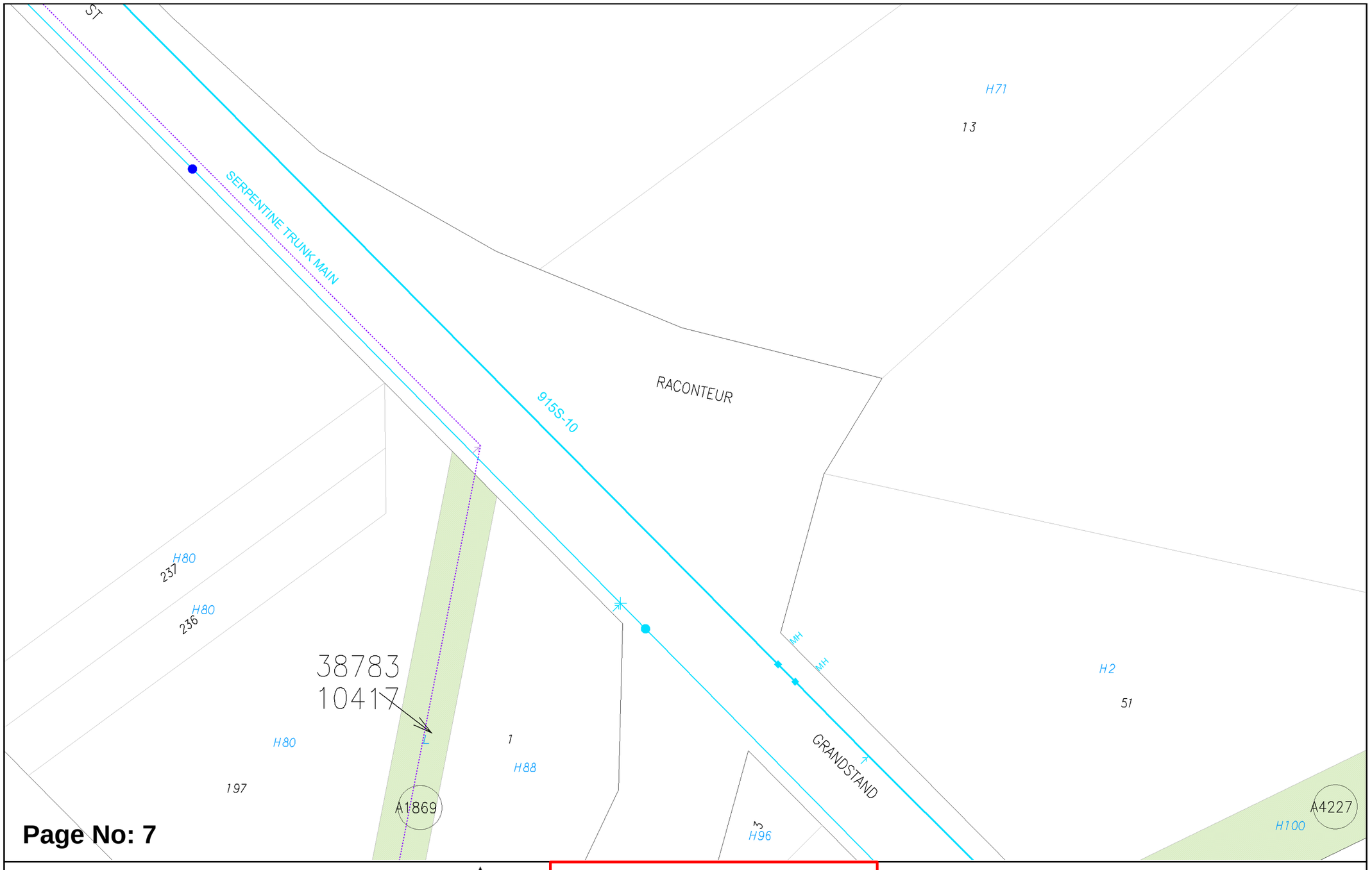
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WATER CORPORATION

Scale: 1:750
Job No.: 36968397
Sequence No.: 240936715
Print Date: 24 Jun 2024

N
Water

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Water Corp - Critical Plan.docx (21 May 2024)




**Overview**

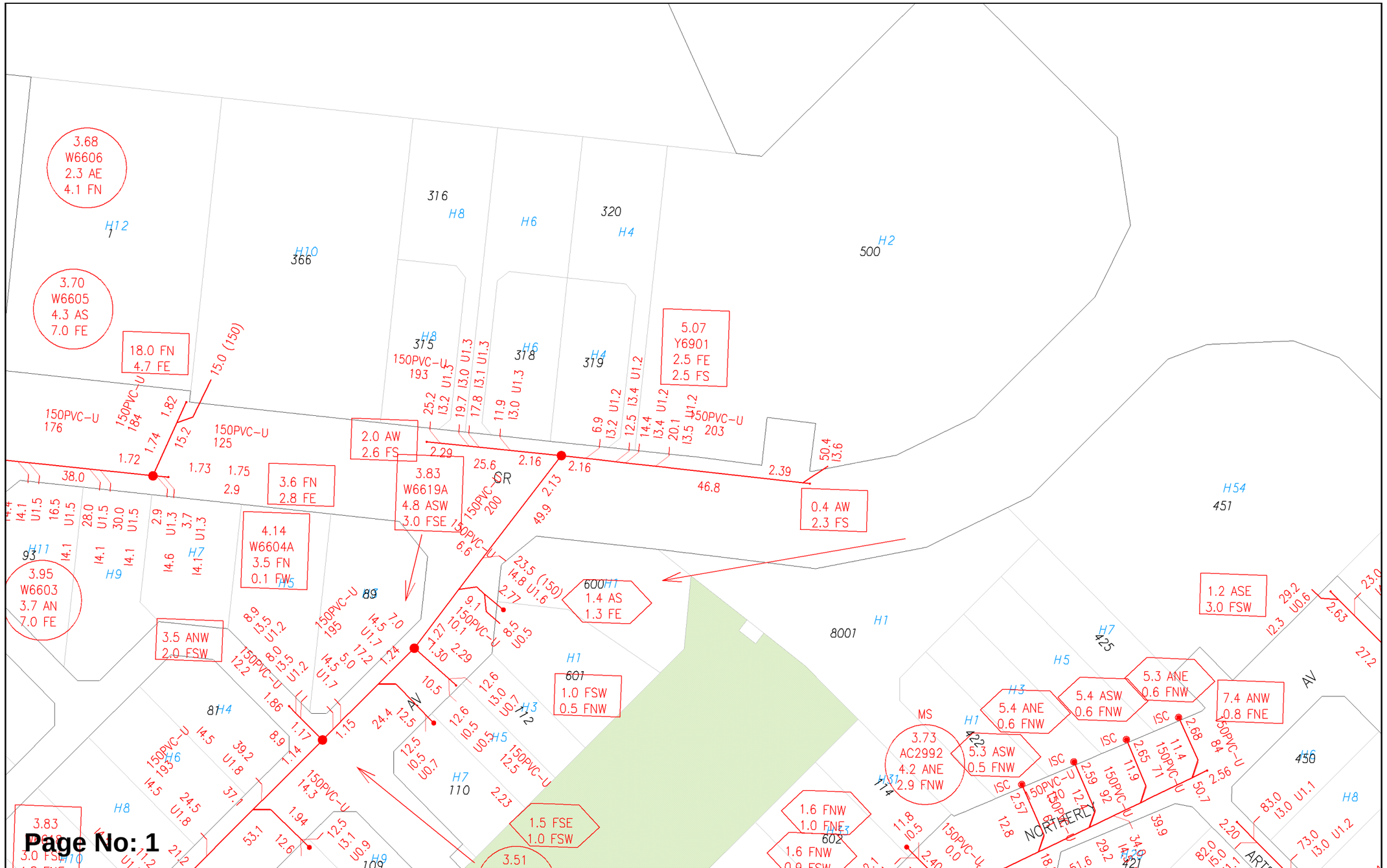
WATER CORPORATION

| | |
|---|---|
| Scale: | 1:2790 |
| Job No.: | 36968397 |
| Sequence No.: | 240936715 |
| Print Date: | 24 Jun 2024 |

N

**Sewer**

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**Page No: 1**

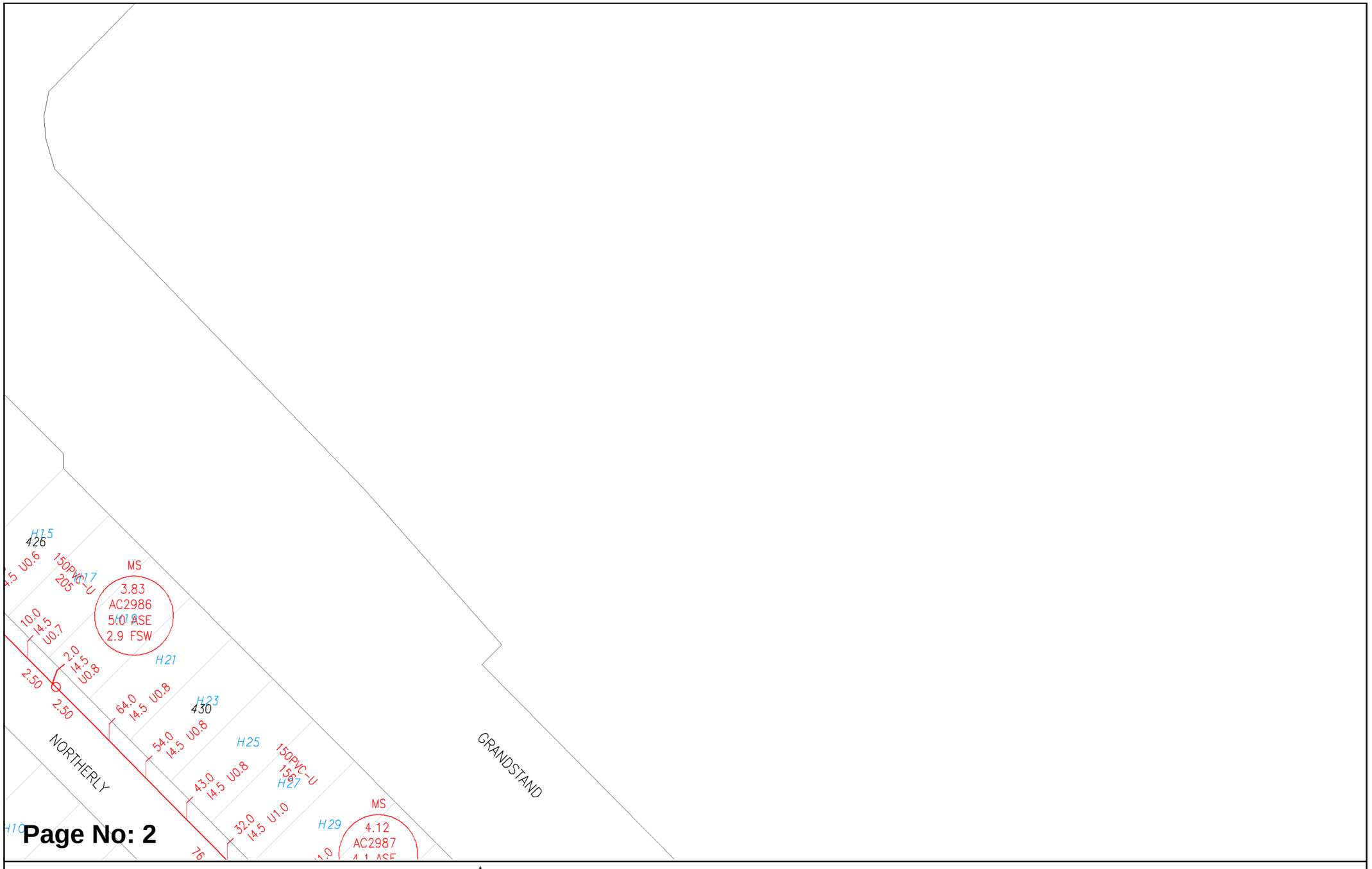
WATER CORPORATION

| | |
|---|---|
| Scale: | 1:750 |
| Job No.: | 36968397 |
| Sequence No.: | 240936715 |
| Print Date: | 24 Jun 2024 |

N

**Sewer**

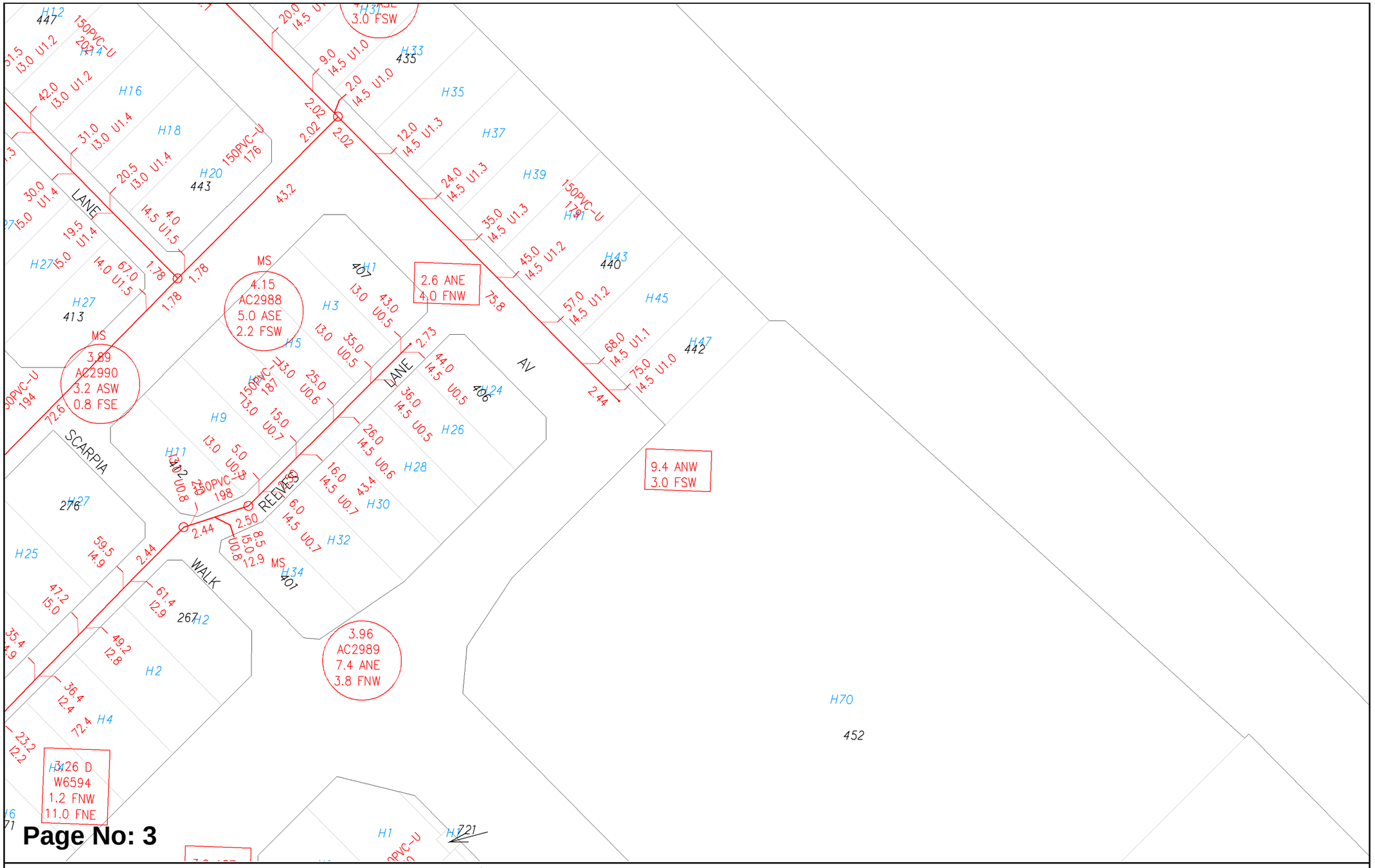
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Sewer

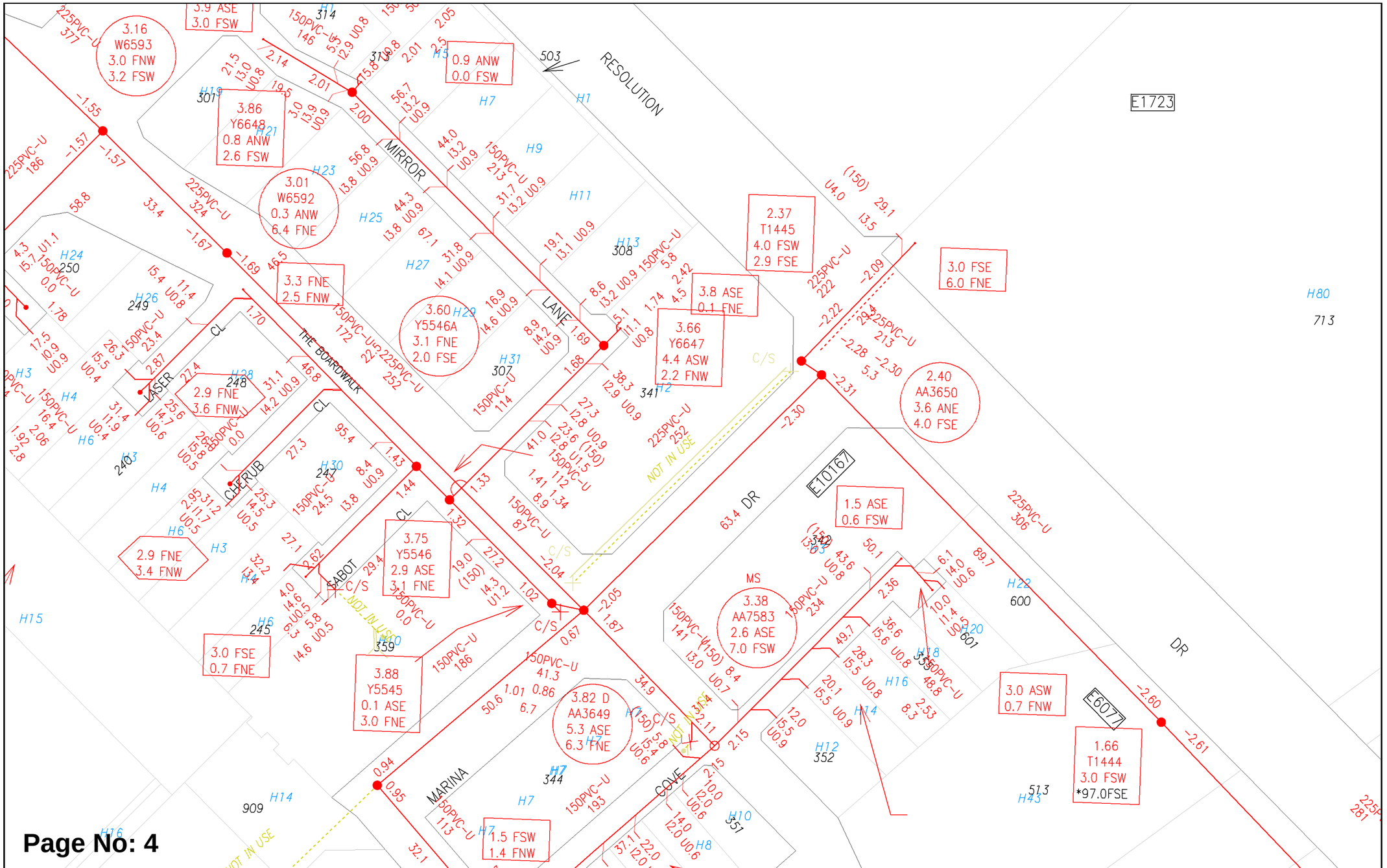
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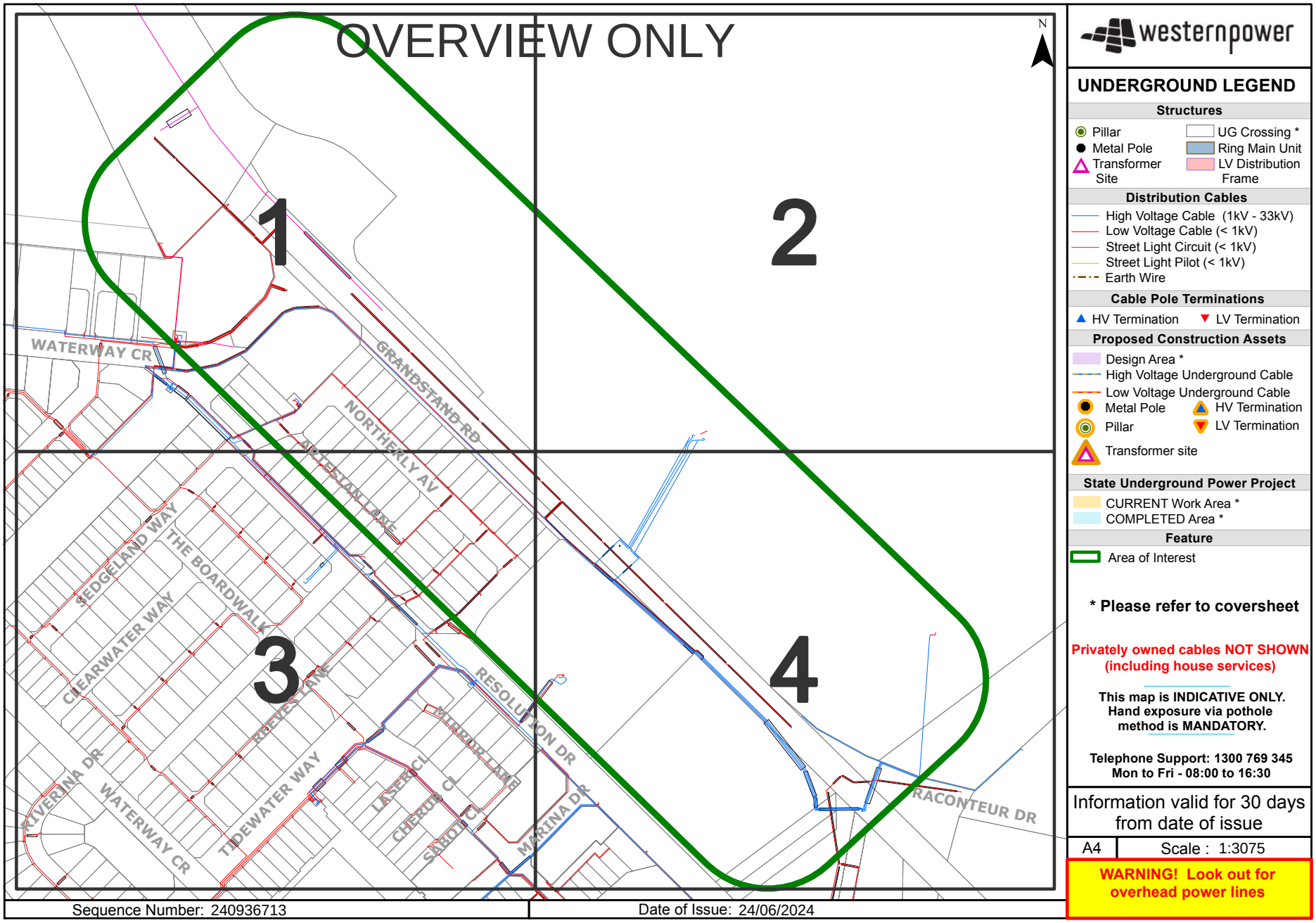

**Page No: 4**

WATER CORPORATION

| | |
|---|---|
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**Sewer**

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westernpower

**UNDERGROUND LEGEND**

**Structures**

- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

**Distribution Cables**

- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

**Cable Pole Terminations**

- HV Termination
- LV Termination

**Proposed Construction Assets**

- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

**State Underground Power Project**

- CURRENT Work Area *
- COMPLETED Area *

**Feature**

- Area of Interest

*** Please refer to coversheet**

**Privately owned cables NOT SHOWN (including house services)**

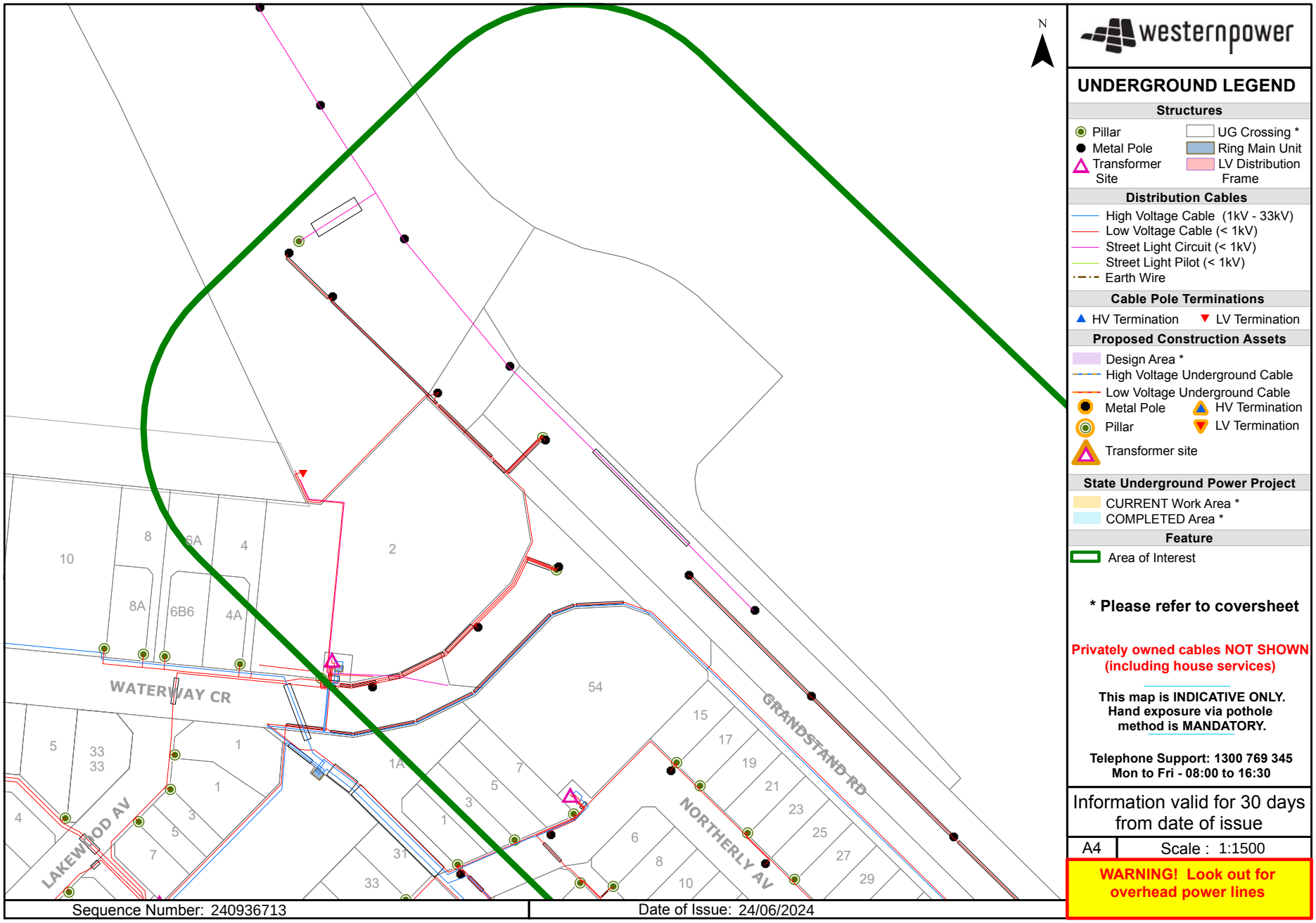
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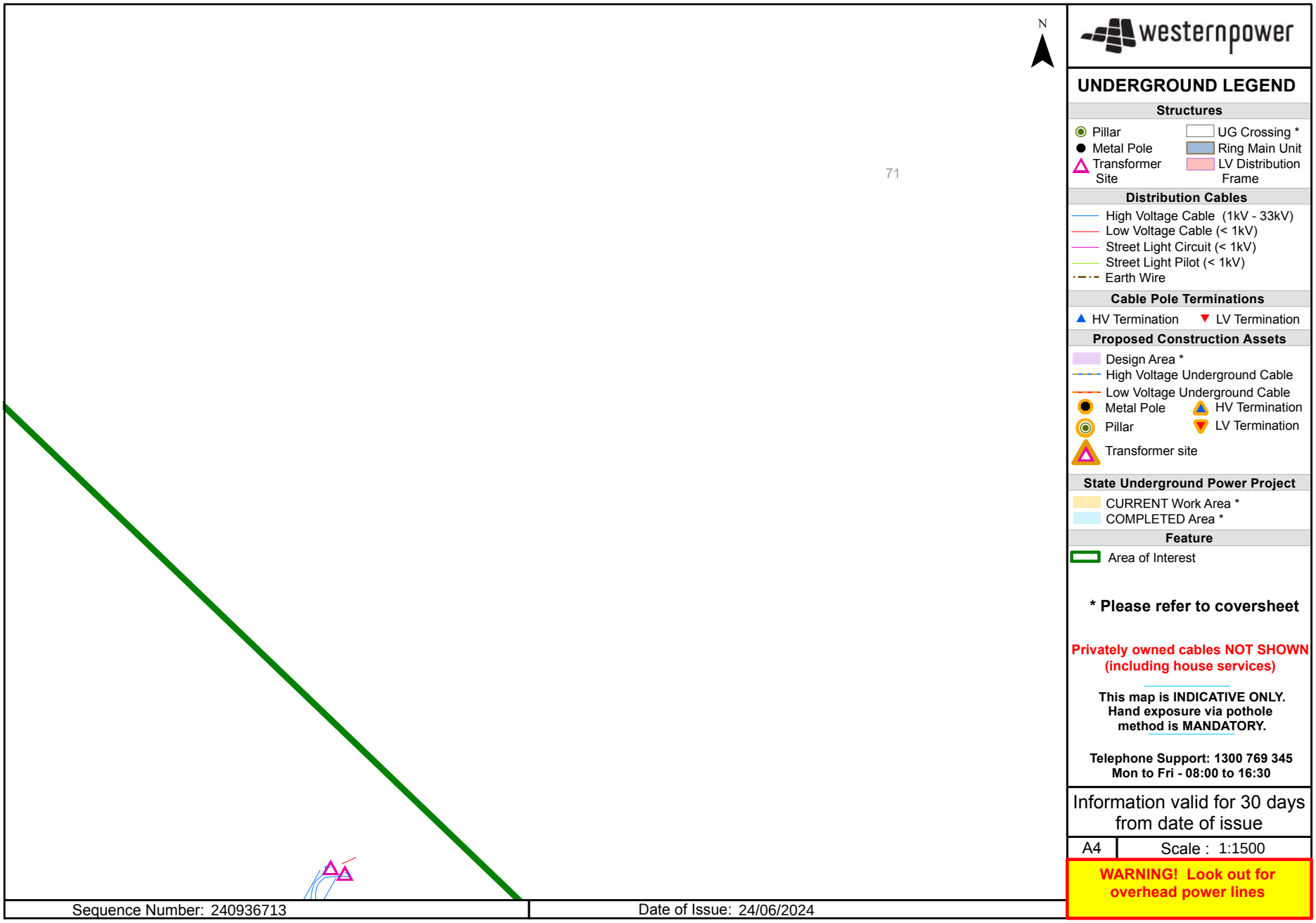
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**Mon to Fri - 08:00 to 16:30**

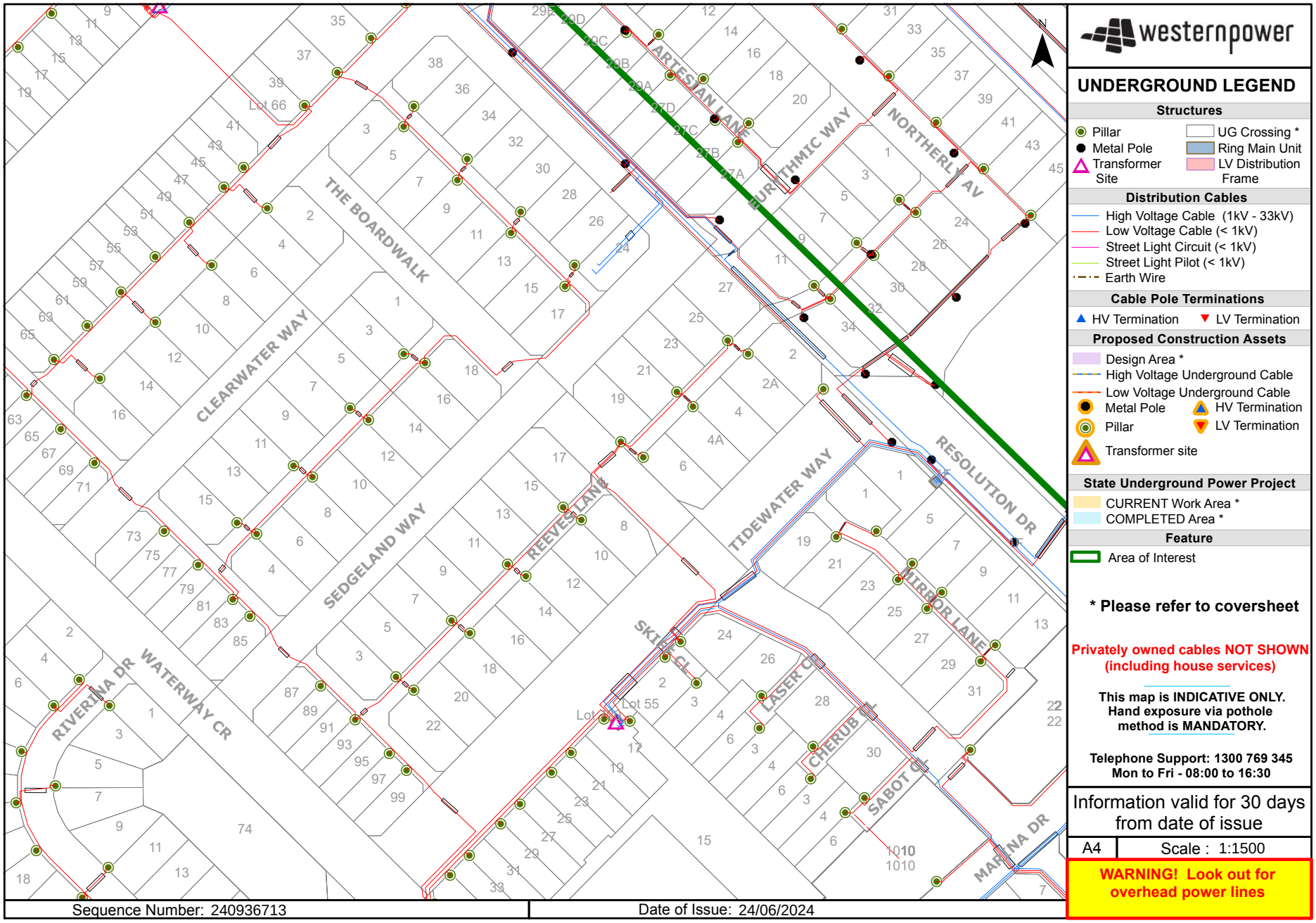
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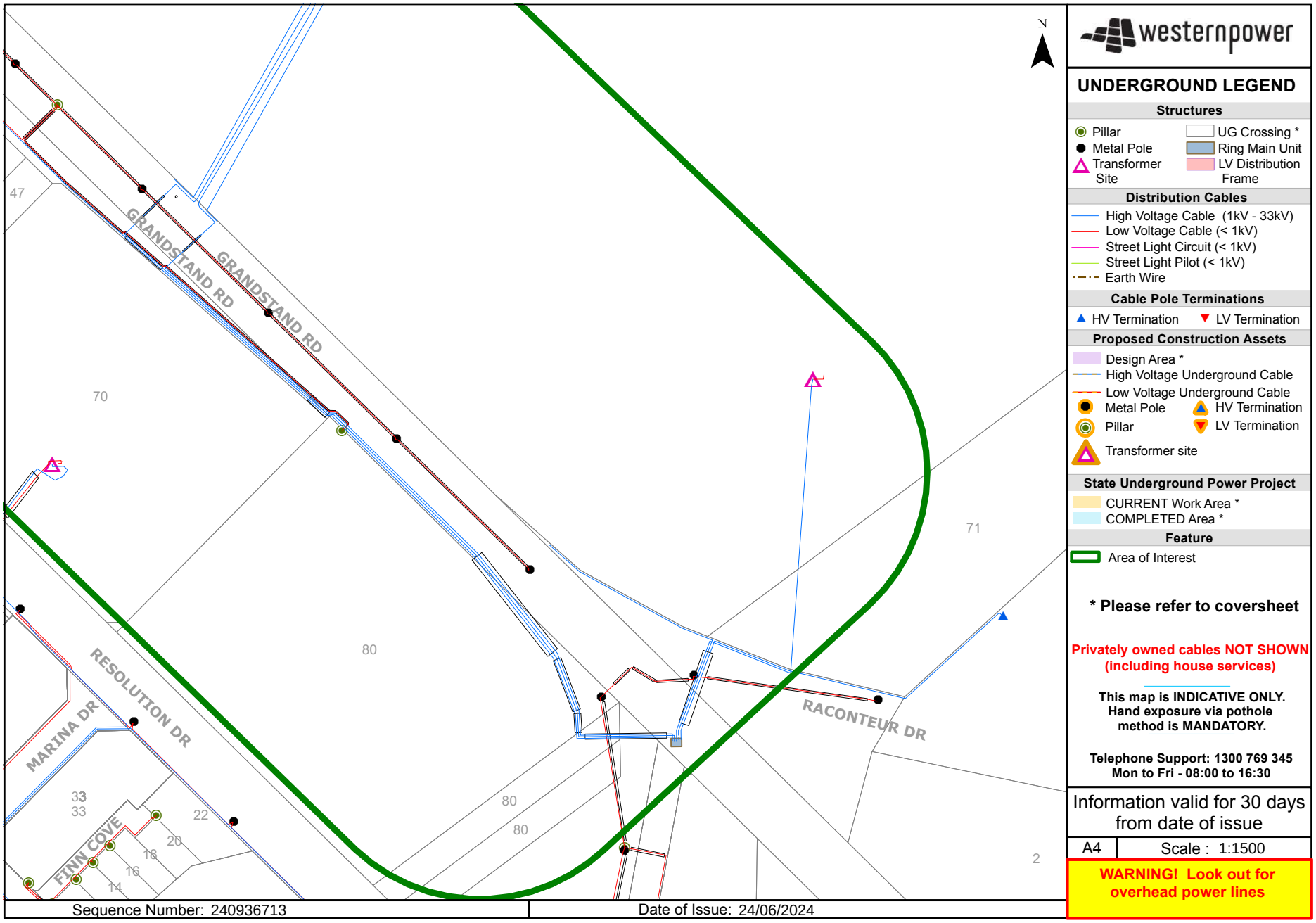
A4 | Scale : 1:3075

**WARNING! Look out for overhead power lines**


N
westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
Low Voltage Cable (< 1kV)
Street Light Circuit (< 1kV)
Street Light Pilot (< 1kV)
Earth Wire
Cable Pole Terminations
HV Termination
LV Termination
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Design Area *
High Voltage Underground Cable
Low Voltage Underground Cable
Metal Pole
Pillar
Transformer site
HV Termination
LV Termination
State Underground Power Project
CURRENT Work Area *
COMPLETED Area *
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines
WATERWAY CR
LAKEWOOD AV
GRANDSTAND RD
NORTHERLY AV
Sequence Number: 240936713
Date of Issue: 24/06/2024


N
71
westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
Low Voltage Cable (< 1kV)
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A4
Scale : 1:1500
WARNING! Look out for overhead power lines
Sequence Number: 240936713
Date of Issue: 24/06/2024


westernpower
UNDERGROUND LEGEND
Structures
Pillar
Metal Pole
Transformer Site
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Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines
THE BOARDWALK
CLEARWATER WAY
SEDGELAND WAY
WATERWAY CR
RIVERINA DR
REEVES LANE
TIDEWATER WAY
RESOLUTION DR
ARTESIAN LANE
RHYTHMIC WAY
NORTHERLY AV
HARBOR LANE
LASER CT
CHERUB CT
SABOT CT
MARINA DR
SKETCH CL
Lot 66
Lot 55
Sequence Number: 240936713
Date of Issue: 24/06/2024




westernpower

## UNDERGROUND LEGEND

**Structures**

- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

**Distribution Cables**

- High Voltage Cable (1kV - 33kV)
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- Pillar
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- HV Termination
- LV Termination

**State Underground Power Project**

- CURRENT Work Area *
- COMPLETED Area *

**Feature**

- Area of Interest

*** Please refer to coversheet**

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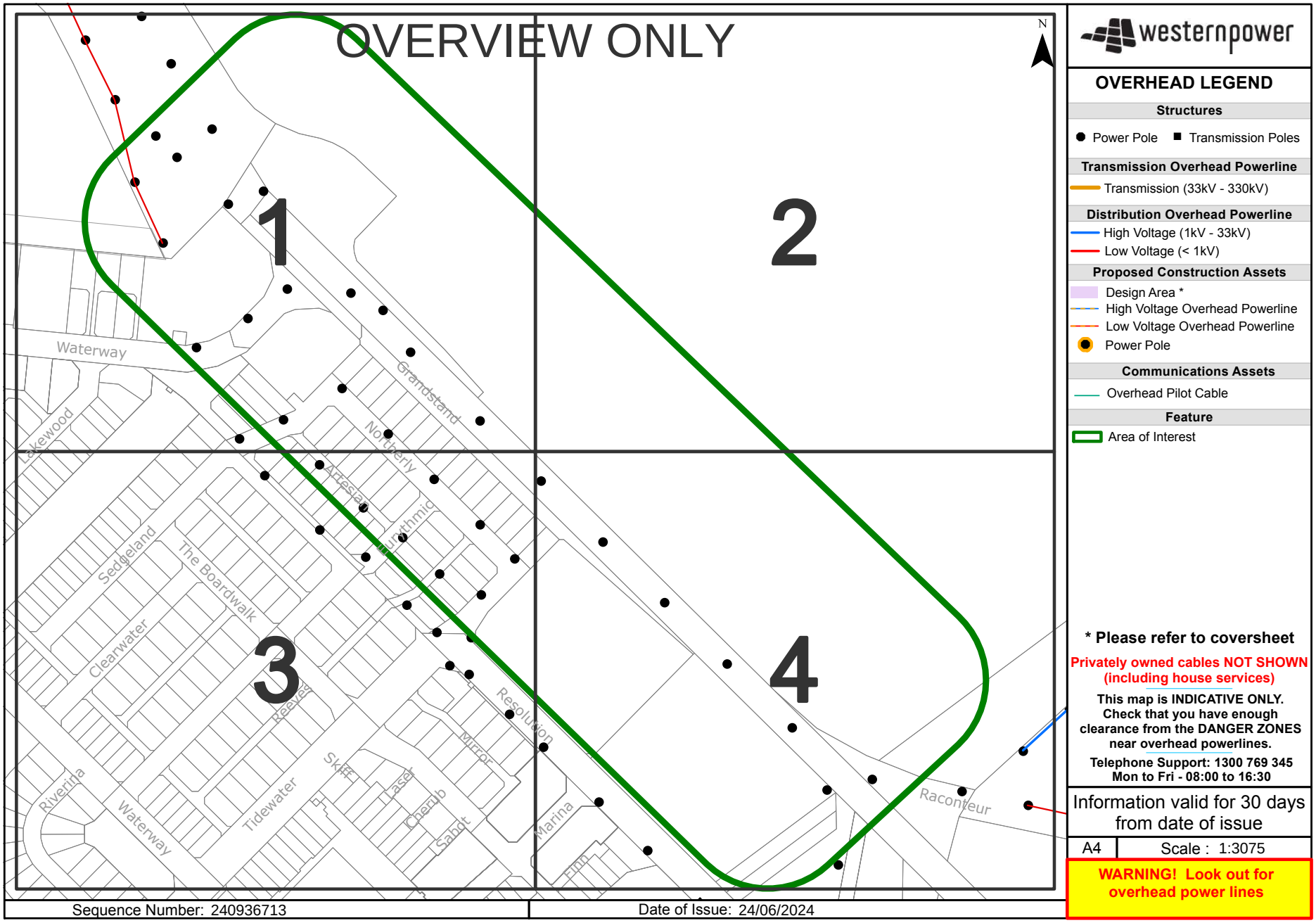
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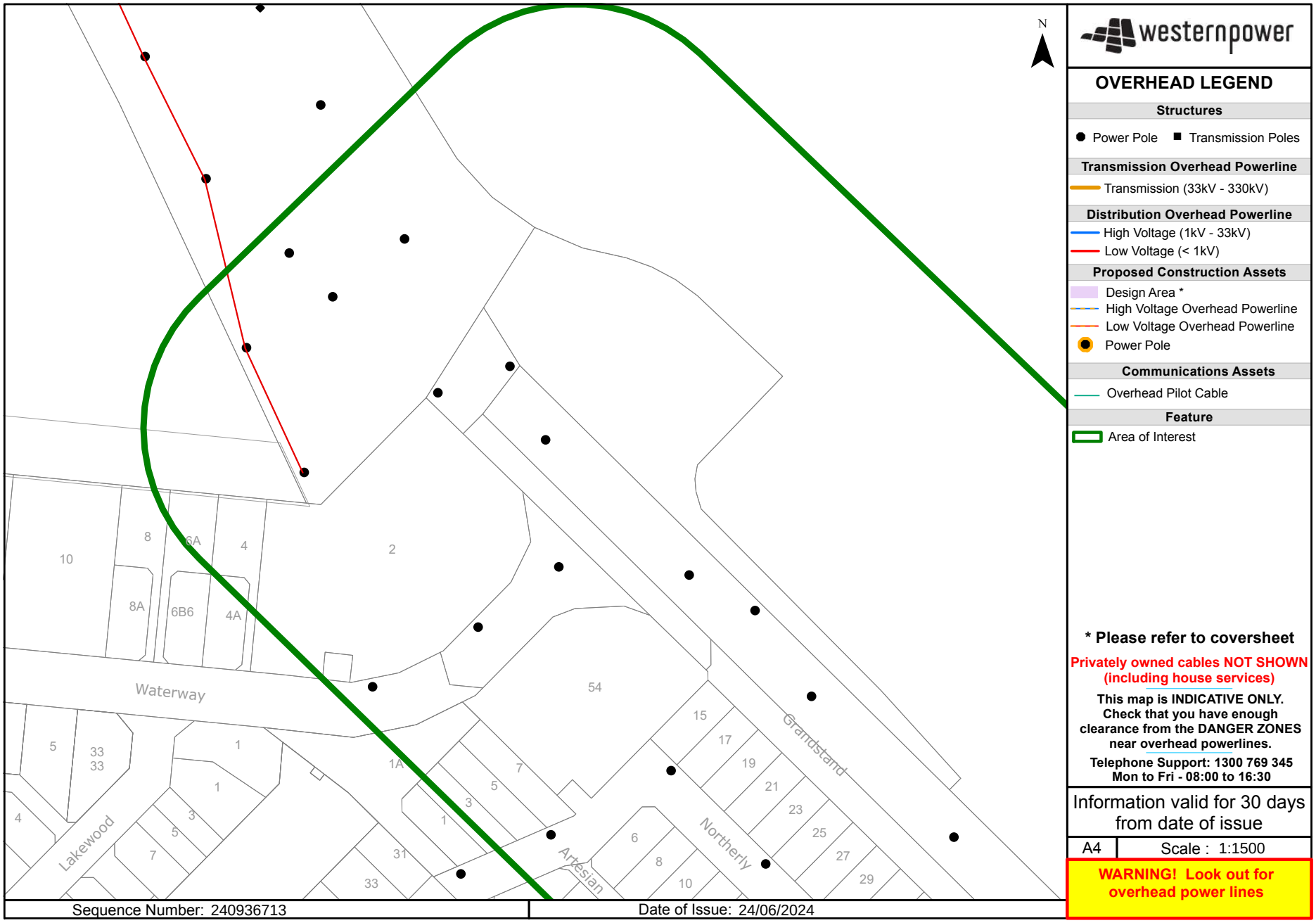
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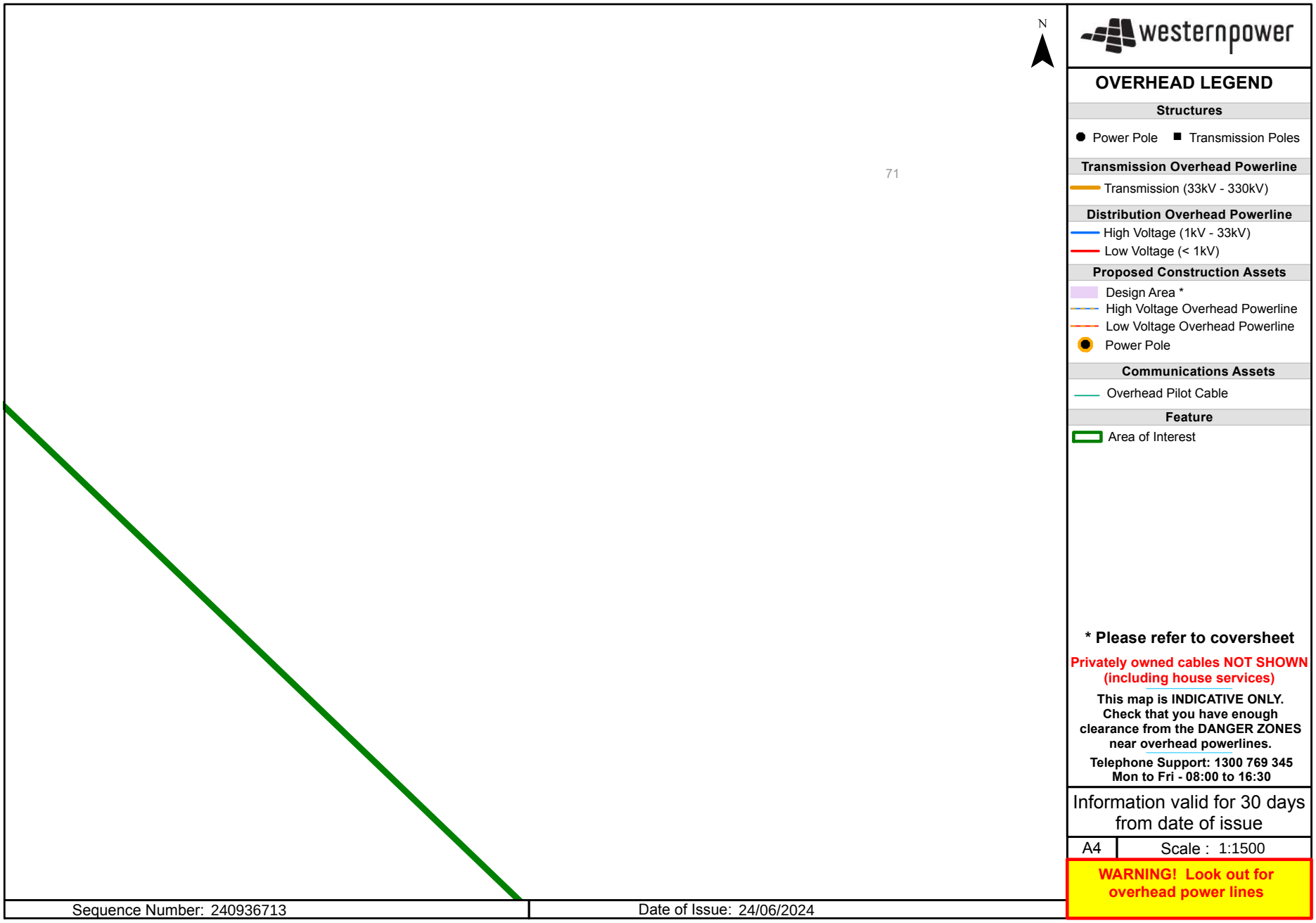
Information valid for 30 days from date of issue

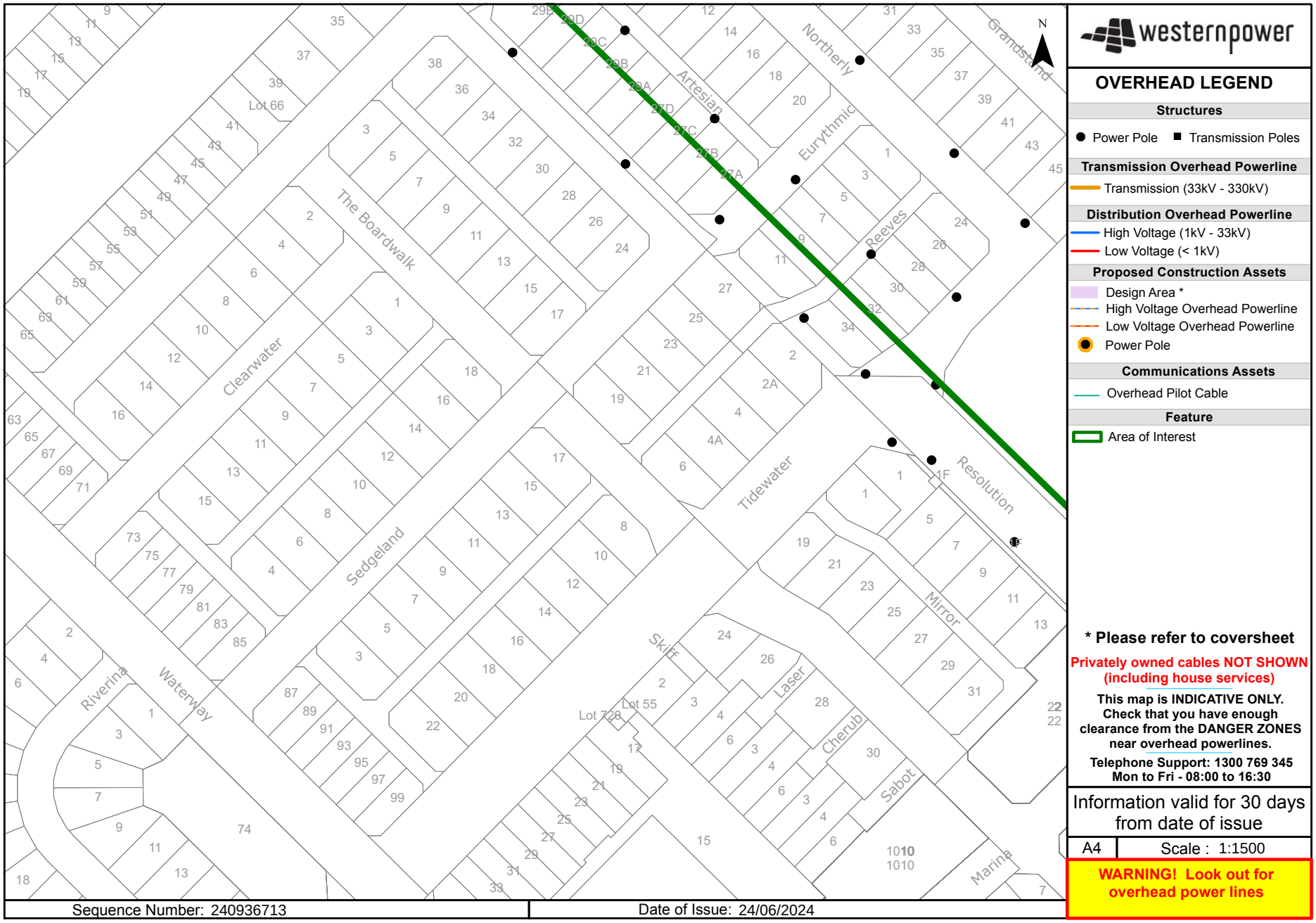
A4 | Scale : 1:1500

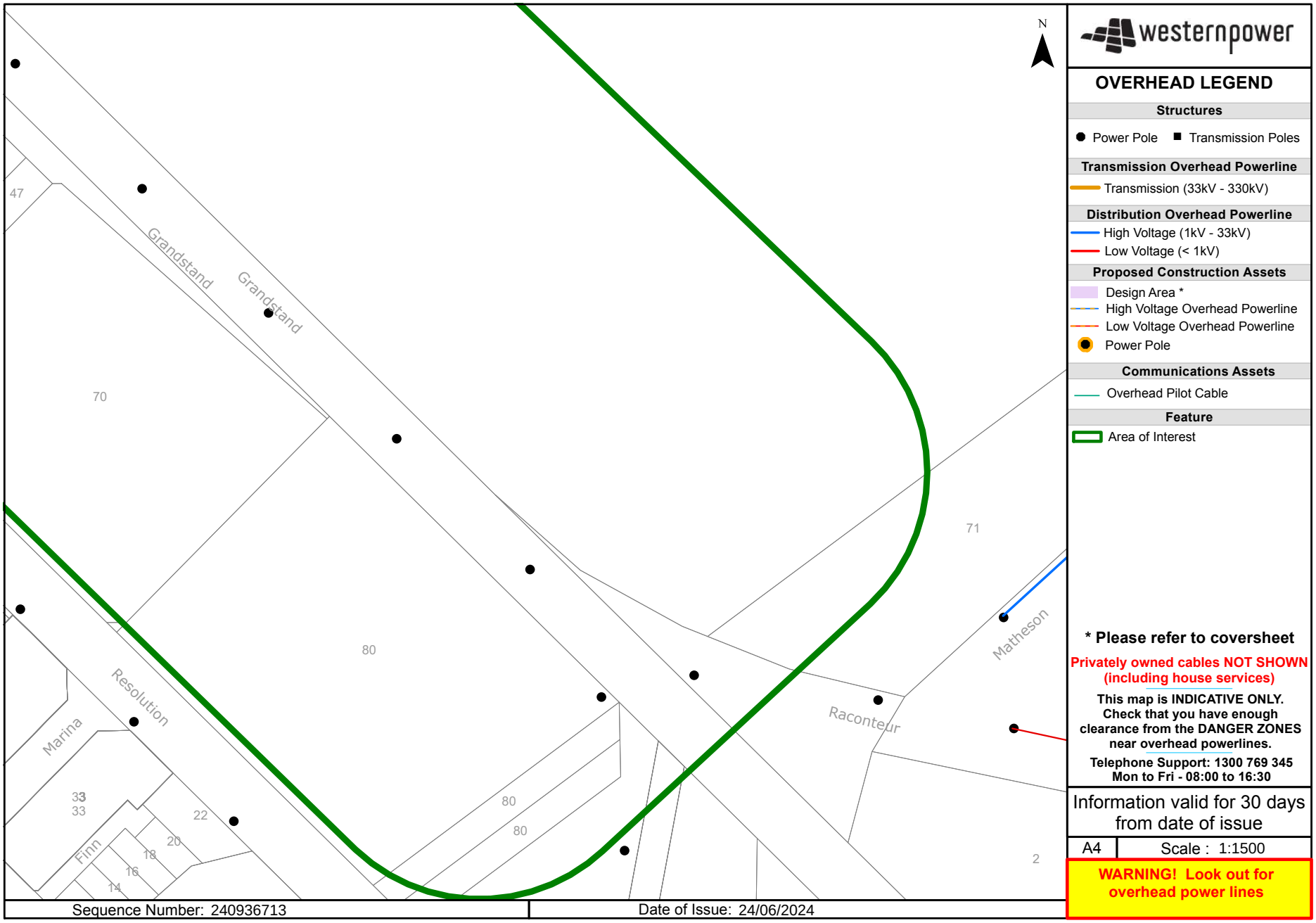
**WARNING! Look out for overhead power lines**


OVERVIEW ONLY
N
1
2
3
4
Waterway
Lakewood
Grandstand
Northerly
Arrestal
Sedgeland
The Boardwalk
Clearwater
Riverina
Waterway
Tidewater
Reeves
Skeg
Laser
Cherub
Sabot
Mirror
Resolution
Marina
Raconteur
Sequence Number: 240936713
Date of Issue: 24/06/2024
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
Low Voltage (< 1kV)
Proposed Construction Assets
Design Area *
High Voltage Overhead Powerline
Low Voltage Overhead Powerline
Power Pole
Communications Assets
Overhead Pilot Cable
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Check that you have enough clearance from the DANGER ZONES near overhead powerlines.
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:3075
WARNING! Look out for overhead power lines


N
westernpower
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Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines
Waterway
Lakewood
Artesian
Northerly
Grandstand
Sequence Number: 240936713
Date of Issue: 24/06/2024


N
71
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
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westernpower
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Northerly
Artesian
Eurythmic
Grandstand
Reeves
The Boardwalk
Clearwater
Sedgeland
Tidewater
Resolution
Mirror
Skiff
Laser
Cherub
Sabot
Marina
Riverina
Waterway
Lot 66
Lot 55
Lot 720


N
47
Grandstand
Grandstand
70
80
71
Resolution
Marina
Raconteur
Matheson
33
33
22
20
18
16
14
80
80
2
Sequence Number: 240936713
Date of Issue: 24/06/2024
westernpower
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Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:1500
WARNING! Look out for overhead power lines

Job No 36962214

byda.com.au

## Contact Details

| Contact | Contact number | Company | Enquirer ID |
|---|---|---|---|
| Justin Zielinski | 0420 304 451 | - | 3140642 |

**Email**
jzielinski@tabec.com.au

**Address**
54 Havelock Street
West Perth WA 6005

## Job Site and Enquiry Details

**WARNING:** The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

| Enquiry date | Start date | End date | On behalf of | Job purpose | Locations | Onsite activities |
|---|---|---|---|---|---|---|
| 21/06/2024 | 24/06/2024 | 24/06/2024 | Private | Design | Both Road | Subdivision |




Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

| User Reference | Address | Notes/description |
|---|---|---|
| Precinct A | 75 Grandstand Road<br>Ascot WA 6104 | - |

## Your Responsibility and Duty of Care

- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the Privacy Policy and Term of Use.
- For more information on safe digging practices, visit www.byda.com.au

## Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

| Referral ID (Seq. no) | Authority Name | Phone | Status |
|---|---|---|---|
| 240900419 | ATCO Gas Australia | 1300 926 755 | NOTIFIED |
| 240900415 | NBN Co (WA) | 1800 687 626 | NOTIFIED |
| 240900413 | Optus (WA) | 1800 505 777 | NOTIFIED |
| 240900417 | Telstra (WA) | 1800 653 935 | NOTIFIED |
| 240900414 | TPG Telecom (WA) | 1800 786 306 | NOTIFIED |
| 240900418 | Water Corporation | 13 13 95 | NOTIFIED |
| 240900416 | Western Power | 13 10 87 | NOTIFIED |

END OF UTILITIES LIST

**Lodge your FREE enquiry online any time at byda.com.au**

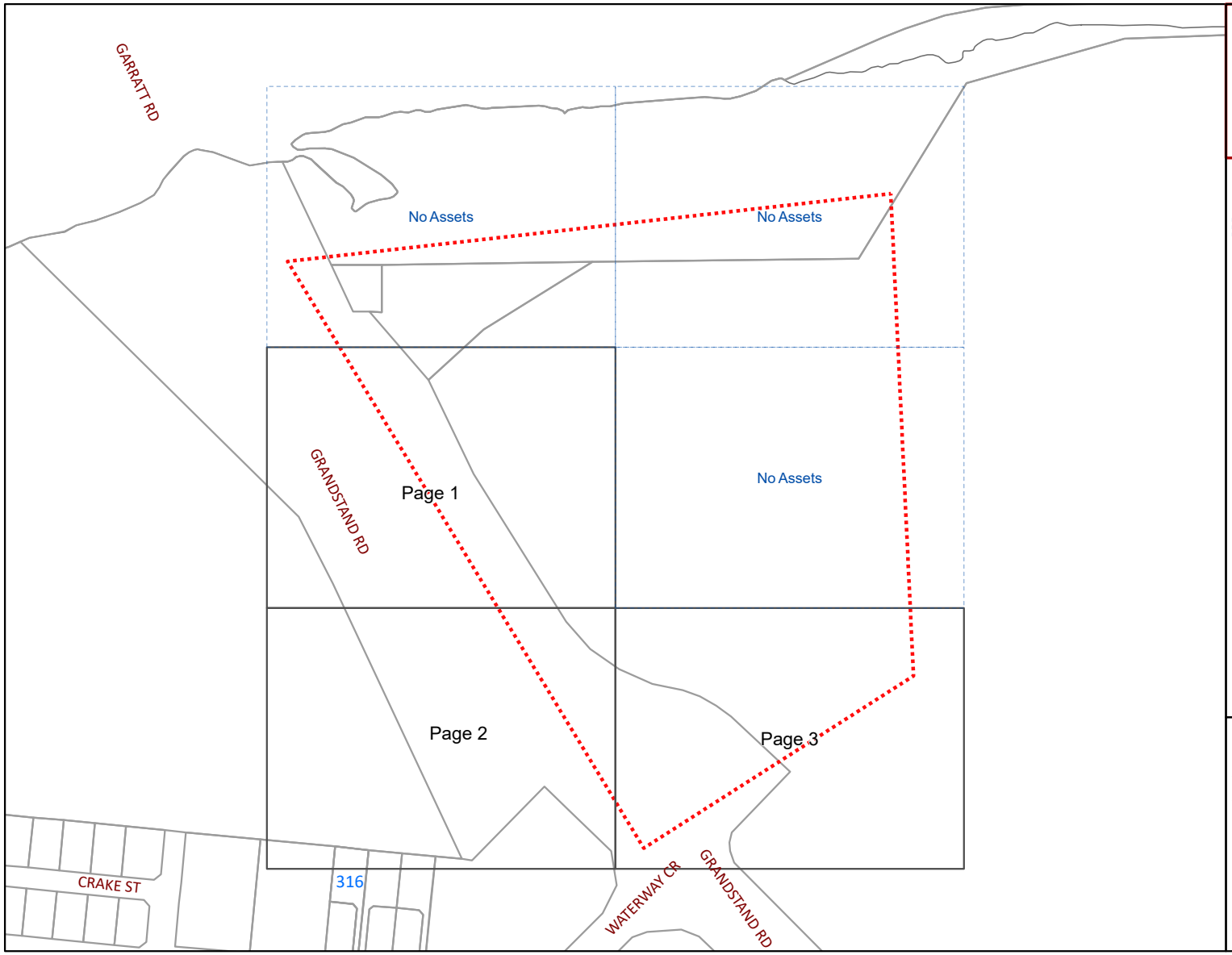
ATCO
©ATCO Gas Australia Pty LTD
ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)
Index Sheet

Seq # 240900419
Job # 36962214

BYDA Location: 75 Grandstand Road Ascot 6104
Scale: 1:2,500

BEFORE YOU DIG www.byda.com.au




**WARNING**
**CRITICAL ASSET**
**IN THE VICINITY.**
No works within 15 meters of this asset are permitted without prior approval from ATCO.
Contact ATCO on 1300 926 755

BYDA Enquiry
Detailed map page
No Assets in the Dig Site

Please refer to Symbols Sheet for Further Information

Disclaimer:
Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing).
ATCO Gas Australia will seek compensation for damage caused to assets.

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ATCO

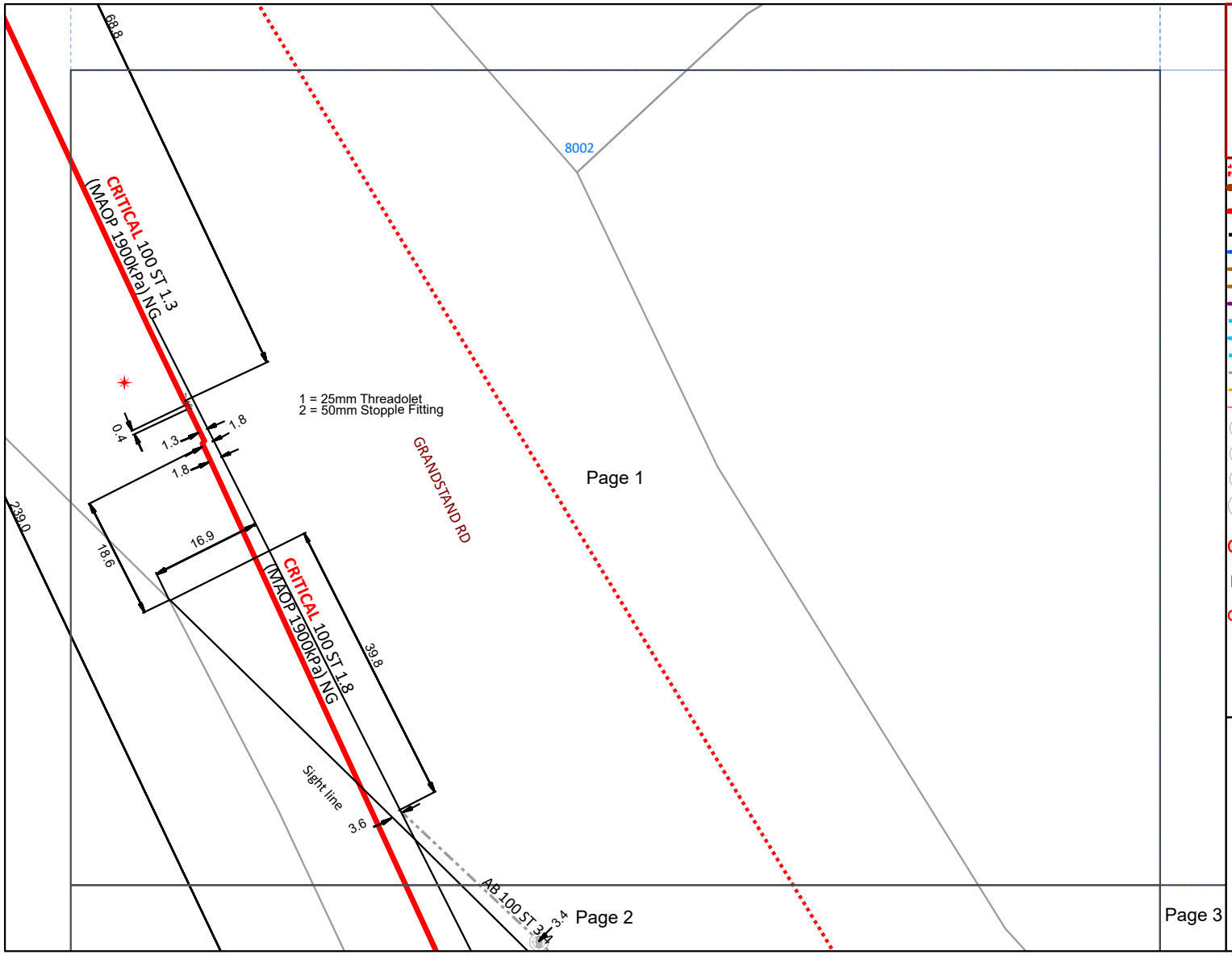
©ATCO Gas Australia Pty LTD
ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)

Seq # 240900419
Job # 36962214

BYDA Location: 75 Grandstand Road Ascot 6104
Scale: 1:800

BEFORE YOU DIG www.byda.com.au




**WARNING**
**CRITICAL ASSET IN THE VICINITY.**
No works within 15 meters of this asset are permitted without prior approval from ATCO.
Contact ATCO on 1300 926 755

- BYDA Enquiry
- Transmission Pipelines MAOP > 1900kPa
- Distribution Pipelines MAOP > 500kPa ≤ 1900kPa
- Not Gassed 0kPa
- Distribution Pipe MAOP ≤ 7kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 100kPa ≤ 350kPa
- Common Trench
- Standard Laying
- Relay Program
- Abandoned Pipe
- Abandoned Pipe Sold
- Service Pipe
- Meter
- Interval Meter
- Proposed Meter
- Removed Meter
- BL End of Main Building
- CoD End of Main on Direction Peg
- SV Gas Service
- NC Not Connected
- Obstacle
- OLS Offline Service
- See Details
- SC Side Elevation
- Sign

Please refer to Symbols Sheet for Further Information

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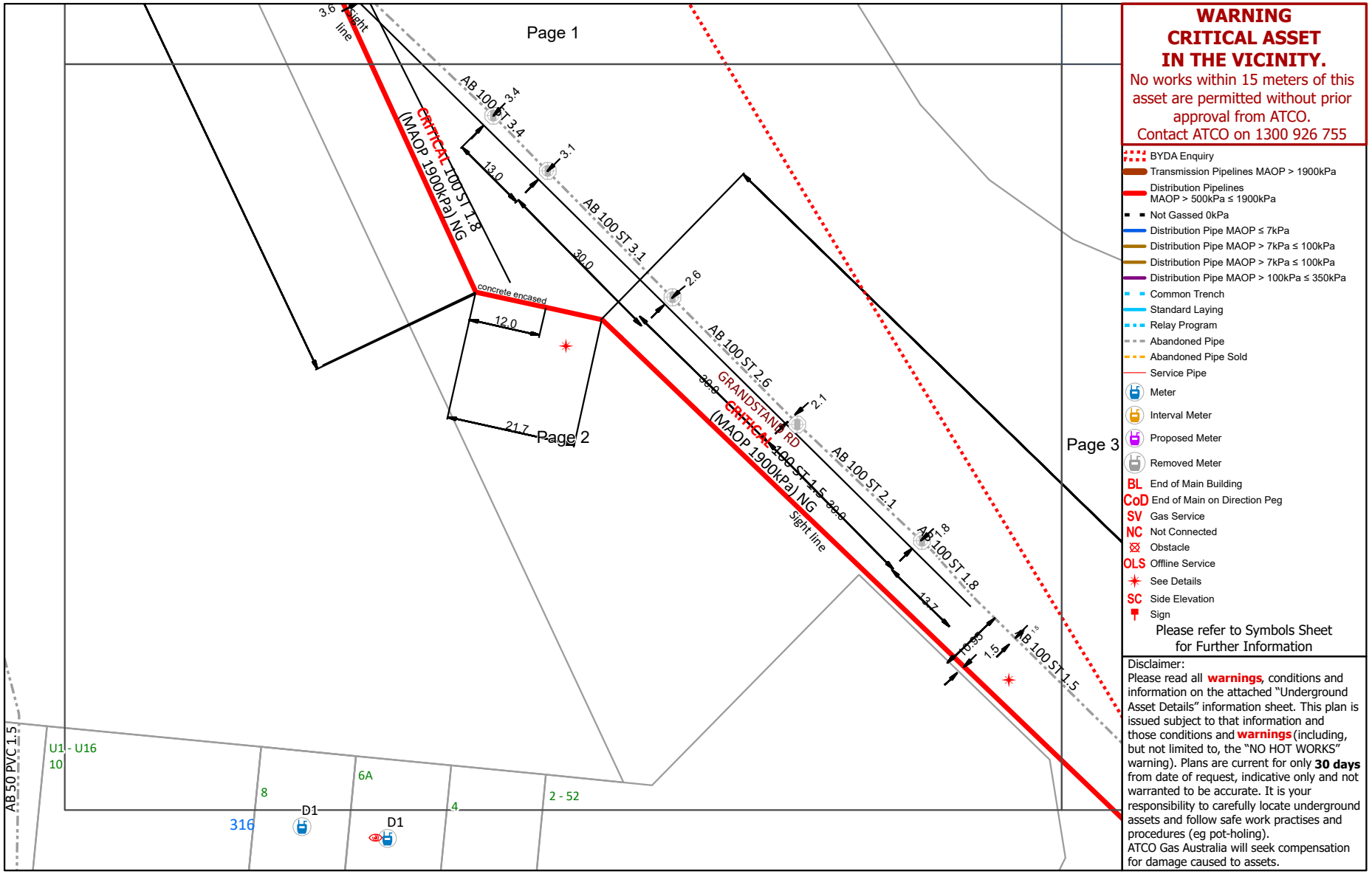
ATCO
©ATCO Gas Australia Pty LTD
ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)

Seq # 240900419
Job # 36962214

BYDA Location: 75 Grandstand Road Ascot 6104
Scale: 1:800

BEFORE YOU DIG www.byda.com.au




**WARNING**
**CRITICAL ASSET IN THE VICINITY.**
No works within 15 meters of this asset are permitted without prior approval from ATCO.
Contact ATCO on 1300 926 755

- BYDA Enquiry
- Transmission Pipelines MAOP > 1900kPa
- Distribution Pipelines MAOP > 500kPa ≤ 1900kPa
- Not Gassed 0kPa
- Distribution Pipe MAOP ≤ 7kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 7kPa ≤ 100kPa
- Distribution Pipe MAOP > 100kPa ≤ 350kPa
- Common Trench
- Standard Laying
- Relay Program
- Abandoned Pipe
- Abandoned Pipe Sold
- Service Pipe
- Meter
- Interval Meter
- Proposed Meter
- Removed Meter
- BL End of Main Building
- CoD End of Main on Direction Peg
- SV Gas Service
- NC Not Connected
- Obstacle
- OLS Offline Service
- See Details
- SC Side Elevation
- Sign

Please refer to Symbols Sheet for Further Information

Disclaimer:
Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing).
ATCO Gas Australia will seek compensation for damage caused to assets.

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ATCO

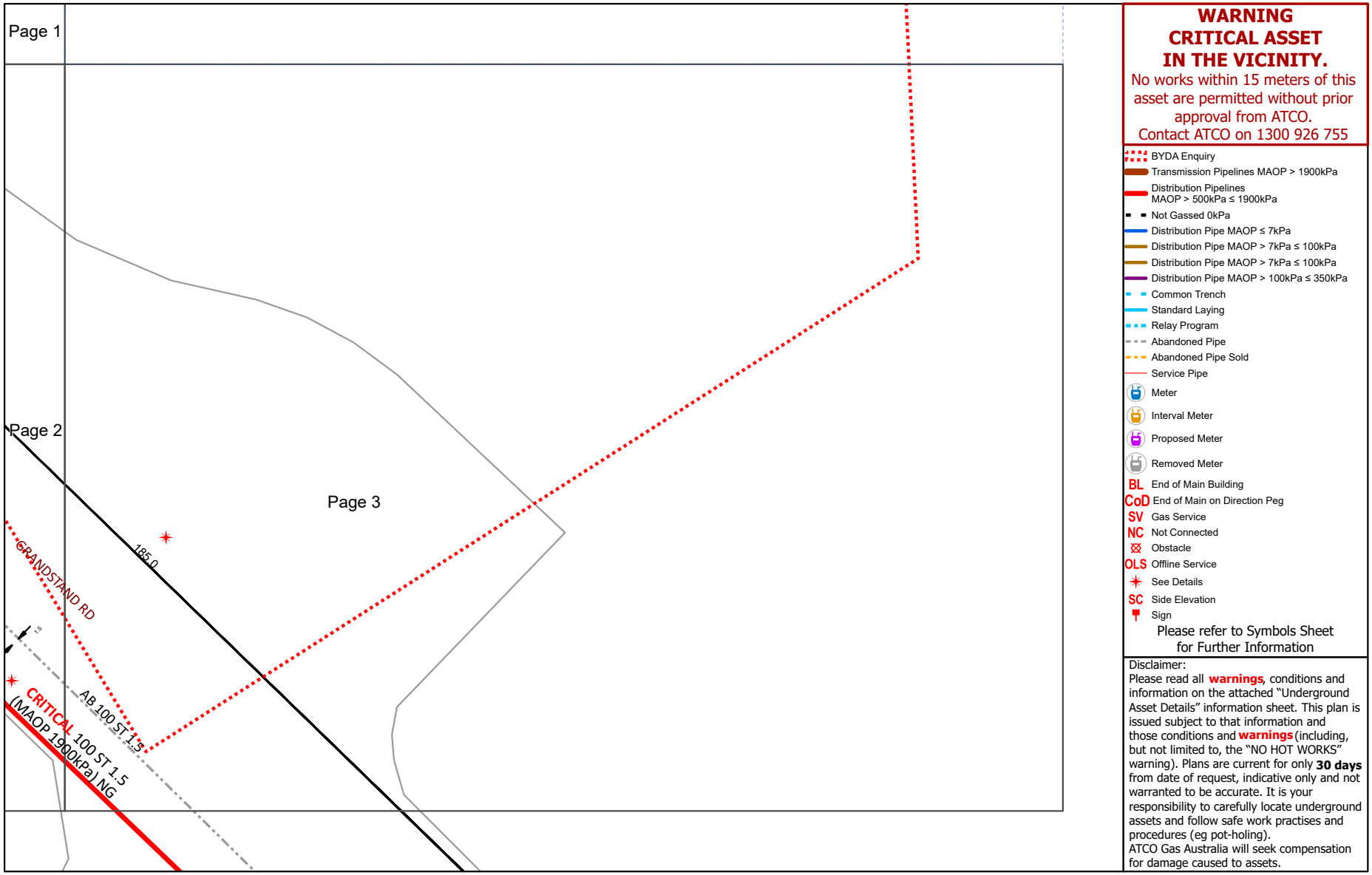
©ATCO Gas Australia Pty LTD
ABN: 90 089 531 975

Date: 21/06/24 (valid for 30 days)

Seq # 240900419
Job # 36962214

BYDA Location: 75 Grandstand Road Ascot 6104
Scale: 1:800

BEFORE YOU DIG www.byda.com.au



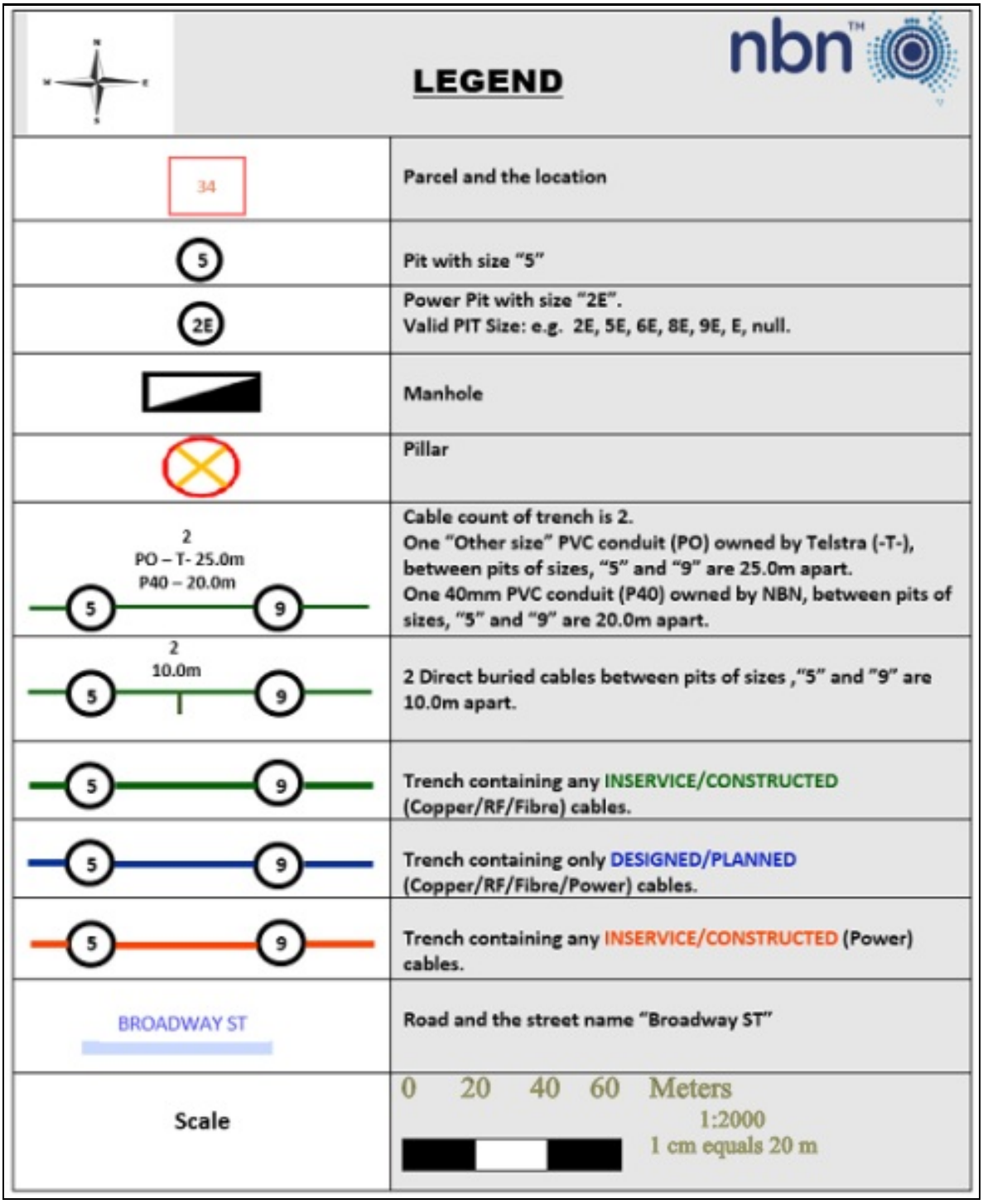

**WARNING**
**CRITICAL ASSET**
**IN THE VICINITY.**
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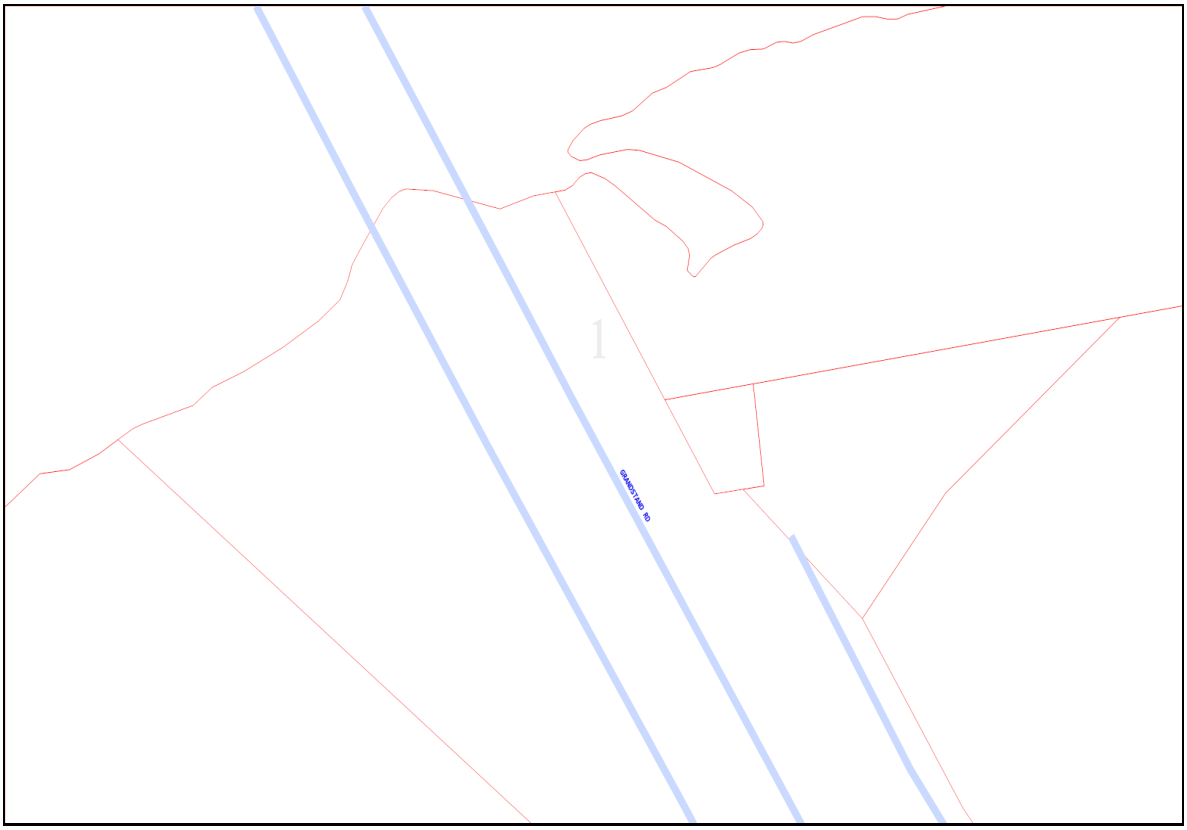
- BYDA Enquiry
- Transmission Pipelines MAOP > 1900kPa
- Distribution Pipelines MAOP > 500kPa ≤ 1900kPa
- Not Gassed 0kPa
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- Obstacle
- OLS Offline Service
- See Details
- SC Side Elevation
- Sign

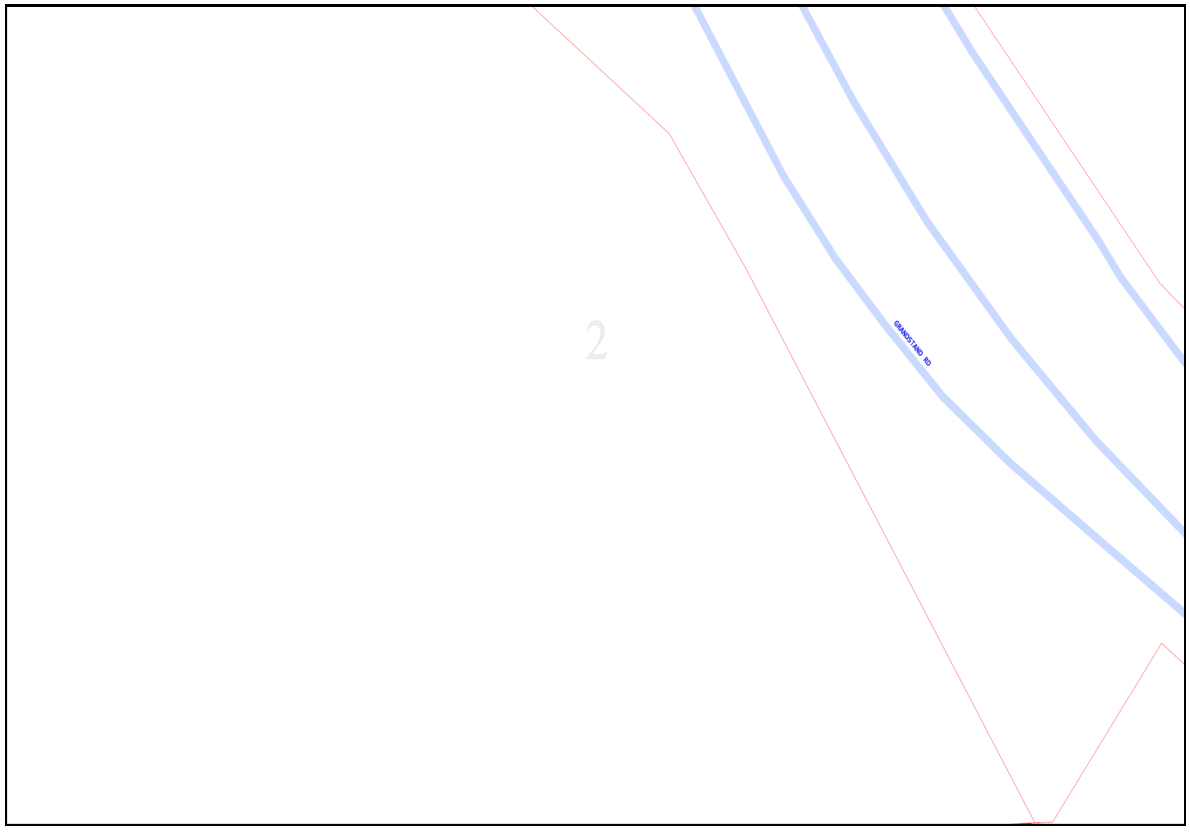
Please refer to Symbols Sheet for Further Information

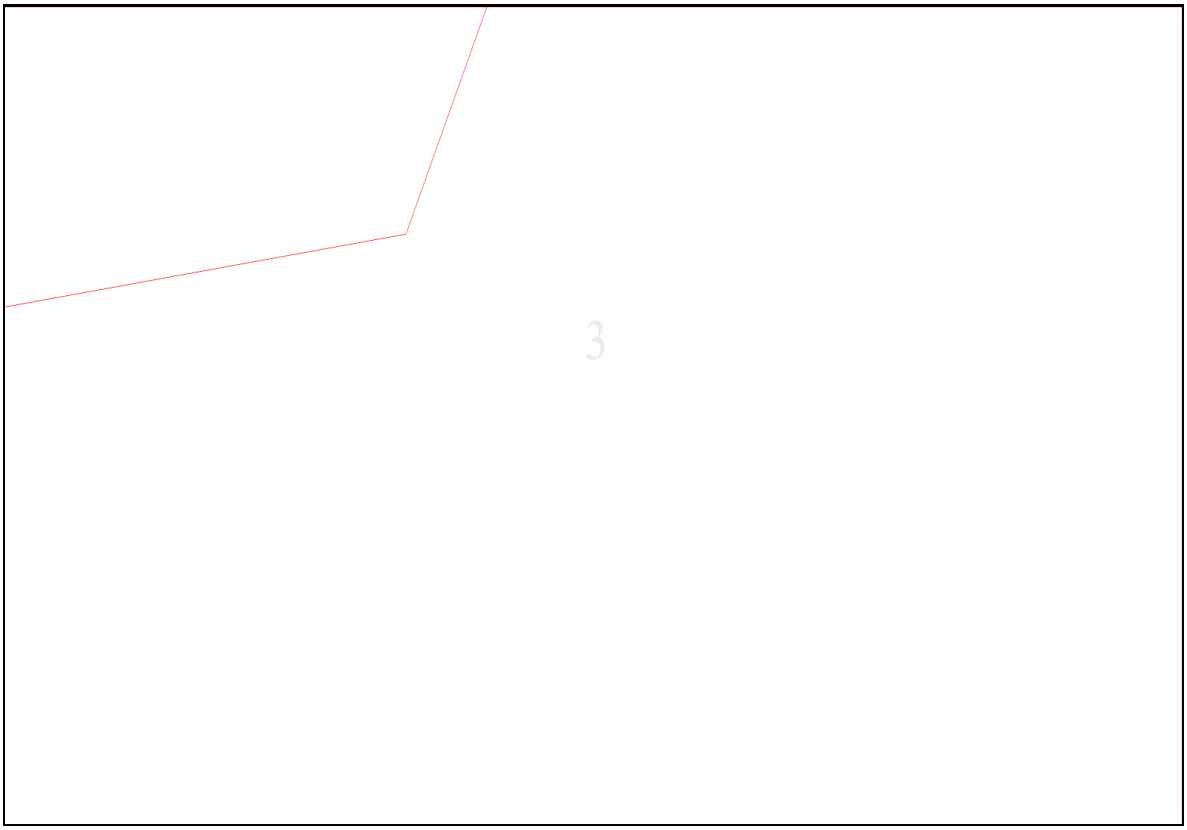
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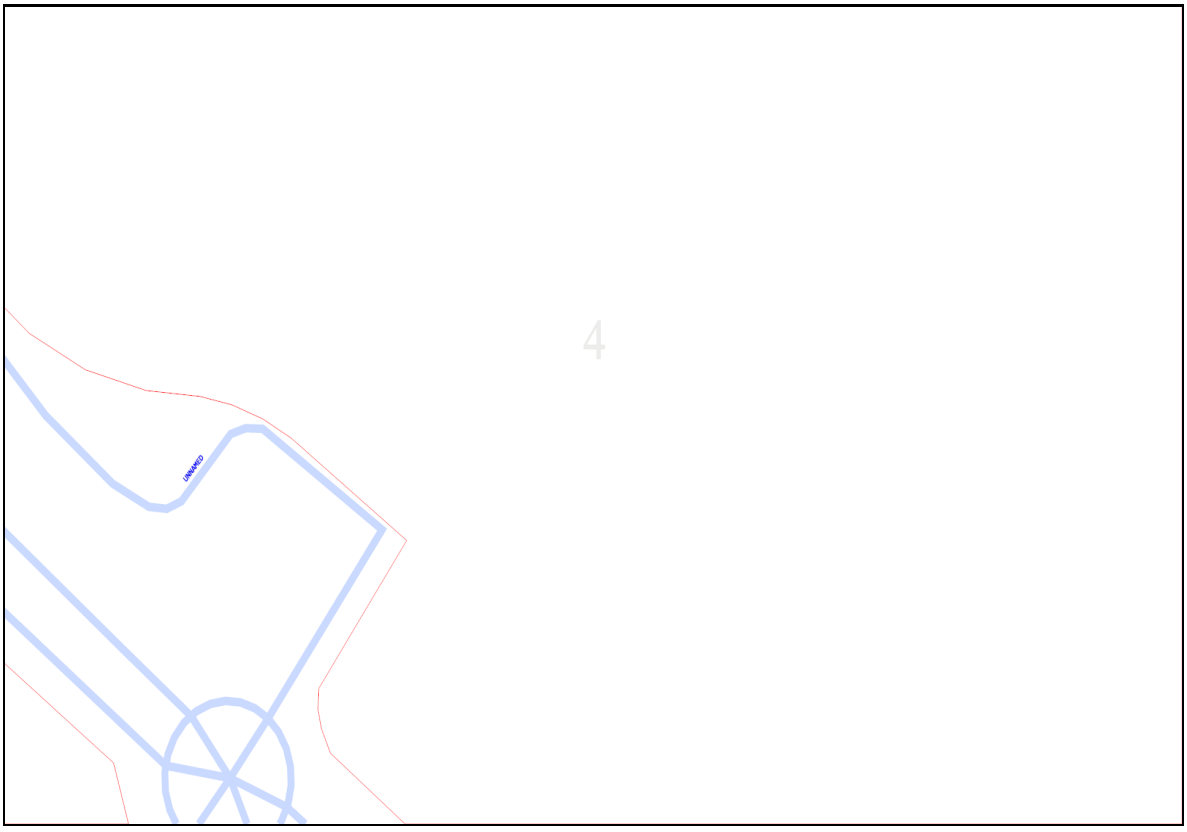
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LEGEND
nbn
34
Parcel and the location
5
Pit with size "5"
2E
Power Pit with size "2E".
Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
Manhole
Pillar
2
PO – T- 25.0m
P40 – 20.0m
5
9
Cable count of trench is 2.
One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart.
One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
2
10.0m
5
9
2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
5
9
Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
5
9
Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
5
9
Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
BROADWAY ST
Road and the street name "Broadway ST"
Scale
0 20 40 60 Meters
1:2000
1 cm equals 20 m


1
GRANSTAND RD

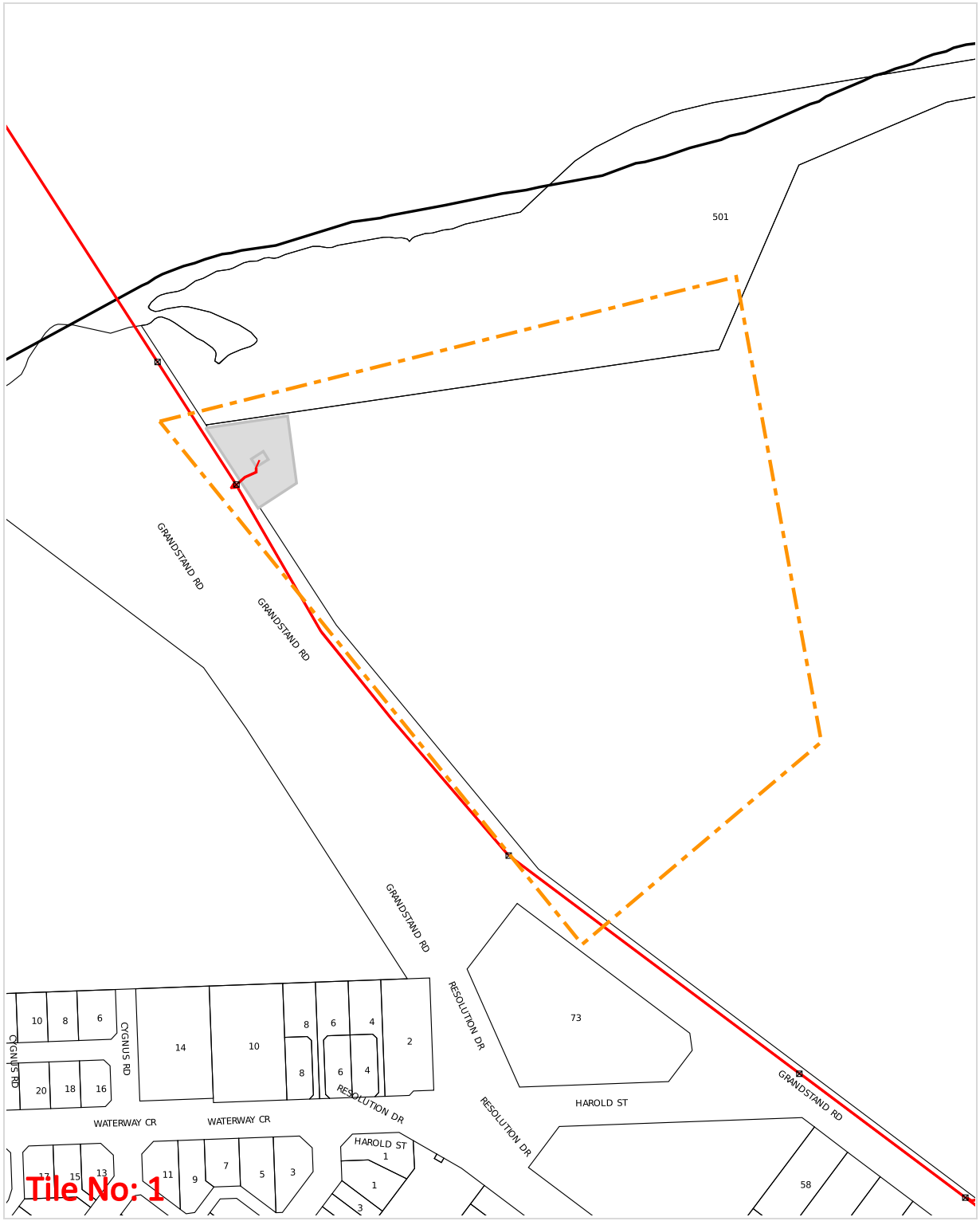

2
GRANGETAND RD






## Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.



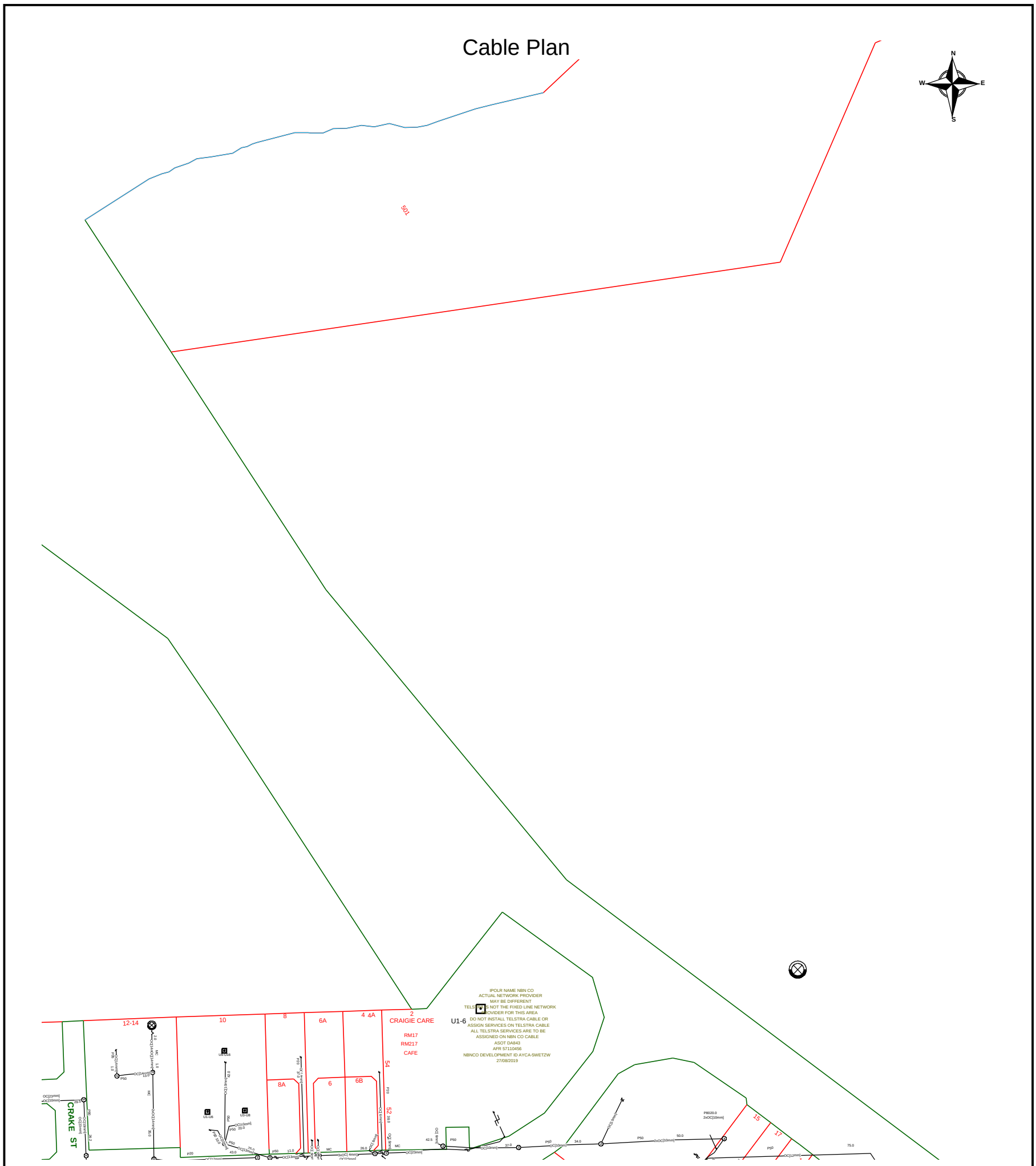

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Sequence Number: 240900413

Date Generated: 21 Jun 2024

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

Plans generated 21 Jun 2024 by Pelicancorp TicketAccess Software | www.pelicancorp.com




| | |
|---|---|
| Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment<br>Ph - 13 22 03<br>Email - Telstra.Plans@team.telstra.com<br>Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries | Sequence Number: 240900417 |
| TELSTRA LIMITED A.C.N. 086 174 781 | CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance. |
| Generated On 21/06/2024 19:05:14 | |

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

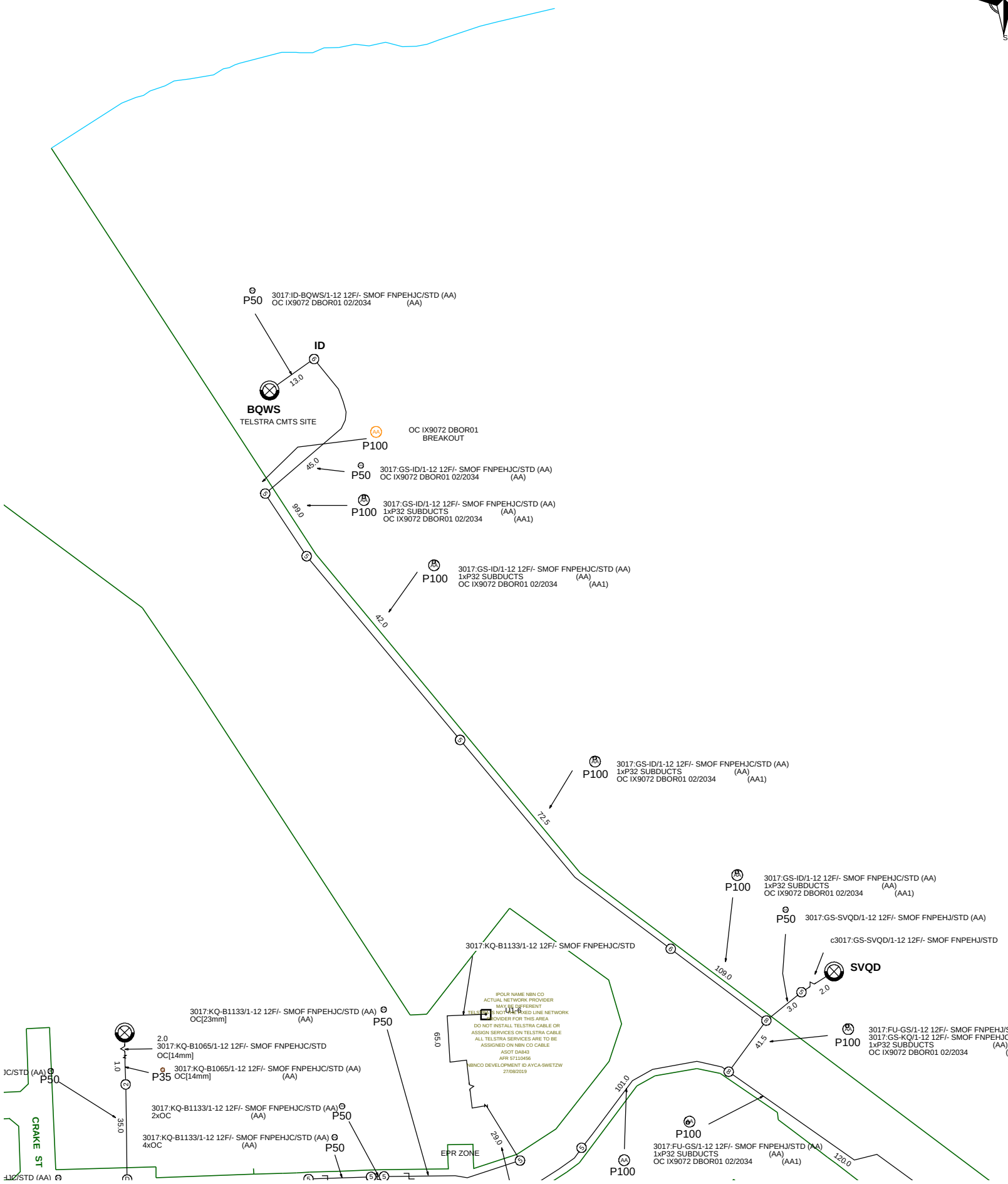
WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

**Page 1 of 2**

# Mains Cable Plan




Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment
Ph - 13 22 03
Email - Telstra.Plans@team.telstra.com
Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 21/06/2024 19:05:16

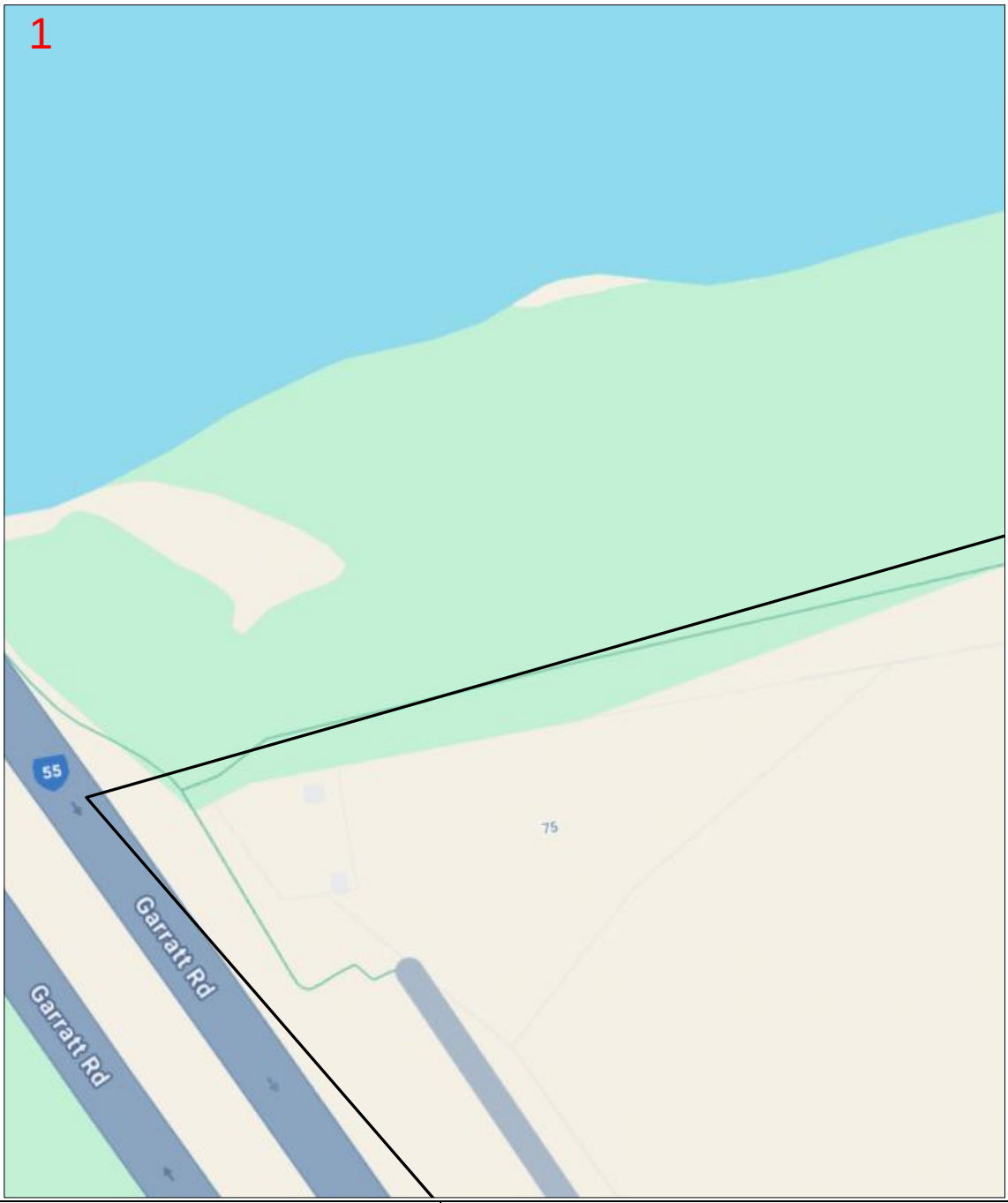
Sequence Number: 240900417

CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
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Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
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Page 2 of 2




**Enquiry Number:** 240900414

**Map Sheet:** 1

**Scale:** 1: 750

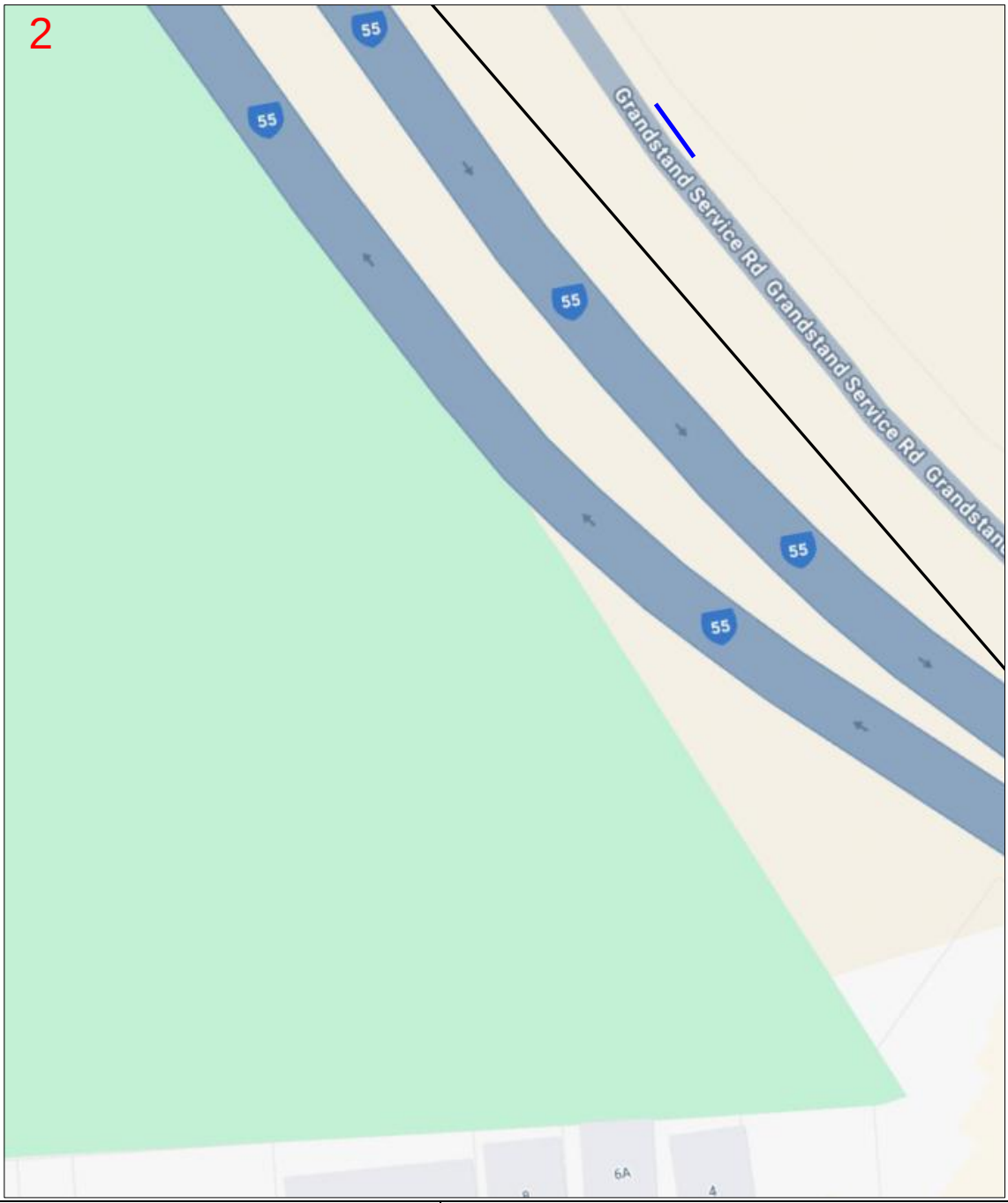
0 0.008km

N

LEGEND

| | |
|---|---|
| BYDA Work Area | |
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240900414

**Map Sheet:** 2

**Scale:** 1: 750

0 0.008km

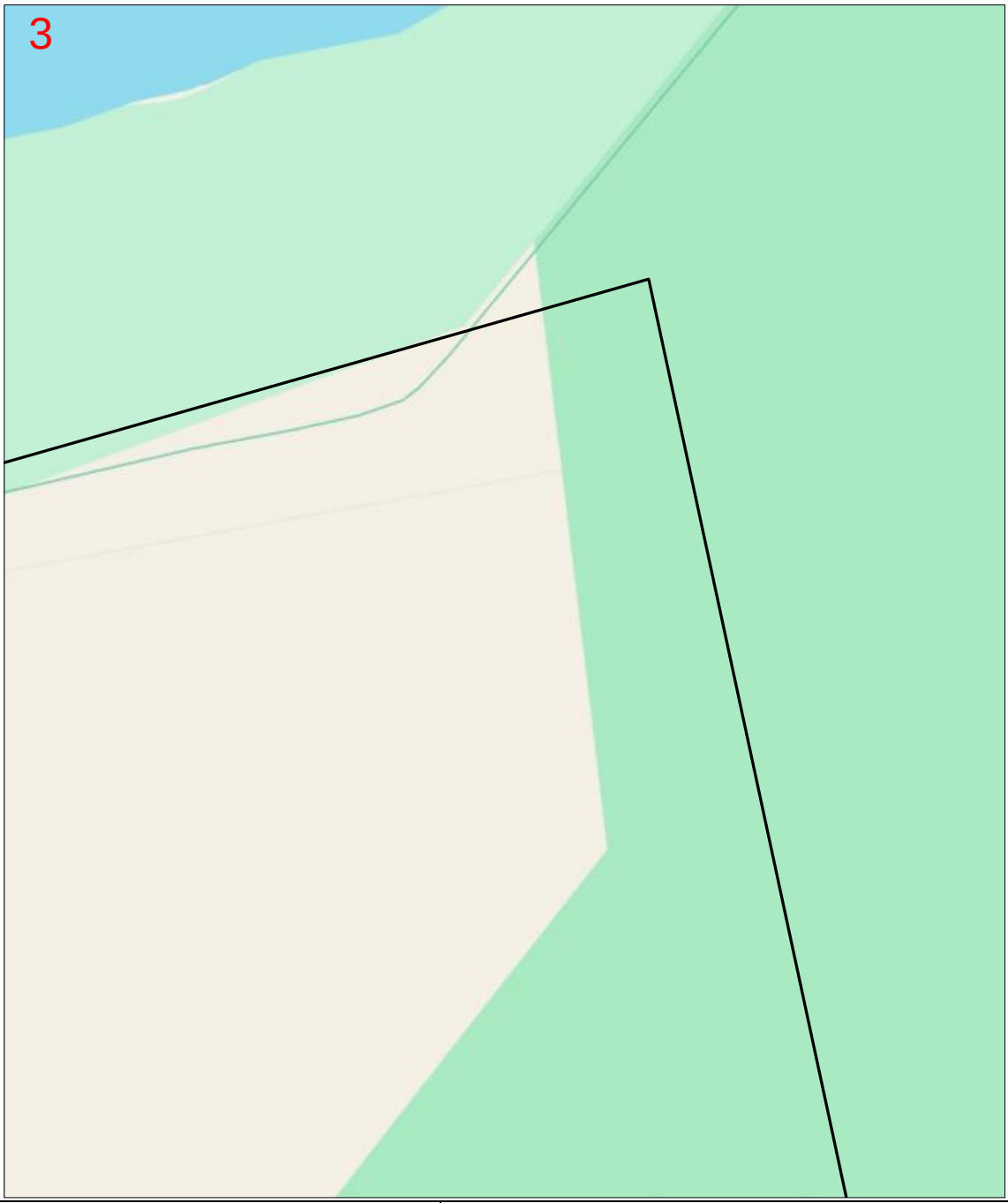
N

**LEGEND**

BYDA Work Area

| | |
|---|---|
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240900414

**Map Sheet:** 3

**Scale:** 1: 750

0 0.008km

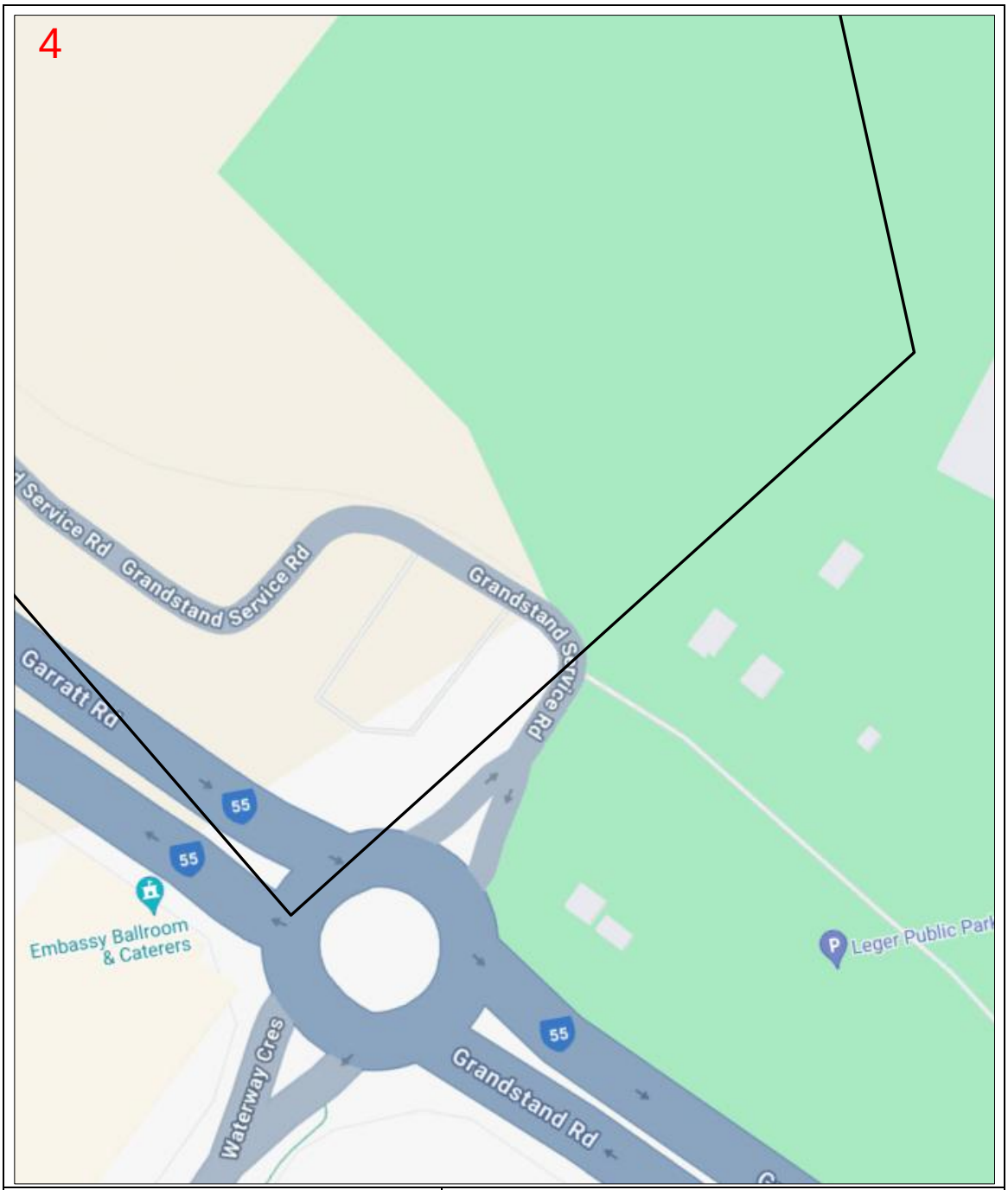
N

LEGEND

BYDA Work Area

| | |
|---|---|
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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**Enquiry Number:** 240900414

**Map Sheet:** 4

**Scale:** 1: 750

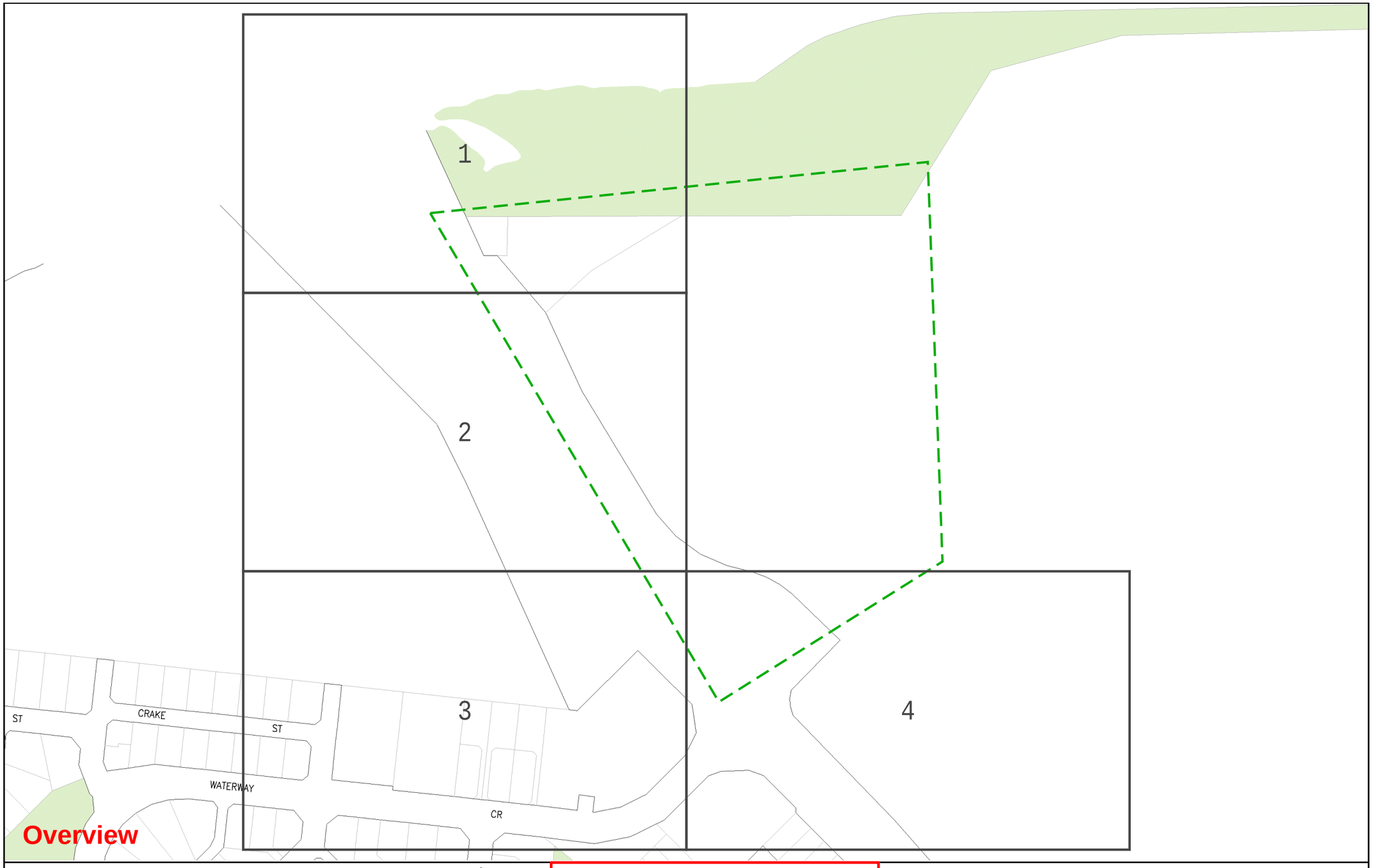
0 0.008km

N

**LEGEND**

| | |
|---|---|
| BYDA Work Area | |
| AAPT/PowerTel Pit | TransACT Pit |
| AAPT/PowerTel Duct | TransACT Duct |
| DDA Pit | SOUL Pattinson Telecoms Pit |
| DDA Duct | SOUL Pattinson Telecoms Duct |
| Agile/Adam Pit | PIPE Networks Pit |
| Agile/Adam Duct | PIPE Networks Duct |

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WATER CORPORATION

Scale: 1:2306
Job No.: 36962214
Sequence No.: 240900418
Print Date: 21 Jun 2024

N

Water

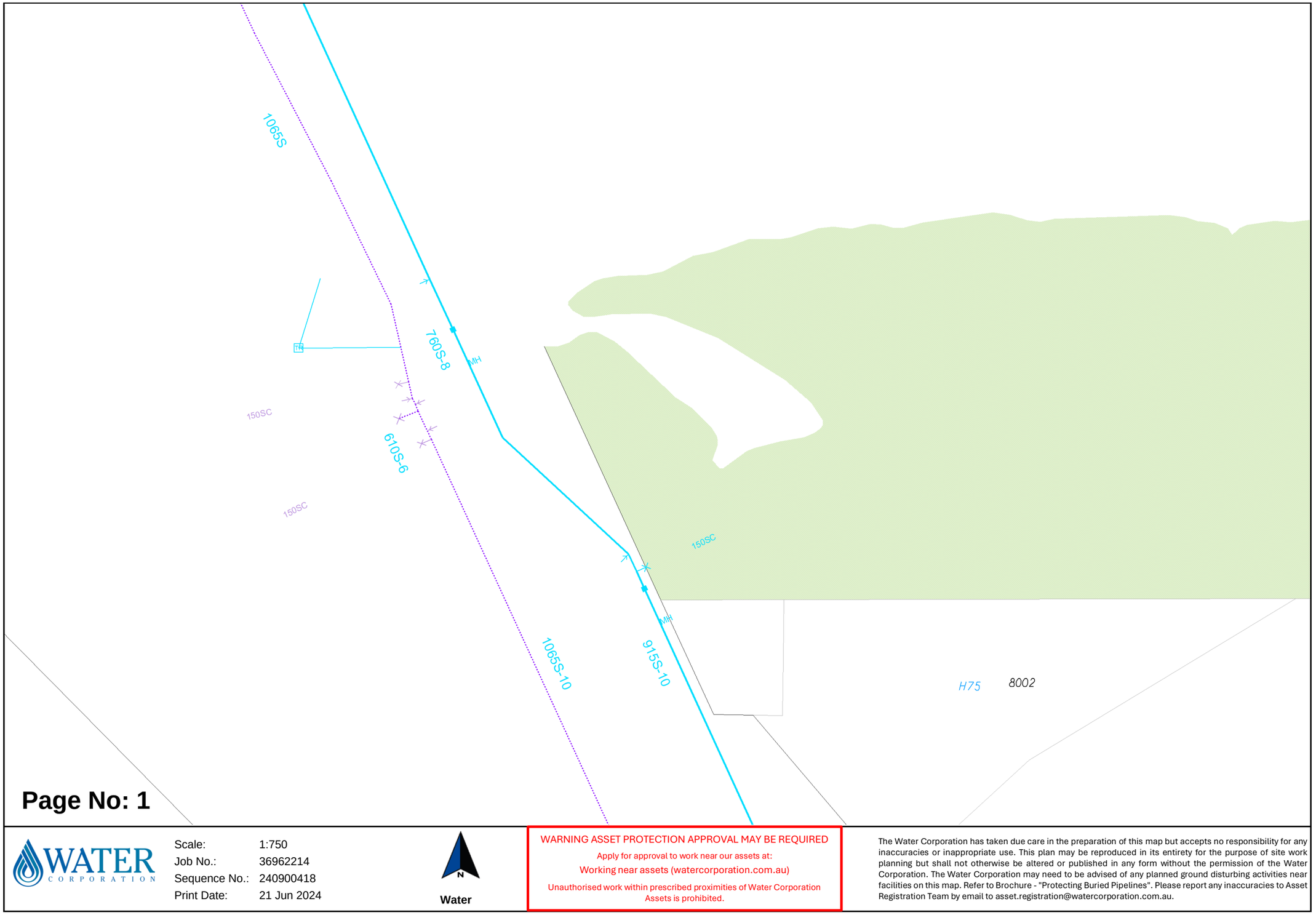
WARNING ASSET PROTECTION APPROVAL MAY BE REQUIRED

Apply for approval to work near our assets at:

Working near assets (watercorporation.com.au)

Unauthorised work within prescribed proximities of Water Corporation Assets is prohibited.

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**Page No: 1**

| | |
|---|---|
| Scale: | 1:750 |
| Job No.: | 36962214 |
| Sequence No.: | 240900418 |
| Print Date: | 21 Jun 2024 |

Water

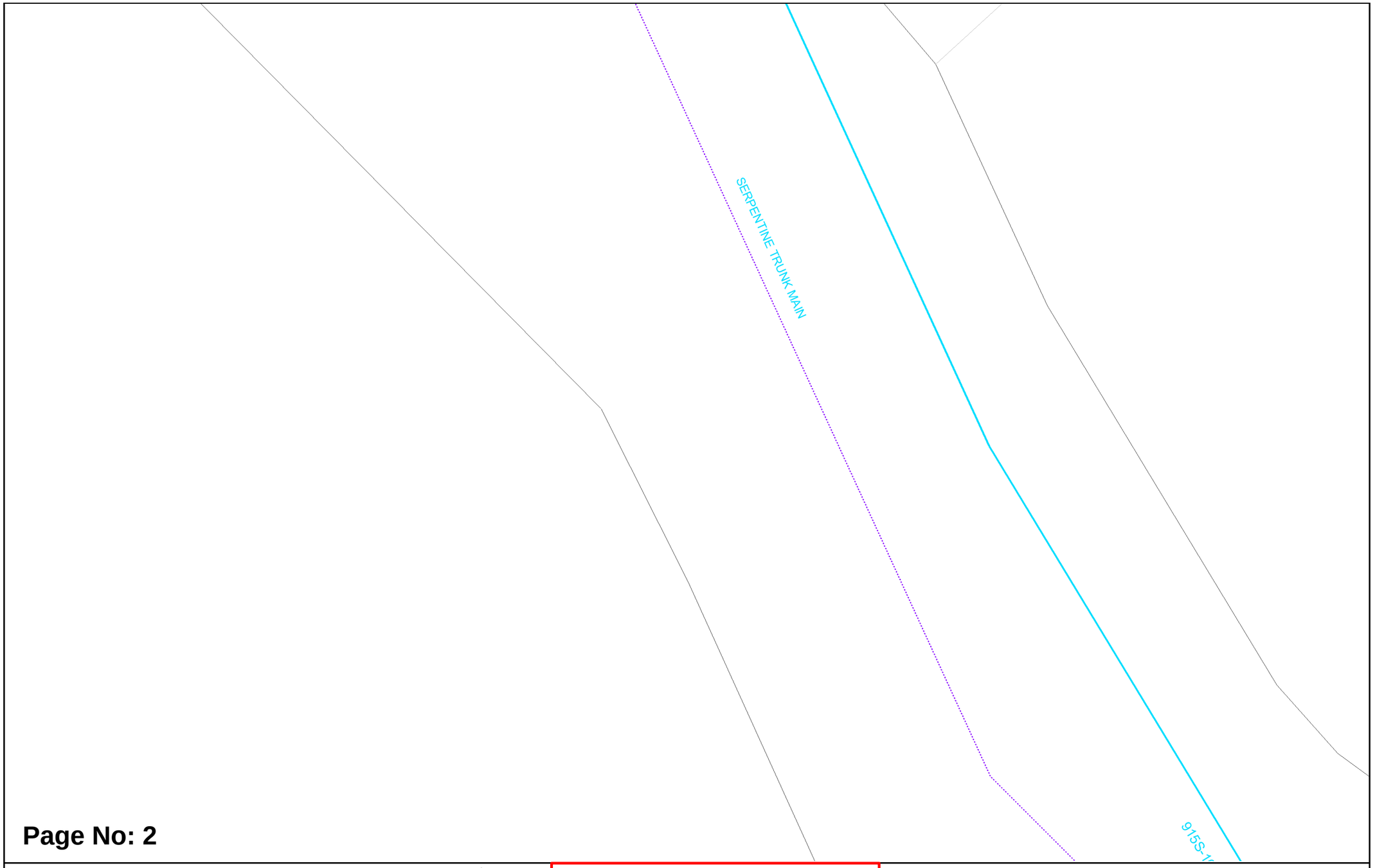
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**Page No: 2**

WATER CORPORATION

Scale: 1:750
Job No.: 36962214
Sequence No.: 240900418
Print Date: 21 Jun 2024

N

Water

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| | |
|---|---|
| Scale: | 1:750 |
| Job No.: | 36962214 |
| Sequence No.: | 240900418 |
| Print Date: | 21 Jun 2024 |

Water

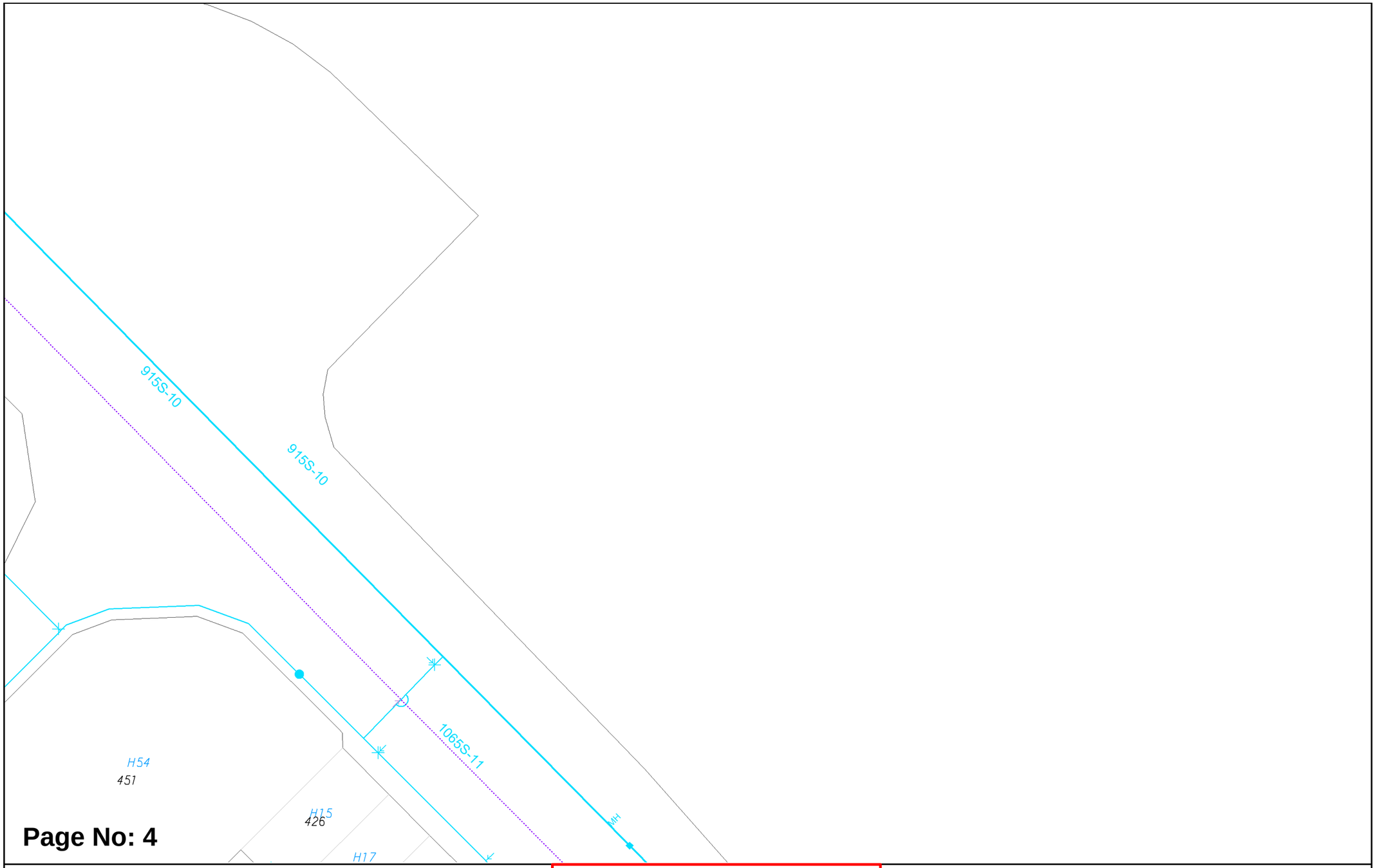
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WATER CORPORATION

Scale: 1:750
Job No.: 36962214
Sequence No.: 240900418
Print Date: 21 Jun 2024

N

Water

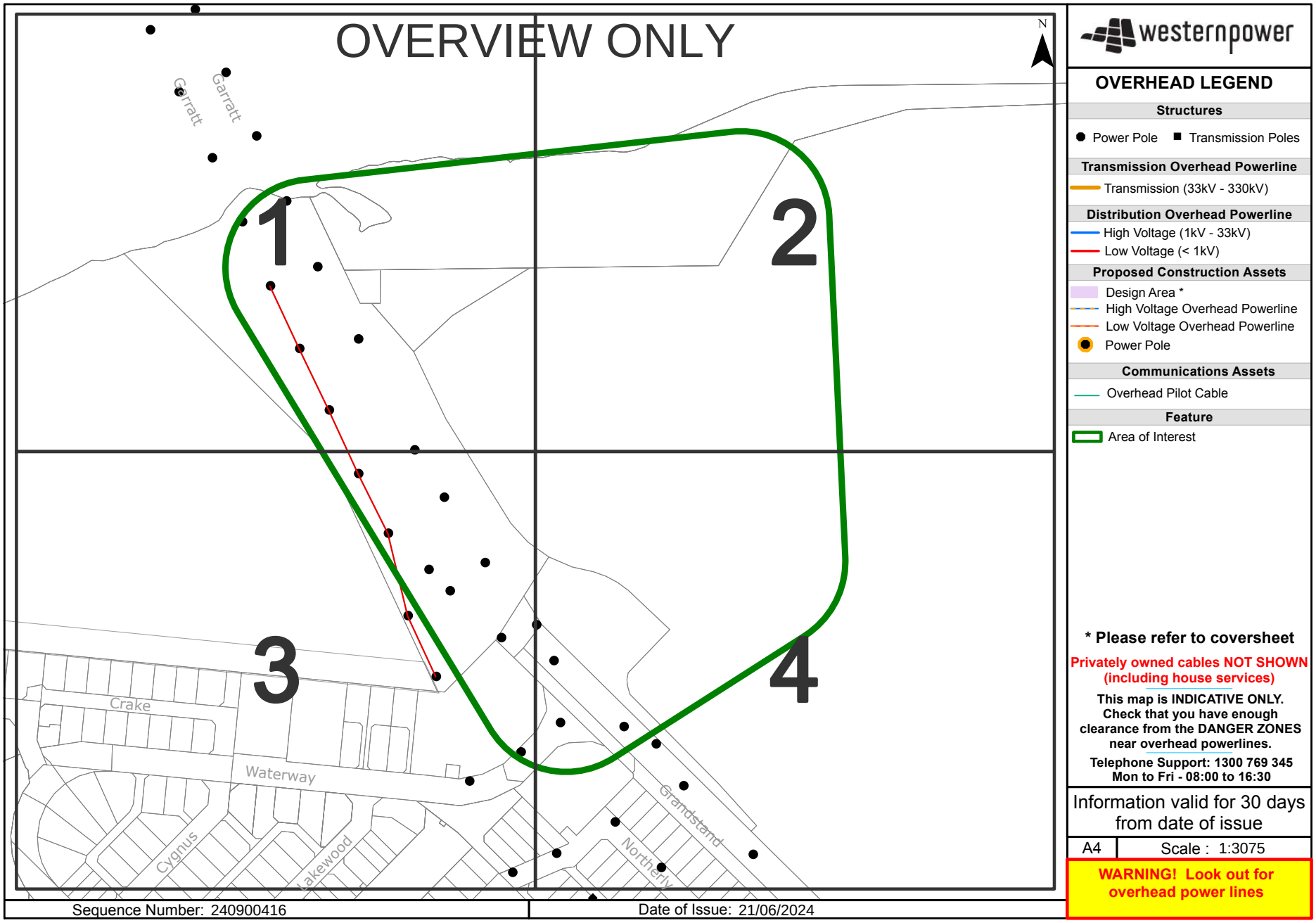
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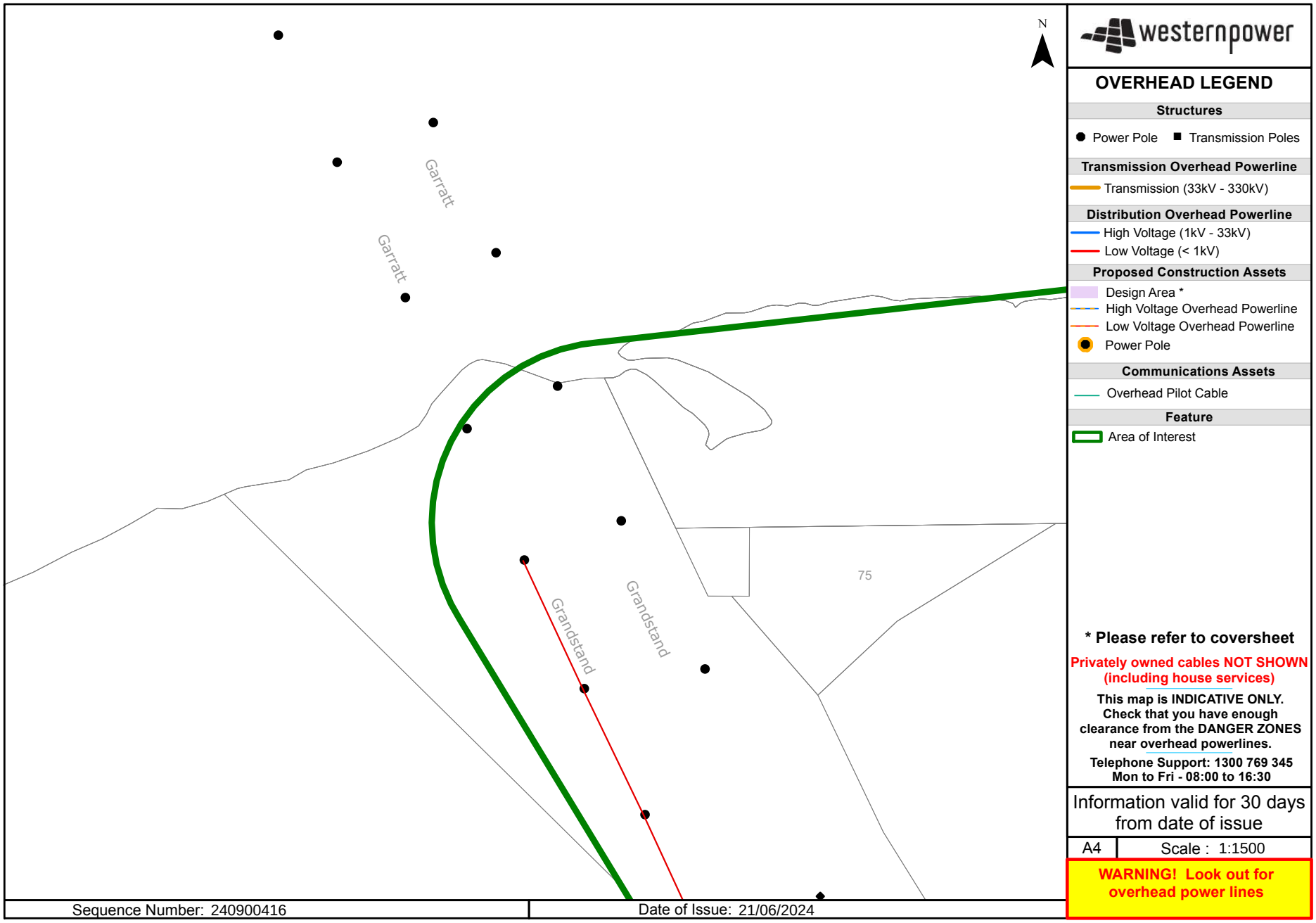
Apply for approval to work near our assets at:

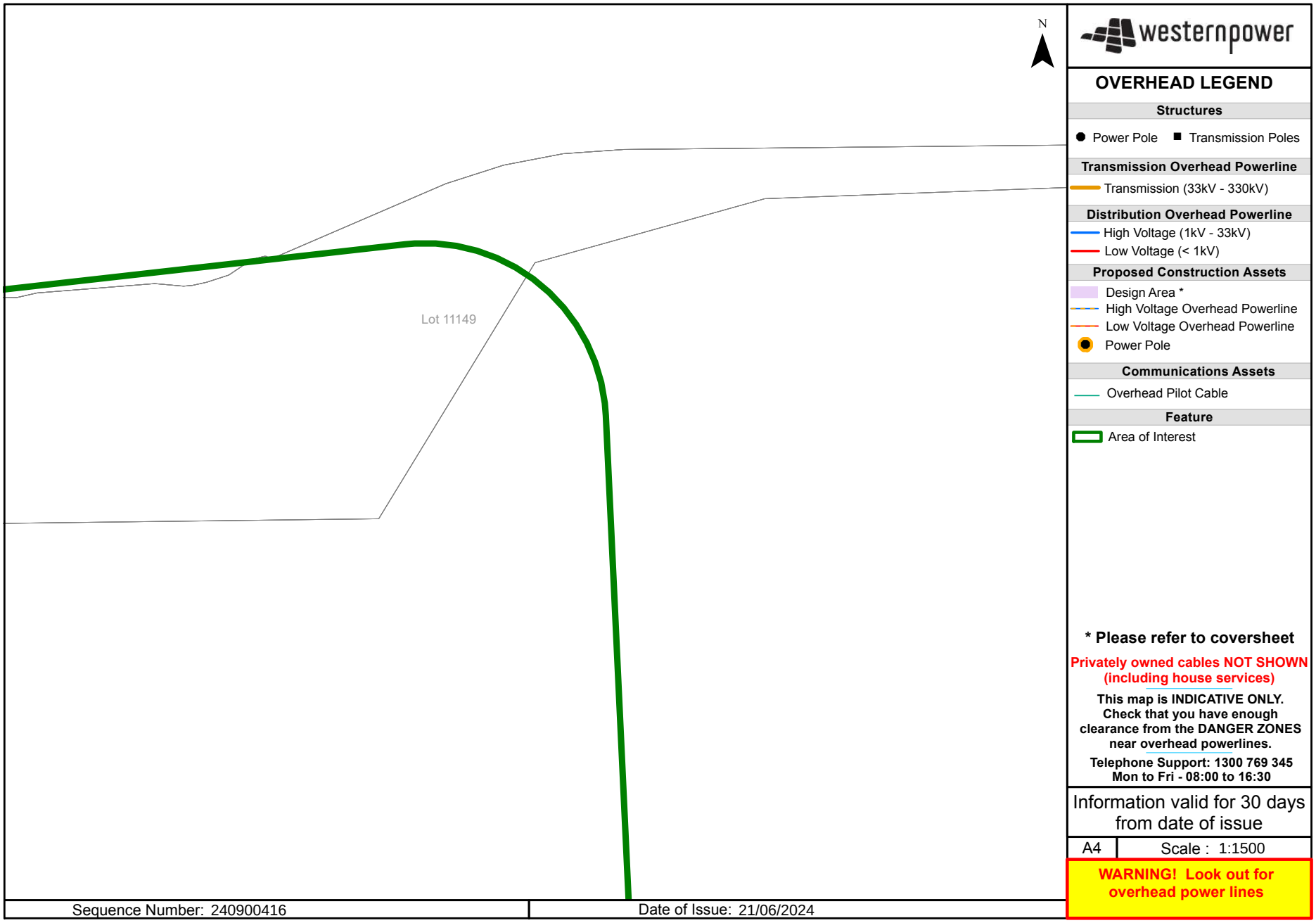
Working near assets (watercorporation.com.au)

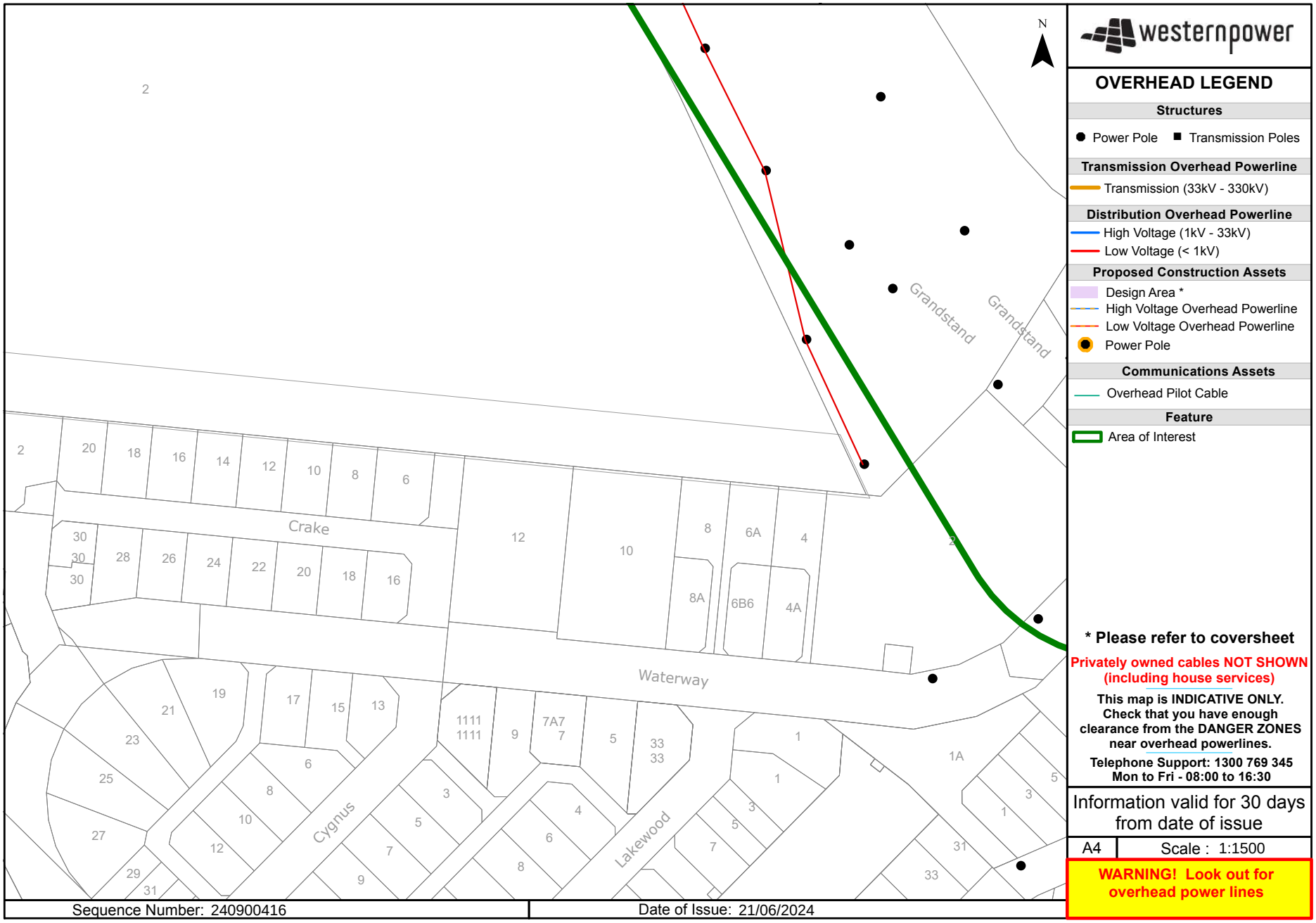
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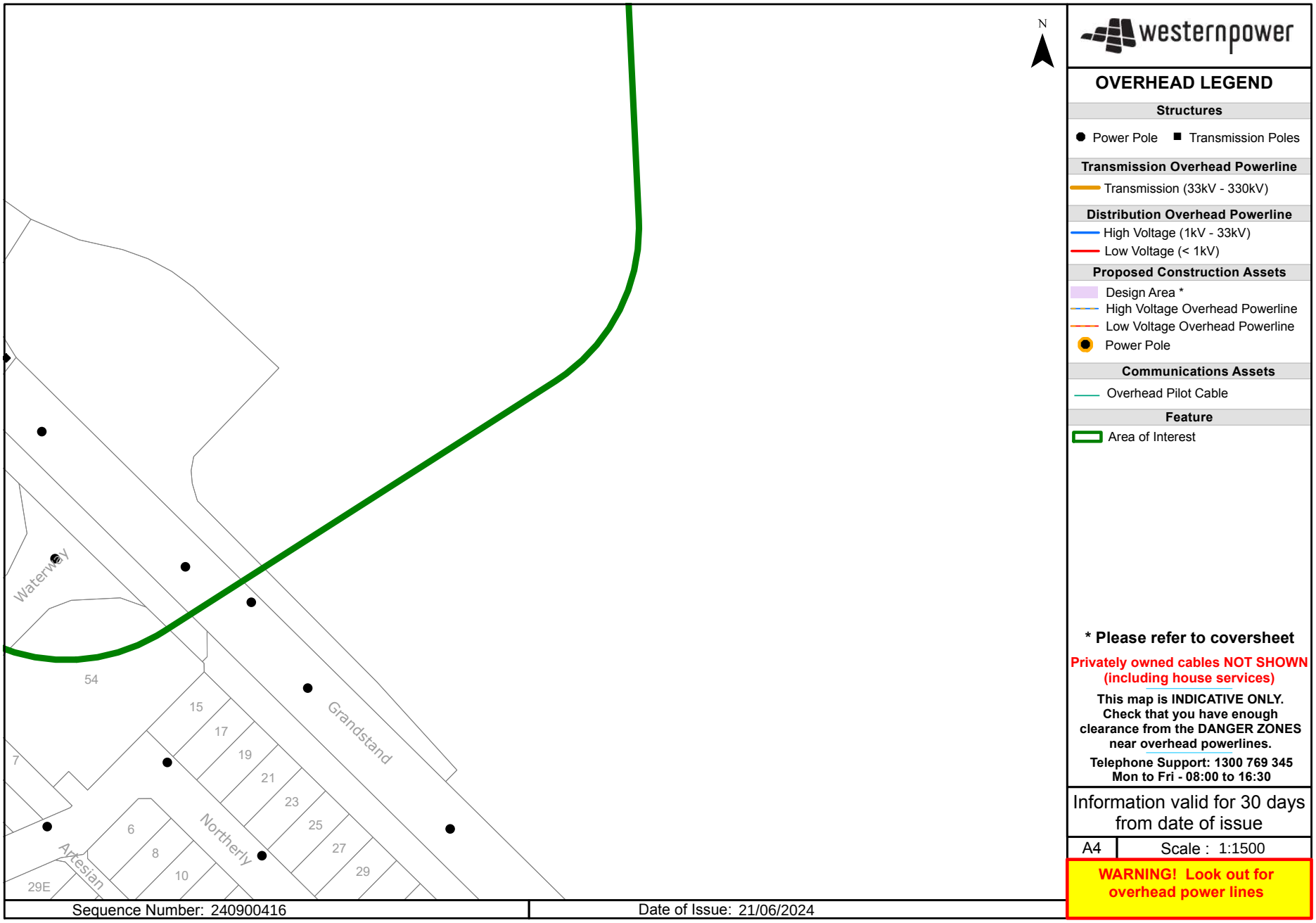
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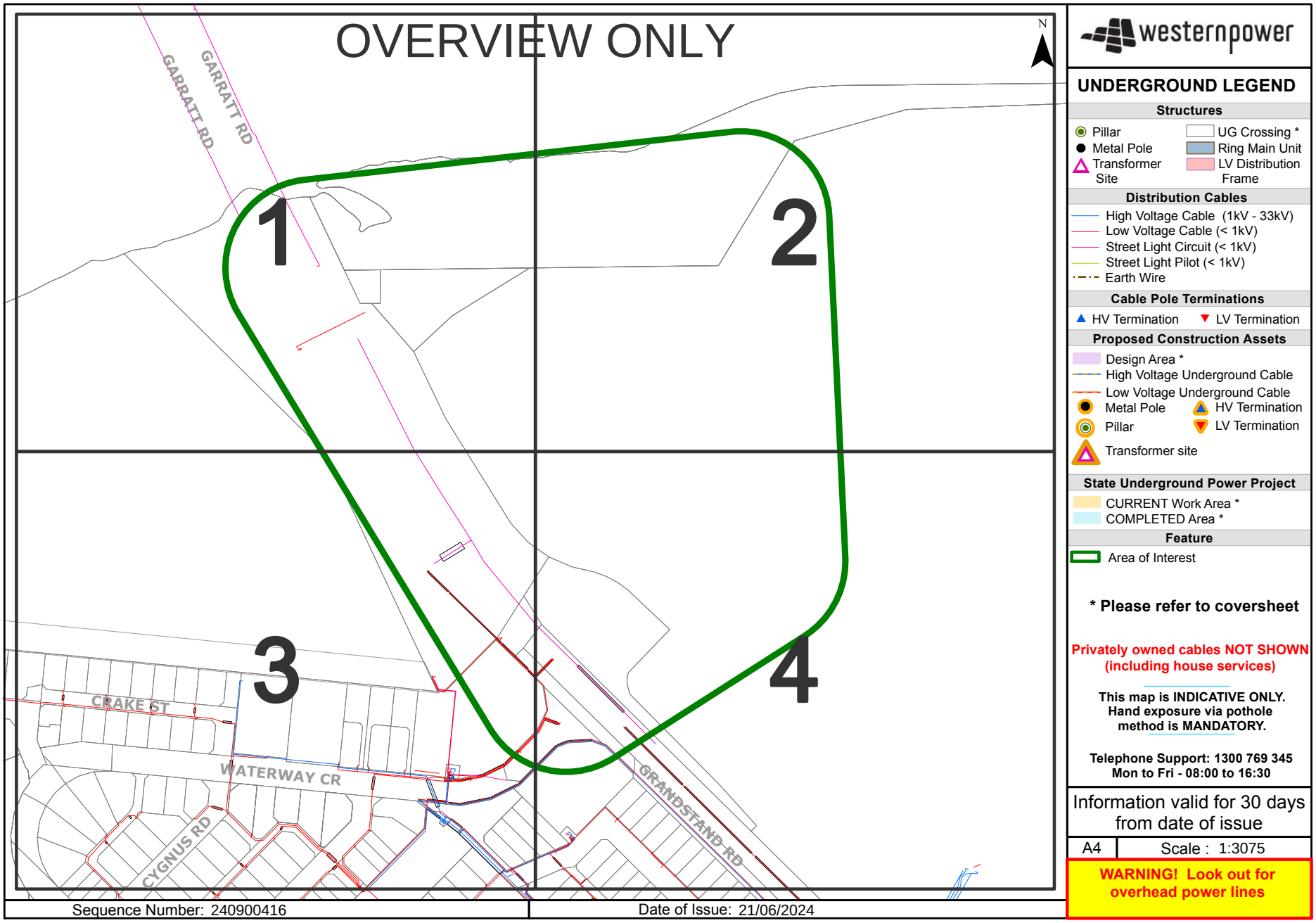

OVERVIEW ONLY
N
Garratt
Garratt
1
2
3
4
Crake
Waterway
Cygnus
Lakewood
Grandstand
Northerly
Sequence Number: 240900416
Date of Issue: 21/06/2024
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
High Voltage (1kV - 33kV)
Low Voltage (< 1kV)
Proposed Construction Assets
Design Area *
High Voltage Overhead Powerline
Low Voltage Overhead Powerline
Power Pole
Communications Assets
Overhead Pilot Cable
Feature
Area of Interest
* Please refer to coversheet
Privately owned cables NOT SHOWN (including house services)
This map is INDICATIVE ONLY. Check that you have enough clearance from the DANGER ZONES near overhead powerlines.
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30
Information valid for 30 days from date of issue
A4
Scale : 1:3075
WARNING! Look out for overhead power lines

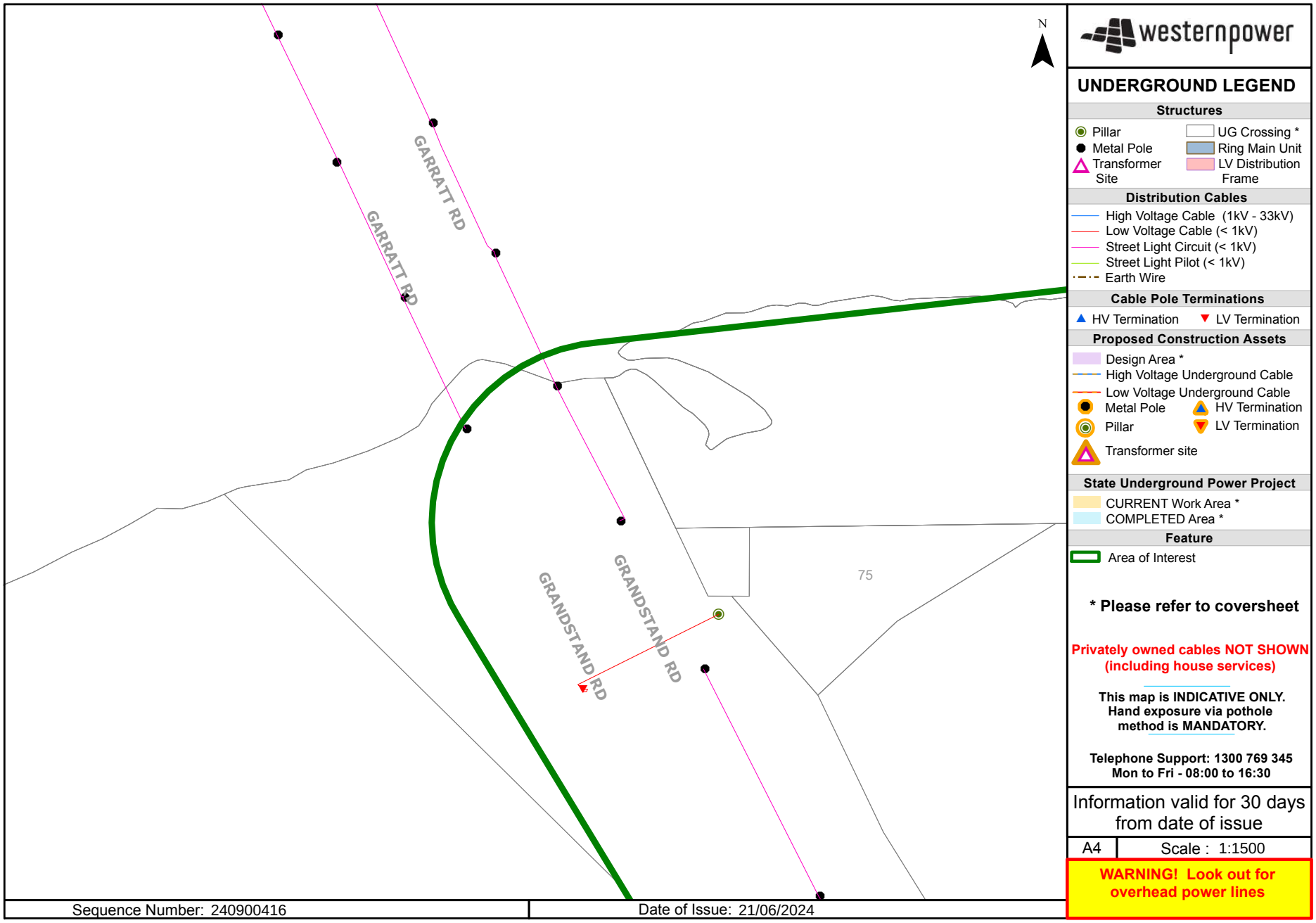

N
Garratt
Garratt
Grandstand
Grandstand
75
westernpower
OVERHEAD LEGEND
Structures
Power Pole
Transmission Poles
Transmission Overhead Powerline
Transmission (33kV - 330kV)
Distribution Overhead Powerline
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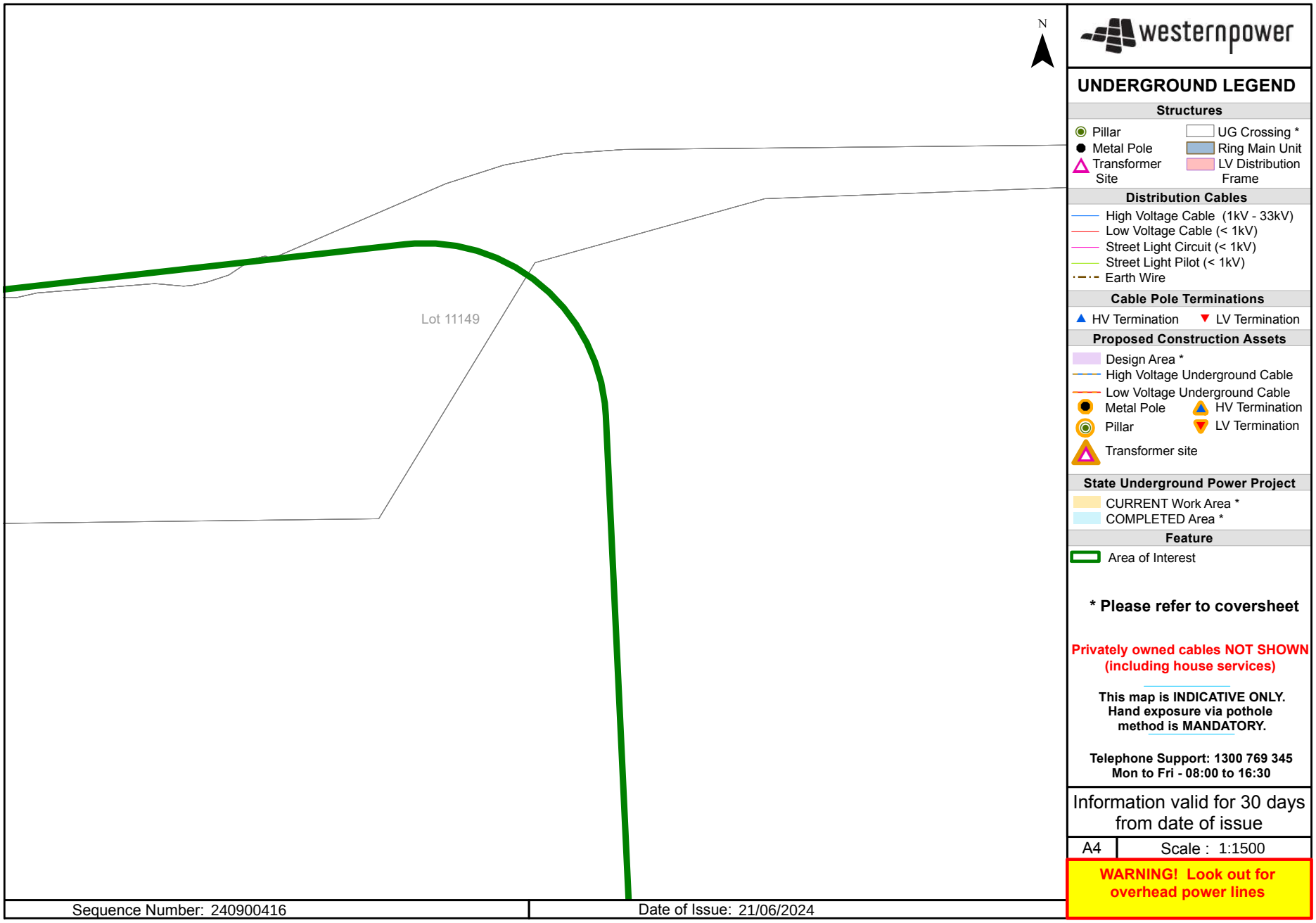

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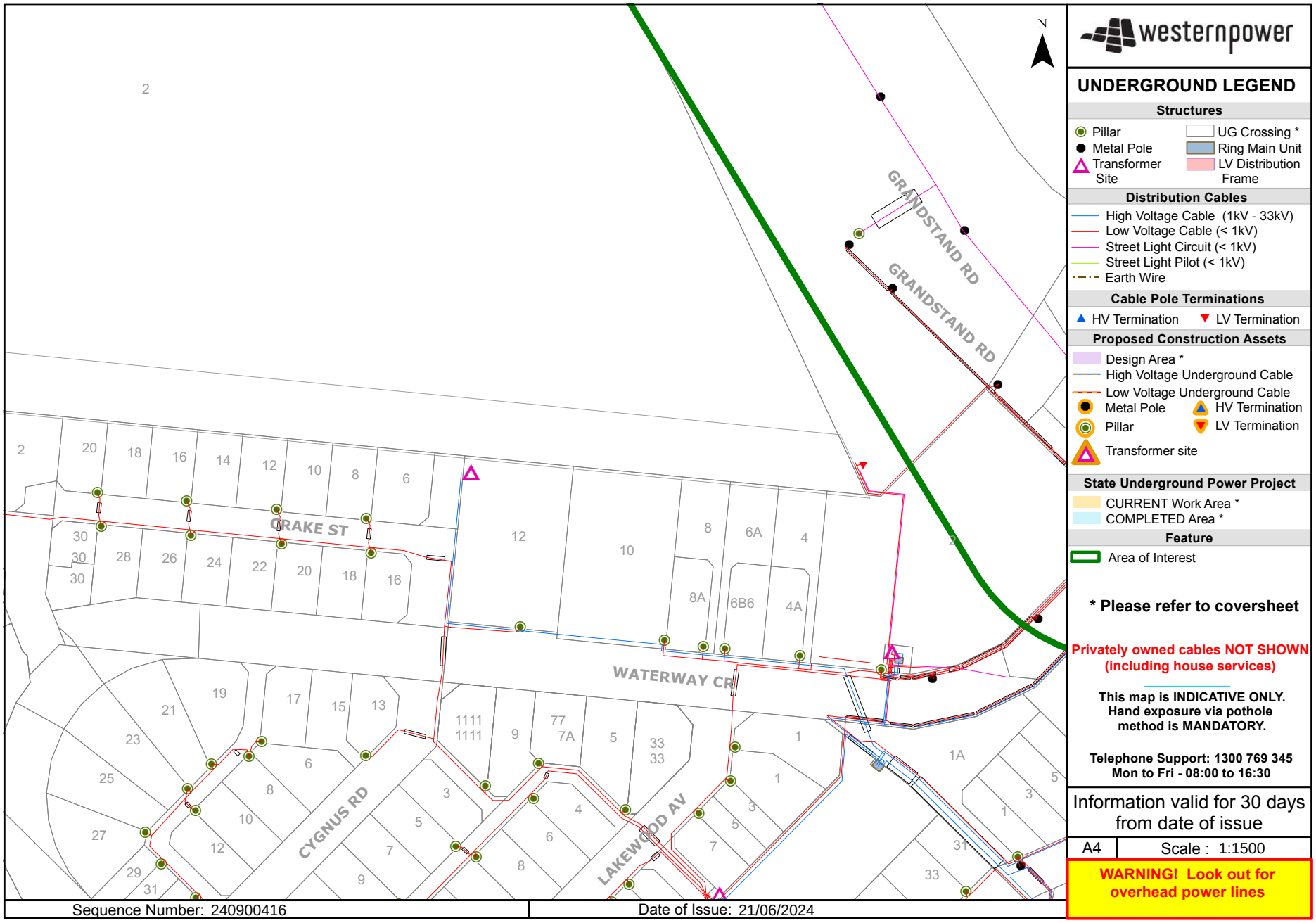

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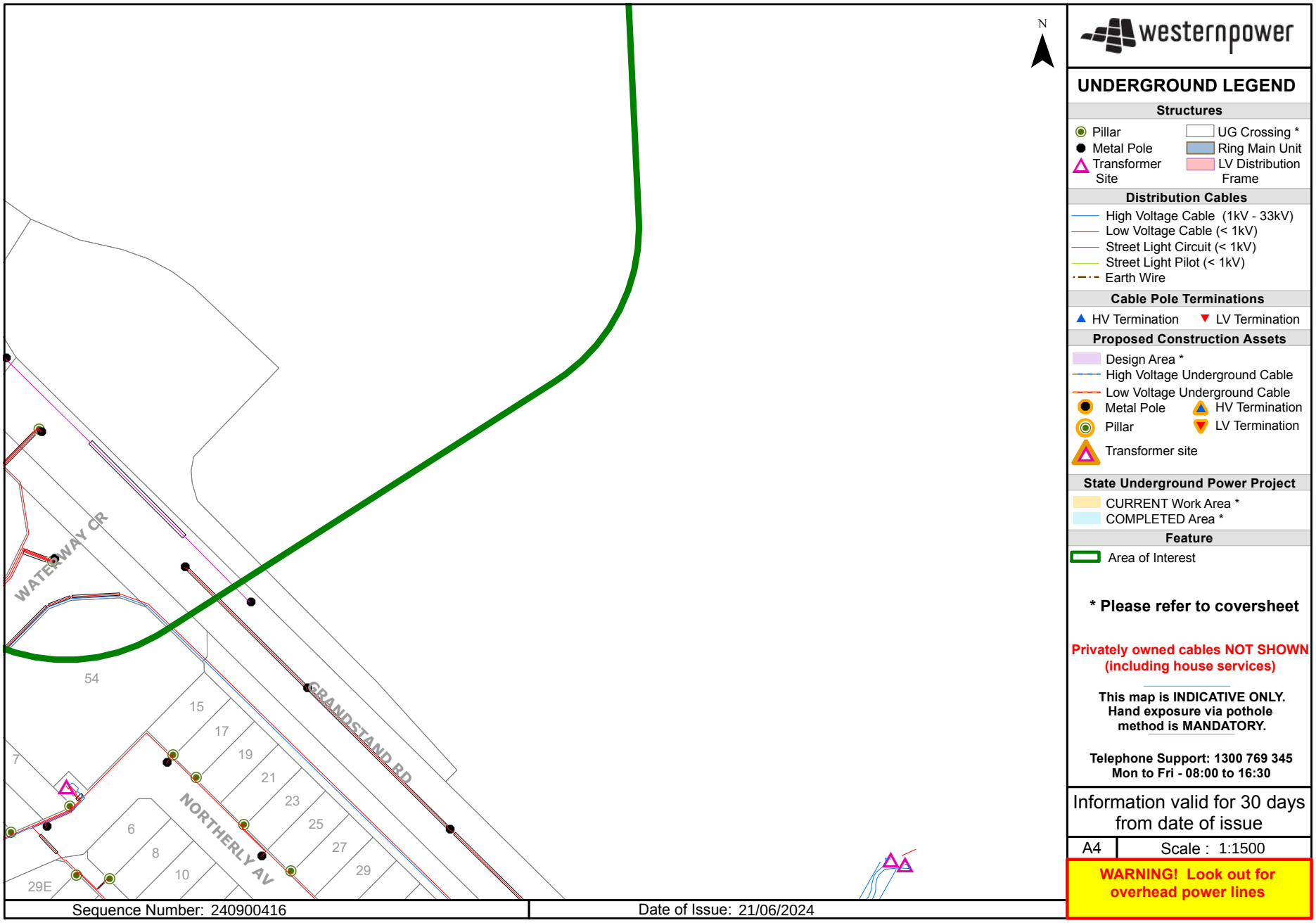

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CYGNUS RD
GRANDSTAND RD
Sequence Number: 240900416
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UNDERGROUND LEGEND
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Transformer Site
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Cable Pole Terminations
HV Termination
LV Termination
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HV Termination
LV Termination
State Underground Power Project
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Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
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Street Light Circuit (< 1kV)
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Cable Pole Terminations
HV Termination
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GRANDSTAND RD
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LAKEWOOD AV
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Pillar
Metal Pole
Transformer Site
UG Crossing *
Ring Main Unit
LV Distribution Frame
Distribution Cables
High Voltage Cable (1kV - 33kV)
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Sequence Number: 240900416
Date of Issue: 21/06/2024


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Sequence Number: 240900416
Date of Issue: 21/06/2024
westernpower
UNDERGROUND LEGEND
Structures
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State Underground Power Project
CURRENT Work Area *
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WARNING! Look out for overhead power lines

# ATTACHMENT 8

Traffic Impact Assessment

**Perth Racing**

# Ascot Racecourse Local Structure Plan and Scheme Amendment

## Transport Impact Assessment

May 2024

Project Code: 07575

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Perth
WA 6000
Australia
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## Version Control and Approval

| Version | Date | Main Contributor | Issued by | Approved by |
|---|---|---|---|---|
| A - DRAFT | 04 April 2024 | Lucy Briggs / Rodney Ding | TM | TM |
| B - FINAL | 08 May 2024 | Rodney Ding | TM | TM |

**Prepared for:**

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6956

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# 1 Introduction

## 1.1 Background

On behalf of Perth Racing (Applicant), Davison Advisory Services commissioned PJA Australia Pty Ltd to prepare this Transport Impact Assessment (TIA) for the proposed Local Structure Plan and the Scheme Amendment for the Applicant's landholding, encompassing Ascot Racecourse and surrounding land in the City of Belmont, Western Australia.

This assessment has been prepared in accordance with the Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines Volume 2 – Planning Schemes, Structure Plans & Activity Centre Plans (2016)*. This is the most appropriate level of TIA for a proposed Local Structure Plan and Scheme Amendment submission.

## 1.2 Summary of TIA

In accordance with WAPC Guidelines for Transport Impact Assessments, this report sets out the details of the proposed Local Structure Plan (LSP) and Scheme Amendment in the context of the movement network, assesses the site in terms of connectivity by active and public transport, parking and vehicular access. The TIA also reviews the future traffic generation of the LSP and any potential impacts that may need to be mitigated.

Under the WAPC Guidelines for TIAs, a LSP and/or Scheme Amendment requires a 'broad brush' assessment of the impacts of the development, given structure planning is for a larger area. This report sets recommendations for more detailed traffic analysis at later stages of the planning process, subject to the LSP and Scheme Amendment being ultimately supported.

This TIA also refers to the developing City of Belmont's Golden Gateway LSP (GGLSP) which currently encompasses part of the land under the ownership of the Applicant, which has been a catalyst to complete this LSP and Scheme Amendment to guide development in this area in a considered way. In pre-submission discussions with the City of Belmont's strategic planners, the support in principle for the Applicant to undertake a LSP has been provided and it is understood that through a later iteration of the concurrent Golden Gateway LSP, the City of Belmont will look to remove the Applicant's landholdings from the GGLSP.

## 1.3 Regional and Local Policy Context

### 1.3.1 Metropolitan Region Scheme (MRS)

The Site area is currently zoned for the most part as 'Private Recreation' for the area in use as Ascot Racecourse, with the surrounding land within the site boundary zoned as 'Urban'. Some land surrounding the site boundary to the north and west is also zoned as 'Parks and Recreation-Restricted Public Access' and the Great Eastern Highway is zoned as a 'Primary Regional Road'. **Figure 1-1** illustrates the site area's MRS zoning in map 16.

**Figure 1-1: MRS Zone Maps 16**




*Source: Metropolitan Region Scheme*

### 1.3.2 City of Belmont Local Planning Scheme No.15

Under the provisions of *the City of Belmont Local Planning Scheme No.15* (LPS No.15) the site area is for the most part zoned as 'Place of Public Assembly' comprising the area in use as Ascot Racecourse, in the southern extent of the site a small parcel is zoned as 'Mixed Use'. The area surrounding the site boundary largely comprises of 'Mixed Use', 'Mixed Business' and 'Residential and Stables' zoning, the latter of which is bespoke to the Ascot Racecourse area and is intended "to provide for compatible and environmentally responsible use of land in proximity" to the Racecourse and Swan River to the north-west.

Part 4 of LPS No.15 sets out the general development requirements for each key zone, inclusive of the minimum car and bicycle parking requirements for largely non-residential land uses (Table 2 and Table 3), residential parking requirements are set out separately. These parking requirements will be considered as the LSP and Scheme Amendment progresses.

**Figure 1-2** illustrates the LSP area zoning in the context of the site area.

**Figure 1-2: City of Belmont's Local Planning Scheme 15**




*Source: Local Planning Scheme 15, Local Zoning, City of Belmont*

### 1.3.3 City of Belmont's Redcliffe Station Precinct Activity Centre Plan & DA6

The Redcliffe Station Precinct Activity Centre Plan (RSPACP) is an extension of the Development Area 6 (DA6) Vision Plan and Implementation Strategy adopted by the City of Belmont in 2014. As set out on Council's website:

*"Development Area 6 (DA6) is DA6) is a redevelopment area bound by Great Eastern Highway, Coolgardie Avenue, Redcliffe Road, Fauntleroy Avenue and Tonkin Highway, as well as Perth Airport's Airport West Precinct. This area can be easily distinguished into two main areas:*

- *Perth Airport's Airport West Precinct*
- *A portion of the Redcliffe neighbourhood between Perth Airport and Great Eastern Highway.*

*Perth Airport Pty Ltd is responsible for planning work for its Airport West Precinct through the preparation and review of the Perth Airport Masterplan.*

*For the remainder of the DA6 Precinct in Redcliffe, in December 2022, the WAPC wrote to advise landowners about the initiation of Improvement Plan 45 – Redcliffe Station Precinct. The Improvement Plan itself does not change the development potential of land at this point in time. Initiating the Improvement Plan is the first step of the planning pathway to establish the appropriate development potential and planning standards for future development in the precinct. The Improvement Plan sets out the broad objectives for the redevelopment of the area, after which an Improvement Scheme is prepared. The Improvement Scheme will set out the specific standards for future development.*

*The DPLH has been tasked to prepare the Improvement Scheme and has advised that the City will continue to play an important role in the development and delivery of this planning framework for the precinct. The Department is currently making arrangements to progress an Improvement Scheme for the Development Area 6 Precinct, which will take several months to prepare. Once drafted, there will be a minimum 90-day consultation period. The Department will subsequently review submissions and assess if any modifications to the Improvement Scheme are necessary, prior to making a recommendation to the Minister for Planning".*

The City of Belmont's Vision Plan for DA6 area is shown in Figure 1-3.

**Figure 1-3: DA6 Vision Plan**




*Source: City of Belmont*

### 1.3.4 Recent Movement Network Upgrades in Ascot

The City of Belmont confirmed the following recent movement network upgrades in the vicinity of the subject site over the last approximate three years:

a) Network changes due to the Tonkin Gap Project: Motorists using Garratt Road bridge to access Great Eastern Highway and Guildford Road rather than the previous Tonkin Highway route increased and the City observed increased rat running over Stanton Road bridge, Abernethy Road (entire route), Hardey Road and Kooyong Road.

b) Redcliffe Train station opened 9 October 2022. This enabled bus network changes including new routes and frequency every 10 minutes. New super-buses will be established from the train station to the Perth CBD via Great Eastern Highway.

c) A 24/7 Woolworths opened near DFO late 2023.

d) Marina Drive residential development is complete and operational.

e) Belmont is slowing in rate of redeveloping the blocks of land from single site dwellings to multi-dwellings.

f) The Springs development area near Rowe Avenue & Riversdale Road, Rivervale: Increase in residential development from The Springs development. City is planning to restrict one car bay per unit, allowing all other on-street bays to be for visitors and people visiting the commercial shops and local businesses. The City has installed 'P' signs which have encouraged Fly-in/Fly-out (FIFO) workers and ALL DAY motorists heading to the Perth CBD. The City has commenced a parking strategy to review the parking. No paid parking will be involved.

Among the aforementioned projects, the Tonkin Gap project and the Marina Drive residential development are expected to directly impact the Ascot LSP area. Specifically, the Marina Drive development serves as an access point to/from Resolution Drive, via the western arm of the existing roundabout. Meanwhile, the Tonkin Gap project's construction diversions were routed via Garratt Road and subsequently Grandstand Road. However, with the recent completion of new traffic counts in 2024 as part of this Ascot LSP, both aforementioned projects (now complete) have been incorporated into the updated traffic counts, providing a basis for assessing the network's suitability and functionality.

# 2 Existing Situation

## 2.1 Existing Site Context and Land Uses

The Site is located in the Ascot suburb of Perth, immediately south of the Swan River, bound to the south-west by Grandstand Road (State Road 55) and south-east/east by Resolution Drive and largely residential land uses, with some stables.

As the site is already well established as Ascot Racecourse, vehicular access can already be achieved from several points along Grandstand Road and Matheson Road, via Raconteur Drive (from Grandstand Road) and further minor accesses via the residential streets to the south-east of the site such as Hardey Road (north), Carbine Street, Leake Street and Ascot Place. The location of the Site is illustrated in **Figure 2-1**.

**Figure 2-1: Site Location**




*Source Mapping: NearMap 2024*

## 2.2 Existing Road Network

The Site is located north-east of Grandstand Road and north-west of Matheson Road and Resolution Drive. Each carriageway abutting the site boundary is within the care and control of the City of Belmont, though the extent of Matheson Road and Raconteur Drive that sits within the site boundary is under the ownership of the Applicant.

**Figure 2-2** shows the layout and classification of the roads surrounding the site, including the primary road network. Grandstand Road is classified under the Main Roads WA Road Hierarchy as a Distributor A, though it is worth noting that further north, the Garratt Road Bridge is classified as a Primary Distributor. This will be due to the management of the bridge sitting with Main Roads rather than the Local Government. Grandstand Road is a dual carriageway road, each side typically measuring 7.0m to 7.8m wide. No on-road cycle lane facilities are provided. A single continuous shared use path along the north-eastern side of Grandstand Road exists, with intermittent (not all continuous) provision on the south-western side. For large portions, the footpaths are separated from the carriageway by a landscaped kerbed area or colour-contrasted paving to provide separation from the road for a more pleasant walking/riding experience.

Raconteur Drive diverts east from Grandstand Road, as a one-way single-lane carriageway providing access to Matheson Road and an existing car park for Ascot Racecourse (horse float car park). Again, there are no on-road cycle lane facilities but a pedestrian footpath exists on the northern side of the carriageway connecting to Grandstand Road and another pedestrian path exists along Matheson Road (southern side) from east of Carbine Street all the way to Moreing Street. There is also a horse path along the northern side of Matheson Road that extends from the racecourse in an easterly direction. Beyond the site boundary, Matheson Road is classified as an Access Road under the Mains Road WA Road Hierarchy and no pedestrian or cycle infrastructure is noted on this route.

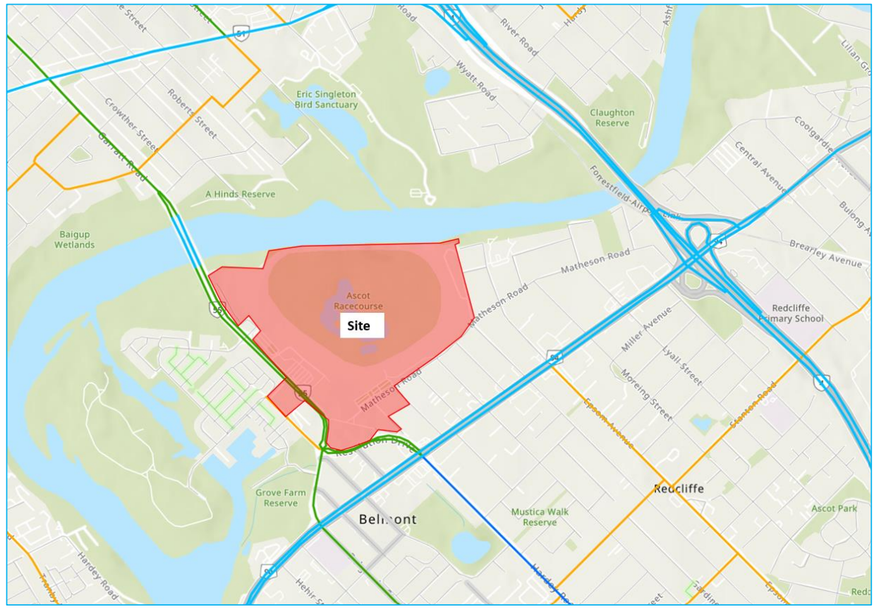
South of the site boundary, Resolution Drive continues west as a Distributor A route, from the Grandstand Road / Stoneham Street / Resolution Drive roundabout intersection. Resolution Drive is a single carriageway with shoulders of approx. 1.8m, each side of the approx. 3.5m carriageway. East of the roundabout, Resolution Drive meets the Great Eastern Highway (National Route 1 / National Highway 94) and Hardey Road via a signal-controlled intersection.

Stoneham Street continues ahead from Grandstand Road as a dual carriageway on approach to a signal-controlled intersection with the Great Eastern Highway and Belgravia Street. Great Eastern Highway is classified as a Primary Distributor while Belgravia Street continues from Stoneham Street as a Distributor A.

**Figure 2-3** over page sets out the speed limits for the road network surrounding the site. Grandstand Road, Resolution Road, Stoneham Street and the Great Eastern Highway are all subject to a 60km/hr speed limit. The remaining access roads surrounding the site are subject to a 40km/h speed limit, including Matheson Road.

Existing Situation

**Figure 2-2: Road Hierarchy**

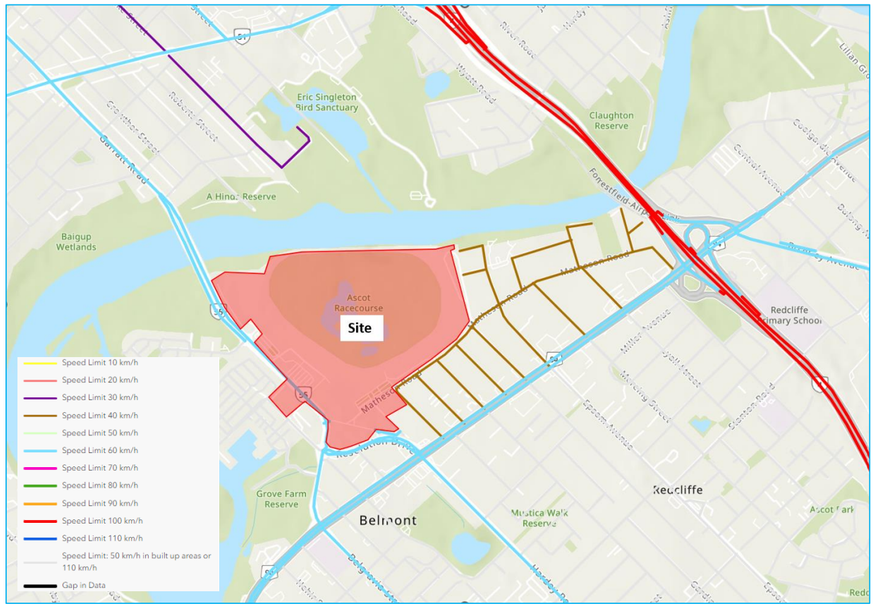



*Source: MRWA Road Information Mapping System*

Road classifications are defined in the Main Roads Functional Hierarchy as follows:

- **Primary Distributors** (light blue): Form the regional and inter-regional grid of MRWA traffic routes and carry large volumes of fast-moving traffic. Some are strategic freight routes, and all are National or State roads. They are managed by Main Roads.
- **Regional Distributors** (red): Roads that are not Primary Distributors but link significant destinations and are designed for efficient movement of people and goods within and beyond regional areas. They are managed by Local Government.
- **District Distributor A** (green): These carry traffic between industrial, commercial, and residential areas and connect to Primary Distributors. These are likely to be truck routes and provide only limited access to adjoining property. They are managed by Local Government.
- **District Distributor B** (dark blue): Perform a similar function to "District Distributor A" but with reduced capacity due to flow restrictions from access to and roadside parking alongside adjoining property. These are often older roads with traffic demand in excess of that originally intended. District Distributor A and B roads run between land-use cells and not through them, forming a grid that would ideally be around 1.5 kilometres apart. They are managed by Local Government.
- **Local Distributors** (orange)**:** Carry traffic within a cell and link District Distributors at the boundary to access roads. The route of the Local Distributor discourages through traffic so that the cell formed by the grid of District Distributors only carries traffic belonging to or serving the area. These roads should accommodate buses but discourage trucks. They are managed by Local Government.
- **Access Roads** (grey): Provide access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function. These roads are bicycle and pedestrian friendly. They are managed by Local Government.

**Figure 2-3: Speed Classifications**




*Source: MRWA Road Information Mapping System*

## 2.3 Existing RAV Network

The road network around the site does not currently form part of the Restricted Access Vehicle (RAV) Network.

## 2.4 Existing Key Intersections

The key intersections within the study area are as follows, with further detail and layouts shown below:

- Resolution Drive / Stoneham Street / Grandstand Road Roundabout
- Raconteur Drive / Grandstand Road Intersection
- Resolution Drive / Great Eastern Highway / Hardey Road Signalised Intersection
- Stoneham Street / Great Eastern Highway / Belgravia Street Signalised Intersection
- Garratt Road / Guildford Road Signalised Intersection.

Existing Situation

All of the above intersections are modelled for traffic performance in this TIA with the exception of the Guildford Road intersection which is some 1.7km away from the LSP area.

**South of Site:**

Resolution Drive / Stoneham Street / Grandstand Road: The 4-way roundabout is located approx. 700m south of the site and connects Grandstand Road (providing several site accesses) with the Great Eastern Highway further south. Figure 2-4 shows the existing geometry of the intersection, Grandstand Road and Stoneham Street both have two-lane approaches to the roundabout while both approaches from Resolution Drive have a single lane approach.

**Figure 2-4: Resolution Drive / Stoneham Street / Grandstand Road – 4-way roundabout**




*Source Mapping: NearMap 2024*

Raconteur Drive / Grandstand Road: The 3-way priority-controlled intersection is located approx. 500m south of the site and provides access to Raconteur Drive connecting to Matheson Road for one of the Ascot Racecourse car parks. As Raconteur Drive is one-way in this section, the intersection allows only left-in and right-in turning movements from each side of Grandstand Road (unless otherwise permitted under race day traffic management controls). **Figure 2-4** shows the existing geometry of the intersection.

**Figure 2-5: Raconteur Drive / Grandstand Road – 3-way priority-controlled intersection (left-in / right in only)**




*Source Mapping: NearMap 2024*

Resolution Drive / Great Eastern Highway / Hardey Road: The 4-way signalised intersection is located approx. 1km south of the site and provides access to existing residential areas to the south-east of Ascot Racecourse. **Figure 2-4** shows the existing geometry of the intersection. This includes three through lanes in each direction on the Great Eastern Highway, an intersection bus queue jump lane, a left-turn lane and a right-turn/U-turn lane.

Existing Situation

**Figure 2-6: Resolution Drive / Great Eastern Highway / Hardey Road – 4-way signalised intersection**




*Source Mapping: NearMap 2024*

Stoneham Street / Great Eastern Highway / Belgravia Street Signalised Intersection: The 4-way signalised intersection is located approx. 1km south of the site and provides access to existing residential areas to the south-east of Ascot Racecourse. **Figure 2-7** shows the existing geometry of the intersection. This includes three through lanes in each direction on the Great Eastern Highway, as well as bus queue jump lane for buses, a left-turn lane and a right-turn/U-turn lane.

**Figure 2-7: Stoneham Street / Great Eastern Highway / Belgravia Street – 4-way signalised intersection**




*Source Mapping: NearMap 2024*

**North-West of the Site:**

Garratt Road / Guildford Road Signalised Intersection: This 4-way signalised intersection is located approximately 1.7km north-west of the site and provides access to existing residential areas to the north-west of Ascot Racecourse. **Figure 2-8** shows the existing geometry of the intersection.

**Figure 2-8: Garratt Road / Guildford Road – 4-way signalised intersection**




*Source – NearMap 2024*

## 2.5 Existing Traffic Volumes

PJA contacted the City of Belmont, who kindly provided their latest traffic count data for the intersection of Resolution Drive/Grandstand Road/Stoneham Street from surveys undertaken in 2017 as part of the GGLSP studies presently being undertaken by the City. In addition to this, recent traffic counts were commissioned by PJA as part of the Ascot Racecourse project in February 2024.

Complementing the existing SCATS traffic counts at the signalised intersections, traffic counts were undertaken at the intersection of Resolution Drive/Raconteur Drive priority-controlled intersection and Grandstand Road/Waterway Crescent roundabout.

Midblock traffic counts were sourced from the Main Roads TrafficMap, and these indicate that there are the following daily traffic flows on the key roads near the Ascot Racecourse:

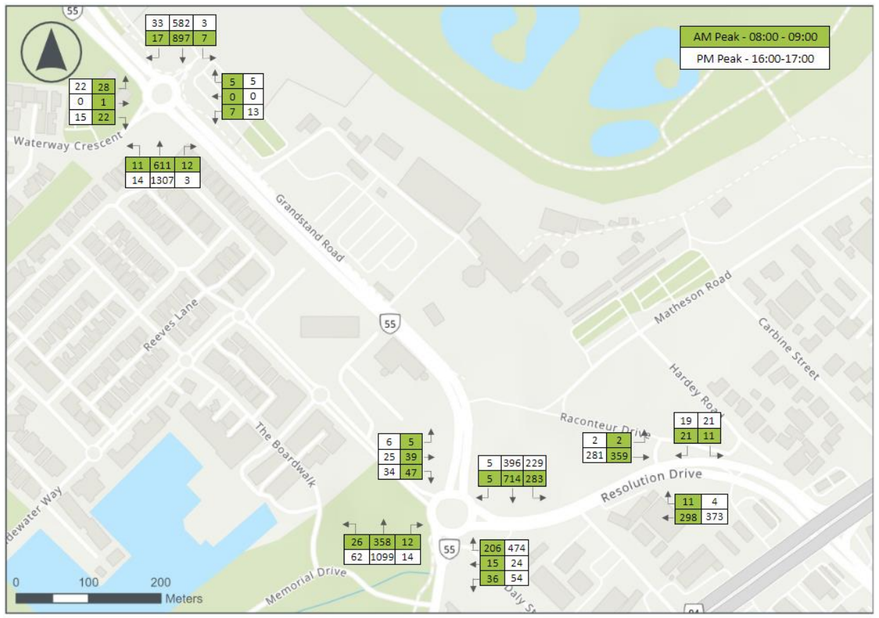
- Grandstand Road 16,670 vehicles per day (vpd) – 2018 counts
- Resolution Drive 7,860 vpd – 2021 counts
- Stoneham Street 14,270 vpd – 2018 counts.

Review of these midblock traffic flows over an extended period[1] up to the present day, indicates that traffic flows in the Ascot area have been increasing by approximately 0.75% per annum. Advice from the City, informed from the development of the traffic model for the Golden Gateway LSP, has indicated a 0.5% growth rate.

Thus, for the derivation of equivalent 2024 traffic flows for the intersection of Resolution Drive/Grandstand Road/Stoneham Street, the traffic flows to and from the main legs of the intersection has been increased by 0.5% per annum from 2017 to 2024. This was discussed with the City as being appropriate for use for the Ascot LSP.

These actual and/or derived counted 2024 traffic flows are shown below in **Figure 2-9**.

**Figure 2-9: Peak Hour 2024 Traffic Flows**




Credits: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, Foursquare, METI/NASA,

## 2.6 Existing Pedestrian / Cycle Networks

Existing pedestrian / cycle networks are illustrated in **Figure 2-10.** The first part of the below figure shows the proximity of the Perth-Midland Principal Shared Path (PSP) to the site, as it links through Meltham and Bayswater north of the site. The Perth-Midland PSP is a high-quality urban dual-use pathway which runs parallel to the Midland railway line. To access the PSP from the site, shared used paths are available on the northern side of the Garratt Road Bridge to/from the site which

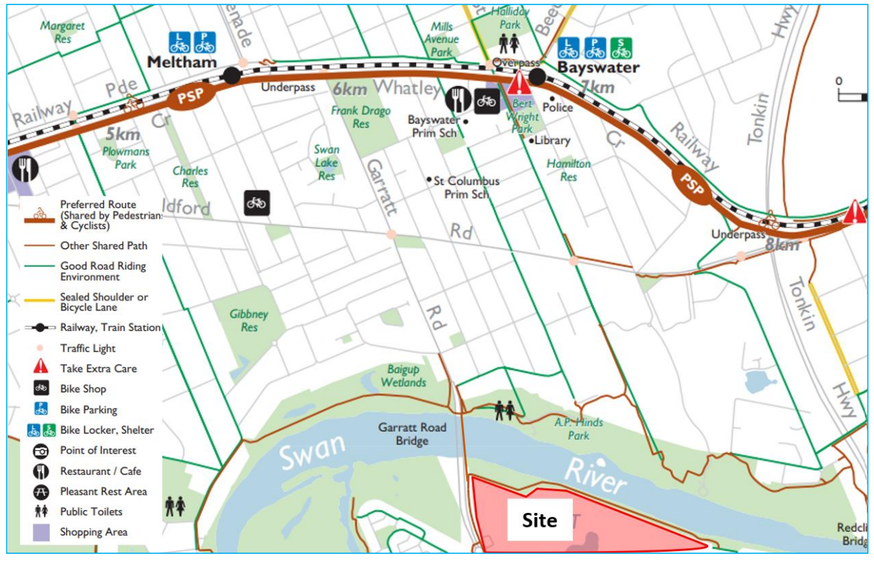
[1] Extended period over approximately 20 years (2002 – 2021).

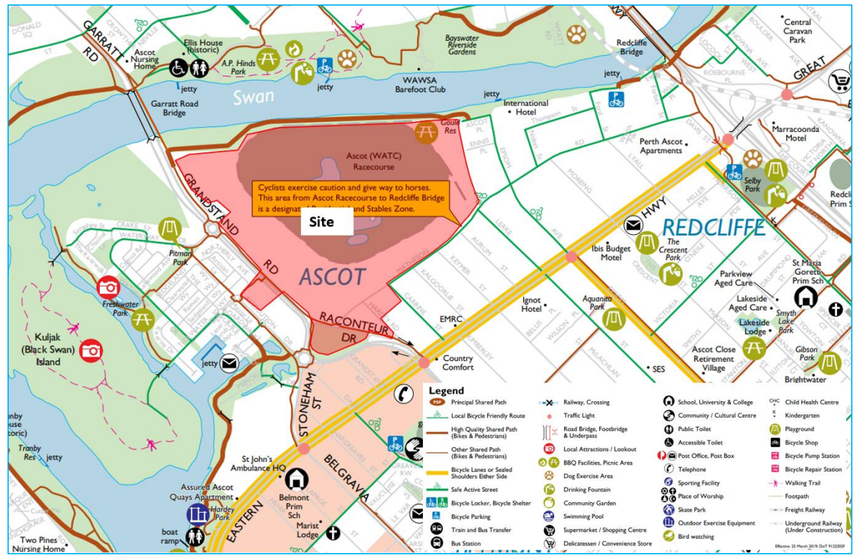
also runs parallel to the Swan River. From here, Leake Street and King William Street are two roads with good road riding environments in order to reach the PSP.

The second part of the figure below shows the existing cycle infrastructure available to the south, west and east of the site. One of the modal integration items to note is for cyclists to exercise caution and to give way to horses in the area between the racecourse and adjacent Redcliffe Bridge as a designated 'Residential and Stables' zone.

Immediately north of the site, a high-quality shared path for cyclists and pedestrians in available between the shared paths along Grandstand Road and Ascot Place. A number of local roads surrounding the site are highlighted as local cycle friendly routes including Matheson Road and Epsom Avenue. Additionally, the Great Eastern Highway is highlighted as providing cycle lanes or sealed shoulders on either side of the carriageway, though these are largely provided as on-road cycle lanes with no physical separation and are combined with, or are immediately adjacent to, bus lanes with vehicles travelling above the Safe System speeds of 30km/h for vulnerable road users.

**Figure 2-10: Existing Pedestrian / Cycle Networks**




*Source: WA Department of Transport (2024)*

## 2.7 Existing Public Transport

The main bus stops accessible from the site are on Grandstand Road immediately adjacent to one of the key pedestrian access points to the racecourse. Based on a desktop review, the infrastructure provided at these stops is limited as a shelter with seating is only available on the south-western side while a raised kerb to assist with reduced mobility access is only available for a short distance on the north-eastern side of Grandstand Road. It would be recommended that the City of Belmont undertake a review of these bus stops (irrespective of this development), particularly as they serve a significant destination.

These stops are served by the bus 998/999 which provided clockwise and anti-clockwise routes of the Perth CircleRoute (shown in purple in **Figure 2-11**), respectively. This circular route has limited stops and a good frequency of every 15 minutes, Monday-Saturday and every 30 minutes on Sundays, which encompasses many of Perth's suburbs encircling central Perth and locally providing connectivity to Bayswater Rail Station. Ascot Racecourse is serviced by the clockwise service at 06:03 on weekdays and a last service at 22:13. A shortened service is available on weekends and public holidays. These timings are reflected similarly in the anticlockwise service.

Additional frequent bus services are accessible from the site along the Great Eastern Highway as shown in **Figure 2-11** including services towards Redcliffe Station, central Perth and Perth Airport.

Existing Situation

**Figure 2-11: Public Transport Services**



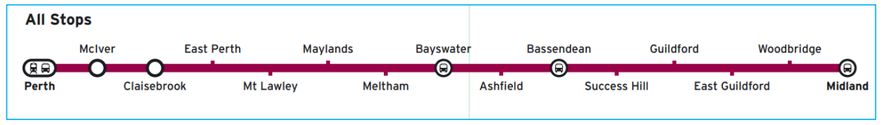

*Source: WA Department of Transport (2024)*

**Rail Services**

Bayswater Train Station is accessible via bus service 999 and provides access to both the Midland Railway Line and the Airport Line.

During the week, the Midland railway line carries passenger rail services between Perth city, and stations in between as shown in **Figure 2-12**, at intervals of approximately 10 to 15 minutes between 05:00am and 21:00pm. The frequency reduces past 9pm to every 30 minutes until 12:30am.

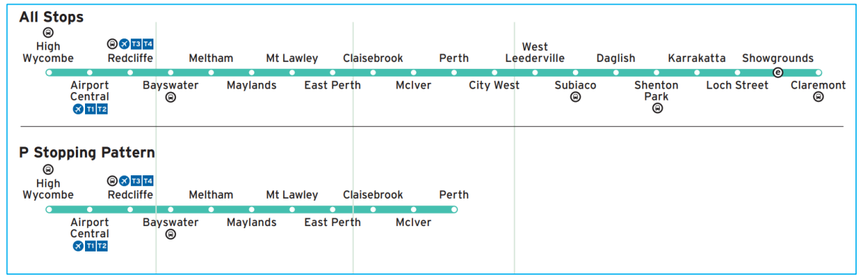
**Figure 2-12: Stopping Pattern on the Midland Rail Line**




*Source: Transperth*

The Airport Line operates from Claremont to High Wycombe via Perth Station, with some services throughout the day just terminating at Perth Station. Both variations of the route are shown in **Figure 2-13**. The service provides a fast connection to Perth Airport, operating every 12 minutes during the peak period, every 15 minutes during the day and every 30 minutes at night.

**Figure 2-13: Stopping Pattern on the Airport Rail Line**




*Source: Transperth*

Overall, the existing public transport service within the vicinity of the Site is good with moderate-to-high frequency of services operating during the network peak periods.

## 2.8 Crash Assessment

A search of the Main Roads WA Reporting Centre for crash data was undertaken. This search covered all recorded traffic accidents for the most recently available five-year reporting period between 1 January 2019 and 31 December 2023 for the study area shown in **Figure 2-14** and **Figure 2-15** which includes the following intersections:

- Resolution Drive / Stoneham Street / Grandstand Road Roundabout
- Raconteur Drive / Grandstand Road Intersection
- Resolution Drive / Great Eastern Highway / Hardey Road Signalised Intersection
- Stoneham Street / Great Eastern Highway / Belgravia Street Signalised Intersection

Both figures highlight how the majority of recorded crashes within the study area are 'Property Damage Only' and mostly occur on the midblock carriageway itself rather than the intersections noted above. The majority of these incidents occur on the Great Eastern Highway, which is typical as a 'Primary Distributor' with higher volumes (crash exposure).

The recorded crash types for the 200 crashes recorded in the study area are shown in **Table 2-1** below. The 'Hospital' and 'Medical' crashes recorded are typically rear-end, non-collision and right-angle types of crash.

**Table 2-1: Crash Data for Study Area**

| Type of Crash | Fatal | Hospital | Medical | Major PDO* | Minor PDO* | Total |
|---|---|---|---|---|---|---|
| Rear End | - | 4 | 19 | 62 | 40 | 125 |
| Sideswipe | - | - | - | 8 | 11 | 19 |
| Hit Object | - | - | - | 2 | 3 | 5 |
| Head On | - | - | - | - | - | - |
| Non-Collision | - | 1 | - | 1 | 1 | 3 |
| Right Angle | - | - | 1 | 12 | 10 | 23 |
| Other | - | 1 | - | 5 | 6 | 12 |
| Total | 0 | 6 | 20 | 90 | 71 | 187 |

**Property Damage Only*

Existing Situation

**Figure 2-14: Summary of All Crashes in Latest 5-Year Period**

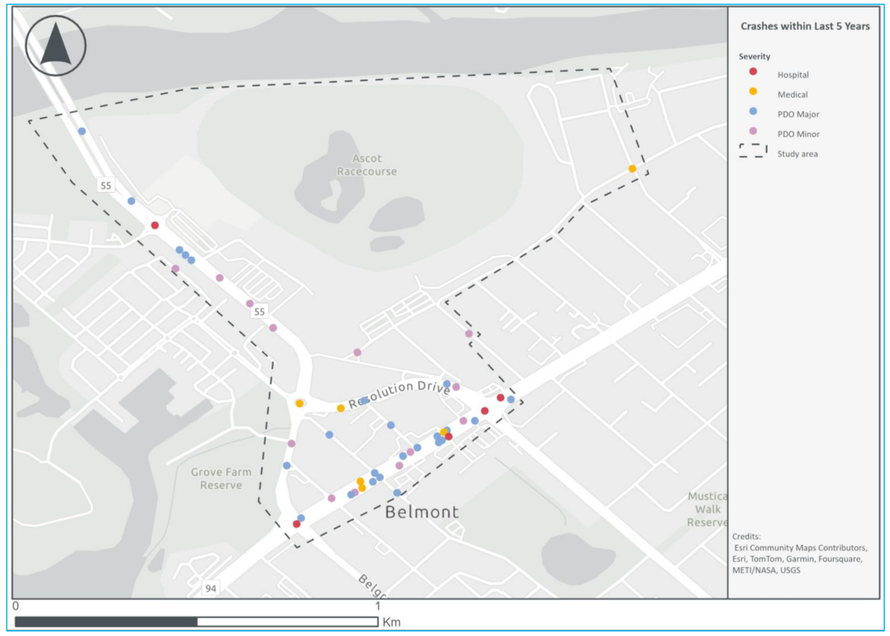
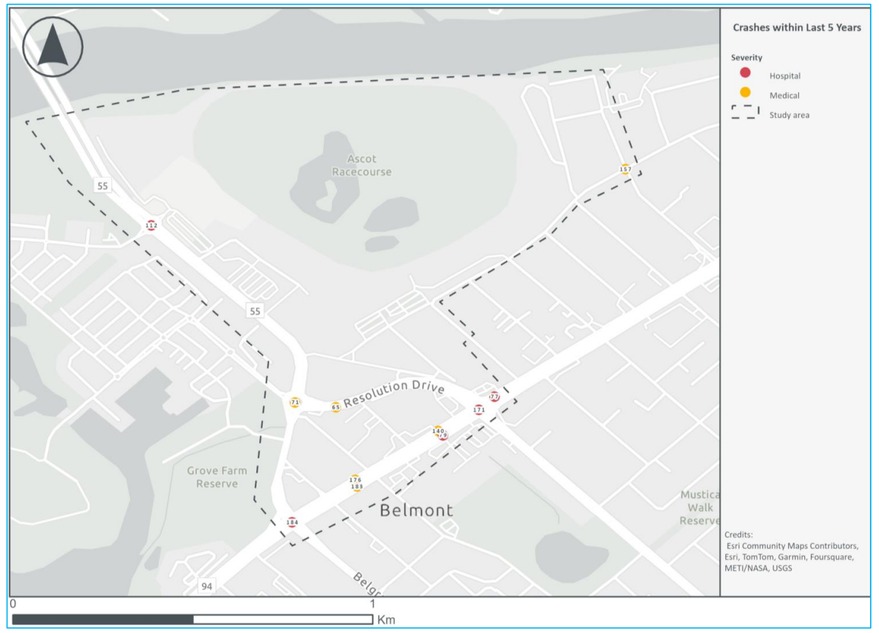



**Figure 2-15: Hospital and Medical Severity Crashes in the Latest 5-Year Period**



# 3 Proposed Local Structure Plan and Scheme Amendment

## 3.1 Proposed Zoning

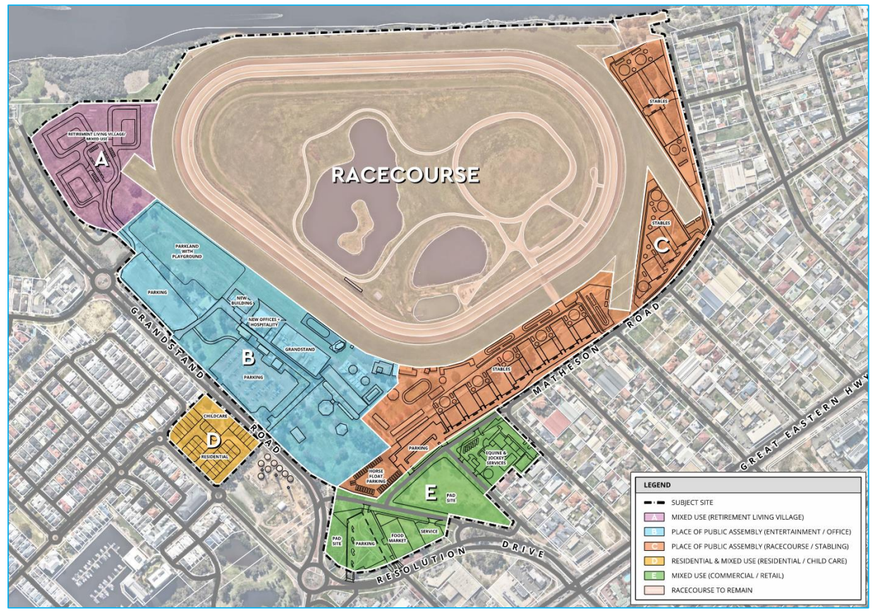
In Section 1 of this TIA, the site area was identified as largely dedicated to uses relating to Ascot Racecourse, such as 'Private Recreation' (MRS) or 'Place of Public Assembly' (LPS No.15), with some areas within the site boundary zoned as 'Urban' or 'Mixed Use'.

The Ascot LSP and Scheme Amendment proposes rezoning areas within the site boundary into five specific precincts, as summarised in **Table 3-1**, set out in **Figure 3-1** (**Appendix B**).

**Table 3-1: Proposed Land Use Yield**

| Precinct | Proposed Zoning | Proposed Uses | Proposed Built Form/Yield |
|---|---|---|---|
| A | Mixed Use | Retirement Living Village | – 330-390 retirement apartments (across 3 buildings of up to 15 storeys, each with 110-130 apartments).<br>– Maximum 300m$^2$ café. |
| B | Place Of Public Assembly (No Change to Existing Zone) | Entertainment / Racecourse Administration Office<br>– (New building with replace the footprint of an existing building and existing building rebuilt adjacent to new building.) | – New building - Office on Ground Floor, approx. 61 people across 680m$^2$ NLA (Net Lettable Area).<br>– New Building - Hospitality venue on Upper Floor - Total building footprint of 1,020m$^2$<br>– Parkland with a playground. |
| C | Place Of Public Assembly (No Change to Existing Zone) | Racecourse / Stabling | – 3 On-course stabling complexes.<br>– Approx. 400 stables.<br>– Parking area inc. Horse float parking. |
| D | Residential & Mixed Use (R60) | Residential / Child Care | – Child care centre fronting Grandstand Rd, across approx. 2,100m$^2$ for 70-90 children.<br>– Residential development with a yield of approx. 41 lots. |
| E | Mixed Use (with additional use of 'shop') | Commercial / Retail | – Site 1: 3,400m$^2$ retail floorspace and 2,500m$^2$ commercial floorspace<br>– Site 2: 5,200-7,100m$^2$ commercial floorspace.<br>– Site 3: Equine Centre - 'Jockey Health' inc. 'consulting room' type uses. |

**Figure 3-1: Proposed Masterplan Concept**




*Source: Rowe Group Design, 2024*

## 3.2 Vehicular Driveway Access Arrangements

While individual lot driveway access arrangements and car parking typically fall outside the scope of a general Structure Plan-level transport assessment outlined in the WAPC Guidelines, the Ascot LSP Applicant is proactively presenting several solutions upfront to enhance future lot access arrangements and network performance. These suggestions and recommendations are intended for discussion purposes only and are subject to further refinement in subsequent stages of development planning.

As highlighted in Section 2, the existing racecourse is served by a number of vehicular access points from Grandstand Road and Matheson Road.

It is acknowledged that in the draft GGLSP, a new roundabout intersection was previously proposed to replace the existing Grandstand Road / Raconteur Drive intersection, introducing an opportunity for a high capacity and controlled access to the racecourse via a new 4th arm of the roundabout. This arm would have also provided direct access for horse floats looking to travel northbound on Grandstand Road. However, it is understood that this new roundabout option was mooted based on stakeholder feedback during the City's draft GGLSP advertising period and subsequently the current intersection format will be retained.

Notwithstanding the above, for the Ascot LSP, this Grandstand Road and Resolution Drive intersection presents a major opportunity to modify the permissible movements at the restricted access point, to improve the overall access strategy for the LSP. This is further explored.

For the proposed Precinct B (Entertainment / Racecourse Administration Office) car park, vehicular access from the members carpark onto Grandstand Road, is expected to be retained as left-in/left-out (LILO). There are existing roundabouts at either end of the racecourse at Waterway Crescent and Resolution Drive that provide the same function as right turns at the crossover points. The traffic concern with allowing any right turns at the Precinct B crossovers is the added delay for patrons queuing and waiting to access the parking areas or when leaving after the races. If the LSP was to pursue direct right turn options at the Precinct B crossovers, it is recommended that the impacts would need to be assessed in finer detail, on a number of different peak weekend race days. Only the AM and PM effects of the wider development coinciding with the typical AM and PM commuter peaks has been examined for this LSP, as these would represent the highest traffic flow on a regular basis. The median island is wide enough for the northern two crossovers to potentially have two-stage right turn movements, but the southern crossover has a narrower median opposite, and therefore would not appear to have enough width to allow for two-staged median movements.

Any crossover to Precinct D (Child Care and Residential) onto Grandstand Road is recommended in the form of a LILO. A LILO is supported in balancing the needs of access to the child care centre and the amenity of residents on Northerly Avenue and Resolution Drive. There would be some non-local child care centre traffic along Resolution Drive if no LILO on Grandstand Road was permitted. As such, a LILO should be pursued to/from Grandstand Boulevard to Precinct D, which would need to be integrated safely with the operations of the crossover on the opposite side of the road to the racecourse. This can be assessed in detail in later stages, post LSP endorsement as an approval of a Scheme Amendment is not contingent on these details and available wider accessibility.

For the driveway accesses for Precinct E (commercial precinct) east of the roundabout, there is limited frontage available along Resolution Drive between Raconteur Drive and Grandstand Road. As such, full movement crossovers are unlikely to be possible due to road safety and as such likely to be in the form of LILOs.

Given the above restrictions for most access points to LILOs due to geometrical constraints, a relief valve is needed to support northbound traffic (right turning vehicle demands from the east). In this regard, the existing intersection of Grandstand Road and Resolution Drive is proposed to be open permanently to traffic with left and right turns allowed from Grandstand Road into Raconteur Drive and a left turn out from Raconteur Drive onto Grandstand Road (LILO-RI). These are the same movements currently permitted at this intersection on race days to allow racecourse patrons to park and exit. This critical left turn out to, and right turn in from Grandstand Road are both expected to operate satisfactorily with acceptable queues and delays to support the Ascot LSP (refer Section 6). Ultimate development queues are expected to be able to be contained within the current right turn pocket length on Grandstand Road.

## 3.3 Parking Impacts

Again, while individual lot driveway access arrangements and car parking typically fall outside the scope of a general Structure Plan-level transport assessment outlined in the WAPC Guidelines, the Ascot LSP Applicant is proactively presenting several solutions upfront to enhance future lot access arrangements.

The proposed redevelopment of Precinct E (commercial/retail) will impact the availability for parking that currently occurs on race days. The redevelopment will alter existing race patron parking and also horse-float and jockey parking in Precinct E.

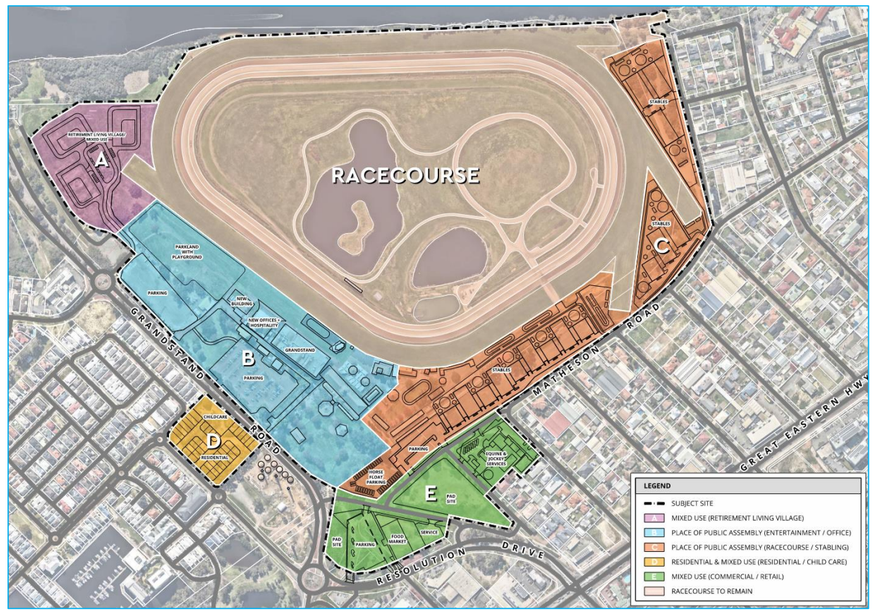
Current parking layout in **Figure 3-2** shows typical parking demand for an opening racing day on 14th October 2023. This shows paved patron parking and members parking within Precinct B (the racecourse entertainment) and patron parking within Precincts C (stabling) and E (commercial/retail). Similarly, the proposed development of Precinct C with the relocation of jockey parking and horse float parking towards the south west extremity of Precinct C will impact the ability of patrons to park within this existing area on race days. A similar impact is expected for Precinct E, where retail development will impact parking currently occurring across this land.

From **Figure 3-2** aerial imagery, there was assessed to be approximately 270 cars parked across the patron parking areas straddling the clouded area across Precincts B, C and E at the south east end of the racecourse.

**Figure 3-2: Typical Parking on Race Days**




**Figure 3-3: Possible Future Parking Layout**




The current patron parking within Precinct C (stabling) and E (commercial/retail) will be the most impacted by the LSP with these parking areas no longer available. The southern Precinct B patron parking area would still be available and could be managed to improve parking utilisation on race days. Based on observations of parking demand within the area of the grassed area in Precinct B and E, approximately 110 to 125 cars park within this area on a busy race day.

From the above aerial observations, it was found that there were approximately 40 spaces available within the patron parking in Precinct B at the north west end of the racecourse (accessed from the Waterways Crescent roundabout), approximately 70 spaces available within the member's parking area (accessed grom Grandstand Road) and the possibility to park up to 75 cars on the grassed area between the patron and member parking areas, all up approximately 185 cars could be parked.

Combined, this indicates that supply across the sites would more than meet the total demand for car parking with a **surplus of approximately 60 to 75 parking spaces** for the currently observed parking demand for a busy typical race day at Ascot. This is based on typical race days. For non-typical large events (such as the New Years Perth Cup) the traffic management plan for the racecourse would be appropriate for continued adoption.

To further manage the relocation of parking within the racecourse it is a recommendation of this TIA to implement a Travel Demand Plan for typical race days to actively discourage patrons from using their private motor vehicle to drive to and from the racecourse. This plan may include both the encouragement in the use of the currently available public transport services near the racecourse, improvement in private services, and the uptake of ride share services.

Routes 998 and 999 (CircleRoutes) stop on Grandstand Road immediately in front of the racecourse and high frequency bus service 940 stops on Great Eastern Highway. The CircleRoutes provide onward connections to Morley Bus Station via the new Bayswater Train Station (soon to be completed with Airport, Ellenbrook and Perth-Midland services and be the busiest station outside of Perth Station). Route 940 runs between Elizabeth Quay bus station (immediately next to Elizabeth Quay train station) and Redcliffe train station.

Implementing Travel Demand strategies to promote rideshare services (also known as Mobility as a Service (MaaS)) presents another option to reduce the reliance on private vehicle usage among Ascot Racecourse patrons. MaaS offers users a range of mobility options through a single platform or service provider, reducing congestion, alleviate parking demand, and promote other sustainable travel choices on race days.

Several strategies could be employed to encourage patrons to use MaaS options effectively and almost immediately:

- partnerships with MaaS providers and local transit agencies can enhance the integration of various transportation modes, ensuring seamless connectivity and ease of use for patrons.
- offering incentives such as discounted fares or priority access to race days for MaaS users (such as dedicated drop-off/pick-up areas) could further encourage patronage.
- By promoting MaaS as a viable alternative to private vehicle usage, the Ascot racecourse development could work towards addressing any perceived parking challenges.

The travel behaviours of patrons of entertainment services (hotels, taverns, restaurants, sporting venues etc) are now skewed towards using ride sharing instead of driving to these land uses. This in due to a combination of many factors but mostly the affordability, availability, attractiveness to latter generations and finally, allowing patrons to enjoy themselves without worry of driving under the influence.

### 3.4 Proposed Internal Transport Network

The proposed Local Structure Plan sets out the indicative future road network for the Scheme Amendment area, which is shown in **Figure 3-1**. The internal network will be detailed further as the lot submissions for each precinct are lodged for assessment. The City of Belmont places high importance on sustainable transport modes (public transport, walking and cycling) and would be seeking high-quality cycling facilities, footpaths, street trees etc to facilitate and reduce reliance on low-occupancy private car modes.

### 3.5 Assessment Years and Time Periods

This TIA analyses the existing base year of 2024 and the anticipated opening year of 2036 'with' and 'without' the full build-out of the Ascot LSP. Section 7 of this report discusses the assessment years and development traffic generation in more detail.

### 3.6 Pedestrian and Cyclist Access

Pedestrian and cyclist access has not yet been fully defined; however, it should be provided generally in accordance with the requirements of national and local guidance, the Department of Transport's Long Term Cycle Network, and areas comprising largely residential uses should be in accordance with *Liveable Neighbourhoods* and Safe System Engineering.

The proposed pedestrian and cyclist facilities should aim to provide a permeable road network within the subject site and create attractive opportunities that maximise the use of non-private vehicle transport modes. Section 5 of this report discusses access to public transport and recommended improvements.

## 4 Changes to External Transport Network

Part of the Ascot Racecourse development is currently within the GGLSP, with Precincts D and E falling wholly within the currently nominated GGLSP area with part of Precinct C. The draft Movement and Access Strategy report prepared by the GGLSP proposed road network changes as part of the LSP to support the LSP, noting that the proposal of a new roundabout at Resolution Drive / Grandstand Boulevard have been mooted based on advertising feedback from stakeholders. Accordingly, the GGLSP is presently in the process of being modified, to address agency concerns and comments and as such the road network is expected to remain much the same as it is presently.

The previous draft proposed road network is shown below in Figure 4-1. The proposed new roundabout, north of the current roundabout at Grandstand Road/Resolution Drive/Stoneham Street, was proposed to be a 3-way roundabout and would have provided Ascot Racecourse Precinct E an opportunity for a fourth approach entry.

The retention of the current road network does have the benefit of retaining Precinct E to be unbisected by any major roadway.

**Figure 4-1: Golden Gateway Local Structure Plan**




*Source: Golden Gateway Public Realm Strategy*

# 5 Integration with Surrounding Area

## 5.1 Surrounding Attractors / Generators

As Ascot Racecourse is already very well established in the local area, a variety of uses including retail, food, beverage and recreational uses are available in the local area primarily along the Great Eastern Highway and on the Racecourse site itself. In addition, as an attractor and a key employment location itself, the racecourse is located in close proximity to large residential areas of Redcliffe, Belmont, Rivervale and Maylands surrounding the site.

Approximately 1.2 km to the south of the Site, is Belmont Primary School.

## 5.2 Proposed Changes to Surrounding Land Uses

The City of Belmont's LPS No.15 details the proposed local zoning of land uses within the area surrounding the Site including DA6 to the south of Great Eastern Highway. The proposed changes to these zones are set out in full in Section 3 of this TIA, in the context of the existing zones.

## 5.3 Level of Overall Accessibility

As Ascot Racecourse is already very well established in the local area, the existing levels of accessibility will be maintained and built upon with the proposals to improve access for all to the site.

## 5.4 Pedestrian and Cyclist Accessibility

The existing shared path network on the northern side of Grandstand Road provides good active transport links to the area surrounding Ascot Racecourse. This will be further enhanced by the improvements proposed within the Ascot LSP and Scheme Amendment, as well as the Public Realm Strategy being developed as part of the GGLSP.

It is a recommendation of this TIA that, investigations be undertaken to extend the existing footpath network surrounding the racecourse, including south of Grandstand Road and improving pedestrian and cycle connections towards the local amenities on Great Eastern Highway and Belmont Primary School. If feasible, this would encourage trips on foot and wheels to local centres and help increase public transport usage to reduce the reliance on private vehicles.

# 6 Analysis of Transport Network

## 6.1 Assessment Years and Time Period

Each intersection will be assessed using the following two scenarios:

- **Scenario 1** – 2024 'current situation'.
- **Scenario 2** – 2036 'without development'.
- **Scenario 3** – 2036 'with Ascot LSP development'.

Scenario 1 sets the baseline for the area for the current traffic flows as surveyed and derived from intersection counts.

Scenario 2 without the development flows have been based on expected traffic flows in 2036 with no development of the Ascot Racecourse nor the effects of the GGLSP. In discussion with the City of Belmont, it was apparent that the previous modelling assessments undertaken for the GGLSP are presently needing to be revised by the GGLSP team. Consequently, there are too many unknowns relating to the GGLSP to assess/assume the outcomes or specific intersection turning movement traffic flows for various scenarios of the GGLSP and the adoption of the draft (now mooted) traffic flows would lead to erroneous results. Accordingly, the 2036 without development Scenario 2 assumes current traffic flows will increase to 2036 with no GGLSP influences.

Scenario 3 is with full development traffic anticipated in 2036 when all precincts are assumed to be fully developed, in line with the Ascot Racecourse anticipated rollout.

## 6.2 Background Traffic

The background traffic assumptions for this assessment have been based on PJA's consultation with the City of Belmont on the City's current GGLSP traffic assumptions, concluding a 0.5% growth per annum from 2021 through to 2036 is to be applied. Advice from the City of Belmont goes further to say that this growth rate is expected to be maintained through to 2041, beyond the assessment year as noted above. This growth has been applied to major traffic flows on the network but excluding traffic flows to and from:

- Waterways Crescent
- Resolution Drive west of the Grandstand Road/Resolution Drive/Stoneham Street roundabout.

The reason is that the two local Access Roads are established with the Marina Drive residential development recently completed and opened, and therefore 'ultimate' flows are captured in the 2024 base data collated.

## 6.3 Traffic Generation

The traffic generation rates in the AM peak trips for the Bulky Goods and Supermarket land uses are based on 20% of the expected PM peak flows.

The trip generation for Precinct A retirement village is based on a rate of 3 trips er dwelling per day and is appropriate, given that it is expected the units will have limited parking and that the demographics of the residents are expected to suggest a lower car ownership.

Table 6-1, sourced from the various sources, have been used to calculate an estimate of the traffic generated in the AM and PM peak periods. Given the location of the Site, the above is considered robust trip rates, with no reductions applied to account for linked or internal trips.

No trips were assigned to Precinct B (Racecourse) as the use of the racecourse in the AM and PM peaks during normal weekdays is comparatively negligible. The use of this precinct is expected to be at its highest on weekends and big race days, where traffic management may be utilised on Grandstand Road.

Likewise, no trips were assigned to Precinct C (the Stables). The reason for this is that activity at the stables typically occur well before the AM peak when horses are trained on the course early in the morning. After which, traffic movements from the stables will typically then occur after the typical network AM peak period.

Finally, for the retail use in Precinct E (Commercial / Retail), this was assumed to be a café of approximately 100-200m$^2$ in gross floor area. This development alone is not expected to generate notable trips independently, but any café patronage would be reciprocal between the proposed supermarket and commercial floorspace proposed to be located under the one roof. The café will also likely attract employees in the nearby area, who are expected to walk to and from the establishment.

The AM trips rates for the Bulky Goods and Supermarket land uses are based on 20% of the expected PM peak flows.

The trip generation for the retirement village is based on a rate of 3 trips er dwelling per day and is appropriate, given that it is expected the units will have limited parking and that the demographics of the residents are expected to suggest a lower car ownership.

**Table 6-1: Trip Generation Rates**

| Land Use | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Retirement (Precinct A) | 0.075 trips per dwelling | 0.225 trips per dwelling | 0.2 trips per dwelling | 0.1 trips per dwelling |
| Racecourse (Precinct B) | NIL | NIL | NIL | NIL |
| Stables (Precinct C) | NIL | NIL | NIL | NIL |
| Residential (Precinct D) | 0.2 trips per dwelling | 0.6 trips per dwelling | 0.5 trips per dwelling | 0.3 trips per dwelling |
| Child Care (Precinct D) | 0.25 trips per child | 0.25 trips per child | 0.15 trips per child | 0.15 trips per child |
| Jockey Services (Precinct E) | 1.6 trips per 100m$^2$ | 0.4 trips per 100m$^2$ | 0.4 trips per 100m$^2$ | 1.6 trips per 100m$^2$ |
| Supermarket (Precinct E) | 1.55 trips per 100m$^2$ | 1.55 trips per 100m$^2$ | 7.75 trips per 100m$^2$ | 7.75 trips per 100m$^2$ |
| Commercial (Precinct E) | 0.32 trips per 100m$^2$ | 0.08 trips per 100m$^2$ | 0.4 trips per 100m$^2$ | 1.6 trips per 100m$^2$ |
| Retail (Precinct E) | NIL | NIL | NIL | NIL |
| Bulky Goods Retail (Precinct E) | 0.2 trips per 100m$^2$ | 0.2 trips per 100m$^2$ | 1.0 trips per 100m$^2$ | 1.0 trips per 100m$^2$ |

Application of the above noted trip generation rates leads to the creation of Table 7-2 which summarises the trip volumes derived from the adopted generation rates.

**Table 6-2: Estimated LSP Traffic Generation (vehicles per hour)**

| Land Use | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Retirement (Precinct A) | 29 | 88 | 78 | 39 |
| Racecourse (Precinct B) | 0 | 0 | 0 | 0 |
| Stables (Precinct C) | 0 | 0 | 0 | 0 |
| Residential (Precinct D) | 8 | 24 | 21 | 11 |

| Land Use | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Child Care (Precinct D) | 20 | 20 | 12 | 12 |
| Jockey Services (Precinct E) | 21 | 5 | 5 | 21 |
| Supermarket (Precinct E) | 72 | 18 | 224 | 224 |
| Commercial (Precinct E) | 1 | 0 | 4 | 4 |
| Retail (Precinct E) | 0 | 0 | 0 | 0 |
| Bulky Goods Retail (Precinct E) | 31 | 8 | 96 | 96 |
| **Total** | **182** | **163** | **440** | **407** |

The Site is expected to generate a total of 345 two-way vehicle trips in the AM peak hour and approximately 845 in the PM peak hour. The overall development is expected to generate the highest flows in the PM and thus the PM peak has been chosen as the basis for the following intersection assessment as these higher flows would be putting the road network under the greatest stress.

Of the above generated trips, 50% of the trips associated with the supermarket have been assumed to be pass-by trips. These trips already exist on the adjacent road network, with drivers diverted from the adjacent road network onto the site and then to exit the site to continue on their journey.

## 6.4 Future Year Traffic Growth

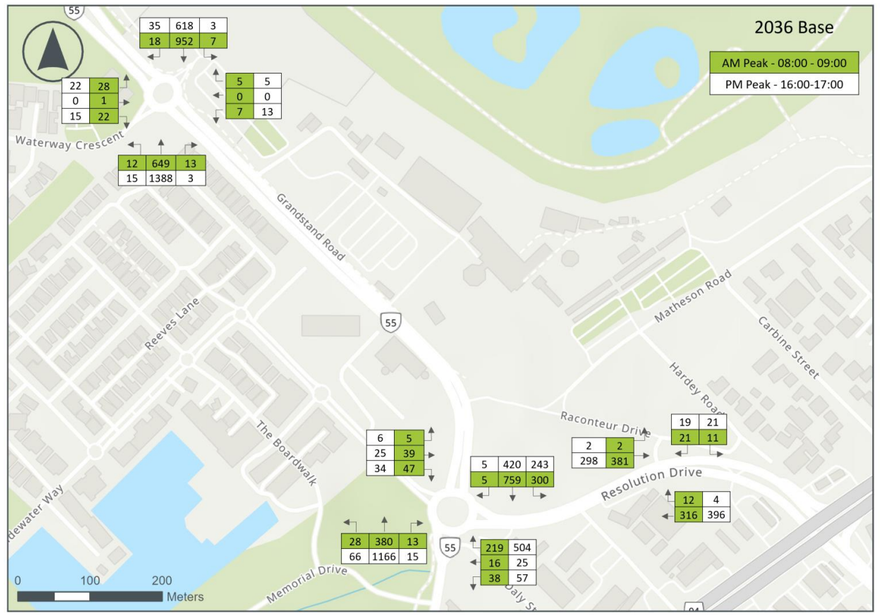
As previously discussed, the future year growth rates to 2036 (and further to 2041) were provided by the City. From 2021 to 2041 traffic flows are expected to increase by 0.5% per annum linear growth. With the Ascot Waters area being now fully developed (apart from the Precinct D component) traffic flows to and from the legs of intersections into Ascot Waters has been assumed to have zero future traffic growth.

## 6.5 Traffic Distribution and Assignment

The distribution of trips to and from the Site via the various site accesses have been estimated based on the existing traffic flow percentage split travelling in each direction in the AM and PM peak periods.

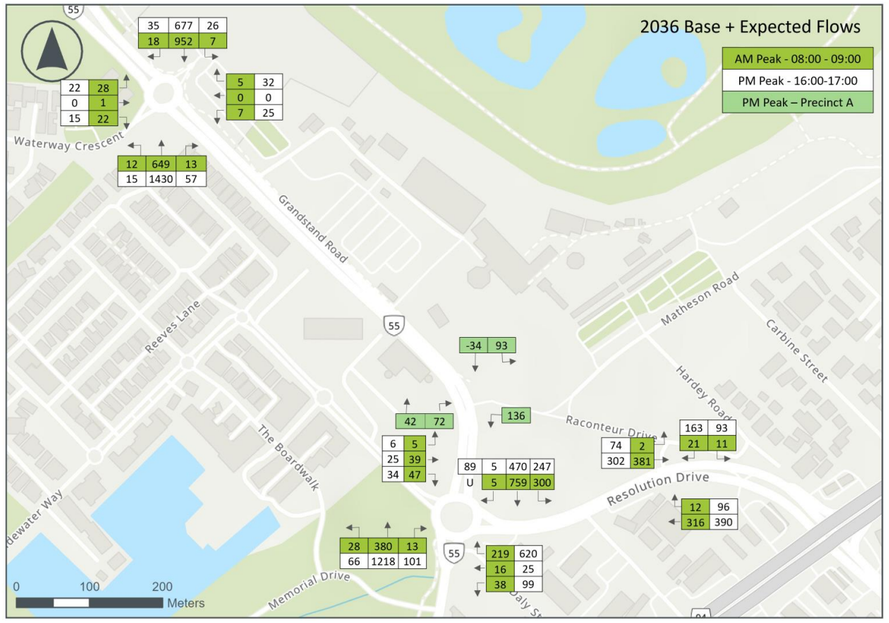
The percentage split of traffic is in keeping with the expectation that a greater proportion of trips generated by the Site will travel in same direction as the commuter peak for the residential and retirement uses. For the commercial attractions, this will be in the same direction as the commuter peak flows for the pass-by trips, but for new trips these will be attracted to the site based on the arrival flow proportions entering the Ascot Racecourse area along Grandstand Road, Resolution Drive and Stoneham Street. The estimated 2036 flows with expected distribution is presented in **Figure 6-1** to **Figure 6-3.**

**Figure 6-1: Base 2036 Traffic Flows (no development; background growth only)**



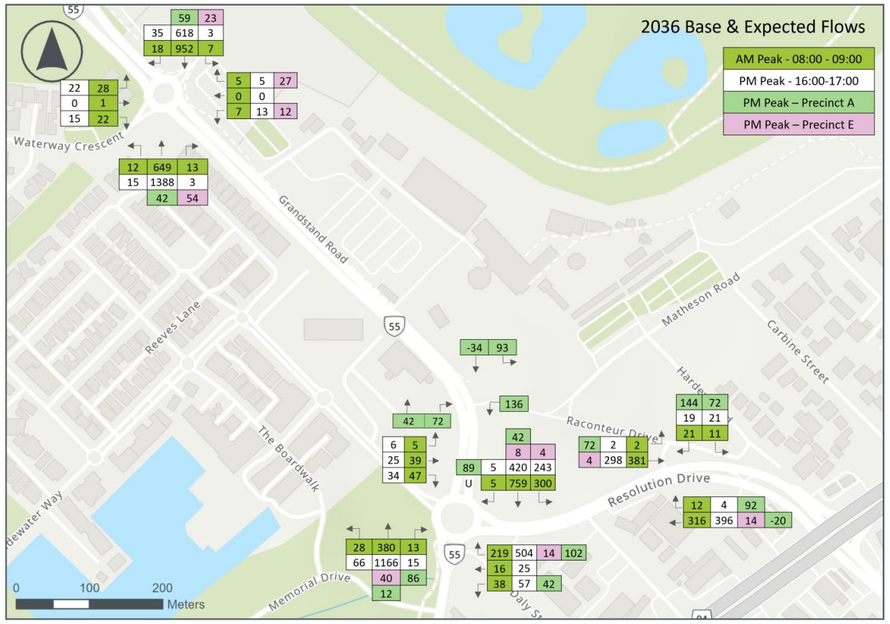

Credits: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, Foursquare, METI/NASA,

**Figure 6-2: 2036 Traffic Flows (plus Precinct A Development Flows)**




Credits: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, Foursquare, METI/NASA,

**Figure 6-3: 2036 Traffic Flows (with Ultimate Ascot LSP Development Flows)**




Credits: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, Foursquare, METI/NASA,

The above figure focuses on the distribution of traffic onto the road network for typical AM and PM peak periods. The Racecourse access has not been shown on this figure as the peak movements to and from the racecourse are expected to occur on a Saturday, when traffic flows on Grandstand Road are approximately 60% of typical PM peak values. Peak Racecourse flow is typically at approximately 12pm, prior to the start of the first race at the racecourse and the expected peak arrival time of patrons. The last race typically concludes at about 5:30pm and traffic flows at that time on Grandstand Road are approximately 50% of PM peak flows, this at a time when patrons will be leaving the racecourse at the highest rate.

To put the above into context, the peak weekend flows on Grandstand Road are approximately the same as the inter-peak weekday flows at about the same time.

## 6.6 Intersection Performance

SIDRA analysis was undertaken at the following intersections to estimate the impact of the development generated traffic on the surrounding transport network:

- Resolution Drive / Stoneham Street / Grandstand Road Roundabout
- Raconteur Drive / Grandstand Road Intersection
- Grandstand Road and Waterways Cresent Roundabout
- Resolution Drive / Raconteur Drive intersection.

SIDRA results for each approach are presented below in the form of Degree of Saturation (DOS), Average Delay, Level of Service (LOS) and 95th Percentile Queue. These characteristics are defined as follows:

- **Degree of Saturation (DOS)**: is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The theoretical intersection capacity is exceeded for an un-signalised intersection where DOS > 0.80;
- **95% Queue:** is the statistical estimate of the queue length up to or below which 95% of all observed queues would be expected;
- **Average Delay:** is the average of all travel time delays for vehicles through the intersection. An unsignalised intersection is considered to be operated at capacity where the average delay exceeds 40 seconds for any movement; and
- **Level of Service (LOS)**: is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers.

## 6.7 Scenario 1 - Current Year 2024

The following presents the analysis of the key access points as noted above assuming current traffic flows on the road network and without the Ascot Racecourse developed.

**Figure 6-4: Current Performance – Grandstand Rd/Waterways Cres**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Grandstand Rd E | 0.45 | 4 | A | 26 |
| Precinct A | 0.03 | 7 | A | 1 |
| Grandstand Rd W | 0.20 | 4 | A | 12 |
| Waterway Cres | 0.05 | 10 | A | 2 |
| **Intersection** | **0.45** | **4** | **A** | **26** |

**Figure 6-5: Current Performance – Grandstand Rd/Raconteur Dr**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Grandstand Rd E | 0.45 | 0 | A | 0 |
| Raconteur Dr | NA | NA | NA | NA |
| Grandstand Rd W | 0.33 | 0 | A | 0 |
| **Intersection (based on minor leg appr/mvt)** | **0.45** | **0** | **A** | **0** |

**Figure 6-6: Current Performance – Grandstand Rd/Resolution Dr/Stoneham St**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Stoneham St S | 0.62 | 9 | A | 54 |
| Resolution Dr E | 0.74 | 15 | B | 47 |
| Grandstand Rd N | 0.33 | 4 | A | 21 |
| Resolution Dr W | 0.16 | 13 | B | 7 |
| **Intersection** | **0.74** | **9** | **A** | **55** |

**Figure 6-7: Current Performance – Resolution Dr/Raconteur Dr**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Resolution Dr E | 0.21 | 0 | A | 0 |
| Resolution Dr E RT | 0.003 | 4 | A | 0.1/0.5 |
| Raconteur Dr RT | 0.02 | 6 | A | 0.5 |
| Resolution Dr W | 0.16 | 0 | A | 0 |
| **Intersection (based on minor leg appr/mvt)** | **0.02** | **6** | **A** | **0.1/0.5** |

**Figure 6-8: Current Performance – Great Eastern Hwy/Resolution Dr/Hardey Rd**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Hardey Rd E | 0.52 | 76 | E | 99 |
| GEH N | 0.75(T)/0.90(R) | 44 | D | 306 |
| Resolution Dr W | 0.93 | 64 | E | 75 |
| GEH S | 0.83(T)/0.65(R) | 31 | C | 319 |
| **Intersection** | **0.93** | **42** | **D** | **319** |

**Figure 6-9: Current Performance – Great Eastern Hwy/Stoneham St/Belgravia St**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Belgravia St E | 0.81 | 72 | E | 172 |
| GEH N | 0.70(T)/0.63(R) | 17 | B | 173 |
| Stoneham St W | 0.93 | 92 | F | 129 |
| GEH S | 0.80(T)/0.88(R) | 25 | C | 294 |
| **Intersection** | **0.93** | **34** | **C** | **294** |

As summarised, apart from Great Eastern Highway, intersections all typically operate at a good level of service, with typically LoS A on all leg/movements, with some LoS B on the Resolution Drive approaches to the Resolution Drive / Stoneham Street / Grandstand Road Roundabout. The largest amount of queueing occurs at this same roundabout where it has a DoS (a

measure of how much traffic takes up the available traffic carrying capacity) of 0.74, this maximum being on the Resolution Drive eastern approach to the roundabout and considered acceptable. Intersections on Great Eastern Highway at Resolution Drive and Stoneham Street operate with DoS of approximately 0.7 to 0.85 on Great Eastern Highway with higher DoS on the western leg approaches (Resolution Drive and Stoneham Street) where DoS is approaching 0.93.

## 6.8 Scenario 2 – 2036 No Development, Background Traffic Growth

The following presents the analysis of the same intersections assuming a future growth horizon to 2036 with NO build out of the development. The intersections have been assessed based on the current geometries.

**Ascot LSP Area Intersections: Grandstand Road and Raconteur Drive**

**Figure 6-10: 2036 Performance – Grandstand Rd/Waterways Cres**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Grandstand Rd E | 0.54 | 4 | A | 38 |
| Precinct A | 0.03 | 7 | A | 1 |
| Grandstand Rd W | 0.25 | 4 | A | 15 |
| Waterway Cres | 0.06 | 13 | B | 3 |
| **Intersection** | **0.54** | **4** | **A** | **38** |

**Figure 6-11: 2036 Performance – Grandstand Rd/Raconteur Dr**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Grandstand Rd E | 0.54 | 0 | A | 0 |
| Raconteur Dr | NA | NA | NA | NA |
| Grandstand Rd W | 0.35 | 0 | A | 0 |
| **Intersection (based on minor leg appr/mvt)** | **0.54** | **0** | **A** | **0** |

**Figure 6-12: 2036 Performance – Grandstand Rd/Resolution Dr/Stoneham St**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Stoneham St S | 0.69 | 11 | B | 68 |
| Resolution Dr E | 0.81 | 17 | B | 59 |
| Grandstand Rd N | 0.35 | 4 | A | 23 |
| Resolution Dr W | 0.19 | 14 | B | 8 |
| **Intersection** | **0.81** | **10** | **A** | **68** |

**Figure 6-13: 2036 Performance – Resolution Dr/Raconteur Dr**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Resolution Dr E | 0.22 | 0 | A | 0 |
| Resolution Dr E RT | 0.002 | 6 | A | 0.6 |
| Raconteur Dr RT | 0.02 | 7 | A | 0.5/0.6 |
| Resolution Dr W | 0.17 | 0 | A | 0 |
| **Intersection (based on minor leg appr/mvt)** | **0.02** | **7** | **A** | **0.5/0.6** |

With no development, and with continued anticipated background traffic growth on the adjacent road network, the intersections are expected to still operate satisfactorily. Noted performance changes to each intersection are:

- Grandstand Road/Waterways Crescent

  This intersection is expected to be operating well, with an overall LoS A, the same as now. There is expected to be a lengthening of vehicle queues on Grandstand Road and a slight increase in the DoS, notably for the Grandstand Road eastern approach to the roundabout.

- Grandstand Road/Raconteur Drive

  Raconteur Drive is presently closed to traffic on non-race days.

- Grandstand Road/Resolution Drive/Stoneham Street

  With the background traffic growth, this intersection is still expected to operate satisfactorily in 2036. Queues are expected to slightly lengthen with the DoS increasing from 0.74 to 0.81. Overall, the intersection is expected to operate at a LoS A.

- Resolution Drive/Raconteur Drive

  This intersection is expected to operate in almost identical manner to how it presently operates. There is still expected to be minimal delays and good corresponding LoS. The DoS for the critical right turn from Raconteur Drive onto Resolution Drive is low at 0.02, this being a measure of good operational performance for this intersection.

**Great Eastern Highway Intersections**

**Figure 6-14: 2036 Performance – Great Eastern Hwy/Resolution Dr/Hardey Rd**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Hardey Rd E | 0.54 | 75 | E | 106 |
| GEH N | 0.71(T)/1.25(R) | 70 | E | 411 |
| Resolution Dr W | 1.24 | 132 | F | 126 |
| GEH S | 0.90(T)/0.90(R) | 30 | C | 410 |
| **Intersection** | **1.25** | **56** | **E** | **411** |

**Figure 6-15: 2036 Performance – Great Eastern Hwy/Stoneham St/Belgravia St**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Belgravia St E | 1.12 | 199 | F | 389 |
| GEH N | 0.65(T)/0.82(R) | 12 | B | 127 |
| Stoneham St W | 1.13 | 237 | F | 232 |
| GEH S | 0.91(T)/1.13(R) | 38 | D | 525 |
| **Intersection** | **1.13** | **67** | **E** | **525** |

- Great Eastern Highway/Resolution Drive/Hardey Road

  With the background traffic growth, this intersection is expected to be oversaturated in 2036. Queues are expected to slightly lengthen with the DoS increasing from 0.93 to 1.25, this high DoS as a result of the right turn lane on the northern Great Eastern Highway approach being over saturated. Overall, the intersection is expected to operate at a LoS E. Options tested to improve this intersection included the introduction of an additional right turn lane on the northern Great Eastern Highway approach, this was found to reduce the DoS to 0.99, based on the Resolution Drive approach.

- Great Eastern Highway/Stoneham Street/Belgravia Street

  Similar to the intersection above, with the background traffic growth, this intersection is expected to be oversaturated in 2036. Queues are expected to lengthen with the DoS increasing from 0.93 to 1.13, this high DoS as a result of the right turn lane on the southern Great Eastern Highway approach along with the Stoneham Street approach being over saturated. Overall, the intersection is expected to operate at a LoS E. Options tested to improve this intersection included the introduction of an additional right turn lane on the southern Great Eastern Highway approach, this was found to still have a similar overall DoS of 1.17, based on the Stoneham Street approach. But the DoS for the right turn movement on the southern approach on Great Eastern Highway reducing to 0.79.

## 6.9 Scenario 3 – 2036 With Ascot LSP Development

The following presents the analysis of the assessment of the road network assuming a future growth horizon to 2036 with full build out of the Ascot Racecourse LSP development for a comprehensive assessment.

**Ascot LSP Area Intersections: Grandstand Road and Raconteur Drive**

**Figure 6-16: 2036 Performance with Development – Grandstand Rd/Waterways Cres**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Grandstand Rd E | 0.54 | 5 | A | 38 |
| Precinct A | 0.10 | 8 | A | 3 |
| Grandstand Rd W | 0.28 | 4 | A | 16 |
| Waterway Cres | 0.06 | 13 | B | 3 |
| **Intersection** | **0.54** | **5** | **A** | **38** |

**Figure 6-17: 2036 Performance with Development – Grandstand Rd/Raconteur Dr**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Grandstand Rd E | 0.48 | 0 | A | 0 |
| Grandstand Rd E RT | 0.09 | 4 | A | 2 |
| Raconteur Dr | 0.08 | 6 | A | 2 |
| Grandstand Rd W | 0.18 | 0 | A | 0 |
| **Intersection (based on minor leg appr/mvt)** | **0.48** | **0.5** | **A** | **2** |

**Figure 6-18: 2036 Performance with Development – Grandstand Rd/Resolution Dr/Stoneham St**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Stoneham St S | 0.85 | 23 | C | 136 |
| Resolution Dr E | 0.86 | 17 | B | 79 |
| Grandstand Rd N | 0.28 | 5 | A | 16 |
| Resolution Dr W | 0.28 | 18 | B | 13 |
| **Intersection** | **0.86** | **17** | **B** | **136** |

**Figure 6-19: 2036 Performance with Development – Resolution Dr/Raconteur Dr**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Resolution Dr E | 0.22 | 0 | A | 0 |
| Resolution Dr E RT | 0.09 | 2.2 | A | 2 |
| Raconteur Dr RT | 0.19 | 8 | A | 3.9/4.9 |
| Resolution Dr W | 0.17 | 0 | A | 0 |
| **Intersection (based on minor leg appr/mvt)** | **0.19** | **8** | **A** | **3.9/4.9** |

With full development of the Ascot Racecourse LSP area, and with continued background traffic growth on the adjacent road network, the intersections are expected to still operate satisfactorily in Scenario 3 and only minor changes to performance results to each intersection as compared to the previous Scenario 2:

- Grandstand Road/Waterways Crescent

  This intersection is expected to continue to operate well, with an overall LoS A, the same as for the no-development Scenario 2. Other metrics for this intersection are expected to be similar to the 2036 scenario and thus there is expected to be no detrimental impact issues caused by the LSP development.

- Grandstand Road/Raconteur Drive

  This intersection is proposed to be open permanently to traffic with left and right turns allowed from Grandstand Road into Raconteur Drive and only a left turn out from Raconteur Drive onto Grandstand Road. These are the same

movements currently permitted at this intersection when the intersection is open on race days to allow racecourse patrons to park. It is noted that the critical right turn from Grandstand Road onto Raconteur Drive and the left turn from Raconteur Drive onto Grandstand Road are both expected to operate at LoS A with DoS of 0.8 to 0.9, acceptable queues and delays. Queues are expected to be able to be contained within the current right turn pocket length on Grandstand Road.

- Grandstand Road/Resolution Drive/Stoneham Street

  With the background traffic growth and the Ascot LSP development traffic, this intersection is still expected to operate satisfactorily in 2036. Queues are expected to lengthen to 136m (68m) on Stoneham Street and 79m (from 59m) on Resolution Drive eastern approach. Overall, the DoS for the intersection is expected to be 0.86, this again acceptable with a total average delay of 17s and overall LoS B. Across all measures, this intersection is expected to operate satisfactorily.

- Resolution Drive/Raconteur Drive

  This intersection is expected to still operate similar to 2024 as in 2036 without any development. The DoS for the right turn from Raconteur Drive onto Resolution Drive is expected to be 0.19 with slightly longer queues, but no more than a single vehicle queued either at Raconteur Drive prior to entering Resolution Drive, or within the median waiting to entering the western traffic flow back towards the roundabout at the intersection of Grandstand Road/Resolution Drive/Stoneham Street.

**Great Eastern Highway Intersections**

**Figure 6-20: 2036 Performance with Development – Great Eastern Hwy/Resolution Dr/Hardey Rd**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Hardey Rd E | 0.60 | 81 | F | 116 |
| GEH N | 0.72(T)/1.53(R) | 126 | F | 634 |
| Resolution Dr W | 1.51 | 204 | F | 195 |
| GEH S | 0.91(T)/0.90(R) | 30 | C | 417 |
| **Intersection** | **1.53** | **86** | **F** | **634** |

**Figure 6-21: 2036 Performance with Development – Great Eastern Hwy/Stoneham St/Belgravia St**

| Lane | PM Peak | | | |
|---|---|---|---|---|
| | Degree of Saturation | Average Delay (s) | Level of Service | 95th %ile Q (m) |
| Belgravia St E | 1.20 | 252 | F | 461 |
| GEH N | 0.63(T)/1.10(R) | 15 | B | 98 |
| Stoneham St W | 1.40 | 480 | F | 354 |
| GEH S | 0.88(T)/1.38(R) | 40 | D | 468 |
| **Intersection** | **1.40** | **103** | **F** | **468** |

- Great Eastern Highway/Resolution Drive/Hardey Road

  The addition of the LSP development traffic is expected to exacerbate the performance of this intersection, which is expected to be over capacity in 2036 without the development. The intersection is expected to be oversaturated with 2036 queues expected to lengthen and the DoS increasing from 1.25 to 1.53. This high DoS is a result of the right turn lane on the northern (or north-east orientated) Great Eastern Highway approach being oversaturated (demand exceeds capacity). Overall, the intersection is expected to operate at a LoS F, slightly worse than the expected E without the LSP development.

- Great Eastern Highway/Stoneham Street/Belgravia Street

  Similar to the highway intersection above, with the background traffic growth and the addition of the LSP development traffic, this intersection is expected to also be oversaturated in 2036. Queues are expected to lengthen with the DoS increasing from 1.13 to 1.40, this high DoS as a result of the right turn lane on the southern (or south-west orientated) Great Eastern Highway approach along with the Stoneham Street approach being oversaturated. Overall, the intersection is expected to operate at a LoS F, slightly worse than the expected E without the LSP development.

## 6.10 SIDRA Intersection Results

Analysis of the intersections in the Ascot LSP area at the 2024 (base) and 2036 (full development) design horizons shows that there is predicted to be no detrimental issues with respect to traffic queuing and delays for any movement in the PM peak period where the highest traffic flows are expected. This is on the basis that the existing intersection of Grandstand Road and Resolution Drive is able to be opened permanently to traffic as a LILO-RI as currently occurs on race days.

The Great Eastern Highway signalised intersections at Resolution Drive and Stoneham Street were also checked for performance in 2036. Unsurprisingly, these highway intersections are expected to be oversaturated in 2036, even without the Ascot LSP development, primarily due to increasing demands on Great Eastern Highway.

In summary, outside of the highway intersections, all parameters of this capacity assessment are within recognised thresholds for acceptable intersection operation.

# 7 Conclusions & Recommendations

This Transport Impact Assessment (TIA) for Ascot Racecourse has been prepared in accordance with the Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines Volume 2 – Planning Schemes, Structure Plans & Activity Centre Plans (2016)*, which is the most appropriate level of TIA for a proposed Scheme Amendment and Local Structure Plan submission.

The Site, which is the subject of this assessment, is currently zoned as Place of Public Assembly across the proposed five development Precinct. This zoning is proposed be changed to mixed use, place of public assembly, and residential across the five precincts to allow development in keeping with the Applicant's intention for this Site as a multi-use development and complements the intention for the proposed Golden Gateway LSP.

The following conclusions and recommendations have been made regarding the proposed development with respect to this TIA:

## 7.1 Overall Integration with Surrounding Attractors / Generators

As Ascot Racecourse is already very well established in the local area, a variety of uses including retail, food, beverage and recreational uses are available in the local area primarily along the route of the Great Eastern Highway and on the Racecourse site itself. In addition, as an attractor and employment location itself, the racecourse is located in close proximity to large residential areas of Redcliffe, Belmont, Rivervale and Maylands surrounding the site.

Approximately 1.2 km to the south of the Site, is situated Belmont Primary School.

## 7.2 Road Network Accessibility and Parking

The site is well located in relation to the existing road network with access available from the major road network through Ascot via current intersections.

The following key intersections are located on the main road network within the Ascot area and will be immediately affected by traffic flows to and from the development site:

- Resolution Drive / Stoneham Street / Grandstand Road Roundabout
- Raconteur Drive / Grandstand Road Intersection
- Grandstand Road and Waterways Cresent Roundabout
- Resolution Drive / Raconteur Drive intersection.

Under the WAPC Guidelines for TIAs, a Scheme Amendment requires a 'broad brush' assessment of the impacts of the development. While individual lot driveway access arrangements and car parking typically fall outside the scope of a general Structure Plan-level transport assessment outlined in the WAPC Guidelines, the Ascot LSP Applicant is proactively presenting discussions/solutions to enhance future lot access arrangements and network performance. These suggestions are subject to further refinement in subsequent stages of development planning.

Given the Ascot LSP restrictions for most access points will be LILOs due to geometrical constraints, a relief valve is needed to support northbound traffic (right turning vehicular demands from the east). In this regard, the existing intersection of Grandstand Road and Raconteur Drive is proposed to be opened permanently to traffic with left and right turns allowed from Grandstand Road into Raconteur Drive and a left turn out from Raconteur Drive onto Grandstand Road (LILO-RI). These are the same movements currently permitted at this intersection on race days to allow racecourse patrons to park and exit. This critical left turn out to, and right turn in from Grandstand Road are both expected to operate satisfactorily with acceptable queues and delays to support the Ascot LSP. Ultimate development queues are expected to be able to be contained within the current right turn pocket length on Grandstand Road.

Additionally, the Applicant has undertaken a high-level parking appraisal for the Ascot LSP, even though this is not a standard requirement of a Structure Plan assessment under the WAPC Guidelines. The exiting net parking availability of Ascot on a race day and the proposed new development areas combined, is estimated to be able to adequately meet the currently observed parking demand for a busy typical race day at Ascot. For non-typical large events (such as the New Years Perth Cup) the traffic management plan for the racecourse would be appropriate for continued adoption. To further ensure that racecourse patrons are well informed of parking distribution and pick up / set down areas, it is a recommendation of this TIA to implement a Travel Demand Plan to assist traffic management and actively discourage patrons from using their private motor vehicle to drive to and from the racecourse. This plan may include both the encouragement in the use of the currently available public transport services near the racecourse, improvement in private high occupancy services, and the uptake of ride share services (MaaS).

## 7.3 Pedestrian and Cycle Accessibility

The existing footpath network on the northern side of Grandstand Road provides good links to the area surrounding Ascot Racecourse. This will be further enhanced by the improvements proposed through the LSP and Scheme Amendment, as well as the Public Realm Strategy being developed as part of the Golden Gateway LSP.

It is a recommendation of this report that, investigations be undertaken to extend the existing footpath network surrounding the racecourse, including south of Grandstand Road and improving pedestrian and cycle connections towards the local amenities on Great Eastern Highway. If feasible, this would encourage trips on foot to local centres and help increase public transport usage to reduce the reliance on private vehicle modes.

## 7.4 Public Transport Accessibility

The main bus stops accessible from the site are on Grandstand Road immediately adjacent to one of the key pedestrian access points to the racecourse. Based on a desktop review, the infrastructure provided at these stops is limited as a shelter with seating is only available on the south-western side while a raised kerb to assist with reduced mobility access is only available for a short distance on the north-eastern side of Grandstand Road. It would be recommended that a review of these bus stops is undertaken irrespective of any development, particularly as they serve a significant destination, it could also be considered that the proposed development provides a contribution to these improvements.

Additional frequent bus services are accessible from the site along the Great Eastern Highway towards the new Bayswater Railway Sation, Redcliffe Station, central Perth and Perth Airport.

## 7.5 Analysis of the Transport Network

Analysis of the intersections in the Ascot area with and without the Ascot LSP has been assessed at the 2024 (current) and 2036 (ultimate) design horizons. The comparison of results show that there is predicted to be no detrimental issues with respect to traffic queuing and delays for any movement in the PM peak period (PM peak is when the highest traffic flows are expected). All parameters of this capacity assessment are within recognised thresholds for acceptable intersection operation.

The downstream Great Eastern Highway intersections were also assessed for completeness and were shown to operate above their capacity in 2036, this without the addition of the Ascot LSP development.

It is important to note that at the time of preparing this report, the details of the Golden Gateway Local Structure Plan were still under revision. Whilst every endeavour was made to interrogate the previous traffic modelling and road network proposals in the draft reports and liaise with key project members for updates, the details were still unfinished and presented too many unknowns to be adequately and accurately incorporated into this traffic modelling intersection analyses.

## 7.6 Recommendations

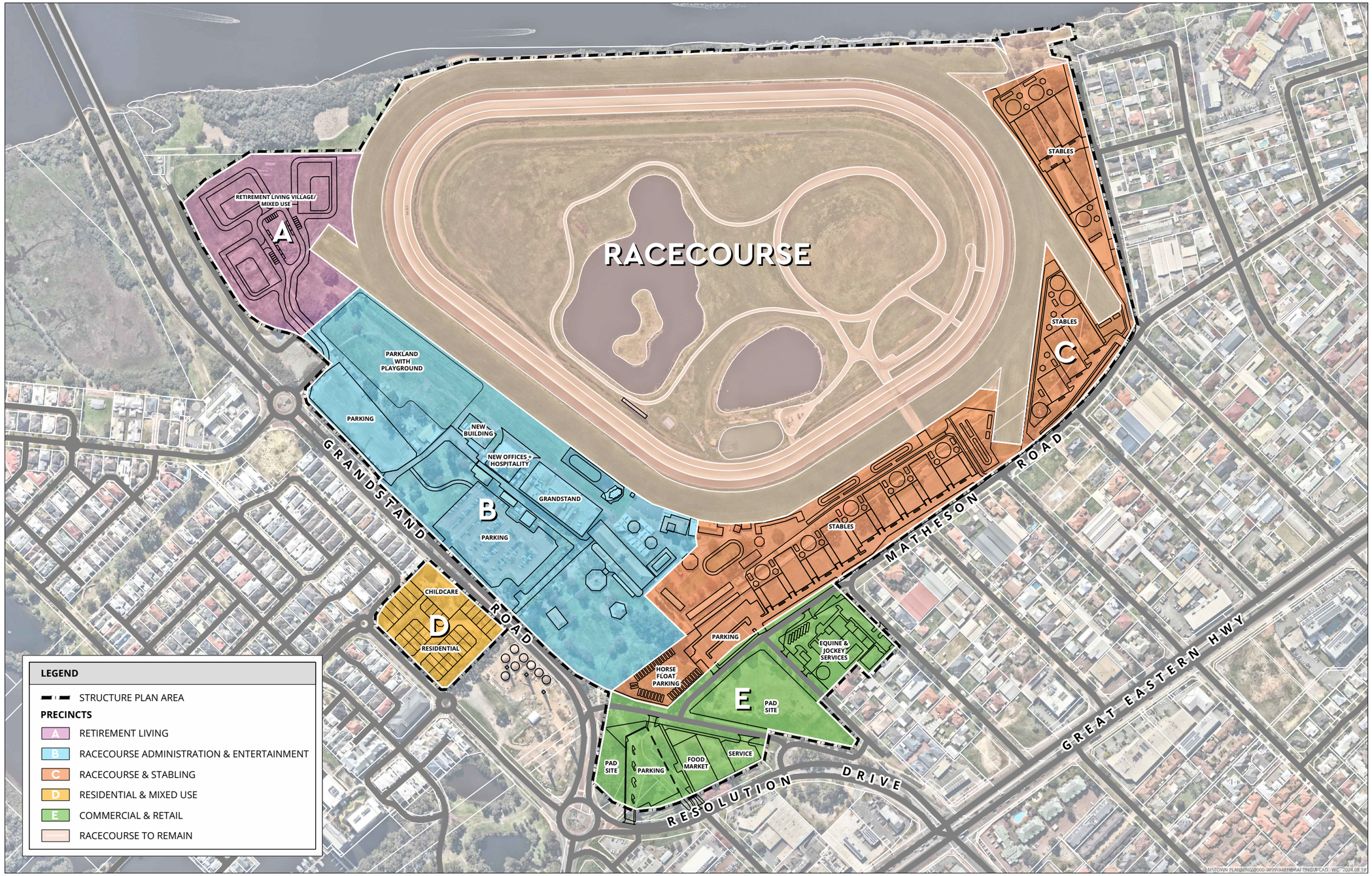
It is the recommendation of this TIA that:

- the existing intersection of Grandstand Road and Raconteur Drive be opened permanently to traffic as a LILO-RI as currently occurs on race days.
- Travel Demand Plan be undertaken to assist Ascot Racecourse patrons better utilise the parking available around the racecourse on race days and/or address this within the Ascot Event Traffic Management Plan.
- When GGLSP details are finalised, the external highway intersections be re-assessed in terms of their capacity to accommodate future development-generated traffic of the wider network and their anticipated background growth:
    - Great Eastern Highway/Resolution Drive/Hardey Road
    - Great Eastern Highway/Stoneham Street/Belgravia Street.

## Appendix A TIA Checklist

| Item | Provided | Comments/Proposals |
|---|---|---|
| Summary | Y | |
| Introduction / Background | Y | |
| Structure Plan Proposal | | |
| Regional context | Y | |
| Proposed land uses | Y | |
| Table of land uses and quantities | Y | |
| Major attractors / generators | Y | |
| Specific issues | Y | |
| Existing Situation | | |
| Existing land uses within structure plan | Y | |
| Existing land uses within 800m of structure plan area | Y | |
| Existing road network within structure plan area | Y | |
| Existing pedestrian / cycle network within structure plan area | Y | |
| Existing public transport services within structure plan area | Y | |
| Existing road network within 2 (or 5) km of the structure plan area | Y | |
| Traffic flows on roads within the structure plan area (PM and/or AM peak hours) | Y | |
| Existing pedestrian / cycle networks within 800m of the structure plan area. | Y | |
| Existing public transport services within 800m of the structure plan area. | Y | |
| Proposed Internal Transport Networks | | |
| Changes / additions to existing road network or proposed new road network | Y | |
| Road reservation widths | Y | |
| Road cross-sections & speed limits | Y | |
| Intersection controls | Y | |
| Pedestrian / cycle networks and crossing facilities | Y | |
| Changes to External Transport Networks | | |
| Road network | Y | |
| Intersection controls | Y | |
| Pedestrian/cycle networks and crossing facilities | Y | |
| Public transport services | Y | |
| Integration with the surrounding area | | |
| Trip attractors / generators within 800 metres | Y | |
| proposed changes to land uses within 800 metres | Y | |
| travel desire lines from development to these attractors/ generators | Y | |
| adequacy of external transport networks | Y | |
| deficiencies in external transport networks | Y | |
| remedial measures to address deficiencies | Y | |
| Analysis of internal transport networks | | |
| assessment years | Y | |
| time periods | Y | |
| Structure plan generated traffic | Y | |
| Extraneous (through) traffic | Y | |
| Design traffic flows (that is, total traffic) | Y | |
| Road cross-sections | Y | |
| Intersection controls | Y | |
| Access strategy | Y | |
| Pedestrian / cycle networks | Y | |
| Safe routes to schools | Y | |
| Pedestrian permeability & efficiency | Y | |
| Access to public transport | Y | |
| Analysis of external transport networks | | |
| Extent of analysis | Y | |
| Base flows for assessment year(s) | Y | |
| Total traffic flows | Y | |
| Road cross-sections | Y | |
| Intersection layouts and controls | Y | |
| Pedestrian / cycle networks | Y | |
| Conclusions | Y | |

## Appendix B Proposed Masterplan Precincts




**DRAFT MASTER PLAN CONCEPT**

VARIOUS LOTS - ASCOT RACECOURSE

ASCOT

N

0 100 m

SCALE @ A3: 1:4000

**9481-CON-01-D**

DRAWN: WC
DATE CREATED: 2024.08.19
PROJECTION: MGA50 GDA94
CADASTRE: LANDGATE
AERIAL: NEARMAP 20230831

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ROWE GROUP DESIGN

# Appendix C SIDRA Modelling Outputs

# LANE SUMMARY

**Site: 103a [Leg 1 PM (Site Folder: Raconteur T)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

**Network: N101 [Raconteur PM with Dev (Network Folder: AM)]**

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 12

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Median | | | | | | | | | | | | | | | |
| Lane 1 | 101 | 0.0 | 101 | 0.0 | 1149 | 0.088 | 100 | 2.2 | LOS A | 0.3 | 2.5 | Full | 6 | 0.0 | 0.0 |
| Approach | 101 | 0.0 | 101 | 0.0 | | 0.088 | | 2.2 | LOS A | 0.3 | 2.5 | | | | |
| North: Racecourse | | | | | | | | | | | | | | | |
| Lane 1 | 172 | 0.0 | 172 | 0.0 | 1298 | 0.132 | 100 | 5.7 | LOS A | 0.6 | 4.5 | Short | 50 | 0.0 | NA |
| Lane 2 | 150 | 0.0 | 150 | 0.0 | 1122 | 0.133 | 100 | 4.6 | LOS A | 0.5 | 3.9 | Full | 500 | 0.0 | 0.0 |
| Approach | 322 | 0.0 | 322 | 0.0 | | 0.133 | | 5.2 | LOS A | 0.6 | 4.5 | | | | |
| West: Raconteur Dr | | | | | | | | | | | | | | | |
| Lane 1 | 78 | 0.0 | 78 | 0.0 | 1772 | 0.044 | 100 | 5.6 | LOS A | 0.0 | 0.0 | Short | 75 | 0.0 | NA |
| Lane 2 | 314 | 2.5 | 314 | 2.5 | 1883 | 0.167 | 100 | 0.0 | LOS A | 0.0 | 0.0 | Full | 550 | 0.0 | 0.0 |
| Approach | 392 | 2.0 | 392 | 2.0 | | 0.167 | | 1.1 | NA | 0.0 | 0.0 | | | | |
| All Vehicles | 815 | 1.0 | 815 | 1.0 | | 0.167 | | 2.9 | NA | 0.6 | 4.5 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Approach Lane Flows (veh/h)**

South: Median

| Mov. From S To Exit: | T1 N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|
| Lane 1 | 101 | 101 | 0.0 | 1149 | 0.088 | 100 | NA | NA |
| Approach | 101 | 101 | 0.0 | | 0.088 | | | |

North: Racecourse

| Mov. From N To Exit: | L2 E | T1 S | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 172 | - | 172 | 0.0 | 1298 | 0.132 | 100 | 0.0 | 2 |
| Lane 2 | - | 150 | 150 | 0.0 | 1122 | 0.133 | 100 | NA | NA |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Approach | 172 | 150 | 322 | 0.0 | | 0.133 | | | |
| West: Raconteur Dr | | | | | | | | | |
| Mov. From W To Exit: | L2 N | T1 E | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 78 | - | 78 | 0.0 | 1772 | 0.044 | 100 | 0.0 | 2 |
| Lane 2 | - | 314 | 314 | 2.5 | 1883 | 0.167 | 100 | NA | NA |
| Approach | 78 | 314 | 392 | 2.0 | | 0.167 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | |
| All Vehicles | 815 | 1.0 | | 0.167 | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Critical Gap pcu/h | Follow-up Headway sec | Lane Flow Rate sec | Capacity veh/h | Deg. Satn veh/h | Min. Delay v/c | Merge Delay sec | sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| South: Median | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| North: Racecourse | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| West: Raconteur Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

**Site: 103b [Leg 2 PM (Site Folder: Raconteur T)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

**Network: N101 [Raconteur PM with Dev (Network Folder: AM)]**

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 12

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Raconteur Dr | | | | | | | | | | | | | | | |
| Lane 1 | 417 | 3.8 | 417 | 3.8 | 1860 | 0.224 | 100 | 0.1 | LOS A | 0.0 | 0.0 | Full | 780 | 0.0 | 0.0 |
| Lane 2 | 101 | 0.0 | 101 | 0.0 | 1773 | 0.057 | 100 | 5.7 | LOS A | 0.0 | 0.0 | Short | 85 | 0.0 | NA |
| Approach | 518 | 3.0 | 518 | 3.0 | | 0.224 | | 1.2 | NA | 0.0 | 0.0 | | | | |
| North: Median | | | | | | | | | | | | | | | |
| Lane 1 | 150 | 0.0 | 150 | 0.0 | 781 | 0.192 | 100 | 3.4 | LOS A | 0.7 | 4.9 | Full | 6 | 0.0 | 0.0 |
| Approach | 150 | 0.0 | 150 | 0.0 | | 0.192 | | 3.4 | LOS A | 0.7 | 4.9 | | | | |
| All Vehicles | 668 | 2.3 | 668 | 2.3 | | 0.224 | | 1.7 | NA | 0.7 | 4.9 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Approach Lane Flows (veh/h)**

East: Raconteur Dr

| Mov. From E To Exit: | T1 W | R2 N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 417 | - | 417 | 3.8 | 1860 | 0.224 | 100 | NA | NA |
| Lane 2 | - | 101 | 101 | 0.0 | 1773 | 0.057 | 100 | 0.0 | 1 |
| Approach | 417 | 101 | 518 | 3.0 | | 0.224 | | | |

North: Median

| Mov. From N To Exit: | R2 W | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|
| Lane 1 | 150 | 150 | 0.0 | 781 | 0.192 | 100 | NA | NA |
| Approach | 150 | 150 | 0.0 | | 0.192 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 668 | 2.3 | 0.224 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Critical Gap pcu/h | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| East: Raconteur Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| North: Median | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LANE SUMMARY

## Site: 103a [Leg 1 PM (Site Folder: Grandstand/Raconteur)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

**Network: N101 [Grandstand PM with Dev (Network Folder: AM)]**

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 19

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Raconteur Dr | | | | | | | | | | | | | | | |
| Lane 1 | 100 | 0.0 | 100 | 0.0 | 1237 | 0.081 | 100 | 5.7 | LOS A | 0.3 | 2.4 | Short | 50 | 0.0 | NA |
| Lane 2 | 1 | 0.0 | 1 | 0.0 | 871 | 0.001 | 100 | 5.6 | LOS A | 0.0 | 0.0 | Full | 500 | 0.0 | 0.0 |
| Approach | 101 | 0.0 | 101 | 0.0 | | 0.081 | | 5.7 | LOS A | 0.3 | 2.4 | | | | |
| NorthWest: Grandstand Rd | | | | | | | | | | | | | | | |
| Lane 1 | 98 | 0.0 | 98 | 0.0 | 1548 | 0.063 | 100 | 5.8 | LOS A | 0.3 | 1.9 | Short | 75 | 0.0 | NA |
| Lane 2 | 345 | 3.5 | 345 | 3.5 | 1864 | 0.185 | 100 | 0.1 | LOS A | 0.0 | 0.0 | Full | 550 | 0.0 | 0.0 |
| Lane 3 | 345 | 3.5 | 345 | 3.5 | 1864 | 0.185 | 100 | 0.1 | LOS A | 0.0 | 0.0 | Full | 550 | 0.0 | 0.0 |
| Approach | 788 | 3.1 | 788 | 3.1 | | 0.185 | | 0.8 | LOS A | 0.3 | 1.9 | | | | |
| SouthWest: Median | | | | | | | | | | | | | | | |
| Lane 1 | 76 | 0.0 | 76 | 0.0 | 869 | 0.087 | 100 | 3.7 | LOS A | 0.3 | 2.2 | Full | 6 | 0.0 | 0.0 |
| Approach | 76 | 0.0 | 76 | 0.0 | | 0.087 | | 3.7 | LOS A | 0.3 | 2.2 | | | | |
| All Vehicles | 964 | 2.5 | 964 | 2.5 | | 0.185 | | 1.5 | NA | 0.3 | 2.4 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Approach Lane Flows (veh/h)**

NorthEast: Raconteur Dr

| Mov. From NE To Exit: | L2 SE | T1 SW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 100 | - | 100 | 0.0 | 1237 | 0.081 | 100 | 0.0 | 2 |
| Lane 2 | - | 1 | 1 | 0.0 | 871 | 0.001 | 100 | NA | NA |
| Approach | 100 | 1 | 101 | 0.0 | | 0.081 | | | |

NorthWest: Grandstand Rd

| Mov. From NW To Exit: | L2 NE | T1 SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 98 | - | 98 | 0.0 | 1548 | 0.063 | 100 | 0.0 | 2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lane 2 | - | 345 | 345 | 3.5 | 1864 | 0.185 | 100 | NA | NA |
| Lane 3 | - | 345 | 345 | 3.5 | 1864 | 0.185 | 100 | NA | NA |
| Approach | 98 | 690 | 788 | 3.1 | | 0.185 | | | |
| SouthWest: Median | | | | | | | | | |
| Mov. From SW To Exit: | T1 NE | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 76 | 76 | 0.0 | | 869 | 0.087 | 100 | NA | NA |
| Approach | 76 | 76 | 0.0 | | | 0.087 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | |
| All Vehicles | 964 | 2.5 | 0.185 | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| NorthEast: Raconteur Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Grandstand Rd | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: Median | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LANE SUMMARY

## Site: 103b [Leg 2 PM (Site Folder: Grandstand/Raconteur)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

**Network: N101 [Grandstand PM with Dev (Network Folder: AM)]**

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 19

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Grandtand Rd | | | | | | | | | | | | | | | |
| Lane 1 | 912 | 2.2 | 912 | 2.2 | 1888 | 0.483 | 100 | 0.3 | LOS A | 0.0 | 0.0 | Full | 780 | 0.0 | 0.0 |
| Lane 2 | 912 | 2.2 | 912 | 2.2 | 1888 | 0.483 | 100 | 0.3 | LOS A | 0.0 | 0.0 | Full | 780 | 0.0 | 0.0 |
| Lane 3 | 76 | 0.0 | 76 | 0.0 | 1770 | 0.043 | 100 | 5.7 | LOS A | 0.0 | 0.0 | Short | 50 | 0.0 | NA |
| Approach | 1900 | 2.1 | 1900 | 2.1 | | 0.483 | | 0.5 | NA | 0.0 | 0.0 | | | | |
| NorthEast: Median | | | | | | | | | | | | | | | |
| Lane 1 | 1 | 0.0 | 1 | 0.0 | 115 | 0.009 | 100 | 30.2 | LOS D | 0.0 | 0.2 | Full | 6 | 0.0 | 0.0 |
| Approach | 1 | 0.0 | 1 | 0.0 | | 0.009 | | 30.2 | LOS D | 0.0 | 0.2 | | | | |
| All Vehicles | 1901 | 2.1 | 1901 | 2.1 | | 0.483 | | 0.5 | NA | 0.0 | 0.2 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Approach Lane Flows (veh/h)**

SouthEast: Grandtand Rd

| Mov. From SE To Exit: | T1 NW | R2 NE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 912 | - | 912 | 2.2 | 1888 | 0.483 | 100 | NA | NA |
| Lane 2 | 912 | - | 912 | 2.2 | 1888 | 0.483 | 100 | NA | NA |
| Lane 3 | - | 76 | 76 | 0.0 | 1770 | 0.043 | 100 | 0.0 | 2 |
| Approach | 1824 | 76 | 1900 | 2.1 | | 0.483 | | | |

NorthEast: Median

| Mov. From NE To Exit: | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|
| Lane 1 | 1 | 1 | 0.0 | 115 | 0.009 | 100 | NA | NA |
| Approach | 1 | 1 | 0.0 | | 0.009 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|

| | | | |
|---|---|---|---|
| All Vehicles | 1901 | 2.1 | 0.483 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Critical Gap pcu/h | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Grandtand Rd | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: Median | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LANE SUMMARY

**Site: 103a [Leg 1 PM - No Dev (Site Folder: Raconteur T)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

**Network: N101 [Raconteur Current PM (Network Folder: AM)]**

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 12

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Median | | | | | | | | | | | | | | | |
| Lane 1 | 4 | 0.0 | 4 | 0.0 | 1200 | 0.004 | 100 | 1.8 | LOS A | 0.0 | 0.1 | Full | 6 | 0.0 | 0.0 |
| Approach | 4 | 0.0 | 4 | 0.0 | | 0.004 | | 1.8 | LOS A | 0.0 | 0.1 | | | | |
| North: Racecourse | | | | | | | | | | | | | | | |
| Lane 1 | 23 | 0.0 | 23 | 0.0 | 1298 | 0.018 | 100 | 5.5 | LOS A | 0.1 | 0.6 | Short | 50 | 0.0 | NA |
| Lane 2 | 21 | 0.0 | 21 | 0.0 | 1202 | 0.018 | 100 | 4.1 | LOS A | 0.1 | 0.5 | Full | 500 | 0.0 | 0.0 |
| Approach | 45 | 0.0 | 45 | 0.0 | | 0.018 | | 4.9 | LOS A | 0.1 | 0.6 | | | | |
| West: Raconteur Dr | | | | | | | | | | | | | | | |
| Lane 1 | 2 | 0.0 | 2 | 0.0 | 1838 | 0.001 | 100 | 5.5 | LOS A | 0.0 | 0.0 | Short | 75 | 0.0 | NA |
| Lane 2 | 314 | 2.5 | 314 | 2.5 | 1883 | 0.167 | 100 | 0.0 | LOS A | 0.0 | 0.0 | Full | 550 | 0.0 | 0.0 |
| Approach | 316 | 2.5 | 316 | 2.5 | | 0.167 | | 0.1 | NA | 0.0 | 0.0 | | | | |
| All Vehicles | 365 | 2.1 | 365 | 2.1 | | 0.167 | | 0.7 | NA | 0.1 | 0.6 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Approach Lane Flows (veh/h)**

South: Median

| Mov. From S To Exit: | T1 N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|
| Lane 1 | 4 | 4 | 0.0 | 1200 | 0.004 | 100 | NA | NA |
| Approach | 4 | 4 | 0.0 | | 0.004 | | | |

North: Racecourse

| Mov. From N To Exit: | L2 E | T1 S | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 23 | - | 23 | 0.0 | 1298 | 0.018 | 100 | 0.0 | 2 |
| Lane 2 | - | 21 | 21 | 0.0 | 1202 | 0.018 | 100 | NA | NA |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Approach | 23 | 21 | 45 | 0.0 | | 0.018 | | | |
| West: Raconteur Dr | | | | | | | | | |
| Mov. From W To Exit: | L2 N | T1 E | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 2 | - | 2 | 0.0 | 1838 | 0.001 | 100 | 0.0 | 2 |
| Lane 2 | - | 314 | 314 | 2.5 | 1883 | 0.167 | 100 | NA | NA |
| Approach | 2 | 314 | 316 | 2.5 | | 0.167 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | |
| All Vehicles | 365 | 2.1 | | 0.167 | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Critical Gap pcu/h | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| South: Median | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| North: Racecourse | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| West: Raconteur Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LANE SUMMARY

**Site: 103b [Leg 2 PM - No Dev (Site Folder: Raconteur T)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

**Network: N101 [Raconteur Current PM (Network Folder: AM)]**

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 12

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Raconteur Dr | | | | | | | | | | | | | | | |
| Lane 1 | 417 | 3.8 | 417 | 3.8 | 1860 | 0.224 | 100 | 0.1 | LOS A | 0.0 | 0.0 | Full | 780 | 0.0 | 0.0 |
| Lane 2 | 4 | 0.0 | 4 | 0.0 | 1838 | 0.002 | 100 | 5.7 | LOS A | 0.0 | 0.0 | Short | 85 | 0.0 | NA |
| Approach | 421 | 3.7 | 421 | 3.7 | | 0.224 | | 0.2 | NA | 0.0 | 0.0 | | | | |
| North: Median | | | | | | | | | | | | | | | |
| Lane 1 | 21 | 0.0 | 21 | 0.0 | 850 | 0.025 | 100 | 2.5 | LOS A | 0.1 | 0.6 | Full | 6 | 0.0 | 0.0 |
| Approach | 21 | 0.0 | 21 | 0.0 | | 0.025 | | 2.5 | LOS A | 0.1 | 0.6 | | | | |
| All Vehicles | 443 | 3.5 | 443 | 3.5 | | 0.224 | | 0.3 | NA | 0.1 | 0.6 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Approach Lane Flows (veh/h)**

East: Raconteur Dr

| Mov. From E To Exit: | T1 W | R2 N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 417 | - | 417 | 3.8 | 1860 | 0.224 | 100 | NA | NA |
| Lane 2 | - | 4 | 4 | 0.0 | 1838 | 0.002 | 100 | 0.0 | 1 |
| Approach | 417 | 4 | 421 | 3.7 | | 0.224 | | | |

North: Median

| Mov. From N To Exit: | R2 W | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|
| Lane 1 | 21 | 21 | 0.0 | 850 | 0.025 | 100 | NA | NA |
| Approach | 21 | 21 | 0.0 | | 0.025 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 443 | 3.5 | 0.224 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Critical Gap pcu/h | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| East: Raconteur Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| North: Median | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LANE SUMMARY

## Site: 101 [Grandstand/Garratt/Waterway 2041 PM - with GG/ Dev (Site Folder: Grandstand/Garratt/Waterway)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 12

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 917 | 0.9 | 917 | 0.9 | 1695 | 0.541 | 100 | 4.3 | LOS A | 5.1 | 38.1 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 772 | 0.9 | 772 | 0.9 | 1427 | 0.541 | 100 | 4.8 | LOS A | 5.0 | 36.9 | Full | 300 | 0.0 | 0.0 |
| Approach | 1689 | 0.9 | 1689 | 0.9 | | 0.541 | | 4.6 | LOS A | 5.1 | 38.1 | | | | |
| NorthEast: Racecourse | | | | | | | | | | | | | | | |
| Lane 1[d] | 74 | 1.4 | 74 | 1.4 | 710 | 0.104 | 100 | 8.0 | LOS A | 0.4 | 3.3 | Full | 500 | 0.0 | 0.0 |
| Approach | 74 | 1.4 | 74 | 1.4 | | 0.104 | | 8.0 | LOS A | 0.4 | 3.3 | | | | |
| NorthWest: Garratt Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 472 | 1.3 | 472 | 1.3 | 1686 | 0.280 | 100 | 4.2 | LOS A | 2.2 | 16.1 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 400 | 1.3 | 400 | 1.3 | 1429 | 0.280 | 100 | 4.7 | LOS A | 2.1 | 15.8 | Full | 500 | 0.0 | 0.0 |
| Approach | 872 | 1.3 | 872 | 1.3 | | 0.280 | | 4.4 | LOS A | 2.2 | 16.1 | | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | | | | | |
| Lane 1[d] | 35 | 0.0 | 35 | 0.0 | 588 | 0.059 | 100 | 11.7 | LOS B | 0.4 | 2.8 | Full | 500 | 0.0 | 0.0 |
| Approach | 35 | 0.0 | 35 | 0.0 | | 0.059 | | 11.7 | LOS B | 0.4 | 2.8 | | | | |
| All Vehicles | 2669 | 1.0 | 2669 | 1.0 | | 0.541 | | 4.7 | LOS A | 5.1 | 38.1 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

SouthEast: Grandstand Road

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | U SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 15 | 902 | - | - | 917 | 0.9 | 1695 | 0.541 | 100 | NA | NA |
| Lane 2 | - | 722 | 48 | 1 | 772 | 0.9 | 1427 | 0.541 | 100 | NA | NA |
| Approach | 15 | 1624 | 48 | 1 | 1689 | 0.9 | | 0.541 | | | |

NorthEast: Racecourse

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 41 | 1 | 32 | 74 | 1.4 | | 710 | 0.104 | 100 | NA | NA |
| Approach | 41 | 1 | 32 | 74 | 1.4 | | | 0.104 | | | |
| NorthWest: Garratt Road | | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | U NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 47 | 424 | - | - | 472 | 1.3 | 1686 | 0.280 | 100 | NA | NA |
| Lane 2 | - | 365 | 32 | 3 | 400 | 1.3 | 1429 | 0.280 | 100 | NA | NA |
| Approach | 47 | 789 | 32 | 3 | 872 | 1.3 | | 0.280 | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 19 | 1 | 15 | 35 | 0.0 | | 588 | 0.059 | 100 | NA | NA |
| Approach | 19 | 1 | 15 | 35 | 0.0 | | | 0.059 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | | | |
| All Vehicles | 2669 | 1.0 | 0.541 | | | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Critical Gap pcu/h | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: Racecourse | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Garratt Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: Waterway Cres | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 101 [Grandstand/Garratt/Waterway Current AM (Site Folder: Grandstand/Garratt/Waterway)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 342 | 2.8 | 342 | 2.8 | 1747 | 0.196 | 100 | 4.0 | LOS A | 1.1 | 8.4 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 290 | 2.9 | 290 | 2.9 | 1483 | 0.196 | 100 | 4.2 | LOS A | 1.1 | 8.3 | Full | 300 | 0.0 | 0.0 |
| Approach | 633 | 2.8 | 633 | 2.8 | | 0.196 | | 4.1 | LOS A | 1.1 | 8.4 | | | | |
| NorthEast: Racecourse | | | | | | | | | | | | | | | |
| Lane 1[d] | 18 | 29.1 | 18 | 29.1 | 455 | 0.039 | 100 | 11.0 | LOS B | 0.1 | 1.5 | Full | 500 | 0.0 | 0.0 |
| Approach | 18 | 29.1 | 18 | 29.1 | | 0.039 | | 11.0 | LOS B | 0.1 | 1.5 | | | | |
| NorthWest: Garratt Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 589 | 1.4 | 589 | 1.4 | 1747 | 0.337 | 100 | 4.1 | LOS A | 2.8 | 20.9 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 498 | 1.4 | 498 | 1.4 | 1476 | 0.337 | 100 | 4.3 | LOS A | 2.8 | 20.6 | Full | 500 | 0.0 | 0.0 |
| Approach | 1086 | 1.4 | 1086 | 1.4 | | 0.337 | | 4.2 | LOS A | 2.8 | 20.9 | | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | | | | | |
| Lane 1[d] | 53 | 4.0 | 53 | 4.0 | 866 | 0.061 | 100 | 7.4 | LOS A | 0.3 | 2.2 | Full | 500 | 0.0 | 0.0 |
| Approach | 53 | 4.0 | 53 | 4.0 | | 0.061 | | 7.4 | LOS A | 0.3 | 2.2 | | | | |
| All Vehicles | 1789 | 2.2 | 1789 | 2.2 | | 0.337 | | 4.3 | LOS A | 2.8 | 20.9 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

SouthEast: Grandstand Road

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | U SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 14 | 328 | - | - | 342 | 2.8 | 1747 | 0.196 | 100 | NA | NA |
| Lane 2 | - | 280 | 9 | 1 | 290 | 2.9 | 1483 | 0.196 | 100 | NA | NA |
| Approach | 14 | 608 | 9 | 1 | 633 | 2.8 | | 0.196 | | | |

NorthEast: Racecourse

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 9 | 1 | 7 | 18 | 29.1 | 455 | 0.039 | 100 | NA | NA |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | 9 | 1 | 7 | 18 | 29.1 | | | 0.039 | | | |
| NorthWest: Garratt Road | | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | U NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 8 | 580 | - | - | 589 | 1.4 | 1747 | 0.337 | 100 | NA | NA |
| Lane 2 | - | 481 | 16 | 1 | 498 | 1.4 | 1476 | 0.337 | 100 | NA | NA |
| Approach | 8 | 1061 | 16 | 1 | 1086 | 1.4 | | 0.337 | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 25 | 1 | 26 | 53 | 4.0 | | 866 | 0.061 | 100 | NA | NA |
| Approach | 25 | 1 | 26 | 53 | 4.0 | | | 0.061 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 1789 | 2.2 | 0.337 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: Racecourse | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Garratt Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: Waterway Cres | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LANE SUMMARY

## Site: 101 [Grandstand/Garratt/Waterway Current PM (Site Folder: Grandstand/Garratt/Waterway)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 12

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 956 | 1.0 | 956 | 1.0 | 1758 | 0.544 | 100 | 4.2 | LOS A | 5.1 | 37.6 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 804 | 1.0 | 804 | 1.0 | 1480 | 0.544 | 100 | 4.3 | LOS A | 5.0 | 36.9 | Full | 300 | 0.0 | 0.0 |
| Approach | 1760 | 1.0 | 1760 | 1.0 | | 0.544 | | 4.2 | LOS A | 5.1 | 37.6 | | | | |
| NorthEast: Racecourse | | | | | | | | | | | | | | | |
| Lane 1[d] | 21 | 5.0 | 21 | 5.0 | 706 | 0.030 | 100 | 7.1 | LOS A | 0.1 | 0.9 | Full | 500 | 0.0 | 0.0 |
| Approach | 21 | 5.0 | 21 | 5.0 | | 0.030 | | 7.1 | LOS A | 0.1 | 0.9 | | | | |
| NorthWest: Garratt Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 438 | 1.7 | 438 | 1.7 | 1781 | 0.246 | 100 | 4.0 | LOS A | 2.0 | 15.1 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 370 | 1.5 | 370 | 1.5 | 1506 | 0.246 | 100 | 4.5 | LOS A | 2.0 | 14.6 | Full | 500 | 0.0 | 0.0 |
| Approach | 808 | 1.6 | 808 | 1.6 | | 0.246 | | 4.2 | LOS A | 2.0 | 15.1 | | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | | | | | |
| Lane 1[d] | 35 | 0.0 | 35 | 0.0 | 610 | 0.057 | 100 | 12.7 | LOS B | 0.4 | 3.1 | Full | 500 | 0.0 | 0.0 |
| Approach | 35 | 0.0 | 35 | 0.0 | | 0.057 | | 12.7 | LOS B | 0.4 | 3.1 | | | | |
| All Vehicles | 2624 | 1.2 | 2624 | 1.2 | | 0.544 | | 4.4 | LOS A | 5.1 | 37.6 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

SouthEast: Grandstand Road

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | U SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 15 | 941 | - | - | 956 | 1.0 | 1758 | 0.544 | 100 | NA | NA |
| Lane 2 | - | 799 | 4 | 1 | 804 | 1.0 | 1480 | 0.544 | 100 | NA | NA |
| Approach | 15 | 1740 | 4 | 1 | 1760 | 1.0 | | 0.544 | | | |

NorthEast: Racecourse

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 15 | 1 | 5 | 21 | 5.0 | | 706 | 0.030 | 100 | NA | NA |
| Approach | 15 | 1 | 5 | 21 | 5.0 | | | 0.030 | | | |
| NorthWest: Garratt Road | | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | U NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 3 | 435 | - | - | 438 | 1.7 | 1781 | 0.246 | 100 | NA | NA |
| Lane 2 | - | 335 | 32 | 4 | 370 | 1.5 | 1506 | 0.246 | 100 | NA | NA |
| Approach | 3 | 769 | 32 | 4 | 808 | 1.6 | | 0.246 | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 19 | 1 | 15 | 35 | 0.0 | | 610 | 0.057 | 100 | NA | NA |
| Approach | 19 | 1 | 15 | 35 | 0.0 | | | 0.057 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | | | |
| All Vehicles | 2624 | 1.2 | 0.544 | | | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: Racecourse | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Garratt Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: Waterway Cres | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LANE SUMMARY

## Site: 101 [Grandstand/Garratt/Waterway 2041 AM (Site Folder: Grandstand/Garratt/Waterway)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 24

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 384 | 2.8 | 384 | 2.8 | 1751 | 0.220 | 100 | 4.0 | LOS A | 1.3 | 9.8 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 326 | 2.8 | 326 | 2.8 | 1484 | 0.220 | 100 | 4.2 | LOS A | 1.3 | 9.6 | Full | 300 | 0.0 | 0.0 |
| Approach | 710 | 2.8 | 710 | 2.8 | | 0.220 | | 4.1 | LOS A | 1.3 | 9.8 | | | | |
| NorthEast: Racecourse | | | | | | | | | | | | | | | |
| Lane 1[d] | 18 | 29.1 | 18 | 29.1 | 421 | 0.042 | 100 | 11.7 | LOS B | 0.2 | 1.6 | Full | 500 | 0.0 | 0.0 |
| Approach | 18 | 29.1 | 18 | 29.1 | | 0.042 | | 11.7 | LOS B | 0.2 | 1.6 | | | | |
| NorthWest: Garratt Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 662 | 1.4 | 662 | 1.4 | 1750 | 0.379 | 100 | 4.1 | LOS A | 3.3 | 24.8 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 559 | 1.4 | 559 | 1.4 | 1477 | 0.379 | 100 | 4.3 | LOS A | 3.3 | 24.5 | Full | 500 | 0.0 | 0.0 |
| Approach | 1221 | 1.4 | 1221 | 1.4 | | 0.379 | | 4.2 | LOS A | 3.3 | 24.8 | | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | | | | | |
| Lane 1[d] | 53 | 4.0 | 53 | 4.0 | 839 | 0.063 | 100 | 7.6 | LOS A | 0.3 | 2.2 | Full | 500 | 0.0 | 0.0 |
| Approach | 53 | 4.0 | 53 | 4.0 | | 0.063 | | 7.6 | LOS A | 0.3 | 2.2 | | | | |
| All Vehicles | 2002 | 2.2 | 2002 | 2.2 | | 0.379 | | 4.3 | LOS A | 3.3 | 24.8 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

SouthEast: Grandstand Road

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | U SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 14 | 371 | - | - | 384 | 2.8 | 1751 | 0.220 | 100 | NA | NA |
| Lane 2 | - | 315 | 9 | 1 | 326 | 2.8 | 1484 | 0.220 | 100 | NA | NA |
| Approach | 14 | 686 | 9 | 1 | 710 | 2.8 | | 0.220 | | | |

NorthEast: Racecourse

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 9 | 1 | 7 | 18 | 29.1 | | 421 | 0.042 | 100 | NA | NA |
| Approach | 9 | 1 | 7 | 18 | 29.1 | | | 0.042 | | | |
| NorthWest: Garratt Road | | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | U NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 8 | 654 | - | - | 662 | 1.4 | 1750 | 0.379 | 100 | NA | NA |
| Lane 2 | - | 542 | 16 | 1 | 559 | 1.4 | 1477 | 0.379 | 100 | NA | NA |
| Approach | 8 | 1196 | 16 | 1 | 1221 | 1.4 | | 0.379 | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 25 | 1 | 26 | 53 | 4.0 | | 839 | 0.063 | 100 | NA | NA |
| Approach | 25 | 1 | 26 | 53 | 4.0 | | | 0.063 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | | | |
| All Vehicles | 2002 | 2.2 | 0.379 | | | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: Racecourse | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Garratt Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: Waterway Cres | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 101 [Grandstand/Garratt/Waterway 2041 PM (Site Folder: Grandstand/Garratt/Waterway)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 24

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 880 | 1.0 | 880 | 1.0 | 1756 | 0.501 | 100 | 4.1 | LOS A | 4.3 | 31.9 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 742 | 1.0 | 742 | 1.0 | 1479 | 0.501 | 100 | 4.3 | LOS A | 4.2 | 31.4 | Full | 300 | 0.0 | 0.0 |
| Approach | 1622 | 1.0 | 1622 | 1.0 | | 0.501 | | 4.2 | LOS A | 4.3 | 31.9 | | | | |
| NorthEast: Racecourse | | | | | | | | | | | | | | | |
| Lane 1[d] | 21 | 5.0 | 21 | 5.0 | 729 | 0.029 | 100 | 6.9 | LOS A | 0.1 | 0.9 | Full | 500 | 0.0 | 0.0 |
| Approach | 21 | 5.0 | 21 | 5.0 | | 0.029 | | 6.9 | LOS A | 0.1 | 0.9 | | | | |
| NorthWest: Garratt Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 404 | 1.7 | 404 | 1.7 | 1779 | 0.227 | 100 | 4.0 | LOS A | 1.8 | 13.5 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 342 | 1.5 | 342 | 1.5 | 1506 | 0.227 | 100 | 4.5 | LOS A | 1.8 | 13.1 | Full | 500 | 0.0 | 0.0 |
| Approach | 747 | 1.6 | 747 | 1.6 | | 0.227 | | 4.2 | LOS A | 1.8 | 13.5 | | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | | | | | |
| Lane 1[d] | 35 | 0.0 | 35 | 0.0 | 643 | 0.054 | 100 | 11.3 | LOS B | 0.4 | 2.6 | Full | 500 | 0.0 | 0.0 |
| Approach | 35 | 0.0 | 35 | 0.0 | | 0.054 | | 11.3 | LOS B | 0.4 | 2.6 | | | | |
| All Vehicles | 2424 | 1.2 | 2424 | 1.2 | | 0.501 | | 4.3 | LOS A | 4.3 | 31.9 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

SouthEast: Grandstand Road

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | U SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 15 | 866 | - | - | 880 | 1.0 | 1756 | 0.501 | 100 | NA | NA |
| Lane 2 | - | 736 | 4 | 1 | 742 | 1.0 | 1479 | 0.501 | 100 | NA | NA |
| Approach | 15 | 1602 | 4 | 1 | 1622 | 1.0 | | 0.501 | | | |

NorthEast: Racecourse

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 15 | 1 | 5 | 21 | 5.0 | | 729 | 0.029 | 100 | NA | NA |
| Approach | 15 | 1 | 5 | 21 | 5.0 | | | 0.029 | | | |
| NorthWest: Garratt Road | | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | U NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 3 | 401 | - | - | 404 | 1.7 | 1779 | 0.227 | 100 | NA | NA |
| Lane 2 | - | 307 | 32 | 4 | 342 | 1.5 | 1506 | 0.227 | 100 | NA | NA |
| Approach | 3 | 708 | 32 | 4 | 747 | 1.6 | | 0.227 | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 19 | 1 | 15 | 35 | 0.0 | | 643 | 0.054 | 100 | NA | NA |
| Approach | 19 | 1 | 15 | 35 | 0.0 | | | 0.054 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 2424 | 1.2 | 0.501 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Critical Gap pcu/h | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: Racecourse | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Garratt Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: Waterway Cres | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 101 [Grandstand/Garratt/Waterway 2041 AM - with GG/ Dev (Site Folder: Grandstand/Garratt/Waterway)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 24

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 479 | 2.3 | 479 | 2.3 | 1626 | 0.295 | 100 | 4.3 | LOS A | 2.0 | 15.4 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 407 | 2.2 | 407 | 2.2 | 1379 | 0.295 | 100 | 4.8 | LOS A | 2.0 | 14.9 | Full | 300 | 0.0 | 0.0 |
| Approach | 886 | 2.2 | 886 | 2.2 | | 0.295 | | 4.5 | LOS A | 2.0 | 15.4 | | | | |
| NorthEast: Racecourse | | | | | | | | | | | | | | | |
| Lane 1[d] | 125 | 4.2 | 125 | 4.2 | 556 | 0.225 | 100 | 10.5 | LOS B | 1.0 | 7.6 | Full | 500 | 0.0 | 0.0 |
| Approach | 125 | 4.2 | 125 | 4.2 | | 0.225 | | 10.5 | LOS B | 1.0 | 7.6 | | | | |
| NorthWest: Garratt Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 683 | 1.3 | 683 | 1.3 | 1713 | 0.399 | 100 | 4.2 | LOS A | 3.5 | 26.4 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 577 | 1.3 | 577 | 1.3 | 1446 | 0.399 | 100 | 4.4 | LOS A | 3.5 | 26.0 | Full | 500 | 0.0 | 0.0 |
| Approach | 1260 | 1.3 | 1260 | 1.3 | | 0.399 | | 4.3 | LOS A | 3.5 | 26.4 | | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | | | | | |
| Lane 1[d] | 53 | 4.0 | 53 | 4.0 | 741 | 0.071 | 100 | 8.4 | LOS A | 0.3 | 2.6 | Full | 500 | 0.0 | 0.0 |
| Approach | 53 | 4.0 | 53 | 4.0 | | 0.071 | | 8.4 | LOS A | 0.3 | 2.6 | | | | |
| All Vehicles | 2324 | 1.9 | 2324 | 1.9 | | 0.399 | | 4.8 | LOS A | 3.5 | 26.4 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

SouthEast: Grandstand Road

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | U SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 14 | 466 | - | - | 479 | 2.3 | 1626 | 0.295 | 100 | NA | NA |
| Lane 2 | - | 378 | 27 | 1 | 407 | 2.2 | 1379 | 0.295 | 100 | NA | NA |
| Approach | 14 | 844 | 27 | 1 | 886 | 2.2 | | 0.295 | | | |

NorthEast: Racecourse

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 63 | 1 | 61 | 125 | 4.2 | | 556 | 0.225 | 100 | NA | NA |
| Approach | 63 | 1 | 61 | 125 | 4.2 | | | 0.225 | | | |
| NorthWest: Garratt Road | | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | U NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 26 | 657 | - | - | 683 | 1.3 | 1713 | 0.399 | 100 | NA | NA |
| Lane 2 | - | 560 | 16 | 1 | 577 | 1.3 | 1446 | 0.399 | 100 | NA | NA |
| Approach | 26 | 1217 | 16 | 1 | 1260 | 1.3 | | 0.399 | | | |
| SouthWest: Waterway Cres | | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 25 | 1 | 26 | 53 | 4.0 | | 741 | 0.071 | 100 | NA | NA |
| Approach | 25 | 1 | 26 | 53 | 4.0 | | | 0.071 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | | | |
| All Vehicles | 2324 | 1.9 | 0.399 | | | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Critical Gap pcu/h | Follow-up Headway sec | Lane Flow Rate sec | Capacity veh/h | Deg. Satn veh/h | Min. Delay v/c | Merge Delay sec | sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: Racecourse | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Garratt Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: Waterway Cres | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LANE SUMMARY

## Site: 101 [Grandstand/Resolution/Stoneham Current AM (Site Folder: Grandstand/Raconteur/Stoneham)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 7

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Stoneham St | | | | | | | | | | | | | | | |
| Lane 1[d] | 234 | 2.8 | 234 | 2.8 | 1458 | 0.160 | 100 | 4.3 | LOS A | 1.0 | 7.3 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 187 | 3.0 | 187 | 3.0 | 1167 | 0.160 | 100 | 5.2 | LOS A | 0.9 | 6.9 | Full | 300 | 0.0 | 0.0 |
| Approach | 421 | 2.9 | 421 | 2.9 | | 0.160 | | 4.7 | LOS A | 1.0 | 7.3 | | | | |
| East: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 271 | 2.9 | 271 | 2.9 | 773 | 0.351 | 100 | 10.2 | LOS B | 1.8 | 14.0 | Full | 500 | 0.0 | 0.0 |
| Approach | 271 | 2.9 | 271 | 2.9 | | 0.351 | | 10.2 | LOS B | 1.8 | 14.0 | | | | |
| North: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 580 | 3.0 | 580 | 3.0 | 1649 | 0.352 | 100 | 4.0 | LOS A | 2.9 | 22.1 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 479 | 3.0 | 479 | 3.0 | 1361 | 0.352 | 100 | 4.2 | LOS A | 2.8 | 21.5 | Full | 500 | 0.0 | 0.0 |
| Approach | 1059 | 3.0 | 1059 | 3.0 | | 0.352 | | 4.1 | LOS A | 2.9 | 22.1 | | | | |
| West: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 99 | 1.0 | 99 | 1.0 | 864 | 0.115 | 100 | 7.3 | LOS A | 0.6 | 4.1 | Full | 500 | 0.0 | 0.0 |
| Approach | 99 | 1.0 | 99 | 1.0 | | 0.115 | | 7.3 | LOS A | 0.6 | 4.1 | | | | |
| All Vehicles | 1850 | 2.8 | 1850 | 2.8 | | 0.352 | | 5.3 | LOS A | 2.9 | 22.1 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

South: Stoneham St

| Mov. From S To Exit: | L2 W | T1 N | R2 E | U S | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 28 | 205 | - | - | 234 | 2.8 | 1458 | 0.160 | 100 | NA | NA |
| Lane 2 | - | 172 | 13 | 2 | 187 | 3.0 | 1167 | 0.160 | 100 | NA | NA |
| Approach | 28 | 377 | 13 | 2 | 421 | 2.9 | | 0.160 | | | |

East: Resolution Dr

| Mov. From E To Exit: | L2 S | T1 W | R2 N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 38 | 16 | 217 | 271 | 2.9 | | 773 | 0.351 | 100 | NA | NA |
| Approach | 38 | 16 | 217 | 271 | 2.9 | | | 0.351 | | | |
| North: Grandstand Road | | | | | | | | | | | |
| Mov. From N To Exit: | L2 E | T1 S | R2 W | U N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 297 | 283 | - | - | 580 | 3.0 | 1649 | 0.352 | 100 | NA | NA |
| Lane 2 | - | 469 | 5 | 4 | 479 | 3.0 | 1361 | 0.352 | 100 | NA | NA |
| Approach | 297 | 752 | 5 | 4 | 1059 | 3.0 | | 0.352 | | | |
| West: Resolution Dr | | | | | | | | | | | |
| Mov. From W To Exit: | L2 N | T1 E | R2 S | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 5 | 42 | 51 | 99 | 1.0 | | 864 | 0.115 | 100 | NA | NA |
| Approach | 5 | 42 | 51 | 99 | 1.0 | | | 0.115 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 1850 | 2.8 | 0.352 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| South: Stoneham St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| East: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| North: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| West: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LANE SUMMARY

## Site: 101 [Grandstand/Resolution/Stoneham Current PM (Site Folder: Grandstand/Raconteur/Stoneham)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 19

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Stoneham St | | | | | | | | | | | | | | | |
| Lane 1[d] | 751 | 2.8 | 751 | 2.8 | 1084 | 0.693 | 100 | 9.7 | LOS A | 9.0 | 68.1 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 561 | 3.0 | 561 | 3.0 | 810 | 0.693 | 100 | 12.2 | LOS B | 8.0 | 60.7 | Full | 300 | 0.0 | 0.0 |
| Approach | 1312 | 2.9 | 1312 | 2.9 | | 0.693 | | 10.8 | LOS B | 9.0 | 68.1 | | | | |
| East: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 618 | 2.9 | 618 | 2.9 | 763 | 0.810 | 100 | 17.2 | LOS B | 7.7 | 58.7 | Full | 500 | 0.0 | 0.0 |
| Approach | 618 | 2.9 | 618 | 2.9 | | 0.810 | | 17.2 | LOS B | 7.7 | 58.7 | | | | |
| North: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 581 | 3.0 | 581 | 3.0 | 1677 | 0.346 | 100 | 3.8 | LOS A | 3.0 | 23.1 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 481 | 3.0 | 481 | 3.0 | 1388 | 0.346 | 100 | 4.1 | LOS A | 2.9 | 22.3 | Full | 500 | 0.0 | 0.0 |
| Approach | 1062 | 3.0 | 1062 | 3.0 | | 0.346 | | 3.9 | LOS A | 3.0 | 23.1 | | | | |
| West: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 75 | 1.0 | 75 | 1.0 | 404 | 0.186 | 100 | 13.9 | LOS B | 1.1 | 8.3 | Full | 500 | 0.0 | 0.0 |
| Approach | 75 | 1.0 | 75 | 1.0 | | 0.186 | | 13.9 | LOS B | 1.1 | 8.3 | | | | |
| All Vehicles | 3066 | 2.9 | 3066 | 2.9 | | 0.810 | | 9.8 | LOS A | 9.0 | 68.1 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

South: Stoneham St

| Mov. From S To Exit: | L2 W | T1 N | R2 E | U S | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 71 | 680 | - | - | 751 | 2.8 | 1084 | 0.693 | 100 | NA | NA |
| Lane 2 | - | 543 | 16 | 1 | 561 | 3.0 | 810 | 0.693 | 100 | NA | NA |
| Approach | 71 | 1223 | 16 | 1 | 1312 | 2.9 | | 0.693 | | | |

East: Resolution Dr

| Mov. From E To Exit: | L2 S | T1 W | R2 N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 60 | 28 | 530 | 618 | 2.9 | | 763 | 0.810 | 100 | NA | NA |
| Approach | 60 | 28 | 530 | 618 | 2.9 | | | 0.810 | | | |
| North: Grandstand Road | | | | | | | | | | | |
| Mov. From N To Exit: | L2 E | T1 S | R2 W | U N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 255 | 326 | - | - | 581 | 3.0 | 1677 | 0.346 | 100 | NA | NA |
| Lane 2 | - | 469 | 6 | 6 | 481 | 3.0 | 1388 | 0.346 | 100 | NA | NA |
| Approach | 255 | 795 | 6 | 6 | 1062 | 3.0 | | 0.346 | | | |
| West: Resolution Dr | | | | | | | | | | | |
| Mov. From W To Exit: | L2 N | T1 E | R2 S | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 7 | 29 | 39 | 75 | 1.0 | | 404 | 0.186 | 100 | NA | NA |
| Approach | 7 | 29 | 39 | 75 | 1.0 | | | 0.186 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 3066 | 2.9 | 0.810 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| South: Stoneham St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| East: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| North: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| West: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 101 [Grandstand/Resolution/Stoneham 2036 AM - No Change (Site Folder: Grandstand/Raconteur/Stoneham)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 19

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Stoneham St | | | | | | | | | | | | | | | |
| Lane 1[d] | 247 | 2.8 | 247 | 2.8 | 1440 | 0.172 | 100 | 4.4 | LOS A | 1.1 | 8.0 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 197 | 3.0 | 197 | 3.0 | 1149 | 0.172 | 100 | 5.3 | LOS A | 1.0 | 7.5 | Full | 300 | 0.0 | 0.0 |
| Approach | 445 | 2.9 | 445 | 2.9 | | 0.172 | | 4.8 | LOS A | 1.1 | 8.0 | | | | |
| East: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 287 | 2.9 | 287 | 2.9 | 751 | 0.382 | 100 | 10.7 | LOS B | 2.1 | 16.1 | Full | 500 | 0.0 | 0.0 |
| Approach | 287 | 2.9 | 287 | 2.9 | | 0.382 | | 10.7 | LOS B | 2.1 | 16.1 | | | | |
| North: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 614 | 3.0 | 614 | 3.0 | 1640 | 0.375 | 100 | 4.0 | LOS A | 3.2 | 24.2 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 506 | 3.0 | 506 | 3.0 | 1351 | 0.375 | 100 | 4.3 | LOS A | 3.1 | 23.4 | Full | 500 | 0.0 | 0.0 |
| Approach | 1120 | 3.0 | 1120 | 3.0 | | 0.375 | | 4.1 | LOS A | 3.2 | 24.2 | | | | |
| West: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 105 | 1.0 | 105 | 1.0 | 846 | 0.124 | 100 | 7.5 | LOS A | 0.6 | 4.5 | Full | 500 | 0.0 | 0.0 |
| Approach | 105 | 1.0 | 105 | 1.0 | | 0.124 | | 7.5 | LOS A | 0.6 | 4.5 | | | | |
| All Vehicles | 1957 | 2.8 | 1957 | 2.8 | | 0.382 | | 5.4 | LOS A | 3.2 | 24.2 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

South: Stoneham St

| Mov. From S To Exit: | L2 W | T1 N | R2 E | U S | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 30 | 218 | - | - | 247 | 2.8 | 1440 | 0.172 | 100 | NA | NA |
| Lane 2 | - | 181 | 14 | 2 | 197 | 3.0 | 1149 | 0.172 | 100 | NA | NA |
| Approach | 30 | 399 | 14 | 2 | 445 | 2.9 | | 0.172 | | | |

East: Resolution Dr

| Mov. From E To Exit: | L2 S | T1 W | R2 N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 40 | 17 | 229 | 287 | 2.9 | | 751 | 0.382 | 100 | NA | NA |
| Approach | 40 | 17 | 229 | 287 | 2.9 | | | 0.382 | | | |
| North: Grandstand Road | | | | | | | | | | | |
| Mov. From N To Exit: | L2 E | T1 S | R2 W | U N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 315 | 300 | - | - | 614 | 3.0 | 1640 | 0.375 | 100 | NA | NA |
| Lane 2 | - | 496 | 6 | 5 | 506 | 3.0 | 1351 | 0.375 | 100 | NA | NA |
| Approach | 315 | 795 | 6 | 5 | 1120 | 3.0 | | 0.375 | | | |
| West: Resolution Dr | | | | | | | | | | | |
| Mov. From W To Exit: | L2 N | T1 E | R2 S | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 6 | 45 | 54 | 105 | 1.0 | | 846 | 0.124 | 100 | NA | NA |
| Approach | 6 | 45 | 54 | 105 | 1.0 | | | 0.124 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | | | |
| All Vehicles | 1957 | 2.8 | 0.382 | | | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| South: Stoneham St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| East: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| North: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| West: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 101 [Grandstand/Resolution/Stoneham 2036 PM - No Change (Site Folder: Grandstand/Raconteur/Stoneham)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 24

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Stoneham St | | | | | | | | | | | | | | | |
| Lane 1[d] | 776 | 2.8 | 776 | 2.8 | 1037 | 0.749 | 100 | 11.2 | LOS B | 10.5 | 79.9 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 574 | 3.0 | 574 | 3.0 | 767 | 0.749 | 100 | 14.1 | LOS B | 9.2 | 70.1 | Full | 300 | 0.0 | 0.0 |
| Approach | 1350 | 2.9 | 1350 | 2.9 | | 0.749 | | 12.4 | LOS B | 10.5 | 79.9 | | | | |
| East: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 636 | 2.9 | 636 | 2.9 | 752 | 0.846 | 100 | 20.7 | LOS C | 10.5 | 79.7 | Full | 500 | 0.0 | 0.0 |
| Approach | 636 | 2.9 | 636 | 2.9 | | 0.846 | | 20.7 | LOS C | 10.5 | 79.7 | | | | |
| North: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 598 | 3.0 | 598 | 3.0 | 1673 | 0.358 | 100 | 3.8 | LOS A | 3.2 | 24.1 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 495 | 3.0 | 495 | 3.0 | 1384 | 0.358 | 100 | 4.1 | LOS A | 3.1 | 23.2 | Full | 500 | 0.0 | 0.0 |
| Approach | 1093 | 3.0 | 1093 | 3.0 | | 0.358 | | 4.0 | LOS A | 3.2 | 24.1 | | | | |
| West: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 77 | 1.0 | 77 | 1.0 | 371 | 0.208 | 100 | 14.3 | LOS B | 1.2 | 8.9 | Full | 500 | 0.0 | 0.0 |
| Approach | 77 | 1.0 | 77 | 1.0 | | 0.208 | | 14.3 | LOS B | 1.2 | 8.9 | | | | |
| All Vehicles | 3156 | 2.9 | 3156 | 2.9 | | 0.846 | | 11.2 | LOS B | 10.5 | 79.9 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

South: Stoneham St

| Mov. From S To Exit: | L2 W | T1 N | R2 E | U S | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 74 | 703 | - | - | 776 | 2.8 | 1037 | 0.749 | 100 | NA | NA |
| Lane 2 | - | 556 | 17 | 1 | 574 | 3.0 | 767 | 0.749 | 100 | NA | NA |
| Approach | 74 | 1259 | 17 | 1 | 1350 | 2.9 | | 0.749 | | | |

East: Resolution Dr

| Mov. From E To Exit: | L2 S | T1 W | R2 N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 62 | 28 | 546 | 636 | 2.9 | | 752 | 0.846 | 100 | NA | NA |
| Approach | 62 | 28 | 546 | 636 | 2.9 | | | 0.846 | | | |
| North: Grandstand Road | | | | | | | | | | | |
| Mov. From N To Exit: | L2 E | T1 S | R2 W | U N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 262 | 336 | - | - | 598 | 3.0 | 1673 | 0.358 | 100 | NA | NA |
| Lane 2 | - | 483 | 6 | 6 | 495 | 3.0 | 1384 | 0.358 | 100 | NA | NA |
| Approach | 262 | 819 | 6 | 6 | 1093 | 3.0 | | 0.358 | | | |
| West: Resolution Dr | | | | | | | | | | | |
| Mov. From W To Exit: | L2 N | T1 E | R2 S | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 7 | 30 | 40 | 77 | 1.0 | | 371 | 0.208 | 100 | NA | NA |
| Approach | 7 | 30 | 40 | 77 | 1.0 | | | 0.208 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | | | |
| All Vehicles | 3156 | 2.9 | 0.846 | | | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| South: Stoneham St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| East: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| North: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| West: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 101 [Grandstand/Resolution/Stoneham 2036 PM - NO GG & Ascott (Site Folder: Grandstand/Raconteur/Stoneham)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Roundabout
Design Life Analysis: Constant Number of Years = 19

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Stoneham St | | | | | | | | | | | | | | | |
| Lane 1[d] | 821 | 2.7 | 821 | 2.7 | 963 | 0.852 | 100 | 20.8 | LOS C | 17.9 | 135.6 | Full | 300 | 0.0 | 0.0 |
| Lane 2 | 590 | 2.7 | 590 | 2.7 | 692 | 0.852 | 100 | 26.1 | LOS C | 14.9 | 112.5 | Full | 300 | 0.0 | 0.0 |
| Approach | 1411 | 2.7 | 1411 | 2.7 | | 0.852 | | 23.0 | LOS C | 17.9 | 135.6 | | | | |
| East: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 741 | 2.4 | 741 | 2.4 | 866 | 0.855 | 100 | 17.2 | LOS B | 10.5 | 79.1 | Full | 500 | 0.0 | 0.0 |
| Approach | 741 | 2.4 | 741 | 2.4 | | 0.855 | | 17.2 | LOS B | 10.5 | 79.1 | | | | |
| North: Grandstand Road | | | | | | | | | | | | | | | |
| Lane 1[d] | 444 | 3.0 | 444 | 3.0 | 1615 | 0.275 | 100 | 3.9 | LOS A | 2.1 | 15.9 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 363 | 2.3 | 363 | 2.3 | 1321 | 0.275 | 100 | 5.9 | LOS A | 2.0 | 15.2 | Full | 500 | 0.0 | 0.0 |
| Approach | 807 | 2.7 | 807 | 2.7 | | 0.275 | | 4.8 | LOS A | 2.1 | 15.9 | | | | |
| West: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1[d] | 85 | 0.9 | 85 | 0.9 | 306 | 0.277 | 100 | 18.2 | LOS B | 1.7 | 12.7 | Full | 500 | 0.0 | 0.0 |
| Approach | 85 | 0.9 | 85 | 0.9 | | 0.277 | | 18.2 | LOS B | 1.7 | 12.7 | | | | |
| All Vehicles | 3043 | 2.6 | 3043 | 2.6 | | 0.855 | | 16.6 | LOS B | 17.9 | 135.6 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

**Approach Lane Flows (veh/h)**

South: Stoneham St

| Mov. From S To Exit: | L2 W | T1 N | R2 E | U S | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 72 | 749 | - | - | 821 | 2.7 | 963 | 0.852 | 100 | NA | NA |
| Lane 2 | - | 524 | 65 | 1 | 590 | 2.7 | 692 | 0.852 | 100 | NA | NA |
| Approach | 72 | 1273 | 65 | 1 | 1411 | 2.7 | | 0.852 | | | |

East: Resolution Dr

| Mov. From E To Exit: | L2 S | T1 W | R2 N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 95 | 28 | 618 | 741 | 2.4 | | 866 | 0.855 | 100 | NA | NA |
| Approach | 95 | 28 | 618 | 741 | 2.4 | | | 0.855 | | | |
| North: Grandstand Road | | | | | | | | | | | |
| Mov. From N To Exit: | L2 E | T1 S | R2 W | U N | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 251 | 193 | - | - | 444 | 3.0 | 1615 | 0.275 | 100 | NA | NA |
| Lane 2 | - | 282 | 6 | 75 | 363 | 2.3 | 1321 | 0.275 | 100 | NA | NA |
| Approach | 251 | 474 | 6 | 75 | 807 | 2.7 | | 0.275 | | | |
| West: Resolution Dr | | | | | | | | | | | |
| Mov. From W To Exit: | L2 N | T1 E | R2 S | Total | %HV | | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 7 | 29 | 49 | 85 | 0.9 | | 306 | 0.277 | 100 | NA | NA |
| Approach | 7 | 29 | 49 | 85 | 0.9 | | | 0.277 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | | | |
| All Vehicles | 3043 | 2.6 | 0.855 | | | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| There are no Exit Short Lanes for Merge Analysis at this Site. | | | | | | | | | | | | |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| South: Stoneham St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| East: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| North: Grandstand Road | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| West: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 103av [TCS PM - Current (Site Folder: GEH/Resolution)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated  Cycle Time = 180 seconds (Site Optimum Cycle Time - Minimum Delay)

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Hardey Rd | | | | | | | | | | | | | | | |
| Lane 1 | 121 | 5.8 | 121 | 5.8 | 307 | 0.393 | 87[6] | 75.6 | LOS E | 9.4 | 73.9 | Short | 60 | 0.0 | NA |
| Lane 2 | 144 | 5.8 | 144 | 5.8 | 319 | 0.452 | 100 | 72.1 | LOS E | 11.4 | 89.1 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 158 | 5.8 | 158 | 5.8 | 303 | 0.522 | 100 | 78.9 | LOS E | 12.7 | 99.1 | Short | 60 | 0.0 | NA |
| Approach | 423 | 5.8 | 423 | 5.8 | | 0.522 | | 75.6 | LOS E | 12.7 | 99.1 | | | | |
| NorthEast: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 117 | 5.8 | 117 | 5.8 | 1329 | 0.088 | 12[5] | 18.9 | LOS B | 2.3 | 17.7 | Short | 120 | 0.0 | NA |
| Lane 2 | 579 | 6.3 | 579 | 6.3 | 771[1] | 0.750 | 100 | 39.1 | LOS D | 36.0 | 283.5 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 614 | 6.3 | 614 | 6.3 | 818 | 0.750 | 100 | 31.0 | LOS C | 38.8 | 305.7 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 561 | 6.3 | 561 | 6.3 | 748[1] | 0.750 | 100 | 36.3 | LOS D | 34.6 | 272.4 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 308 | 5.8 | 308 | 5.8 | 342 | 0.903 | 100 | 101.5 | LOS F | 29.6 | 231.4 | Short | 125 | 0.0 | NA |
| Approach | 2179 | 6.2 | 2179 | 6.2 | | 0.903 | | 43.8 | LOS D | 38.8 | 305.7 | | | | |
| NorthWest: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1 | 157 | 5.8 | 157 | 5.8 | 742 | 0.211 | 100 | 23.7 | LOS C | 6.4 | 50.1 | Short | 90 | 0.0 | NA |
| Lane 2 | 37 | 5.8 | 37 | 5.8 | 103 | 0.362 | 39[6] | 92.4 | LOS F | 3.3 | 25.7 | Full | 430 | 0.0 | 0.0 |
| Lane 3 | 95 | 5.8 | 95 | 5.8 | 103 | 0.926 | 100 | 109.3 | LOS F | 9.5 | 74.6 | Short | 140 | 0.0 | NA |
| Lane 4 | 32 | 5.8 | 32 | 5.8 | 98 | 0.323 | 100 | 97.3 | LOS F | 2.8 | 21.7 | Short | 58 | 0.0 | NA |
| Approach | 321 | 5.8 | 321 | 5.8 | | 0.926 | | 64.4 | LOS E | 9.5 | 74.6 | | | | |
| SouthWest: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 57 | 5.8 | 57 | 5.8 | 781 | 0.073 | 9[5] | 52.7 | LOS D | 2.8 | 21.8 | Short | 75 | 0.0 | NA |
| Lane 2 | 610 | 11.7 | 610 | 11.7 | 731[1] | 0.834 | 100 | 36.4 | LOS D | 34.4 | 291.3 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 641 | 11.7 | 641 | 11.7 | 768 | 0.834 | 100 | 20.1 | LOS C | 37.6 | 319.0 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 641 | 11.7 | 641 | 11.7 | 768 | 0.834 | 100 | 20.1 | LOS C | 37.6 | 319.0 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 221 | 5.8 | 221 | 5.8 | 342 | 0.647 | 100 | 77.8 | LOS E | 17.9 | 140.2 | Short | 240 | 0.0 | NA |
| Approach | 2169 | 10.9 | 2169 | 10.9 | | 0.834 | | 31.4 | LOS C | 37.6 | 319.0 | | | | |
| All Vehicles | 5093 | 8.2 | 5093 | 8.2 | | 0.926 | | 42.5 | LOS D | 38.8 | 319.0 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects

**Approach Lane Flows (veh/h)**

| SouthEast: Hardey Rd | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 85 | 36 | - | 121 | 5.8 | 307 | 0.393 | 87[6] | 23.9 | 2 |
| Lane 2 | - | 144 | - | 144 | 5.8 | 319 | 0.452 | 100 | NA | NA |
| Lane 3 | - | - | 158 | 158 | 5.8 | 303 | 0.522 | 100 | 51.1 | 2 |
| Approach | 85 | 180 | 158 | 423 | 5.8 | | 0.522 | | | |
| NorthEast: GEH | | | | | | | | | | |
| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 117 | - | - | 117 | 5.8 | 1329 | 0.088 | 12[5] | 0.0 | 2 |
| Lane 2 | - | 579 | - | 579 | 6.3 | 771[1] | 0.750 | 100 | NA | NA |
| Lane 3 | - | 614 | - | 614 | 6.3 | 818 | 0.750 | 100 | NA | NA |
| Lane 4 | - | 561 | - | 561 | 6.3 | 748[1] | 0.750 | 100 | NA | NA |
| Lane 5 | - | - | 308 | 308 | 5.8 | 342 | 0.903 | 100 | 61.9 | 4 |
| Approach | 117 | 1754 | 308 | 2179 | 6.2 | | 0.903 | | | |
| NorthWest: Resolution Dr | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 157 | - | - | 157 | 5.8 | 742 | 0.211 | 100 | 0.0 | 2 |
| Lane 2 | - | 37 | - | 37 | 5.8 | 103 | 0.362 | 39[6] | NA | NA |
| Lane 3 | - | 95 | - | 95 | 5.8 | 103 | 0.926 | 100 | 0.0 | 2 |
| Lane 4 | - | - | 32 | 32 | 5.8 | 98 | 0.323 | 100 | 0.0 | 3 |
| Approach | 157 | 133 | 32 | 321 | 5.8 | | 0.926 | | | |
| SouthWest: GEH | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 57 | - | - | 57 | 5.8 | 781 | 0.073 | 9[5] | 0.0 | 2 |
| Lane 2 | - | 610 | - | 610 | 11.7 | 731[1] | 0.834 | 100 | NA | NA |
| Lane 3 | - | 641 | - | 641 | 11.7 | 768 | 0.834 | 100 | NA | NA |
| Lane 4 | - | 641 | - | 641 | 11.7 | 768 | 0.834 | 100 | NA | NA |
| Lane 5 | - | - | 221 | 221 | 5.8 | 342 | 0.647 | 100 | 0.0 | 4 |
| Approach | 57 | 1892 | 221 | 2169 | 10.9 | | 0.834 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 5093 | 8.2 | 0.926 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

5 Lane under-utilisation found by the program

6 Lane under-utilisation due to downstream effects

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast Exit: Hardey Rd Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 45 | 0.0 | 316 | 326 | 3.09 | 2.06 | 154 | 1413 | 0.109 | 0.5 | 0.7 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 316 | 1800 | 0.176 | 0.0 | 0.0 |
| NorthEast Exit: GEH | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 120 | 0.0 | 610 | 642 | 3.09 | 2.06 | 157 | 1076 | 0.146 | 1.3 | 1.7 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 610 | 1800 | 0.339 | 0.0 | 0.0 |
| NorthWest Exit: Resolution Dr<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 140 | 0.0 | 453 | 466 | 3.09 | 2.06 | 92 | 1265 | 0.073 | 0.8 | 1.0 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 453 | 1800 | 0.252 | 0.0 | 0.0 |

**Variable Demand Analysis**

| | Initial Queued Demand<br>veh | Residual Queued Demand<br>veh | Time for Residual Demand to Clear<br>sec | Duration of Oversatn<br>sec |
|---|---|---|---|---|
| SouthEast: Hardey Rd | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 103av [TCS PM - 2036 (Site Folder: GEH/Resolution)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated  Cycle Time = 180 seconds (Site Optimum Cycle Time - Minimum Delay)
Design Life Analysis: Constant Number of Years = 14

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Hardey Rd | | | | | | | | | | | | | | | |
| Lane 1 | 141 | 5.8 | 141 | 5.8 | 318 | 0.442 | 87[6] | 75.2 | LOS E[11] | 11.0 | 86.3 | Short | 60 | 0.0 | NA |
| Lane 2 | 167 | 5.8 | 167 | 5.8 | 329 | 0.508 | 100 | 72.2 | LOS E[11] | 13.3 | 104.1 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 169 | 5.8 | 169 | 5.8 | 312[1] | 0.542 | 100 | 78.5 | LOS E[11] | 13.5 | 106.0 | Short | 60 | 0.0 | NA |
| Approach | 477 | 5.8 | 477 | 5.8 | | 0.542 | | 75.3 | LOS E[11] | 13.5 | 106.0 | | | | |
| NorthEast: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 125 | 5.8 | 125 | 5.8 | 1341 | 0.093 | 13[5] | 16.1 | LOS B | 2.6 | 20.0 | Short | 120 | 0.0 | NA |
| Lane 2 | 619 | 6.3 | 619 | 6.3 | 866[1] | 0.714 | 100 | 28.6 | LOS C | 33.7 | 265.4 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 650 | 6.3 | 650 | 6.3 | 910 | 0.714 | 100 | 23.7 | LOS C | 36.0 | 283.4 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 608 | 6.3 | 608 | 6.3 | 852[1] | 0.714 | 100 | 29.4 | LOS C | 32.9 | 259.6 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 330 | 5.8 | 330 | 5.8 | 264 | 1.252 | 100 | 333.4 | LOS F[11] | 52.6 | 411.1 | Short | 125 | 0.0 | NA |
| Approach | 2331 | 6.2 | 2331 | 6.2 | | 1.252 | | 69.9 | LOS E[11] | 52.6 | 411.1 | | | | |
| NorthWest: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1 | 168 | 5.8 | 168 | 5.8 | 628 | 0.267 | 100 | 31.7 | LOS C | 8.4 | 65.5 | Short | 90 | 0.0 | NA |
| Lane 2 | 40 | 5.8 | 40 | 5.8 | 82 | 0.485 | 39[6] | 96.0 | LOS F[11] | 3.6 | 28.2 | Full | 430 | 0.0 | 0.0 |
| Lane 3 | 102 | 5.8 | 102 | 5.8 | 82 | 1.239 | 100 | 320.5 | LOS F[11] | 16.0 | 125.5 | Short | 140 | 0.0 | NA |
| Lane 4 | 34 | 5.8 | 34 | 5.8 | 78 | 0.433 | 100 | 100.9 | LOS F[11] | 3.1 | 23.9 | Short | 58 | 0.0 | NA |
| Approach | 344 | 5.8 | 344 | 5.8 | | 1.239 | | 131.7 | LOS F[11] | 16.0 | 125.5 | | | | |
| SouthWest: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 61 | 5.8 | 61 | 5.8 | 869 | 0.070 | 8[5] | 44.9 | LOS D | 2.7 | 21.2 | Short | 75 | 0.0 | NA |
| Lane 2 | 735 | 11.7 | 735 | 11.7 | 813[1] | 0.903 | 100 | 31.6 | LOS C | 42.6 | 360.7 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 772 | 11.7 | 772 | 11.7 | 855 | 0.903 | 100 | 17.9 | LOS B | 48.4 | 410.3 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 772 | 11.7 | 772 | 11.7 | 855 | 0.903 | 100 | 17.9 | LOS B | 48.4 | 410.3 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 237 | 5.8 | 237 | 5.8 | 264 | 0.897 | 100 | 100.4 | LOS F[11] | 22.8 | 178.1 | Short | 240 | 0.0 | NA |
| Approach | 2576 | 11.0 | 2576 | 11.0 | | 0.903 | | 30.0 | LOS C | 48.4 | 410.3 | | | | |
| All Vehicles | 5728 | 8.3 | 5728 | 8.3 | | 1.252 | | 56.1 | LOS E[11] | 52.6 | 411.1 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects
11 Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

**Approach Lane Flows (veh/h)**

SouthEast: Hardey Rd

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 91 | 49 | - | 141 | 5.8 | 318 | 0.442 | 87[6] | 38.2 | 2 |
| Lane 2 | - | 167 | - | 167 | 5.8 | 329 | 0.508 | 100 | NA | NA |
| Lane 3 | - | - | 169 | 169 | 5.8 | 312[1] | 0.542 | 100 | 57.5 | 2 |
| Approach | 91 | 217 | 169 | 477 | 5.8 | | 0.542 | | | |

NorthEast: GEH

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 125 | - | - | 125 | 5.8 | 1341 | 0.093 | 13[5] | 0.0 | 2 |
| Lane 2 | - | 619 | - | 619 | 6.3 | 866[1] | 0.714 | 100 | NA | NA |
| Lane 3 | - | 650 | - | 650 | 6.3 | 910 | 0.714 | 100 | NA | NA |
| Lane 4 | - | 608 | - | 608 | 6.3 | 852[1] | 0.714 | 100 | NA | NA |
| Lane 5 | - | - | 330 | 330 | 5.8 | 264 | 1.252 | 100 | 100.0 | 4 |
| Approach | 125 | 1876 | 330 | 2331 | 6.2 | | 1.252 | | | |

NorthWest: Resolution Dr

| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 168 | - | - | 168 | 5.8 | 628 | 0.267 | 100 | 0.0 | 2 |
| Lane 2 | - | 40 | - | 40 | 5.8 | 82 | 0.485 | 39[6] | NA | NA |
| Lane 3 | - | 102 | - | 102 | 5.8 | 82 | 1.239 | 100 | 0.0 | 2 |
| Lane 4 | - | - | 34 | 34 | 5.8 | 78 | 0.433 | 100 | 0.0 | 3 |
| Approach | 168 | 142 | 34 | 344 | 5.8 | | 1.239 | | | |

SouthWest: GEH

| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 61 | - | - | 61 | 5.8 | 869 | 0.070 | 8[5] | 0.0 | 2 |
| Lane 2 | - | 735 | - | 735 | 11.7 | 813[1] | 0.903 | 100 | NA | NA |
| Lane 3 | - | 772 | - | 772 | 11.7 | 855 | 0.903 | 100 | NA | NA |
| Lane 4 | - | 772 | - | 772 | 11.7 | 855 | 0.903 | 100 | NA | NA |
| Lane 5 | - | - | 237 | 237 | 5.8 | 264 | 0.897 | 100 | 0.0 | 4 |
| Approach | 61 | 2278 | 237 | 2576 | 11.0 | | 0.903 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 5728 | 8.3 | 1.252 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

5 Lane under-utilisation found by the program

6 Lane under-utilisation due to downstream effects

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast Exit: Hardey Rd<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 45 | 0.0 | 319 | 328 | 3.09 | 2.06 | 165 | 1411 | 0.117 | 0.5 | 0.7 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 319 | 1800 | 0.177 | 0.0 | 0.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast Exit: GEH<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 120 | 0.0 | 735 | 773 | 3.09 | 2.06 | 168 | 935 | 0.179 | 1.8 | 2.3 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 735 | 1800 | 0.408 | 0.0 | 0.0 |
| NorthWest Exit: Resolution Dr<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 140 | 0.0 | 431 | 443 | 3.09 | 2.06 | 110 | 1289 | 0.086 | 0.8 | 1.0 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 431 | 1800 | 0.239 | 0.0 | 0.0 |

**Variable Demand Analysis**

| | Initial Queued Demand<br>veh | Residual Queued Demand<br>veh | Time for Residual Demand to Clear<br>sec | Duration of Oversatn<br>sec |
|---|---|---|---|---|
| SouthEast: Hardey Rd | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 33.2 | 453.8 | NA |
| NorthWest: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 9.8 | 429.8 | NA |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 103av [TCS PM - 2036 - mod (Site Folder: GEH/ Resolution)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated  Cycle Time = 180 seconds (Site Optimum Cycle Time - Minimum Delay)
Design Life Analysis: Constant Number of Years = 14

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Hardey Rd | | | | | | | | | | | | | | | |
| Lane 1 | 148 | 5.8 | 148 | 5.8 | 351 | 0.422 | 87[6] | 54.2 | LOS D | 9.6 | 75.3 | Short | 60 | 0.0 | NA |
| Lane 2 | 160 | 5.8 | 160 | 5.8 | 329 | 0.486 | 100 | 71.9 | LOS E[11] | 12.7 | 99.0 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 169 | 5.8 | 169 | 5.8 | 312[1] | 0.542 | 100 | 78.5 | LOS E[11] | 13.5 | 106.0 | Short | 60 | 0.0 | NA |
| Approach | 477 | 5.8 | 477 | 5.8 | | 0.542 | | 68.8 | LOS E[11] | 13.5 | 106.0 | | | | |
| NorthEast: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 125 | 5.8 | 125 | 5.8 | 1326 | 0.094 | 13[5] | 16.6 | LOS B | 2.7 | 21.5 | Short | 120 | 0.0 | NA |
| Lane 2 | 614 | 6.3 | 614 | 6.3 | 868[1] | 0.707 | 100 | 28.2 | LOS C | 33.2 | 261.5 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 644 | 6.3 | 644 | 6.3 | 910 | 0.707 | 100 | 23.6 | LOS C | 35.3 | 278.3 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 619 | 6.3 | 619 | 6.3 | 875[1] | 0.707 | 100 | 27.6 | LOS C | 33.5 | 264.2 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 149 | 5.8 | 149 | 5.8 | 239 | 0.624 | 83[6] | 90.3 | LOS F[11] | 12.5 | 98.0 | Short | 125 | 0.0 | NA |
| Lane 6 | 181 | 5.8 | 181 | 5.8 | 239 | 0.756 | 100 | 89.4 | LOS F[11] | 15.8 | 124.0 | Short | 125 | 0.0 | NA |
| Approach | 2331 | 6.2 | 2331 | 6.2 | | 0.756 | | 34.8 | LOS C | 35.3 | 278.3 | | | | |
| NorthWest: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1 | 168 | 5.8 | 168 | 5.8 | 628 | 0.267 | 100 | 31.7 | LOS C | 8.4 | 65.5 | Short | 90 | 0.0 | NA |
| Lane 2 | 40 | 5.8 | 40 | 5.8 | 103 | 0.387 | 39[6] | 92.6 | LOS F[11] | 3.5 | 27.5 | Full | 430 | 0.0 | 0.0 |
| Lane 3 | 102 | 5.8 | 102 | 5.8 | 103 | 0.991 | 100 | 128.6 | LOS F[11] | 11.1 | 87.1 | Short | 140 | 0.0 | NA |
| Lane 4 | 34 | 5.8 | 34 | 5.8 | 98 | 0.346 | 100 | 97.5 | LOS F[11] | 3.0 | 23.3 | Short | 58 | 0.0 | NA |
| Approach | 344 | 5.8 | 344 | 5.8 | | 0.991 | | 74.0 | LOS E[11] | 11.1 | 87.1 | | | | |
| SouthWest: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 61 | 5.8 | 61 | 5.8 | 869 | 0.070 | 8[5] | 44.7 | LOS D | 2.7 | 21.2 | Short | 75 | 0.0 | NA |
| Lane 2 | 735 | 11.7 | 735 | 11.7 | 813[1] | 0.903 | 100 | 31.6 | LOS C | 42.6 | 360.7 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 772 | 11.7 | 772 | 11.7 | 855 | 0.903 | 100 | 17.9 | LOS B | 48.4 | 410.3 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 772 | 11.7 | 772 | 11.7 | 855 | 0.903 | 100 | 17.9 | LOS B | 48.4 | 410.3 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 237 | 5.8 | 237 | 5.8 | 244 | 0.969 | 100 | 120.5 | LOS F[11] | 25.2 | 197.2 | Short | 240 | 0.0 | NA |
| Approach | 2576 | 11.0 | 2576 | 11.0 | | 0.969 | | 31.9 | LOS C | 48.4 | 410.3 | | | | |
| All Vehicles | 5728 | 8.3 | 5728 | 8.3 | | 0.991 | | 38.7 | LOS D | 48.4 | 410.3 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects

11 Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

**Approach Lane Flows (veh/h)**

SouthEast: Hardey Rd

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 91 | 57 | - | 148 | 5.8 | 351 | 0.422 | 87[6] | 25.6 | 2 |
| Lane 2 | - | 160 | - | 160 | 5.8 | 329 | 0.486 | 100 | NA | NA |
| Lane 3 | - | - | 169 | 169 | 5.8 | 312[1] | 0.542 | 100 | 57.5 | 2 |
| Approach | 91 | 217 | 169 | 477 | 5.8 | | 0.542 | | | |

NorthEast: GEH

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 125 | - | - | 125 | 5.8 | 1326 | 0.094 | 13[5] | 0.0 | 2 |
| Lane 2 | - | 614 | - | 614 | 6.3 | 868[1] | 0.707 | 100 | NA | NA |
| Lane 3 | - | 644 | - | 644 | 6.3 | 910 | 0.707 | 100 | NA | NA |
| Lane 4 | - | 619 | - | 619 | 6.3 | 875[1] | 0.707 | 100 | NA | NA |
| Lane 5 | - | - | 149 | 149 | 5.8 | 239 | 0.624 | 83[6] | 4.2 | 4 |
| Lane 6 | - | - | 181 | 181 | 5.8 | 239 | 0.756 | 100 | 4.2 | 5 |
| Approach | 125 | 1876 | 330 | 2331 | 6.2 | | 0.756 | | | |

NorthWest: Resolution Dr

| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 168 | - | - | 168 | 5.8 | 628 | 0.267 | 100 | 0.0 | 2 |
| Lane 2 | - | 40 | - | 40 | 5.8 | 103 | 0.387 | 39[6] | NA | NA |
| Lane 3 | - | 102 | - | 102 | 5.8 | 103 | 0.991 | 100 | 0.0 | 2 |
| Lane 4 | - | - | 34 | 34 | 5.8 | 98 | 0.346 | 100 | 0.0 | 3 |
| Approach | 168 | 142 | 34 | 344 | 5.8 | | 0.991 | | | |

SouthWest: GEH

| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 61 | - | - | 61 | 5.8 | 869 | 0.070 | 8[5] | 0.0 | 2 |
| Lane 2 | - | 735 | - | 735 | 11.7 | 813[1] | 0.903 | 100 | NA | NA |
| Lane 3 | - | 772 | - | 772 | 11.7 | 855 | 0.903 | 100 | NA | NA |
| Lane 4 | - | 772 | - | 772 | 11.7 | 855 | 0.903 | 100 | NA | NA |
| Lane 5 | - | - | 237 | 237 | 5.8 | 244 | 0.969 | 100 | 0.0 | 4 |
| Approach | 61 | 2278 | 237 | 2576 | 11.0 | | 0.969 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 5728 | 8.3 | 0.991 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

5 Lane under-utilisation found by the program

6 Lane under-utilisation due to downstream effects

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast Exit: Hardey Rd | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 45 | 0.0 | 339 | 348 | 3.09 | 2.06 | 165 | 1389 | 0.119 | 0.6 | 0.7 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 339 | 1800 | 0.188 | 0.0 | 0.0 |
| NorthEast Exit: GEH<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 120 | 0.0 | 735 | 773 | 3.09 | 2.06 | 168 | 935 | 0.179 | 1.8 | 2.3 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 735 | 1800 | 0.408 | 0.0 | 0.0 |
| NorthWest Exit: Resolution Dr<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 140 | 0.0 | 341 | 351 | 3.09 | 2.06 | 267 | 1387 | 0.192 | 0.6 | 0.8 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 341 | 1800 | 0.189 | 0.0 | 0.0 |

**Variable Demand Analysis**

| | Initial Queued Demand<br>veh | Residual Queued Demand<br>veh | Time for Residual Demand to Clear<br>sec | Duration of Oversatn<br>sec |
|---|---|---|---|---|
| SouthEast: Hardey Rd | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 6 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 103av [TCS PM - 2036 - with LSP (Site Folder: GEH/ Resolution)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated  Cycle Time = 180 seconds (Site Optimum Cycle Time - Minimum Delay)
Design Life Analysis: Constant Number of Years = 14

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Hardey Rd | | | | | | | | | | | | | | | |
| Lane 1 | 168 | 5.4 | 168 | 5.4 | 321 | 0.522 | 87[6] | 81.3 | LOS F[11] | 13.4 | 104.2 | Short | 60 | 0.0 | NA |
| Lane 2 | 184 | 4.8 | 184 | 4.8 | 307[1] | 0.600 | 100 | 78.8 | LOS E[11] | 14.9 | 115.6 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 169 | 5.8 | 169 | 5.8 | 312[1] | 0.542 | 100 | 83.8 | LOS F[11] | 13.5 | 106.0 | Short | 60 | 0.0 | NA |
| Approach | 521 | 5.3 | 521 | 5.3 | | 0.600 | | 81.2 | LOS F[11] | 14.9 | 115.6 | | | | |
| NorthEast: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 125 | 5.8 | 125 | 5.8 | 1341 | 0.093 | 13[5] | 16.2 | LOS B | 2.6 | 20.0 | Short | 120 | 0.0 | NA |
| Lane 2 | 620 | 6.3 | 620 | 6.3 | 866[1] | 0.716 | 100 | 28.8 | LOS C | 33.9 | 266.7 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 652 | 6.3 | 652 | 6.3 | 910 | 0.716 | 100 | 23.7 | LOS C | 36.2 | 285.0 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 605 | 6.3 | 605 | 6.3 | 844[1] | 0.716 | 100 | 44.8 | LOS D | 32.7 | 257.9 | Full | 500 | 0.0 | 26.6[8] |
| Lane 5 | 405 | 4.7 | 405 | 4.7 | 265 | 1.529 | 100 | 593.6 | LOS F[11] | 81.9 | 633.9 | Short | 125 | 0.0 | NA |
| Approach | 2406 | 6.0 | 2406 | 6.0 | | 1.529 | | 125.8 | LOS F[11] | 81.9 | 633.9 | | | | |
| NorthWest: Resolution Dr | | | | | | | | | | | | | | | |
| Lane 1 | 207 | 4.7 | 207 | 4.7 | 631 | 0.328 | 100 | 33.4 | LOS C | 11.1 | 85.8 | Short | 90 | 0.0 | NA |
| Lane 2 | 49 | 4.7 | 49 | 4.7 | 83 | 0.590 | 39[6] | 96.8 | LOS F[11] | 4.5 | 34.6 | Full | 430 | 0.0 | 0.0 |
| Lane 3 | 125 | 4.7 | 125 | 4.7 | 83 | 1.508 | 100 | 559.7 | LOS F[11] | 25.2 | 194.9 | Short | 140 | 0.0 | NA |
| Lane 4 | 41 | 4.8 | 41 | 4.8 | 78 | 0.525 | 100 | 101.5 | LOS F[11] | 3.7 | 29.0 | Short | 58 | 0.0 | NA |
| Approach | 422 | 4.7 | 422 | 4.7 | | 1.508 | | 203.7 | LOS F[11] | 25.2 | 194.9 | | | | |
| SouthWest: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 75 | 4.7 | 75 | 4.7 | 872 | 0.085 | 9[5] | 44.8 | LOS D | 3.4 | 25.9 | Short | 75 | 0.0 | NA |
| Lane 2 | 729 | 11.7 | 729 | 11.7 | 805[1] | 0.906 | 100 | 31.8 | LOS C | 42.2 | 357.5 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 774 | 11.7 | 774 | 11.7 | 855 | 0.906 | 100 | 18.3 | LOS B | 49.3 | 417.3 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 774 | 11.7 | 774 | 11.7 | 855 | 0.906 | 100 | 18.3 | LOS B | 49.3 | 417.3 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 237 | 5.8 | 237 | 5.8 | 264 | 0.897 | 100 | 100.4 | LOS F[11] | 22.8 | 178.1 | Short | 240 | 0.0 | NA |
| Approach | 2589 | 11.0 | 2589 | 11.0 | | 0.906 | | 30.4 | LOS C | 49.3 | 417.3 | | | | |
| All Vehicles | 5939 | 8.0 | 5939 | 8.0 | | 1.529 | | 85.8 | LOS F[11] | 81.9 | 633.9 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

11 Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

**Approach Lane Flows (veh/h)**

SouthEast: Hardey Rd

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 91 | 77 | - | 168 | 5.4 | 321 | 0.522 | 87[6] | 55.9 | 2 |
| Lane 2 | - | 184 | - | 184 | 4.8 | 307[1] | 0.600 | 100 | NA | NA |
| Lane 3 | - | - | 169 | 169 | 5.8 | 312[1] | 0.542 | 100 | 57.5 | 2 |
| Approach | 91 | 261 | 169 | 521 | 5.3 | | 0.600 | | | |

NorthEast: GEH

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 125 | - | - | 125 | 5.8 | 1341 | 0.093 | 13[5] | 0.0 | 2 |
| Lane 2 | - | 620 | - | 620 | 6.3 | 866[1] | 0.716 | 100 | NA | NA |
| Lane 3 | - | 652 | - | 652 | 6.3 | 910 | 0.716 | 100 | NA | NA |
| Lane 4 | - | 605 | - | 605 | 6.3 | 844[1] | 0.716 | 100 | NA | NA |
| Lane 5 | - | - | 405 | 405 | 4.7 | 265 | 1.529 | 100 | 100.0 | 4 |
| Approach | 125 | 1876 | 405 | 2406 | 6.0 | | 1.529 | | | |

NorthWest: Resolution Dr

| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 207 | - | - | 207 | 4.7 | 631 | 0.328 | 100 | 0.7 | 2 |
| Lane 2 | - | 49 | - | 49 | 4.7 | 83 | 0.590 | 39[6] | NA | NA |
| Lane 3 | - | 125 | - | 125 | 4.7 | 83 | 1.508 | 100 | 35.2 | 2 |
| Lane 4 | - | - | 41 | 41 | 4.8 | 78 | 0.525 | 100 | 0.0 | 3 |
| Approach | 207 | 175 | 41 | 422 | 4.7 | | 1.508 | | | |

SouthWest: GEH

| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 75 | - | - | 75 | 4.7 | 872 | 0.085 | 9[5] | 0.0 | 2 |
| Lane 2 | - | 729 | - | 729 | 11.7 | 805[1] | 0.906 | 100 | NA | NA |
| Lane 3 | - | 774 | - | 774 | 11.7 | 855 | 0.906 | 100 | NA | NA |
| Lane 4 | - | 774 | - | 774 | 11.7 | 855 | 0.906 | 100 | NA | NA |
| Lane 5 | - | - | 237 | 237 | 5.8 | 264 | 0.897 | 100 | 0.0 | 4 |
| Approach | 75 | 2278 | 237 | 2589 | 11.0 | | 0.906 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 5939 | 8.0 | 1.529 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

5 Lane under-utilisation found by the program

6 Lane under-utilisation due to downstream effects

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast Exit: Hardey Rd<br>Merge Type: **Priority** | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Exit Short Lane | 1 | 45 | 0.0 | 320 | 329 | 3.08 | 2.05 | 174 | 1413 | 0.123 | 0.5 | 0.7 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 320 | 1800 | 0.178 | 0.0 | 0.0 |
| NorthEast Exit: GEH<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 120 | 0.0 | 729 | 768 | 3.07 | 2.05 | 207 | 952 | 0.217 | 1.7 | 2.3 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 729 | 1800 | 0.405 | 0.0 | 0.0 |
| NorthWest Exit: Resolution Dr<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 140 | 0.0 | 449 | 460 | 3.07 | 2.05 | 151 | 1281 | 0.118 | 0.8 | 1.0 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 449 | 1800 | 0.250 | 0.0 | 0.0 |

**Variable Demand Analysis**

| | Initial Queued Demand<br>veh | Residual Queued Demand<br>veh | Time for Residual Demand to Clear<br>sec | Duration of Oversatn<br>sec |
|---|---|---|---|---|
| SouthEast: Hardey Rd | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 70.0 | 952.5 | NA |
| NorthWest: Resolution Dr | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 21.1 | 914.4 | NA |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 103av [TCS PM - Current (Site Folder: GEH/Stoneham)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated  Cycle Time = 150 seconds (Site Optimum Cycle Time - Minimum Delay)

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Belgravia St | | | | | | | | | | | | | | | |
| Lane 1 | 268 | 13.0 | 268 | 13.0 | 332 | 0.806 | 100 | 69.0 | LOS E | 19.9 | 172.3 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 247 | 13.0 | 247 | 13.0 | 306[1] | 0.806 | 100 | 74.3 | LOS E | 18.4 | 159.3 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 173 | 13.0 | 173 | 13.0 | 320 | 0.540 | 67[5] | 71.6 | LOS E | 11.5 | 99.3 | Short | 73 | 0.0 | NA |
| Approach | 687 | 13.0 | 687 | 13.0 | | 0.806 | | 71.5 | LOS E | 19.9 | 172.3 | | | | |
| NorthEast: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 136 | 4.6 | 136 | 4.6 | 1226 | 0.111 | 16[5] | 13.6 | LOS B | 3.2 | 24.9 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 587 | 6.2 | 587 | 6.2 | 835 | 0.702 | 100 | 13.8 | LOS B | 22.0 | 173.4 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 587 | 6.2 | 587 | 6.2 | 835 | 0.702 | 100 | 13.8 | LOS B | 22.0 | 173.4 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 587 | 6.2 | 587 | 6.2 | 835 | 0.702 | 100 | 13.8 | LOS B | 22.0 | 173.4 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 82 | 5.8 | 82 | 5.8 | 129 | 0.637 | 100 | 82.4 | LOS F | 6.2 | 48.2 | Short | 180 | 0.0 | NA |
| Approach | 1978 | 6.1 | 1978 | 6.1 | | 0.702 | | 16.7 | LOS B | 22.0 | 173.4 | | | | |
| NorthWest: Stoneham St | | | | | | | | | | | | | | | |
| Lane 1 | 11 | 5.8 | 11 | 5.8 | 199 | 0.053 | 100 | 71.4 | LOS E | 0.7 | 5.4 | Short | 75 | 0.0 | NA |
| Lane 2 | 194 | 5.8 | 194 | 5.8 | 210 | 0.926 | 100 | 88.9 | LOS F | 16.5 | 128.7 | Full | 300 | 0.0 | 0.0 |
| Lane 3 | 188 | 5.8 | 188 | 5.8 | 203[1] | 0.926 | 100 | 92.5 | LOS F | 15.9 | 124.6 | Full | 300 | 0.0 | 0.0 |
| Lane 4 | 184 | 5.8 | 184 | 5.8 | 199 | 0.926 | 100 | 95.8 | LOS F | 15.7 | 122.6 | Short | 60 | 0.0 | NA |
| Approach | 577 | 5.8 | 577 | 5.8 | | 0.926 | | 91.9 | LOS F | 16.5 | 128.7 | | | | |
| SouthWest: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 712 | 5.8 | 712 | 5.8 | 1261 | 0.564 | 70[5] | 13.5 | LOS B | 21.0 | 164.6 | Short | 145 | 0.0 | NA |
| Lane 2 | 646 | 6.8 | 646 | 6.8 | 804 | 0.803 | 100 | 25.6 | LOS C | 34.9 | 277.3 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 665 | 6.8 | 665 | 6.8 | 828 | 0.803 | 100 | 26.0 | LOS C | 36.9 | 293.5 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 665 | 6.8 | 665 | 6.8 | 828 | 0.803 | 100 | 26.0 | LOS C | 36.9 | 293.5 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 114 | 4.6 | 114 | 4.6 | 130 | 0.877 | 100 | 91.6 | LOS F | 9.3 | 72.0 | Short | 210 | 0.0 | NA |
| Approach | 2802 | 6.5 | 2802 | 6.5 | | 0.877 | | 25.4 | LOS C | 36.9 | 293.5 | | | | |
| All Vehicles | 6044 | 7.0 | 6044 | 7.0 | | 0.926 | | 34.1 | LOS C | 36.9 | 293.5 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
5 Lane under-utilisation found by the program

**Approach Lane Flows (veh/h)**

SouthEast: Belgravia St

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 84 | 184 | - | 268 | 13.0 | 332 | 0.806 | 100 | NA | NA |
| Lane 2 | - | 247 | - | 247 | 13.0 | 306[1] | 0.806 | 100 | NA | NA |
| Lane 3 | - | - | 173 | 173 | 13.0 | 320 | 0.540 | 67[5] | 33.0 | 2 |
| Approach | 84 | 431 | 173 | 687 | 13.0 | | 0.806 | | | |
| NorthEast: GEH | | | | | | | | | | |
| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 136 | - | - | 136 | 4.6 | 1226 | 0.111 | 16[5] | NA | NA |
| Lane 2 | - | 587 | - | 587 | 6.2 | 835 | 0.702 | 100 | NA | NA |
| Lane 3 | - | 587 | - | 587 | 6.2 | 835 | 0.702 | 100 | NA | NA |
| Lane 4 | - | 587 | - | 587 | 6.2 | 835 | 0.702 | 100 | NA | NA |
| Lane 5 | - | - | 82 | 82 | 5.8 | 129 | 0.637 | 100 | 0.0 | 4 |
| Approach | 136 | 1760 | 82 | 1978 | 6.1 | | 0.702 | | | |
| NorthWest: Stoneham St | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 11 | - | - | 11 | 5.8 | 199 | 0.053 | 100 | 0.0 | 2 |
| Lane 2 | - | 194 | - | 194 | 5.8 | 210 | 0.926 | 100 | NA | NA |
| Lane 3 | - | 100 | 87 | 188 | 5.8 | 203[1] | 0.926 | 100 | NA | NA |
| Lane 4 | - | - | 184 | 184 | 5.8 | 199 | 0.926 | 100 | 71.4 | 3 |
| Approach | 11 | 295 | 272 | 577 | 5.8 | | 0.926 | | | |
| SouthWest: GEH | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 712 | - | - | 712 | 5.8 | 1261 | 0.564 | 70[5] | 16.5 | 2 |
| Lane 2 | - | 646 | - | 646 | 6.8 | 804 | 0.803 | 100 | NA | NA |
| Lane 3 | - | 665 | - | 665 | 6.8 | 828 | 0.803 | 100 | NA | NA |
| Lane 4 | - | 665 | - | 665 | 6.8 | 828 | 0.803 | 100 | NA | NA |
| Lane 5 | - | - | 114 | 114 | 4.6 | 130 | 0.877 | 100 | 0.0 | 4 |
| Approach | 712 | 1977 | 114 | 2802 | 6.5 | | 0.877 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 6044 | 7.0 | 0.926 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

5 Lane under-utilisation found by the program

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast Exit: GEH Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 100 | 0.0 | 646 | 667 | 3.09 | 2.06 | 11 | 1049 | 0.010 | 1.4 | 1.5 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 646 | 1800 | 0.359 | 0.0 | 0.0 |
| SouthWest Exit: GEH Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 100 | 0.0 | 587 | 604 | 3.16 | 2.11 | 84 | 1069 | 0.079 | 1.3 | 1.6 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | 587 | 1800 | 0.326 | 0.0 | 0.0 |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Belgravia St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Stoneham St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| SouthWest: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 103av [TCS PM - 2036 (Site Folder: GEH/Stoneham)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated  Cycle Time = 180 seconds (Site Optimum Cycle Time - Minimum Delay)
Design Life Analysis: Constant Number of Years = 14

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Belgravia St | | | | | | | | | | | | | | | |
| Lane 1 | 333 | 13.0 | 333 | 13.0 | 296 | 1.123 | 100 | 213.6 | LOS F[11] | 44.9 | 389.1 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 276 | 13.0 | 276 | 13.0 | 246[1] | 1.123 | 100 | 241.7 | LOS F[11] | 37.5 | 324.9 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 185 | 13.0 | 185 | 13.0 | 275[1] | 0.672 | 60[5] | 108.9 | LOS F[11] | 15.3 | 132.5 | Short | 73 | 0.0 | NA |
| Approach | 793 | 13.0 | 793 | 13.0 | | 1.123 | | 199.0 | LOS F[11] | 44.9 | 389.1 | | | | |
| NorthEast: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 145 | 4.6 | 145 | 4.6 | 1296 | 0.112 | 17[5] | 12.9 | LOS B | 3.6 | 27.8 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 628 | 6.2 | 628 | 6.2 | 962 | 0.652 | 100 | 7.1 | LOS A | 16.1 | 127.1 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 628 | 6.2 | 628 | 6.2 | 962 | 0.652 | 100 | 7.1 | LOS A | 16.1 | 127.1 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 628 | 6.2 | 628 | 6.2 | 962 | 0.652 | 100 | 7.1 | LOS A | 16.1 | 127.1 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 88 | 5.8 | 88 | 5.8 | 107 | 0.818 | 100 | 104.3 | LOS F[11] | 8.3 | 64.6 | Short | 180 | 0.0 | NA |
| Approach | 2116 | 6.1 | 2116 | 6.1 | | 0.818 | | 11.5 | LOS B | 16.1 | 127.1 | | | | |
| NorthWest: Stoneham St | | | | | | | | | | | | | | | |
| Lane 1 | 11 | 5.8 | 11 | 5.8 | 185 | 0.061 | 100 | 97.0 | LOS F[11] | 0.9 | 7.0 | Short | 75 | 0.0 | NA |
| Lane 2 | 221 | 5.8 | 221 | 5.8 | 195[1] | 1.129 | 100 | 232.6 | LOS F[11] | 29.7 | 232.7 | Full | 300 | 0.0 | 0.0 |
| Lane 3 | 194 | 5.8 | 194 | 5.8 | 172[1] | 1.129 | 100 | 241.9 | LOS F[11] | 26.2 | 205.2 | Full | 300 | 0.0 | 0.0 |
| Lane 4 | 191 | 5.8 | 191 | 5.8 | 170[1] | 1.129 | 100 | 245.0 | LOS F[11] | 25.9 | 202.8 | Short | 60 | 0.0 | NA |
| Approach | 617 | 5.8 | 617 | 5.8 | | 1.129 | | 236.9 | LOS F[11] | 29.7 | 232.7 | | | | |
| SouthWest: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 761 | 5.8 | 761 | 5.8 | 1254 | 0.607 | 67[5] | 18.4 | LOS B | 30.1 | 235.3 | Short | 145 | 0.0 | NA |
| Lane 2 | 665 | 6.8 | 665 | 6.8 | 729[1] | 0.912 | 100 | 36.5 | LOS D | 46.1 | 366.3 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 870 | 6.8 | 870 | 6.8 | 954 | 0.912 | 100 | 30.8 | LOS C | 66.1 | 525.0 | Full | 500 | 0.0 | 9.4 |
| Lane 4 | 846 | 6.8 | 846 | 6.8 | 928[1] | 0.912 | 100 | 36.9 | LOS D | 63.4 | 503.5 | Full | 500 | 0.0 | 5.6 |
| Lane 5 | 122 | 4.6 | 122 | 4.6 | 108 | 1.126 | 100 | 233.7 | LOS F[11] | 16.3 | 127.0 | Short | 210 | 0.0 | NA |
| Approach | 3264 | 6.5 | 3264 | 6.5 | | 1.126 | | 38.2 | LOS D | 66.1 | 525.0 | | | | |
| All Vehicles | 6791 | 7.1 | 6791 | 7.1 | | 1.129 | | 66.7 | LOS E[11] | 66.1 | 525.0 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
5 Lane under-utilisation found by the program
11 Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

**Approach Lane Flows (veh/h)**

SouthEast: Belgravia St

| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 90 | 242 | - | 333 | 13.0 | 296 | 1.123 | 100 | NA | NA |
| Lane 2 | - | 276 | - | 276 | 13.0 | 246[1] | 1.123 | 100 | NA | NA |
| Lane 3 | - | - | 185 | 185 | 13.0 | 275[1] | 0.672 | 60[5] | 60.0 | 2 |
| Approach | 90 | 519 | 185 | 793 | 13.0 | | 1.123 | | | |

NorthEast: GEH

| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 145 | - | - | 145 | 4.6 | 1296 | 0.112 | 17[5] | NA | NA |
| Lane 2 | - | 628 | - | 628 | 6.2 | 962 | 0.652 | 100 | NA | NA |
| Lane 3 | - | 628 | - | 628 | 6.2 | 962 | 0.652 | 100 | NA | NA |
| Lane 4 | - | 628 | - | 628 | 6.2 | 962 | 0.652 | 100 | NA | NA |
| Lane 5 | - | - | 88 | 88 | 5.8 | 107 | 0.818 | 100 | 0.0 | 4 |
| Approach | 145 | 1883 | 88 | 2116 | 6.1 | | 0.818 | | | |

NorthWest: Stoneham St

| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 11 | - | - | 11 | 5.8 | 185 | 0.061 | 100 | 0.0 | 2 |
| Lane 2 | - | 221 | - | 221 | 5.8 | 195[1] | 1.129 | 100 | NA | NA |
| Lane 3 | - | 95 | 99 | 194 | 5.8 | 172[1] | 1.129 | 100 | NA | NA |
| Lane 4 | - | - | 191 | 191 | 5.8 | 170[1] | 1.129 | 100 | 100.0 | 3 |
| Approach | 11 | 315 | 291 | 617 | 5.8 | | 1.129 | | | |

SouthWest: GEH

| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane 1 | 761 | - | - | 761 | 5.8 | 1254 | 0.607 | 67[5] | 49.5 | 2 |
| Lane 2 | - | 665 | - | 665 | 6.8 | 729[1] | 0.912 | 100 | NA | NA |
| Lane 3 | - | 870 | - | 870 | 6.8 | 954 | 0.912 | 100 | NA | NA |
| Lane 4 | - | 846 | - | 846 | 6.8 | 928[1] | 0.912 | 100 | NA | NA |
| Lane 5 | - | - | 122 | 122 | 4.6 | 108 | 1.126 | 100 | 0.0 | 4 |
| Approach | 761 | 2381 | 122 | 3264 | 6.5 | | 1.126 | | | |

| | Total | %HV | Deg.Satn (v/c) |
|---|---|---|---|
| All Vehicles | 6791 | 7.1 | 1.129 |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

5 Lane under-utilisation found by the program

**Merge Analysis**

| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast Exit: GEH<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 100 | 0.0 | 665 | 686 | 3.09 | 2.06 | 11 | 1029 | 0.011 | 1.4 | 1.6 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 665 | 1800 | 0.369 | 0.0 | 0.0 |
| SouthWest Exit: GEH | | | | | | | | | | | | |

| Merge Type: **Priority** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Exit Short Lane | 1 | 100 | 0.0 | 628 | 647 | 3.16 | 2.11 | 80 | 1024 | 0.078 | 1.4 | 1.7 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 628 | 1800 | 0.349 | 0.0 | 0.0 |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Belgravia St | | | | |
| Lane 1 | 0.0 | 18.2 | 221.7 | NA |
| Lane 2 | 0.0 | 15.1 | 221.7 | NA |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthWest: Stoneham St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 12.6 | 232.6 | NA |
| Lane 3 | 0.0 | 11.1 | 232.6 | NA |
| Lane 4 | 0.0 | 11.0 | 232.6 | NA |
| SouthWest: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 6.8 | 226.7 | NA |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 103av [TCS PM - 2036 - mod (Site Folder: GEH/ Stoneham)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 180 seconds (Site Optimum Cycle Time - Minimum Delay)
Design Life Analysis: Constant Number of Years = 14

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Belgravia St | | | | | | | | | | | | | | | |
| Lane 1 | 336 | 13.0 | 336 | 13.0 | 303 | 1.109 | 100 | 184.7 | LOS F[11] | 43.9 | 380.6 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 272 | 13.0 | 272 | 13.0 | 245[1] | 1.109 | 100 | 229.8 | LOS F[11] | 36.2 | 313.9 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 185 | 13.0 | 185 | 13.0 | 275[1] | 0.671 | 61[5] | 108.1 | LOS F[11] | 15.3 | 132.5 | Short | 73 | 0.0 | NA |
| Approach | 793 | 13.0 | 793 | 13.0 | | 1.109 | | 182.4 | LOS F[11] | 43.9 | 380.6 | | | | |
| NorthEast: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 145 | 4.6 | 145 | 4.6 | 1336 | 0.109 | 17[5] | 11.7 | LOS B | 3.3 | 25.5 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 628 | 6.2 | 628 | 6.2 | 1003 | 0.626 | 100 | 4.6 | LOS A | 11.5 | 90.6 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 628 | 6.2 | 628 | 6.2 | 1003 | 0.626 | 100 | 4.6 | LOS A | 11.5 | 90.6 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 628 | 6.2 | 628 | 6.2 | 1003 | 0.626 | 100 | 4.6 | LOS A | 11.5 | 90.6 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 88 | 5.8 | 88 | 5.8 | 78 | 1.125 | 100 | 228.7 | LOS F[11] | 11.8 | 92.3 | Short | 180 | 0.0 | NA |
| Approach | 2116 | 6.1 | 2116 | 6.1 | | 1.125 | | 14.4 | LOS B | 11.8 | 92.3 | | | | |
| NorthWest: Stoneham St | | | | | | | | | | | | | | | |
| Lane 1 | 11 | 5.8 | 11 | 5.8 | 312 | 0.036 | 100 | 83.0 | LOS F[11] | 0.8 | 6.3 | Short | 75 | 0.0 | NA |
| Lane 2 | 217 | 5.8 | 217 | 5.8 | 185 | 1.173 | 100 | 268.7 | LOS F[11] | 31.2 | 244.1 | Full | 300 | 0.0 | 0.0 |
| Lane 3 | 196 | 5.8 | 196 | 5.8 | 167[1] | 1.173 | 100 | 279.5 | LOS F[11] | 28.2 | 220.2 | Full | 300 | 0.0 | 0.0 |
| Lane 4 | 193 | 5.8 | 193 | 5.8 | 165[1] | 1.173 | 100 | 282.6 | LOS F[11] | 27.8 | 217.6 | Short | 60 | 0.0 | NA |
| Approach | 617 | 5.8 | 617 | 5.8 | | 1.173 | | 273.1 | LOS F[11] | 31.2 | 244.1 | | | | |
| SouthWest: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 761 | 5.8 | 761 | 5.8 | 1276 | 0.597 | 68[5] | 20.2 | LOS C | 28.6 | 224.0 | Short | 145 | 0.0 | NA |
| Lane 2 | 635 | 6.8 | 635 | 6.8 | 722[1] | 0.880 | 100 | 32.6 | LOS C | 41.0 | 325.4 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 875 | 6.8 | 875 | 6.8 | 995 | 0.880 | 100 | 21.9 | LOS C | 57.4 | 456.4 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 870 | 6.8 | 870 | 6.8 | 990[1] | 0.880 | 100 | 22.9 | LOS C | 56.9 | 452.1 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 61 | 4.6 | 61 | 4.6 | 77 | 0.790 | 100 | 107.4 | LOS F[11] | 5.8 | 44.8 | Short | 210 | 0.0 | NA |
| Lane 6 | 61 | 4.6 | 61 | 4.6 | 77 | 0.790 | 100 | 106.3 | LOS F[11] | 5.8 | 44.8 | Short | 210 | 0.0 | NA |
| Approach | 3264 | 6.5 | 3264 | 6.5 | | 0.880 | | 27.0 | LOS C | 57.4 | 456.4 | | | | |
| All Vehicles | 6791 | 7.1 | 6791 | 7.1 | | 1.173 | | 63.6 | LOS E[11] | 57.4 | 456.4 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
5 Lane under-utilisation found by the program
11 Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

| Approach Lane Flows (veh/h) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Belgravia St | | | | | | | | | | |
| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 90 | 246 | - | 336 | 13.0 | 303 | 1.109 | 100 | NA | NA |
| Lane 2 | - | 272 | - | 272 | 13.0 | 245[1] | 1.109 | 100 | NA | NA |
| Lane 3 | - | - | 185 | 185 | 13.0 | 275[1] | 0.671 | 61[5] | 60.0 | 2 |
| Approach | 90 | 519 | 185 | 793 | 13.0 | | 1.109 | | | |
| NorthEast: GEH | | | | | | | | | | |
| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 145 | - | - | 145 | 4.6 | 1336 | 0.109 | 17[5] | NA | NA |
| Lane 2 | - | 628 | - | 628 | 6.2 | 1003 | 0.626 | 100 | NA | NA |
| Lane 3 | - | 628 | - | 628 | 6.2 | 1003 | 0.626 | 100 | NA | NA |
| Lane 4 | - | 628 | - | 628 | 6.2 | 1003 | 0.626 | 100 | NA | NA |
| Lane 5 | - | - | 88 | 88 | 5.8 | 78 | 1.125 | 100 | 0.0 | 4 |
| Approach | 145 | 1883 | 88 | 2116 | 6.1 | | 1.125 | | | |
| NorthWest: Stoneham St | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 11 | - | - | 11 | 5.8 | 312 | 0.036 | 100 | 0.0 | 2 |
| Lane 2 | - | 217 | - | 217 | 5.8 | 185 | 1.173 | 100 | NA | NA |
| Lane 3 | - | 98 | 98 | 196 | 5.8 | 167[1] | 1.173 | 100 | NA | NA |
| Lane 4 | - | - | 193 | 193 | 5.8 | 165[1] | 1.173 | 100 | 100.0 | 3 |
| Approach | 11 | 315 | 291 | 617 | 5.8 | | 1.173 | | | |
| SouthWest: GEH | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. |
| Lane 1 | 761 | - | - | 761 | 5.8 | 1276 | 0.597 | 68[5] | 44.9 | 2 |
| Lane 2 | - | 635 | - | 635 | 6.8 | 722[1] | 0.880 | 100 | NA | NA |
| Lane 3 | - | 875 | - | 875 | 6.8 | 995 | 0.880 | 100 | NA | NA |
| Lane 4 | - | 870 | - | 870 | 6.8 | 990[1] | 0.880 | 100 | NA | NA |
| Lane 5 | - | - | 61 | 61 | 4.6 | 77 | 0.790 | 100 | 0.0 | 4 |
| Lane 6 | - | - | 61 | 61 | 4.6 | 77 | 0.790 | 100 | 0.0 | 5 |
| Approach | 761 | 2381 | 122 | 3264 | 6.5 | | 0.880 | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | | |
| All Vehicles | 6791 | 7.1 | 1.173 | | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

5 Lane under-utilisation found by the program

| Merge Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
| NorthEast Exit: GEH Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 100 | 0.0 | 635 | 656 | 3.09 | 2.06 | 11 | 1061 | 0.011 | 1.3 | 1.5 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 635 | 1800 | 0.353 | 0.0 | 0.0 |
| SouthWest Exit: GEH<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 100 | 0.0 | 628 | 647 | 3.16 | 2.11 | 81 | 1024 | 0.079 | 1.4 | 1.7 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 628 | 1800 | 0.349 | 0.0 | 0.0 |

**Variable Demand Analysis**

| | Initial Queued Demand<br>veh | Residual Queued Demand<br>veh | Time for Residual Demand to Clear<br>sec | Duration of Oversatn<br>sec |
|---|---|---|---|---|
| SouthEast: Belgravia St | | | | |
| Lane 1 | 0.0 | 16.6 | 196.5 | NA |
| Lane 2 | 0.0 | 13.4 | 196.5 | NA |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 4.9 | 224.9 | NA |
| NorthWest: Stoneham St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 16.0 | 311.0 | NA |
| Lane 3 | 0.0 | 14.4 | 311.0 | NA |
| Lane 4 | 0.0 | 14.2 | 311.0 | NA |
| SouthWest: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 6 | 0.0 | 0.0 | 0.0 | 0.0 |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

# LANE SUMMARY

## Site: 103av [TCS PM - 2036 - with LSP (Site Folder: GEH/ Stoneham)]

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated  Cycle Time = 180 seconds (Site Optimum Cycle Time - Minimum Delay)
Design Life Analysis: Constant Number of Years = 14

**Lane Use and Performance**

| | Demand Flows [ Total veh/h | HV ] % | Arrival Flows [ Total veh/h | HV ] % | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Aver. Delay sec | Level of Service | 95% Back Of Queue [ Veh | Dist ] m | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Belgravia St | | | | | | | | | | | | | | | |
| Lane 1 | 359 | 12.1 | 359 | 12.1 | 299 | 1.199 | 100 | 276.3 | LOS F[11] | 53.7 | 460.6 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 302 | 11.8 | 302 | 11.8 | 251[1] | 1.199 | 100 | 307.9 | LOS F[11] | 45.3 | 387.2 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 185 | 13.0 | 185 | 13.0 | 274[1] | 0.674 | 56[5] | 112.9 | LOS F[11] | 15.3 | 132.5 | Short | 73 | 0.0 | NA |
| Approach | 845 | 12.2 | 845 | 12.2 | | 1.199 | | 251.8 | LOS F[11] | 53.7 | 460.6 | | | | |
| NorthEast: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 145 | 4.6 | 145 | 4.6 | 1336 | 0.109 | 17[5] | 11.7 | LOS B | 3.3 | 25.5 | Full | 500 | 0.0 | 0.0 |
| Lane 2 | 628 | 6.2 | 628 | 6.2 | 1003 | 0.626 | 100 | 4.6 | LOS A | 11.5 | 90.6 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 628 | 6.2 | 628 | 6.2 | 1003 | 0.626 | 100 | 4.6 | LOS A | 11.5 | 90.6 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 628 | 6.2 | 628 | 6.2 | 1003 | 0.626 | 100 | 4.6 | LOS A | 11.5 | 90.6 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 97 | 5.2 | 97 | 5.2 | 88 | 1.105 | 100 | 212.0 | LOS F[11] | 12.7 | 98.4 | Short | 180 | 0.0 | NA |
| Approach | 2126 | 6.0 | 2126 | 6.0 | | 1.105 | | 14.6 | LOS B | 12.7 | 98.4 | | | | |
| NorthWest: Stoneham St | | | | | | | | | | | | | | | |
| Lane 1 | 13 | 4.9 | 13 | 4.9 | 167 | 0.080 | 100 | 108.2 | LOS F[11] | 1.1 | 8.4 | Short | 75 | 0.0 | NA |
| Lane 2 | 247 | 5.0 | 247 | 5.0 | 176 | 1.402 | 100 | 479.2 | LOS F[11] | 45.6 | 353.6 | Full | 300 | 0.0 | 19.9 |
| Lane 3 | 228 | 5.0 | 228 | 5.0 | 163[1] | 1.402 | 100 | 490.1 | LOS F[11] | 42.2 | 327.1 | Full | 300 | 0.0 | 12.8 |
| Lane 4 | 225 | 5.0 | 225 | 5.0 | 161[1] | 1.402 | 100 | 493.2 | LOS F[11] | 41.6 | 322.6 | Short | 60 | 0.0 | NA |
| Approach | 714 | 5.0 | 714 | 5.0 | | 1.402 | | 480.2 | LOS F[11] | 45.6 | 353.6 | | | | |
| SouthWest: GEH | | | | | | | | | | | | | | | |
| Lane 1 | 846 | 5.2 | 846 | 5.2 | 1264 | 0.669 | 76[5] | 22.6 | LOS C | 31.9 | 247.9 | Short | 145 | 0.0 | NA |
| Lane 2 | 627 | 6.8 | 627 | 6.8 | 709[1] | 0.885 | 100 | 34.1 | LOS C | 41.4 | 328.6 | Full | 500 | 0.0 | 0.0 |
| Lane 3 | 881 | 6.8 | 881 | 6.8 | 995 | 0.885 | 100 | 22.6 | LOS C | 58.9 | 468.1 | Full | 500 | 0.0 | 0.0 |
| Lane 4 | 873 | 6.8 | 873 | 6.8 | 986[1] | 0.885 | 100 | 23.6 | LOS C | 58.0 | 460.5 | Full | 500 | 0.0 | 0.0 |
| Lane 5 | 122 | 4.6 | 122 | 4.6 | 88 | 1.376 | 100 | 448.3 | LOS F[11] | 22.1 | 171.7 | Short | 210 | 0.0 | NA |
| Approach | 3348 | 6.3 | 3348 | 6.3 | | 1.376 | | 40.5 | LOS D | 58.9 | 468.1 | | | | |
| All Vehicles | 7033 | 6.8 | 7033 | 6.8 | | 1.402 | | 102.7 | LOS F[11] | 58.9 | 468.1 | | | | |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
5 Lane under-utilisation found by the program
11 Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

| Approach Lane Flows (veh/h) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Belgravia St | | | | | | | | | | | |
| Mov. From SE To Exit: | L2 SW | T1 NW | R2 NE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. | |
| Lane 1 | 90 | 269 | - | 359 | 12.1 | 299 | 1.199 | 100 | NA | NA | |
| Lane 2 | - | 302 | - | 302 | 11.8 | 251[1] | 1.199 | 100 | NA | NA | |
| Lane 3 | - | - | 185 | 185 | 13.0 | 274[1] | 0.674 | 56[5] | 60.1 | 2 | |
| Approach | 90 | 570 | 185 | 845 | 12.2 | | 1.199 | | | | |
| NorthEast: GEH | | | | | | | | | | | |
| Mov. From NE To Exit: | L2 SE | T1 SW | R2 NW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. | |
| Lane 1 | 145 | - | - | 145 | 4.6 | 1336 | 0.109 | 17[5] | NA | NA | |
| Lane 2 | - | 628 | - | 628 | 6.2 | 1003 | 0.626 | 100 | NA | NA | |
| Lane 3 | - | 628 | - | 628 | 6.2 | 1003 | 0.626 | 100 | NA | NA | |
| Lane 4 | - | 628 | - | 628 | 6.2 | 1003 | 0.626 | 100 | NA | NA | |
| Lane 5 | - | - | 97 | 97 | 5.2 | 88 | 1.105 | 100 | 0.0 | 4 | |
| Approach | 145 | 1883 | 97 | 2126 | 6.0 | | 1.105 | | | | |
| NorthWest: Stoneham St | | | | | | | | | | | |
| Mov. From NW To Exit: | L2 NE | T1 SE | R2 SW | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. | |
| Lane 1 | 13 | - | - | 13 | 4.9 | 167 | 0.080 | 100 | 0.0 | 2 | |
| Lane 2 | - | 247 | - | 247 | 5.0 | 176 | 1.402 | 100 | NA | NA | |
| Lane 3 | - | 118 | 111 | 228 | 5.0 | 163[1] | 1.402 | 100 | NA | NA | |
| Lane 4 | - | - | 225 | 225 | 5.0 | 161[1] | 1.402 | 100 | 100.0 | 3 | |
| Approach | 13 | 365 | 336 | 714 | 5.0 | | 1.402 | | | | |
| SouthWest: GEH | | | | | | | | | | | |
| Mov. From SW To Exit: | L2 NW | T1 NE | R2 SE | Total | %HV | Cap. veh/h | Deg. Satn v/c | Lane Util. % | Prob. SL Ov. % | Ov. Lane No. | |
| Lane 1 | 846 | - | - | 846 | 5.2 | 1264 | 0.669 | 76[5] | 54.4 | 2 | |
| Lane 2 | - | 627 | - | 627 | 6.8 | 709[1] | 0.885 | 100 | NA | NA | |
| Lane 3 | - | 881 | - | 881 | 6.8 | 995 | 0.885 | 100 | NA | NA | |
| Lane 4 | - | 873 | - | 873 | 6.8 | 986[1] | 0.885 | 100 | NA | NA | |
| Lane 5 | - | - | 122 | 122 | 4.6 | 88 | 1.376 | 100 | 0.0 | 4 | |
| Approach | 846 | 2381 | 122 | 3348 | 6.3 | | 1.376 | | | | |
| | Total | %HV | Deg.Satn (v/c) | | | | | | | | |
| All Vehicles | 7033 | 6.8 | 1.402 | | | | | | | | |

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

5 Lane under-utilisation found by the program

| Merge Analysis | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Exit Lane Number | Short Lane Length m | Percent Opng in Lane % | Opposing Flow Rate veh/h | Opposing Flow Rate pcu/h | Critical Gap sec | Follow-up Headway sec | Lane Flow Rate veh/h | Capacity veh/h | Deg. Satn v/c | Min. Delay sec | Merge Delay sec |
| NorthEast Exit: GEH<br>Merge Type: **Priority** | | | | | | | | | | | | |
| Exit Short Lane | 1 | 100 | 0.0 | 627 | 648 | 3.07 | 2.05 | 13 | 1079 | 0.012 | 1.3 | 1.5 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 627 | 1800 | 0.349 | 0.0 | 0.0 |
| SouthWest Exit: GEH | | | | | | | | | | | | |

| Merge Type: **Priority** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Exit Short Lane | 1 | 100 | 0.0 | 628 | 647 | 3.16 | 2.11 | 75 | 1024 | 0.073 | 1.4 | 1.7 |
| Merge Lane | 2 | - | 100.0 | Merge Lane is not Opposed | | | | 628 | 1800 | 0.349 | 0.0 | 0.0 |

**Variable Demand Analysis**

| | Initial Queued Demand veh | Residual Queued Demand veh | Time for Residual Demand to Clear sec | Duration of Oversatn sec |
|---|---|---|---|---|
| SouthEast: Belgravia St | | | | |
| Lane 1 | 0.0 | 29.8 | 358.4 | NA |
| Lane 2 | 0.0 | 25.0 | 358.4 | NA |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| NorthEast: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 4.6 | 189.6 | NA |
| NorthWest: Stoneham St | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 35.4 | 723.2 | NA |
| Lane 3 | 0.0 | 32.7 | 723.2 | NA |
| Lane 4 | 0.0 | 32.3 | 723.2 | NA |
| SouthWest: GEH | | | | |
| Lane 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane 5 | 0.0 | 16.6 | 677.1 | NA |

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Project: C:\PJA\Phil Jones Associates\SharedData - 07575 Ascot Racecourse Local Structure Plan & Scheme Amendment\4. Technical\4.3 Analysis\4.3.1 Transport\07575_M_01_A_Ascot Racecourse LSP&SA.sip9

City of Belmont

# Scheme Amendment No. 24

## Local Planning Scheme No. 15



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*Planning and Development Act 2005*

**Resolution to prepare amendment to local planning scheme.**

**City of Belmont**
**Local Planning Scheme No. 15**

**Scheme Amendment No. 24**

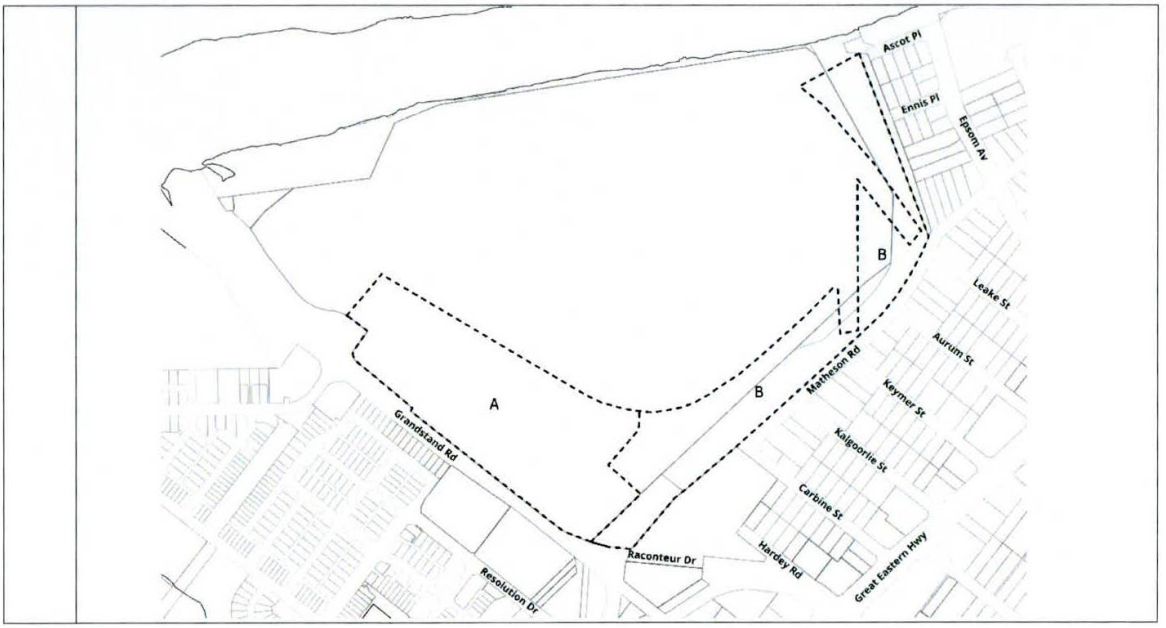
Resolved that the local government pursuant to section 75 of the *Planning Development Act 2005*, amend the above local planning scheme by:

1. Rezoning a portion of Lot 452 No. 70 Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Residential' R60 zone.
2. Rezoning a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone and including a Restricted Use (R1) designation and R60 density code.
3. Rezoning Lot 100 (No. 1) Raconteur Drive, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone, rezoning Lot 23 (No. 2) Carbine Street from the 'Residential and Stables' zone to the 'Mixed Use' zone, deleting the Additional Use (A18) designation, inserting residential density codes of R10 and R-AC4, and including a Restricted Use (R1) designation.
4. Rezoning the redundant residual alignments of Grandstand Road and Matheson Road and part of Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone, inserting a residential density coding of R-AC3 and applying a Restricted Use (R2) designation.
5. Modifying Schedule No. 2 – Additional Uses as follows:

| No. | Location and Additional Uses |
|---|---|
| 18 | Within Precinct A, the local government may consider the following additional uses:<br>• Office<br>• Hotel<br>• Reception Centre<br>• Restaurant<br>• Tavern<br><br>Within Precinct B, the local government may consider the following additional uses:<br>• Stables<br>• Veterinary Centre |



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6. Inserting the following into Schedule No. 3 – Restricted Uses and deleting the Text "There are no restricted uses which apply to the Scheme":

| No. | Description of Land | Restricted Use | Conditions |
|---|---|---|---|
| 1 | 'Mixed Use' zoned portion of Lot 452 (No. 70) Grandstand Road, Ascot<br><br>Lot 100 (No. 1) Raconteur Drive, Ascot.<br><br>Lot 23 (No. 2) Carbine Street, Ascot. | • Aged or Dependent Persons Dwelling<br>• Ancillary Dwelling<br>• Art Gallery<br>• Betting Agency<br>• Car Park<br>• Caretakers Dwelling<br>• Child Care Premises<br>• Child Family Day Care<br>• Civic Use<br>• Club Premises<br>• Community Home<br>• Consulting Rooms<br>• Convenience Store<br>• Dry Cleaning Premises<br>• Educational Establishment<br>• Exhibition Centre<br>• Grouped Dwelling<br>• Health Centre<br>• Health Studio<br>• Home Business<br>• Home Occupation<br>• Home Store<br>• Hospital<br>• Hosted Short Term Rental Accommodation | Nil |



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| | | | |
|---|---|---|---|
| | | • Hotel<br>• Laundromat<br>• Liquor Store – Small<br>• Lunch Bar<br>• Massage Parlour<br>• Medical Centre<br>• Mobile Phone Tower & Associated Facilities<br>• Multiple Dwelling<br>• Nursing Home<br>• Office<br>• Private Recreation<br>• Place of Worship<br>• Public Amusement<br>• Reception Centre<br>• Residential Building<br>• Restaurant/Café<br>• Single House<br>• Small Bar<br>• Studio<br>• Tavern<br>• Telecommunications Infrastructure<br>• Tourist and Visitor Accommodation<br>• Unhosted Short term Rental Accommodation<br>• Veterinary Centre<br>• Vet Consulting Rooms<br>• Video Store | |
| 2 | Lot 1 (No. 88) and Lot 3 (No. 96) Grandstand Road and Lot 51 (No. 2) Raconteur Drive, Ascot | • Aged or Dependent Persons Dwelling<br>• Amusement Facility<br>• Art Gallery<br>• Betting Agency<br>• Car Park<br>• Caretaker's Dwelling<br>• Child Care Premises<br>• Civic Use<br>• Club Premises<br>• Consulting Rooms<br>• Dry Cleaning Premises<br>• Educational Establishment<br>• Exhibition Centre<br>• Fast Food Outlet/Lunch Bar<br>• Health Centre<br>• Health Studio<br>• Home Business<br>• Home Occupation | Residential dwellings shall not be located on the ground floor.<br><br>Retail floorspace is restricted to 1,200m$^2$ increasing up to 3,000m$^2$ where a Net Benefit Test is provided to the satisfaction of the Local Government.<br><br>'Fast Food Outlet/Lunch Bar' shall only be permitted where it forms part of and is integrated with the built form of the precinct, and where no drive-through facilities are proposed. |



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| | | | |
|---|---|---|---|
| | | • Hosted Short Term Rental Accommodation<br>• Laundromat<br>• Liquor Store-Small<br>• Liquor Store-Large<br>• Lunch Bar<br>• Massage Parlour<br>• Medical Centre<br>• Mobile Phone Tower & Associated Facilities<br>• Multiple Dwelling<br>• Office<br>• Public Amusement<br>• Restaurant/Café<br>• Restricted Premises<br>• Shop<br>• Small Bar<br>• Tavern<br>• Telecommunications Infrastructure<br>• Unhosted Short Term Rental Accommodation<br>• Veterinary Centre<br>• Vet Consulting Rooms<br>• Video Store | |

7. Amending the Scheme Map accordingly.

Pursuant to Clause 35(2) of the Planning and Development (Local Planning Schemes (Regulations) 2015 (WA), determines that Amendment No. 24 to Local Planning Scheme No. 15 is a 'Complex' amendment as the intended zones, density codes and land use permissibility for the subject land is not addressed by the City's Local Planning Strategy.

Dated this 25th day of November 2025.

**City of Belmont Chief Executive Officer**

# Scheme Amendment Details

| Item | Description | Details |
|---|---|---|
| **1.** | Local Authority | City of Belmont |
| **2.** | Description of Local Planning Scheme | Local Planning Scheme No. 15 |
| **3.** | Type of Scheme | Local Zoning Scheme |
| **4.** | Scheme Amendment No. | Amendment No. 24 |
| **5.** | Summary of Proposal | • Rezone a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Residential' R60 zone.<br>• Rezone a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the Place of Public Assembly zone' to the 'Mixed Use' zone with a Restricted Use (R1) designation and R60 density code.<br>• Rezone Lot 100 (No. 1) Raconteur Drive, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone, Lot 23 (No. 2) Carbine Street from the 'Residential and Stables' zone to the 'Mixed Use' zone delete the Additional Use (A18) designation, insert density codes of R10 and R-AC4 and include a Restricted Use (R1) designation.<br>• Rezone redundant road alignments of Grandstand Road and Matheson Road and portions of Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive from 'Mixed Use' and no zone to the 'Commercial' zone, apply an R-AC3 density code, and include a Restricted Use (R2) designation.<br>• Modify Schedule No. 2 – Additional Uses to specify additional permissible uses.<br>• Insert Schedule No. 3 – Restricted Uses to list restricted uses for 'Mixed Use' and 'Commercial' zoned land.<br>• Amend the Scheme Map to reflect the proposed zoning, density, and land use permissibility changes. |
| **6.** | Classification | Complex |



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# Planning Report

## Introduction

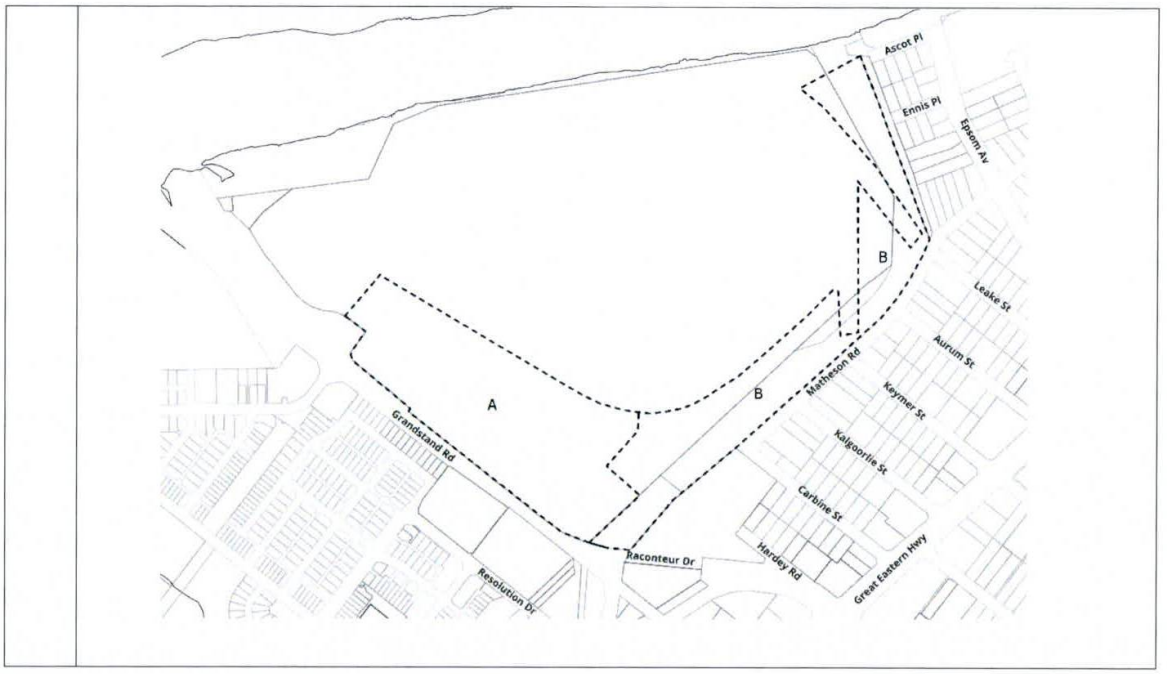
Amendment No. 24 to Local Planning Scheme No. 15 (LPS 15) proposes the following:

1. Rezoning a portion of Lot 452 No. 70 Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Residential' R60 zone.
2. Rezoning a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone and including a Restricted Use (R1) designation and R60 density code.
3. Rezoning Lot 100 (No. 1) Raconteur Drive, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone, rezoning Lot 23 (No. 2) Carbine Street from the 'Residential and Stables' zone to the 'Mixed Use' zone, deleting the Additional Use (A18) designation, inserting residential density codes of R10 and R-AC4, and including a Restricted Use (R1) designation.
4. Rezoning the redundant residual alignments of Grandstand Road and Matheson Road and part of Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone, inserting a residential density coding of R-AC3 and applying a Restricted Use (R2) designation.
5. Modifying Schedule No. 2 – Additional Uses as follows:

| No. | Location and Additional Uses |
|---|---|
| 18 | Within Precinct A, the local government may consider the following additional uses:<br>• Office<br>• Hotel<br>• Reception Centre<br>• Restaurant<br>• Tavern<br><br>Within Precinct B, the local government may consider the following additional uses:<br>• Stables<br>• Veterinary Centre |



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6. Inserting the following into Schedule No. 3 – Restricted Uses and deleting the Text "There are no restricted uses which apply to the Scheme":

| No. | Description of Land | Restricted Use | Conditions |
|---|---|---|---|
| 1 | 'Mixed Use' zoned portion of Lot 452 (No. 70) Grandstand Road, Ascot<br><br>Lot 100 (No. 1) Raconteur Drive, Ascot.<br><br>Lot 23 (No. 2) Carbine Street, Ascot. | • Aged or Dependent Persons Dwelling<br>• Ancillary Dwelling<br>• Art Gallery<br>• Betting Agency<br>• Car Park<br>• Caretakers Dwelling<br>• Child Care Premises<br>• Child Family Day Care<br>• Civic Use<br>• Club Premises<br>• Community Home<br>• Consulting Rooms<br>• Convenience Store<br>• Dry Cleaning Premises<br>• Educational Establishment<br>• Exhibition Centre<br>• Grouped Dwelling<br>• Health Centre<br>• Health Studio<br>• Home Business<br>• Home Occupation<br>• Home Store<br>• Hospital | Nil |



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| | | | |
|---|---|---|---|
| | | • Hosted Short Term Rental Accommodation<br>• Hotel<br>• Laundromat<br>• Liquor Store – Small<br>• Lunch Bar<br>• Massage Parlour<br>• Medical Centre<br>• Mobile Phone Tower & Associated Facilities<br>• Multiple Dwelling<br>• Nursing Home<br>• Office<br>• Private Recreation<br>• Place of Worship<br>• Public Amusement<br>• Reception Centre<br>• Residential Building<br>• Restaurant/Café<br>• Single House<br>• Small Bar<br>• Studio<br>• Tavern<br>• Telecommunications Infrastructure<br>• Tourist and Visitor Accommodation<br>• Unhosted Short term Rental Accommodation<br>• Veterinary Centre<br>• Vet Consulting Rooms<br>• Video Store | |
| 2 | Lot 1 (No. 88) and Lot 3 (No. 96) Grandstand Road and Lot 51 (No. 2) Raconteur Drive, Ascot | • Aged or Dependent Persons Dwelling<br>• Amusement Facility<br>• Art Gallery<br>• Betting Agency<br>• Car Park<br>• Caretaker's Dwelling<br>• Child Care Premises<br>• Civic Use<br>• Club Premises<br>• Consulting Rooms<br>• Dry Cleaning Premises<br>• Educational Establishment<br>• Exhibition Centre<br>• Fast Food Outlet/Lunch Bar<br>• Health Centre<br>• Health Studio | Residential dwellings shall not be located on the ground floor.<br><br>Retail floorspace is restricted to 1,200m$^2$ increasing up to 3,000m$^2$ where a Net Benefit Test is provided to the satisfaction of the Local Government.<br><br>'Fast Food Outlet/Lunch Bar' shall only be permitted where it forms part of and is integrated with the built form of the precinct, and where no drive-through facilities are proposed. |



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| | | | |
|---|---|---|---|
| | | • Home Business<br>• Home Occupation<br>• Hosted Short Term Rental Accommodation<br>• Laundromat<br>• Liquor Store-Small<br>• Liquor Store-Large<br>• Lunch Bar<br>• Massage Parlour<br>• Medical Centre<br>• Mobile Phone Tower & Associated Facilities<br>• Multiple Dwelling<br>• Office<br>• Public Amusement<br>• Restaurant/Café<br>• Restricted Premises<br>• Shop<br>• Small Bar<br>• Tavern<br>• Telecommunications Infrastructure<br>• Unhosted Short Term Rental Accommodation<br>• Veterinary Centre<br>• Vet Consulting Rooms<br>• Video Store | |

7. Amending the Scheme Map accordingly.

## Background

### Location

Amendment No. 24 relates to 61.3 hectares of land bound by the Swan River, Ascot Waters Estate, Grandstand Road, Resolution Drive, the Residential and Stables zone, Hardey Road, Carbine Street and Matheson Road in Ascot (refer to Figure 1 below).



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*Figure 1: Location Plan – Subject land outlined in Red*

**Proposed Amendment**

Rowe Group on behalf of Perth Racing has prepared the draft Ascot Racecourse Precinct Structure Plan (PSP) to guide the future use and development of the land in and around Ascot Racecourse. At the 15 April 2025 Ordinary Council Meeting, Council resolved to recommend that the draft PSP be approved by the Western Australian Planning Commission (WAPC) subject to modifications. The purpose of this Amendment is to align zones and land use controls with Council's resolution at the 15 April 2025 Ordinary Council Meeting.

**Planning Context**

Statutory Planning Framework

Local Planning Scheme Amendments

Section 75 of the *Planning and Development Act 2005* provides for an amendment to be made to a local planning scheme. The procedures for amending a local planning scheme, including public consultation requirements are set out within Part 5 of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)* (The Regulations).

The Regulations specify three different types of scheme amendments being 'basic', 'standard', and 'complex'. Clause 35(2) of the Regulations requires a resolution of the local government which specifies the amendment type and the reasons for the classification.

When a local government resolves to amend a scheme, the proposed scheme amendment is required to be referred to the Department of Planning Lands and Heritage (DPLH) to obtain



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consent to advertise. Where an amendment is deemed to have an environmental impact, it is also required to be referred to the Environmental Protection Authority.

Following consent to advertise, the responsible authority shall advertise the amendment in accordance with the Regulations by:

- Displaying the amendment and associated public notice on the local government's website.
- Publishing the notice in a local newspaper and displaying this on the local government's public notice boards.
- Giving a copy of the notice to each public authority that the local government considers is likely to be affected by the amendment.

After the conclusion of the advertising period, Council is required to consider the submissions and pass a resolution to either support the amendment, with or without modification, or not support the amendment. After passing a resolution, the amendment is to be forwarded to the Western Australian Planning Commission (WAPC) to review and provide a recommendation to the Minister for Planning.

Metropolitan Region Scheme

The subject land area is primarily zoned 'Private Recreation' under the Metropolitan Region Scheme (MRS), with the balance zoned 'Urban' and land abutting the Swan River is reserved 'Parks and Recreation' (refer to Figure 2). The proposed Scheme Amendment is able to be accommodated under the current MRS zoning.




*Figure 2: MRS Zones and Reserves (Amendment Area outlined Red)*



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Local Planning Scheme No. 15

The subject land is predominantly zoned 'Place of Public Assembly – Racecourse' under LPS 15. The southern portion of the subject land abutting Resolution Drive, is zoned 'Mixed Use', Lot 23 (No. 2) Carbine Street is zoned 'Residential and Stables', and a separate portion of land adjacent to Grandstand Road is not currently assigned a zone or reserve (refer to Figure 3).

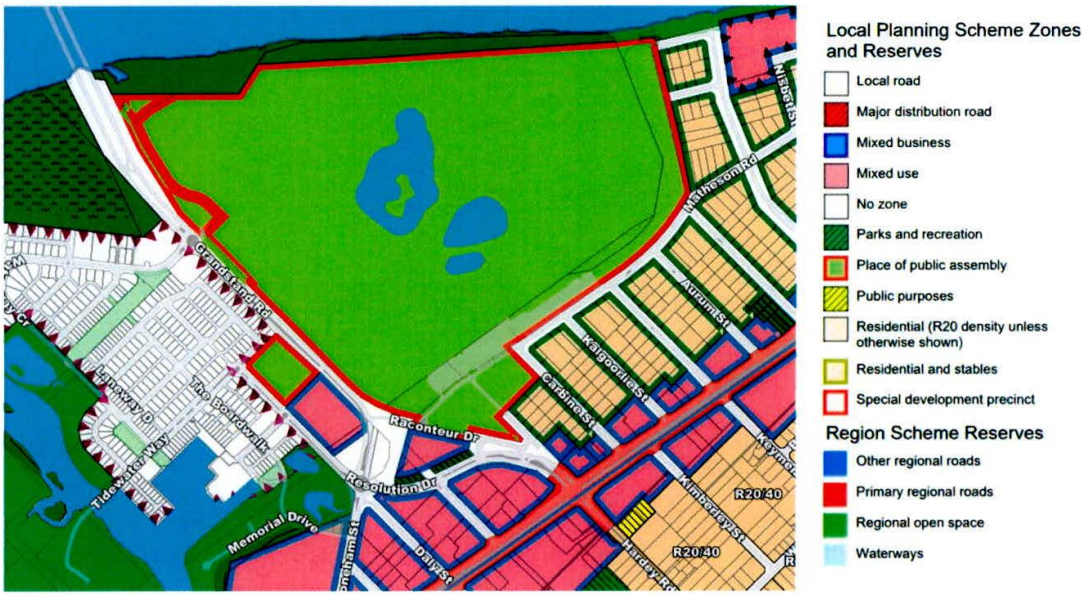



*Figure 3: LPS 15 Zones and Reserves*

The objectives of the 'Place of Public Assembly', 'Mixed Use' and 'Residential and Stables zones are as follows:

> *"The 'Places of Public Assembly' zone is intended to allow for special places of assembly, such as halls, private schools, grounds for athletics, sports grounds with provision for spectators, racecourses, trotting track, stadia and/or showgrounds."*
>
> *"The Mixed Use Zone is intended to allow for the development of a mix of varied by compatible land uses such as housing, offices, showrooms, amusement centres, eating establishments and appropriate industrial activities which do not generate nuisances detrimental to the amenity of the district or to the health, welfare and safety of its residents. Buildings should be of a high standard of architectural design set in pleasant garden surrounds with limited vehicular access from properties to primary roads.*
>
> *To provide for a wide variety of active uses on street level which are compatible with residential and other non-active uses on upper levels."*
>
> *"The Residential and Stables Zone is intended to provide for compatible and environmentally responsible use of land in proximity to the Ascot Racecourse and the Swan River by residential accommodation and stables and ancillary functions of the horse racing industry."*

Table 1 (Zoning Table) of LPS 15 sets out the permissibility of uses using the symbols of 'P', 'D', 'A', and 'X'. The meaning of the symbols is listed below:

'P' means the use is permitted by the Scheme providing the use complies with the relevant development standards and the requirements of the Scheme;

'D' means that the use is not permitted unless the local government has exercised its discretion by granting Development Approval;



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'A' means the use is not permitted unless the local government has exercised its discretion by granting Development Approval after giving special notice in accordance with the provisions contained in Clause 64 of the *Planning and Development (Local Planning Schemes) Regulations 2015* Schedule 2;

'X' means a use that is not permitted by the scheme.

Clause 3.5 addresses Additional Uses and outlines that, regardless of the use class designation in the zoning table, land uses for areas specified in Schedule No. 2 can receive approval, subject to the specific conditions being met.

Schedule No. 3 of LPS 15 and Clause 3.6 relate to Restricted Uses. Clause 3.6 sets out the purpose of Restricted Uses as follows:

> *"Despite anything contained in the Zoning Table, the land specified in Schedule 3 may only be used for the specific use or uses that are listed and subject to the conditions set out in Schedule 3 with respect to that land."*

There are currently no restricted uses under LPS 15.

State Planning Policy 7.3 – Residential Design Codes

The Residential Design Codes (R-Codes) establish built form controls for all residential development within Western Australia and are used in the assessment of residential development and subdivision proposals. Volume 1 of the R-Codes establishes standards for single houses, grouped dwellings, and multiple dwellings up to R60. Volume 2 of the R-Codes specifically relates to multiple dwelling developments at the R80 code and above. Any future residential development will be assessed against the PSP and the R-Codes.

Strategic Planning Framework

Perth and Peel @ 3.5 Million

Perth and Peel @ 3.5 Million provides a strategic framework to guide development across the Perth and Peel regions, in response to a projected population of 3.5 million by 2050. The document divides the Perth metropolitan area into four sub-regions: Central, North-West, North-East, and South. The subject land is located within the Central Sub-region.

The strategy also outlines Urban Consolidation Principles and identifies corresponding precincts. Of particular relevance to this amendment are the 'Green Network', 'Urban Corridor' and 'Activity Centres' principles and precincts.

The racecourse is identified as part of the 'Green Network' that extends along the Swan River. The document highlights the importance of supporting population growth and higher-density living with a connected network of public and private open spaces.

Great Eastern Highway, located south of the subject land, is identified as an 'Urban Corridor', intended to accommodate higher-density residential development that leverages proximity to public transport while minimising impacts on surrounding areas and maintaining the efficiency of the regional transport network. Great Eastern Highway, Grandstand Road, and Resolution Drive are also identified as high-frequency public transit routes.

The document references State Planning Policy SPP 4.2 (SPP 4.2) and the hierarchy of centres based on the future importance of each centre from a network perspective. Additionally, the document identifies the important role that activity centres have in being a focal point for commercial and social activity and the importance of these areas being designed to be walkable and near public transport to support these means of access.



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State Planning Policy 4.2

State Planning Policy 4.2 guides the planning and development of activity centres in the Perth and Peel region. The document emphasises the importance of activity centres having a compact urban form with pedestrian-focused streetscapes. The City's Activity Centre Planning Strategy (ACPS) identifies a local centre within the broader Golden Gateway precinct, which includes part of Perth Racing's landholdings subject to the draft PSP. State Planning Policy 4.2 states that neighbourhood and local centres should cater to daily and weekly household shopping needs, provide community facilities, and offer a small range of convenience services. Neighbourhood centres typically include a supermarket, personal services, and convenience shops, supported by small-scale offices. Local centres share these characteristics but operate on a smaller scale.

State Planning Policy 4.2 emphasises that development in activity centres should generally align with the floorspace requirements set out in local planning strategies or structure plans. Where a proposal exceeds that floorspace need, the proposal is to demonstrate a net benefit to the community. A net benefit test is to be prepared in accordance with Section 7.8 of SPP 4.2 and address matters included in Section 5.3 of the Implementation Guidelines.

City of Belmont Local Planning Strategy

The City of Belmont Local Planning Strategy is the strategic planning document that broadly sets out the long-term planning direction for the City. The Strategy also informed the preparation of LPS 15. The key objectives of the Local Planning Strategy and relevant sub strategies for this precinct are as follows:

- To enhance the north-west entrance to the City.
- To encourage landmark development.
- Acknowledge that Ascot Racecourse and the Swan River are 'strategic tourism sites' of State significance to benefit future tourism development.

This amendment is not considered to be addressed by the Local Planning Strategy.

Activity Centre Planning Strategy

The ACPS was prepared to guide the future planning and coordination of activity centres within the City of Belmont and was adopted by Council at the February 2024 Ordinary Council Meeting (OCM). The ACPS identifies a future local centre within the broader Golden Gateway precinct, which includes a portion of Perth Racing's land and outlines that it is to be 1,200m$^2$ in the first instance. The ACPS states that following further residential development within the Golden Gateway precinct, it may be appropriate for this figure to be reviewed through a Needs Assessment or Net Benefit Test.

Draft Ascot Racecourse Precinct Structure Plan

The draft PSP (refer to Figure 4) has been prepared to guide the future use and development of land in and around Ascot Racecourse. At the 15 April 2025 Ordinary Council Meeting, Council resolved to recommend that the WAPC approve the draft PSP and supporting technical appendices subject to modifications.

The amendment request lodged by the applicant seeks to apply zones, density codes and land use permissibility consistent with the draft PSP for Precincts B, C, D and E. The applicant has advised that a request to rezone Precinct A under LPS 15 will be prepared and submitted for consideration in due course.



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*Figure 4: Draft Ascot Racecourse Precinct Structure Plan*

## Report

### Zoning and Density

This Amendment proposes zones and density codes consistent with the draft PSP and modifications endorsed by Council. An overview of the changes is included below:

Lot 452 (No. 70) Grandstand Rod, Ascot

Lot 452 (No. 70) Grandstand Road (refer to Figure 5) is proposed to be rezoned from the 'Place of Public Assembly' zone to the 'Residential' and 'Mixed Use' zone with an R60 density code assigned. This is considered appropriate for the following reasons:

- Applying the 'Residential' zone will largely provide for a 'Residential' interface to Ascot Waters.
- The 'Mixed Use' zone will allow for a range of land uses that can take advantage of the site's strategic location along Grandstand Road, while use restrictions (as outlined in the Land Use Permissibility section) will ensure potential amenity impacts are appropriately managed.
- The R60 density code will enable building heights of up to three storeys, consistent with the two to four storey character of the Ascot Waters Estate. To ensure an appropriate interface between the 'Mixed Use' portion and adjoining residential properties, modifications recommended to the PSP include a 3 metre landscaped setback.



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*Figure 5: Lot 452 (No. 70) Grandstand Road*

Lot 100 (No. 1) Raconteur Drive and Lot 23 (No. 2) Carbine Street, Ascot

Lot 100 (No. 1) Raconteur Drive is proposed to be rezoned from the 'Place of Public Assembly' zone to the 'Mixed Use' zone with a density code of R-AC4 applied to land west of Hardey Road and a density code of R10 applied to land east of Hardey Road (refer to Figure 6). Lot 23 (No. 2) Carbine Street is proposed to be rezoned from the 'Residential and Stables' zone to the 'Mixed Use' zone with a density code of R10 (refer to Figure 7). The proposed zoning and density codes are considered appropriate for the following reasons:

- The 'Mixed Use' zone will allow for a range of land uses with use restrictions applied to ensure that potential amenity impacts are appropriately managed.
- The draft PSP proposes a maximum building height of two storeys east of Hardey Road and includes setback controls to Carbine Street and adjoining properties. These controls and the proposed R10 density code will ensure that new developments align with the scale of residential buildings within the residential and stables area and create a suitable interface.
- A density code of R-AC4 is proposed for land west of Hardey Road which will provide for a maximum building height of three storeys. It is considered that this height is acceptable, as future development will be sufficiently separated from existing residential development.




*Figure 6: Lot 100 (No.1) Raconteur Drive*



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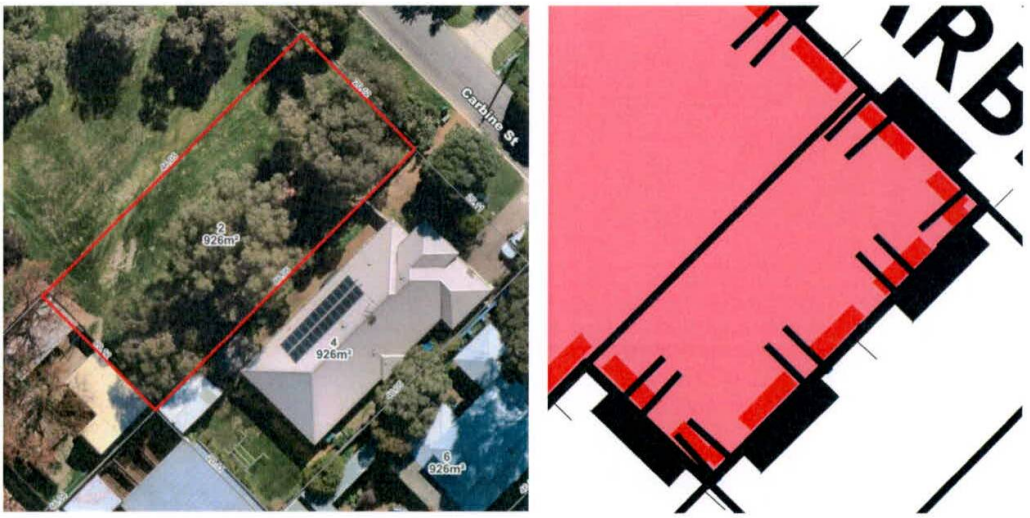



*Figure 7: Lot 23 (No. 2) Carbine Street*

Residual Alignments of Grandstand Road and Matheson Road and Part Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive

The redundant residual alignments of Grandstand Road and Matheson Road and part Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive (refer to Figure 8) are proposed to be rezoned from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone with a density code of R-AC3 applied. The proposed zoning and density code is considered appropriate for the following reasons:

- The draft Golden Gateway LSP and draft Ascot Racecourse PSP both support the development of a local centre within the precincts. The proposed 'Commercial' zone would facilitate this and is therefore considered appropriate.
- The R-AC3 density code would provide for a maximum height of six storeys. It is considered that the proposed heights are acceptable due to the separation from residential areas.

In addition to the above, it should be noted that the subject land accommodates major water distribution mains owned and managed by the Water Corporation. While zoning applied to land does not automatically enable development without due consideration of existing infrastructure assets, Water Corporation in their referral response for the PSP opposed the rezoning stating that the infrastructure cannot be moved or built on. However, the applicant further engaged with Water Corporation who advised that car parking over the assets is possible. This amendment will be referred to Water Corporation for further comment.



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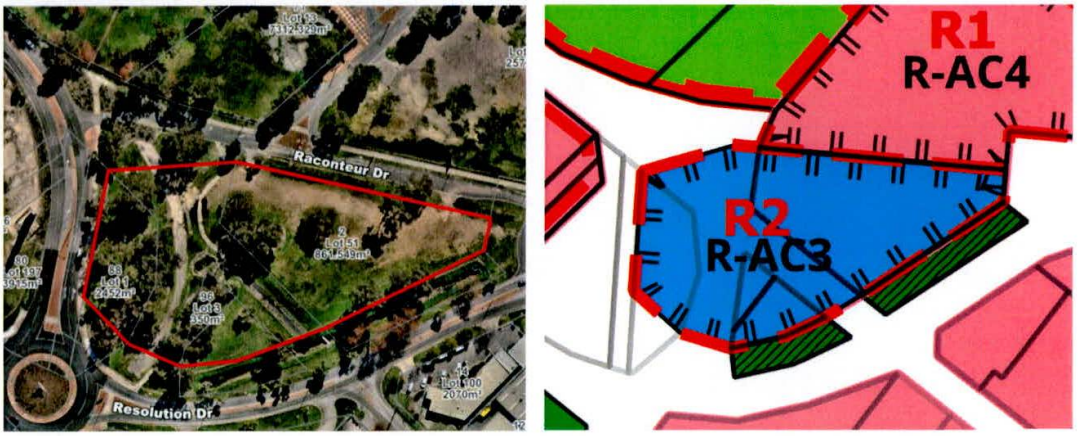



*Figure 8: Residual alignments of Grandstand Road and Matheson Road, Part Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive*

**Land Use Permissibility**

Additional Uses

Clause 3.5 of LPS 15 addresses Additional Uses and outlines that, regardless of the use class designation in the zoning table, land uses for areas specified in Schedule 2 can receive approval, subject to the specific conditions being met. Portions of the Amendment area are currently subject to Additional Use 18 (A18) which provides for 'Horse Sales' and 'Stables' to be approved on No. 71 Grandstand Road and No. 1 Raconteur Drive (refer to Figure 9).

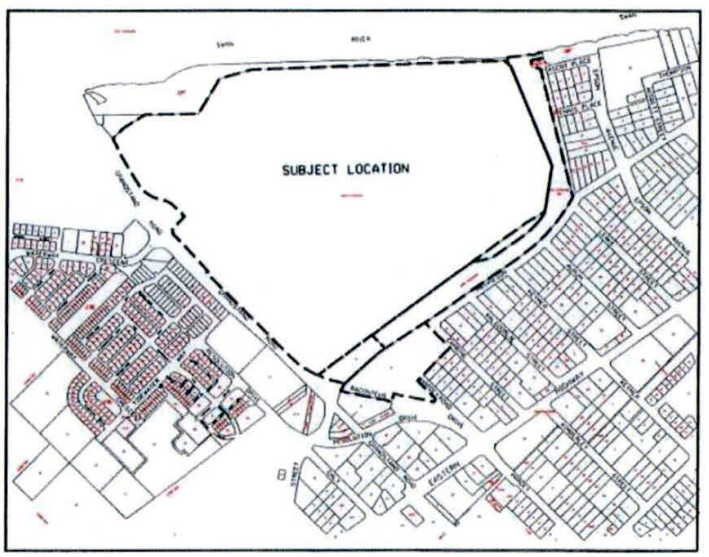



*Figure 9: Area currently subject to A18*

Consistent with the draft PSP, this Amendment proposes to delete the Additional Use of 'Horse Sales' and update A18 to apply the uses of 'Office', 'Hotel', 'Reception Centre', 'Restaurant' and 'Tavern' to Precinct B of the draft PSP, and 'Stables' and 'Veterinary Centre' to Precinct C. These uses are considered appropriate as they support the function of the racecourse and entertainment precinct.

The A18 plan will also be updated to reflect these changes. As it is not appropriate for the scheme to reference the PSP, Precinct B of the draft PSP will be labelled as Precinct A on the A18 plan, and Precinct C will be labelled as Precinct B.

Restricted Uses

Restricted Use areas are a mechanism in local planning schemes that limit land to specific permitted uses. This means that only the designated use(s) are allowed on a particular site, and any other uses that would typically be permissible within the zone are not permitted.

This amendment proposes to introduce two Restricted Use areas into LPS 15. The first will apply to the portions of the Amendment area that are proposed to be zoned 'Mixed Use' and will include land uses capable of approval within the 'Mixed Use' zone except the following:

- 'Amusement Facility'
- 'Amusement Parlour'
- 'Auction Mart'
- 'Garden Centre'
- 'Industry-Light'
- 'Industry – Service'
- 'Motor Vehicle Repair'
- 'Warehouse'
- 'Fast Food Outlet/Lunch Bar'
- 'Funeral Parlour'
- 'Pet Day Care'
- 'Night Club'
- 'Radio or Tv Installation'
- 'Restricted Premises'
- 'Service Station'
- 'Vet Hospital'
- 'Showroom'

These uses are not considered appropriate within proximity to residential development as they are likely to have adverse amenity impacts or do not align with the intent of the precinct in the draft PSP. Additionally, with respect to 'Showrooms' the following is relevant:

- The original version of the PSP lodged by Perth Racing indicates that 9,600m$^2$ of other retail floorspace will establish within the 'Mixed Use' portion of Precinct E. The addition of 9,600m$^2$ of retail floorspace represents a significant change that is not contemplated in the City's strategic planning framework and would undermine the centres intended role and hierarchy of the centre by effectively making it the secondary designation.
- Irrespective of the abovementioned floorspace matter, the appropriateness of bulky goods showrooms in this location must be further considered having regard to the following:
  - There are distinct differences between establishing a bulky goods showroom on Great Eastern Highway compared to locating it adjacent to a local or neighbourhood centre. The latter is subject to significant transformation under relevant Structure Plans, with a key focus on active uses that foster walking or cycling.
  - The land identified for bulky goods showrooms by the original version of the draft PSP is located directly adjacent to the designated future local centre. In accordance with the principles of SPP 4.2, local centres should have a compact urban form with pedestrian orientated streetscapes. Where activity is concentrated along key public streets and open spaces. Introducing bulky goods showrooms in this location contradicts these outcomes. The use is inherently car dependent and fundamentally undermines the intended function of the local centre as a pedestrian friendly, mixed use environment.



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- State Planning Policy 4.2 designates 'Showroom' as a desired use adjacent to district centres but does not extend this designation to local and neighbourhood centres. Furthermore, while SPP 4.2 states that 'Showrooms' are appropriate within activity centre frame areas, it also acknowledges that smaller centres may not have a frame. In this instance, a frame is not considered appropriate, particularly where the retail floorspace within the frame exceeds that of the centre itself.

Having regard to the above, 'Showroom' is not an appropriate use within the proposed 'Mixed Use' zone and is therefore not included as a 'Restricted Use'.

The second Restricted Use area will apply to the land that is proposed to be zoned 'Commercial'. This will provide for uses capable of approval within the 'Commercial' zone excluding the following:

- 'Garden Centre'
- 'Radio or Tv Installation'
- 'Showroom'
- 'Single House'
- 'Grouped Dwelling'

In addition, the 'Health Centre' land use is proposed to be included as a use that can be considered as it a use complementary to the intended function as a local centre. 'Fast Food Outlet/Lunch Bar' is also proposed to be included as a use that may be considered; however, it is proposed to be subject to a condition limiting its development to circumstances where it does not include drive-through facilities. This approach enables the consideration of a use that may complement the local centre while ensuring that a standalone, car-oriented development does not establish within it.

In considering why the abovementioned uses are not appropriate, the following is relevant:

- The intent of the 'Commercial' zoned land is to facilitate the development of an activity centre. A 'Garden Centre' that includes the propagation, rearing and sale of plans and the storage of produces associated with horticulture and gardens is not considered to be consistent with this intent.
- 'Radio or Tv Installations' could occur elsewhere within the City of Belmont and are not required within a 'Mixed Use' precinct within proximity to the Kilns site, Ascot Racecourse and future development within the Golden Gateway precinct.
- As detailed above, 'Showrooms' are more appropriate in existing planned precincts, such as those along Great Eastern Highway and within the City's business park.
- Low density dwelling typologies such as 'Single House' and 'Grouped Dwelling' are not consistent with the intent of this area to facilitate the development of an activity centre. Additionally, Council in its previous resolution have requested development provisions that require activation of all street frontages. It is considered that this should occur through active commercial uses on the ground floor supported by residential development on upper floors.

Having regard to the above, these land uses are not included within the Restricted Use area. Additionally, a condition is proposed to be applied to the 'Multiple Dwelling' land use to ensure that multiple dwellings are not located on the ground floor.

A condition is also recommended to limit retail floorspace to 1,200m$^2$ having regard to the following:

- The Retail Assessment provided in support of the PSP concludes that the proposed 3,400m$^2$ retail floorspace aligns with the City's strategic framework, this view is not considered to reflect the intent of the City's ACPS. The City's ACPS anticipates incremental expansion over time.



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- The Retail Assessment states that the centre will be sustainable by 2026 without broader precinct development and with minimal impact on adjacent centres. This assumption relies on sufficient demand from the immediate trade area. However, as the draft Golden Gateway LSP has not been finalised, development within the precinct is unlikely to progress within this timeframe.
- Population growth projections also indicate that growth may not materialise until 2031–2041. As a result, the local population base in 2026 may be insufficient to support a 3,400m$^2$ neighbourhood centre without significantly drawing sales from existing centres. The claim that the centre will be sustainable by 2026 is therefore considered overly optimistic and requires further justification.
- Section 2.1 of the Retail Assessment mentions the key considerations outlined in SPP 4.2's Implementation Guidelines for preparation and assessment of retail assessments. However, the report does not provide clear responses to address these matters. The Retail Assessment is therefore not satisfactory in its current form.

Considering the above and in the absence of a modified Retail Assessment, it is appropriate to restrict retail floorspace within the 'Commercial' portion of Precinct E of the draft PSP to 1,200m$^2$ in the first instance through LPS 15. This figure could be reviewed upon receipt of a Net Benefit Test which provides clear justification for a higher figure and addresses the above points.

**Scheme Amendment Classification**

The Amendment is considered to be a 'complex' amendment because the intended zones, density codes and land use permissibility for the subject land has not been addressed by the City's Local Planning Strategy.

## Conclusion

This Amendment proposes updates to LPS 15 to align with Council's resolution at the 15 April 2025 Ordinary Council Meeting, which recommended approval of the draft PSP subject to modifications. It also reflects further consideration of suitable land use and development controls for land proposed to be zoned 'Commercial'. The Amendment establishes appropriate zones, density codes and land use permissibility provisions to guide the development of Perth Racing's landholdings.



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*Planning and Development Act 2005*

**Resolution to prepare amendment to local planning scheme.**

**City of Belmont**
**Local Planning Scheme No. 15**

**Scheme Amendment No. 25**

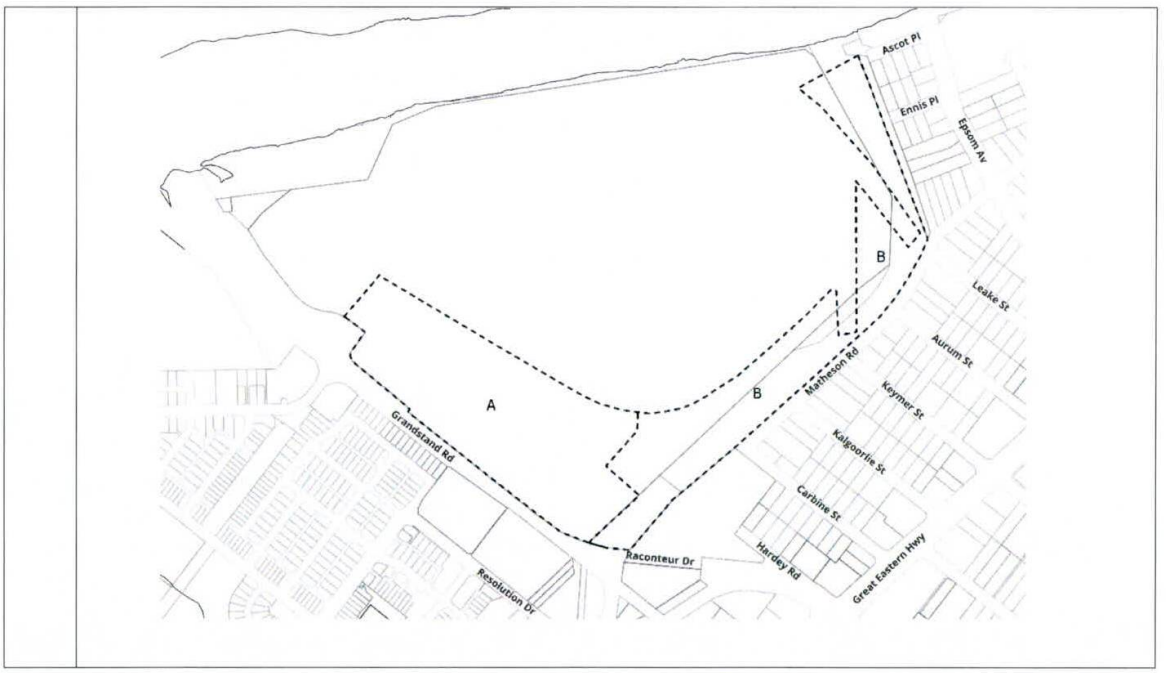
The Council of the City of Belmont, under and by virtue of the powers conferred upon it in that behalf by the *Planning and Development Act 2005*, hereby amends the above Local Planning Scheme by:

1. Rezoning a portion of Lot 452 No. 70 Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Residential' R60 zone.
2. Rezoning a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone and including a Restricted Use (R1) designation and R60 density code.
3. Rezoning Lot 100 (No. 1) Raconteur Drive, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone, rezoning Lot 23 (No. 2) Carbine Street from the 'Residential and Stables' zone to the 'Mixed Use' zone, deleting the Additional Use (A18) designation, inserting residential density codes of R10 and R-AC4, and including a Restricted Use (R1) designation.
4. Rezoning the redundant residual alignments of Grandstand Road and Matheson Road and part of Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone, inserting a residential density coding of R-AC3 and applying a Restricted Use (R2) designation.
5. Modifying Schedule No. 2 – Additional Uses as follows:

| No. | Location and Additional Uses |
|---|---|
| 18 | Within Precinct A, the local government may consider the following additional uses:<br>• Office<br>• Hotel<br>• Reception Centre<br>• Restaurant<br>• Tavern<br><br>Within Precinct B, the local government may consider the following additional uses:<br><br>• Stables<br>• Veterinary Centre |



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6. Inserting the following into Schedule No. 3 – Restricted Uses and deleting the Text "There are no restricted uses which apply to the Scheme":

| No. | Description of Land | Restricted Use | Conditions |
|---|---|---|---|
| 1 | 'Mixed Use' zoned portion of Lot 452 (No. 70) Grandstand Road, Ascot<br><br>Lot 100 (No. 1) Raconteur Drive, Ascot.<br><br>Lot 23 (No. 2) Carbine Street, Ascot. | • Aged or Dependent Persons Dwelling<br>• Ancillary Dwelling<br>• Art Gallery<br>• Betting Agency<br>• Car Park<br>• Caretakers Dwelling<br>• Child Care Premises<br>• Child Family Day Care<br>• Civic Use<br>• Club Premises<br>• Community Home<br>• Consulting Rooms<br>• Convenience Store<br>• Dry Cleaning Premises<br>• Educational Establishment<br>• Exhibition Centre<br>• Grouped Dwelling<br>• Health Centre<br>• Health Studio<br>• Home Business<br>• Home Occupation<br>• Home Store<br>• Hospital | Nil |



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| | | | |
|---|---|---|---|
| | | • Hosted Short Term Rental Accommodation<br>• Hotel<br>• Laundromat<br>• Liquor Store – Small<br>• Lunch Bar<br>• Massage Parlour<br>• Medical Centre<br>• Mobile Phone Tower & Associated Facilities<br>• Multiple Dwelling<br>• Nursing Home<br>• Office<br>• Private Recreation<br>• Place of Worship<br>• Public Amusement<br>• Reception Centre<br>• Residential Building<br>• Restaurant/Café<br>• Single House<br>• Small Bar<br>• Studio<br>• Tavern<br>• Telecommunications Infrastructure<br>• Tourist and Visitor Accommodation<br>• Unhosted Short term Rental Accommodation<br>• Veterinary Centre<br>• Vet Consulting Rooms<br>• Video Store | |
| 2 | Lot 1 (No. 88) and Lot 3 (No. 96) Grandstand Road and Lot 51 (No. 2) Raconteur Drive, Ascot | • Aged or Dependent Persons Dwelling<br>• Amusement Facility<br>• Art Gallery<br>• Betting Agency<br>• Car Park<br>• Caretaker's Dwelling<br>• Child Care Premises<br>• Civic Use<br>• Club Premises<br>• Consulting Rooms<br>• Dry Cleaning Premises<br>• Educational Establishment<br>• Exhibition Centre<br>• Fast Food Outlet/Lunch Bar<br>• Health Centre<br>• Health Studio | Residential dwellings shall not be located on the ground floor.<br><br>Retail floorspace is restricted to 1,200m$^2$ increasing up to 3,000m$^2$ where a Net Benefit Test is provided to the satisfaction of the Local Government.<br><br>'Fast Food Outlet/Lunch Bar' shall only be permitted where it forms part of and is integrated with the built form of the precinct, and where no drive-through facilities are proposed. |

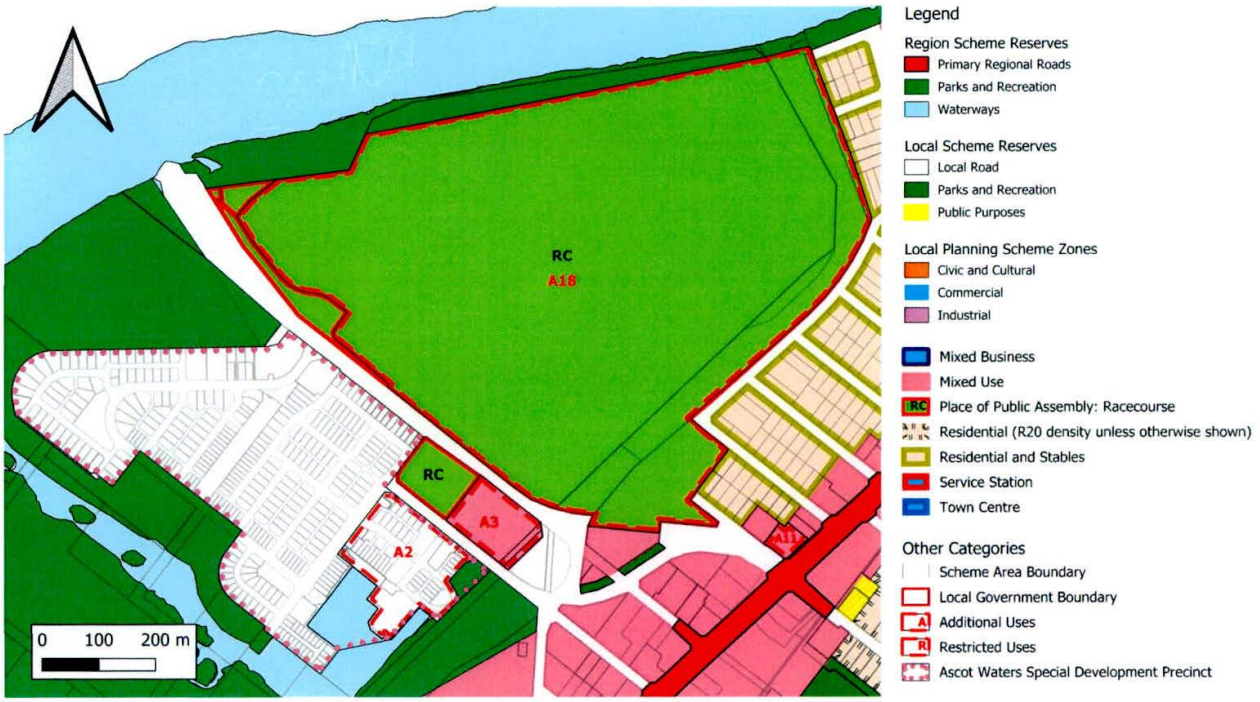
| | | | |
|---|---|---|---|
| | | • Home Business<br>• Home Occupation<br>• Hosted Short Term Rental Accommodation<br>• Laundromat<br>• Liquor Store-Small<br>• Liquor Store-Large<br>• Lunch Bar<br>• Massage Parlour<br>• Medical Centre<br>• Mobile Phone Tower & Associated Facilities<br>• Multiple Dwelling<br>• Office<br>• Public Amusement<br>• Restaurant/Café<br>• Restricted Premises<br>• Shop<br>• Small Bar<br>• Tavern<br>• Telecommunications Infrastructure<br>• Unhosted Short Term Rental Accommodation<br>• Veterinary Centre<br>• Vet Consulting Rooms<br>• Video Store | |

7. Amending the Scheme Map accordingly.

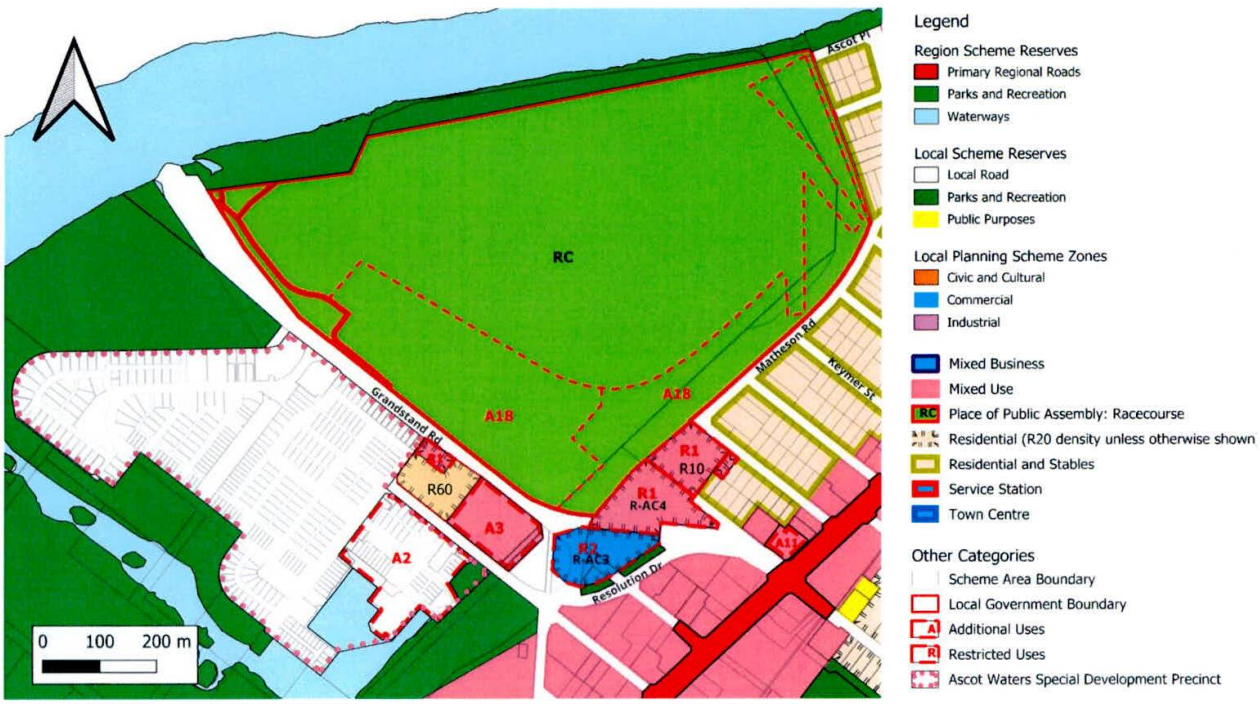


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## EXISTING SCHEME MAP




## AMENDMENT MAP






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**Council adoption for advertising**

Adopted for advertising by resolution of the Council of the City of Belmont at the Ordinary Meeting of the Council held on this 25th day of November 2025.

Mayor

Chief Executive Officer

**Council recommended/submitted for approval**

Supported for submission to the Minister for Planning for approval by resolution of the City of Belmont at the Ordinary Meeting of the Council held on this day of and the Common Seal of the City of Belmont was hereunto affixed by the authority of a resolution of the Council in the presence of:

Mayor

Chief Executive Officer

**WAPC recommended/submitted for approval**

Delegated under S.16 of the
*Planning and Development Act 2005*

Date

**Approval granted**

Minister for Planning
S.87 of the *Planning and Development Act 2005*

Date

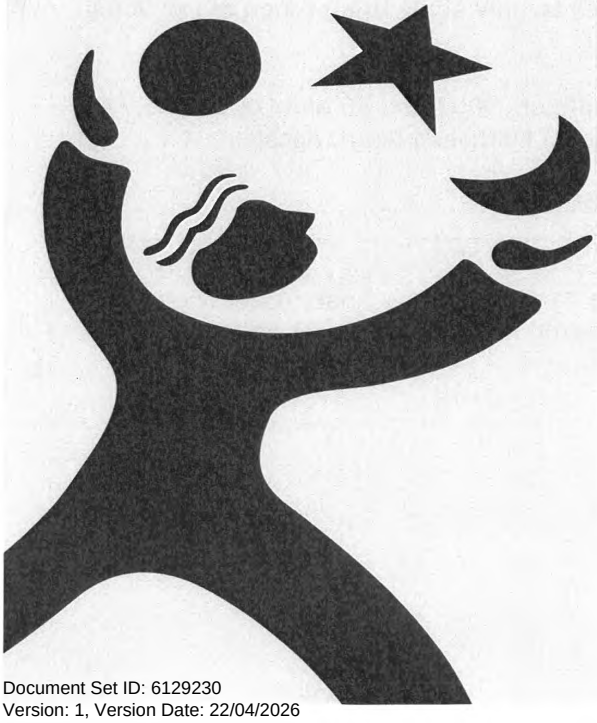


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City of Belmont

# Scheme Amendment No. 24

## Local Planning Scheme No. 15



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Version: 1, Version Date: 22/04/2026

*Planning and Development Act 2005*

**Modified**

**Amendment to Local Planning Scheme**

**City of Belmont**
**Local Planning Scheme No. 15**

**Scheme Amendment No. 24**

The local government as directed by the Minister for Planning and Lands (or as delegated) pursuant to Section 83A(2)(b) of the *Planning and Development Act 2005* amend the above Local Planning Scheme by:

1. Rezoning a portion of Lot 452 No. 70 Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Residential' R60 zone.

2. Rezoning a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' R60 zone and including a Restricted Use (R1) designation.

3. Rezoning Lot 100 (No. 1) Raconteur Drive, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone, rezoning Lot 23 (No. 2) Carbine Street, Ascot from the 'Residential and Stables' zone to the 'Mixed Use' zone, deleting the Additional Use (A18) designation, inserting residential density codes of R10 and R-AC4, and including a Restricted Use (R3) designation.

4. Rezoning the redundant residual alignments of Grandstand Road and Matheson Road and part of Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive, Ascot from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone, inserting a residential density coding of R-AC3 and applying a Restricted Use (R2) designation.

5. Modifying the designation of Additional Use (A18) to only apply to a portion of Lot 9002 (No.71) Grandstand Road, Ascot.

6. Designating Additional Use (A21) over portions of Lots 9002 and 50 and Lot 13 (No.71) Grandstand Road, and portions of Lot 7705 (No.71) Matheson Road, Ascot.

7. Modifying Schedule No. 2 - Additional Uses as follows:

| No. | Location and Additional Uses |
|---|---|
| 18 | For portions of Lot 9002 on DP60342 (No.71) Grandstand Road, Ascot (near Grandstand Road) as depicted on the Scheme Map, the following Additional Uses are permitted:<br>P- Hotel;<br>P- Office;<br>P- Reception Centre;<br>P- Restaurant; |



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| | |
|---|---|
| | P- Tavern; |
| 21 | For:<br>• portions of Lot 9002 on DP60342 (No.71) Grandstand Road;<br>• Lot 13 on D26760 (No.71) Grandstand Road;<br>• portions of Lot 50 on P5729 (No.71) Grandstand Road; and<br>• portions of Lot 7705 on DP209359 (No.71) Matheson Road;<br>each of Ascot as depicted on the Scheme Map, the following Additional Uses are permitted:<br>P- Animal Establishment;<br>P- Stables;<br>P- Veterinary Centre; |

8. Inserting the following into Schedule No. 3 - Restricted Uses and deleting the Text "There are no restricted uses which apply to the Scheme" in Schedule No. 3 and Clause 3.6 Restricted Uses:

| No. | Description of Land | Restricted Use | Conditions |
|---|---|---|---|
| 1 | Portion of Lot 452 on DP60339 (No.70) Grandstand Road, Ascot as depicted on the Scheme Map | D- Aged or Dependent Persons Dwelling;<br>D- Ancillary Dwelling;<br>D- Art Gallery;<br>D- Betting Agency;<br>D- Car Park;<br>D- Caretakers Dwelling;<br>D- Child Care Premises;<br>D- Child Family Day Care;<br>D- Civic Use;<br>D- Club Premises;<br>D- Community Home;<br>D- Consulting Rooms;<br>A- Convenience Store;<br>D- Dry Cleaning Premises;<br>D- Educational Establishment;<br>A- Exhibition Centre;<br>D- Grouped Dwelling;<br>D- Health Centre;<br>D- Health Studio;<br>P- Home Business;<br>P- Home Occupation;<br>D- Home Store;<br>A- Hospital; | Nil. |



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| | | | |
|---|---|---|---|
| | | P- Hosted Short Term Rental Accommodation;<br>D- Hotel;<br>D- Laundromat;<br>D- Lunch Bar;<br>A- Massage Parlour;<br>A- Liquor Store – Small;<br>D- Medical Centre;<br>D- Mobile Phone Tower & Associated Facilities;<br>D- Multiple Dwelling;<br>D- Nursing Home;<br>D- Office;<br>D- Private Recreation;<br>A- Place of Worship;<br>D- Public Amusement;<br>A- Reception Centre;<br>D- Residential Building;<br>D- Restaurant/Café;<br>D- Single House;<br>A- Small Bar;<br>D- Studio;<br>A- Tavern;<br>P- Telecommunications Infrastructure;<br>D- Tourist and Visitor Accommodation;<br>A- Unhosted Short term Rental Accommodation;<br>A- Veterinary Centre;<br>D- Vet Consulting Rooms;<br>D- Video Store; | |
| 2 | • Lot 51 on P15104 (No.2) Raconteur Drive;<br>• Lot 3 on D55346 (No.96) Grandstand Road;<br>• portions of Lot 1 on D55346 (No.88) Grandstand Road; and<br>• portions of road reserve; | D- Aged or Dependent Persons Dwelling;<br>D- Amusement Facility;<br>D- Art Gallery;<br>D- Betting Agency;<br>D- Car Park;<br>D- Caretaker's Dwelling;<br>D- Child Care Premises; | 1. The following land uses are not to be located on the ground floor:<br>• Aged or Dependent Persons Dwelling;<br>• Caretaker's Dwelling;<br>• Multiple Delling |



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| | | | |
|---|---|---|---|
| | each of Ascot as depicted on the Scheme Map | D- Civic Use;<br>D- Club Premises;<br>D- Consulting Rooms;<br>D- Convenience Store;<br>D- Dry Cleaning Premises;<br>D- Educational Establishment;<br>D- Exhibition Centre;<br>D- Fast Food Outlet/Lunch Bar;<br>D- Health Centre;<br>D- Health Studio;<br>P- Home Business;<br>P- Home Occupation;<br>P- Hosted Short Term Rental Accommodation;<br>D- Laundromat;<br>D- Liquor Store-Small;<br>A- Liquor Store-Large;<br>D- Lunch Bar;<br>D- Massage Parlour;<br>D- Medical Centre;<br>D- Mobile Phone Tower & Associated Facilities;<br>D- Multiple Dwelling;<br>D- Office;<br>A- Public Amusement;<br>D- Restaurant/Café;<br>D- Restricted Premises;<br>D- Shop;<br>A- Small Bar;<br>A- Tavern;<br>P- Telecommunications Infrastructure;<br>A- Unhosted Short Term Rental Accommodation;<br>A- Veterinary Centre;<br>D- Vet Consulting Rooms;<br>P- Video Store; | |
| 3 | • Lot 100 on DP60341 (No.1) Raconteur Drive; and | D- Aged or Dependent Persons Dwelling;<br>D- Ancillary Dwelling; | Nil. |



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| | | | |
|---|---|---|---|
| | • Lot 23 on P2198 (No.2) Carbine Street; both of Ascot | D- Art Gallery;<br>D- Betting Agency;<br>D- Car Park;<br>D- Caretakers Dwelling;<br>D- Child Care Premises;<br>D- Child Family Day Care;<br>D- Civic Use;<br>D- Club Premises;<br>D- Community Home;<br>D- Consulting Rooms;<br>A- Convenience Store;<br>D- Dry Cleaning Premises;<br>D- Educational Establishment;<br>A- Exhibition Centre;<br>D- Grouped Dwelling;<br>D- Health Centre;<br>D- Health Studio;<br>P- Home Business;<br>P- Home Occupation;<br>D- Home Store;<br>A- Hospital;<br>P- Hosted Short Term Rental Accommodation;<br>D- Hotel;<br>D- Laundromat;<br>A- Liquor Store – Small;<br>D- Lunch Bar;<br>A- Massage Parlour;<br>D- Medical Centre;<br>D- Mobile Phone Tower & Associated Facilities;<br>D- Multiple Dwelling;<br>D- Nursing Home;<br>D- Office;<br>D- Private Recreation;<br>A- Place of Worship;<br>D- Public Amusement;<br>A- Reception Centre;<br>D- Residential Building; | |



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| | | | |
|---|---|---|---|
| | | D- Restaurant/Café;<br>D- Single House;<br>D- Showroom;<br>A- Small Bar;<br>D- Studio;<br>A- Tavern;<br>P- Telecommunications Infrastructure;<br>D- Tourist and Visitor Accommodation;<br>A- Unhosted Short term Rental Accommodation;<br>A- Veterinary Centre;<br>D- Vet Consulting Rooms;<br>A- Vet Hospital;<br>D- Video Store; | |

9. Amending the Scheme Map accordingly.

Pursuant to Clause 35(2) of the Planning and Development (Local Planning Schemes (Regulations) 2015 (WA), determines that Amendment No. 24 to Local Planning Scheme No. 15 is a 'Complex' amendment as the intended zones, density codes and land use permissibility for the subject land is not addressed by the City's Local Planning Strategy.

Dated this 25th day of November 2025.

**City of Belmont Chief Executive Officer**



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# Scheme Amendment Details

| Item | Description | Details |
|---|---|---|
| **1.** | Local Authority | City of Belmont |
| **2.** | Description of Local Planning Scheme | Local Planning Scheme No. 15 |
| **3.** | Type of Scheme | Local Zoning Scheme |
| **4.** | Scheme Amendment No. | Amendment No. 24 |
| **5.** | Summary of Proposal | 1. Rezoning a portion of Lot 452 No. 70 Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Residential' R60 zone.<br><br>2. Rezoning a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' R60 zone and including a Restricted Use (R1) designation.<br><br>3. Rezoning Lot 100 (No. 1) Raconteur Drive, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone, rezoning Lot 23 (No. 2) Carbine Street, Ascot from the 'Residential and Stables' zone to the 'Mixed Use' zone, deleting the Additional Use (A18) designation, inserting residential density codes of R10 and R-AC4, and including a Restricted Use (R3) designation.<br><br>4. Rezoning the redundant residual alignments of Grandstand Road and Matheson Road and part of Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive, Ascot from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone, inserting a residential density coding of R-AC3 and applying a Restricted Use (R2) designation.<br><br>5. Modifying the designation of Additional Use (A18) to only apply to a portion of Lot 9002 (No.71) Grandstand Road, Ascot.<br><br>6. Designating Additional Use (A21) over portions of Lots 9002 and 50 and Lot 13 (No.71) Grandstand Road, and portions of Lot 7705 (No.71) Matheson Road, Ascot. |

| | | |
|---|---|---|
| | | 7. Modifying Schedule No. 2 – Additional Uses to specify additional uses capable of approval.<br><br>8. Inserting Schedule No. 3 – Restricted uses to list restricted uses for 'Mixed Use' and 'Commercial' zoned land.<br><br>9. Amending the Scheme Map to reflect the proposed zoning, density, and land use permissibility changes. |
| **6.** | Classification | Complex |

# Planning Report

## Introduction

Amendment No. 24 to Local Planning Scheme No. 15 (LPS 15) proposes to modify LPS 15 by:

1. Rezoning a portion of Lot 452 No. 70 Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Residential' R60 zone.

2. Rezoning a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' R60 zone and including a Restricted Use (R1) designation.

3. Rezoning Lot 100 (No. 1) Raconteur Drive, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone, rezoning Lot 23 (No. 2) Carbine Street, Ascot from the 'Residential and Stables' zone to the 'Mixed Use' zone, deleting the Additional Use (A18) designation, inserting residential density codes of R10 and R-AC4, and including a Restricted Use (R3) designation.

4. Rezoning the redundant residual alignments of Grandstand Road and Matheson Road and part of Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive, Ascot from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone, inserting a residential density coding of R-AC3 and applying a Restricted Use (R2) designation.

5. Modifying the designation of Additional Use (A18) to only apply to a portion of Lot 9002 (No.71) Grandstand Road, Ascot.

6. Designating Additional Use (A21) over portions of Lots 9002 and 50 and Lot 13 (No.71) Grandstand Road, and portions of Lot 7705 (No.71) Matheson Road, Ascot.

7. Modifying Schedule No. 2 - Additional Uses as follows:

| No. | Location and Additional Uses |
|---|---|
| 18 | For portions of Lot 9002 on DP60342 (No.71) Grandstand Road, Ascot (near Grandstand Road) as depicted on the Scheme Map, the following Additional Uses are permitted: |

| | |
|---|---|
| | P- Hotel;<br>P- Office;<br>P- Reception Centre;<br>P- Restaurant;<br>P- Tavern; |
| 21 | For:<br>• portions of Lot 9002 on DP60342 (No.71) Grandstand Road;<br>• Lot 13 on D26760 (No.71) Grandstand Road;<br>• portions of Lot 50 on P5729 (No.71) Grandstand Road; and<br>• portions of Lot 7705 on DP209359 (No.71) Matheson Road;<br>each of Ascot as depicted on the Scheme Map, the following Additional Uses are permitted:<br>P- Animal Establishment;<br>P- Stables;<br>P- Veterinary Centre; |

8. Inserting the following into Schedule No. 3 - Restricted Uses and deleting the Text "There are no restricted uses which apply to the Scheme" in Schedule No. 3 and Clause 3.6 Restricted Uses:

| No. | Description of Land | Restricted Use | Conditions |
|---|---|---|---|
| 1 | Portion of Lot 452 on DP60339 (No.70) Grandstand Road, Ascot as depicted on the Scheme Map | D- Aged or Dependent Persons Dwelling;<br>D- Ancillary Dwelling;<br>D- Art Gallery;<br>D- Betting Agency;<br>D- Car Park;<br>D- Caretakers Dwelling;<br>D- Child Care Premises;<br>D- Child Family Day Care;<br>D- Civic Use;<br>D- Club Premises;<br>D- Community Home;<br>D- Consulting Rooms;<br>A- Convenience Store;<br>D- Dry Cleaning Premises;<br>D- Educational Establishment;<br>A- Exhibition Centre;<br>D- Grouped Dwelling;<br>D- Health Centre;<br>D- Health Studio; | Nil. |

| | | | |
|---|---|---|---|
| | | P- Home Business;<br>P- Home Occupation;<br>D- Home Store;<br>A- Hospital;<br>P- Hosted Short Term Rental Accommodation;<br>D- Hotel;<br>D- Laundromat;<br>D- Lunch Bar;<br>A- Massage Parlour;<br>A- Liquor Store – Small;<br>D- Medical Centre;<br>D- Mobile Phone Tower & Associated Facilities;<br>D- Multiple Dwelling;<br>D- Nursing Home;<br>D- Office;<br>D- Private Recreation;<br>A- Place of Worship;<br>D- Public Amusement;<br>A- Reception Centre;<br>D- Residential Building;<br>D- Restaurant/Café;<br>D- Single House;<br>A- Small Bar;<br>D- Studio;<br>A- Tavern;<br>P- Telecommunications Infrastructure;<br>D- Tourist and Visitor Accommodation;<br>A- Unhosted Short term Rental Accommodation;<br>A- Veterinary Centre;<br>D- Vet Consulting Rooms;<br>D- Video Store; | |
| 2 | • Lot 51 on P15104 (No.2) Raconteur Drive;<br>• Lot 3 on D55346 (No.96) Grandstand Road; | D- Aged or Dependent Persons Dwelling;<br>D- Amusement Facility;<br>D- Art Gallery; | 1. The following land uses are not to be located on the ground floor: |



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| | | | |
|---|---|---|---|
| | • portions of Lot 1 on D55346 (No.88) Grandstand Road; and<br>• portions of road reserve;<br>each of Ascot as depicted on the Scheme Map | D- Betting Agency;<br>D- Car Park;<br>D- Caretaker's Dwelling;<br>D- Child Care Premises;<br>D- Civic Use;<br>D- Club Premises;<br>D- Consulting Rooms;<br>D- Convenience Store;<br>D- Dry Cleaning Premises;<br>D- Educational Establishment;<br>D- Exhibition Centre;<br>D- Fast Food Outlet/Lunch Bar;<br>D- Health Centre;<br>D- Health Studio;<br>P- Home Business;<br>P- Home Occupation;<br>P- Hosted Short Term Rental Accommodation;<br>D- Laundromat;<br>D- Liquor Store-Small;<br>A- Liquor Store-Large;<br>D- Lunch Bar;<br>D- Massage Parlour;<br>D- Medical Centre;<br>D- Mobile Phone Tower & Associated Facilities;<br>D- Multiple Dwelling;<br>D- Office;<br>A- Public Amusement;<br>D- Restaurant/Café;<br>D- Restricted Premises;<br>D- Shop;<br>A- Small Bar;<br>A- Tavern;<br>P- Telecommunications Infrastructure;<br>A- Unhosted Short Term Rental Accommodation;<br>A- Veterinary Centre; | • Aged or Dependent Persons Dwelling;<br>• Caretaker's Dwelling;<br>• Multiple Delling |



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| | | | |
|---|---|---|---|
| | | D- Vet Consulting Rooms;<br>P- Video Store; | |
| 3 | • Lot 100 on DP60341 (No.1) Raconteur Drive; and<br>• Lot 23 on P2198 (No.2) Carbine Street;<br>both of Ascot | D- Aged or Dependent Persons Dwelling;<br>D- Ancillary Dwelling;<br>D- Art Gallery;<br>D- Betting Agency;<br>D- Car Park;<br>D- Caretakers Dwelling;<br>D- Child Care Premises;<br>D- Child Family Day Care;<br>D- Civic Use;<br>D- Club Premises;<br>D- Community Home;<br>D- Consulting Rooms;<br>A- Convenience Store;<br>D- Dry Cleaning Premises;<br>D- Educational Establishment;<br>A- Exhibition Centre;<br>D- Grouped Dwelling;<br>D- Health Centre;<br>D- Health Studio;<br>P- Home Business;<br>P- Home Occupation;<br>D- Home Store;<br>A- Hospital;<br>P- Hosted Short Term Rental Accommodation;<br>D- Hotel;<br>D- Laundromat;<br>A- Liquor Store – Small;<br>D- Lunch Bar;<br>A- Massage Parlour;<br>D- Medical Centre;<br>D- Mobile Phone Tower & Associated Facilities;<br>D- Multiple Dwelling;<br>D- Nursing Home;<br>D- Office; | Nil. |



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| | | | |
|---|---|---|---|
| | | D- Private Recreation;<br>A- Place of Worship;<br>D- Public Amusement;<br>A- Reception Centre;<br>D- Residential Building;<br>D- Restaurant/Café;<br>D- Single House;<br>D- Showroom;<br>A- Small Bar;<br>D- Studio;<br>A- Tavern;<br>P- Telecommunications Infrastructure;<br>D- Tourist and Visitor Accommodation;<br>A- Unhosted Short term Rental Accommodation;<br>A- Veterinary Centre;<br>D- Vet Consulting Rooms;<br>A- Vet Hospital;<br>D- Video Store; | |

9. Amending the Scheme Map accordingly.

## Background

Amendment No. 24 relates to 61.3 hectares of land bound by the Swan River, Ascot Waters Estate, Grandstand Road, Resolution Drive, the Residential and Stables zone, Hardey Road, Carbine Street and Matheson Road in Ascot (refer to Figure 1 below).




*Figure 1: Location Plan – Subject land outlined in Red*

Rowe Group on behalf of Perth Racing has prepared the draft Ascot Racecourse Precinct Structure Plan (PSP) to guide the future use and development of the land in and around Ascot Racecourse. At the 15 April 2025 Ordinary Council Meeting, Council resolved to recommend that the draft PSP be approved by the Western Australian Planning Commission (WAPC) subject to modifications. At the 25 November 2025 Ordinary Council Meeting, Council initiated Amendment No. 24 to align zones and land use controls with Council's resolution at the 15 April 2025 Ordinary Council Meeting. Amendment No. 24 as initiated by Council proposed the following:

1. Rezoning a portion of Lot 452 No. 70 Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Residential' R60 zone.

2. Rezoning a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone and including a Restricted Use (R1) designation and R60 density code.

3. Rezoning Lot 100 (No. 1) Raconteur Drive, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone, rezoning Lot 23 (No. 2) Carbine Street from the 'Residential and Stables' zone to the 'Mixed Use' zone, deleting the Additional Use (A18) designation, inserting residential density codes of R10 and R-AC4, and including a Restricted Use (R1) designation.

4. Rezoning the redundant residual alignments of Grandstand Road and Matheson Road and part of Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone, inserting a residential density coding of R-AC3 and applying a Restricted Use (R2) designation.

5. Modifying Schedule No. 2 – Additional Uses as follows:

| No. | Location and Additional Uses |
|---|---|
| 18 | Within Precinct A, the local government may consider the following additional uses:<br>• Office<br>• Hotel<br>• Reception Centre<br>• Restaurant<br>• Tavern<br><br>Within Precinct B, the local government may consider the following additional uses:<br>• Stables<br>• Veterinary Centre<br><br><br> |

6. Inserting the following into Schedule No. 3 – Restricted Uses and deleting the Text "There are no restricted uses which apply to the Scheme":

| No. | Description of Land | Restricted Use | Conditions |
|---|---|---|---|
| 1 | 'Mixed Use' zoned portion of Lot 452 (No. 70) Grandstand Road, Ascot<br><br>Lot 100 (No. 1) Raconteur Drive, Ascot.<br><br>Lot 23 (No. 2) Carbine Street, Ascot. | • Aged or Dependent Persons Dwelling<br>• Ancillary Dwelling<br>• Art Gallery<br>• Betting Agency<br>• Car Park<br>• Caretakers Dwelling<br>• Child Care Premises<br>• Child Family Day Care | Nil |



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| | | | |
|---|---|---|---|
| | | • Civic Use<br>• Club Premises<br>• Community Home<br>• Consulting Rooms<br>• Convenience Store<br>• Dry Cleaning Premises<br>• Educational Establishment<br>• Exhibition Centre<br>• Grouped Dwelling<br>• Health Centre<br>• Health Studio<br>• Home Business<br>• Home Occupation<br>• Home Store<br>• Hospital<br>• Hosted Short Term Rental Accommodation<br>• Hotel<br>• Laundromat<br>• Liquor Store – Small<br>• Lunch Bar<br>• Massage Parlour<br>• Medical Centre<br>• Mobile Phone Tower & Associated Facilities<br>• Multiple Dwelling<br>• Nursing Home<br>• Office<br>• Private Recreation<br>• Place of Worship<br>• Public Amusement<br>• Reception Centre<br>• Residential Building<br>• Restaurant/Café<br>• Single House<br>• Small Bar<br>• Studio<br>• Tavern<br>• Telecommunications Infrastructure<br>• Tourist and Visitor Accommodation<br>• Unhosted Short term Rental Accommodation<br>• Veterinary Centre<br>• Vet Consulting Rooms<br>• Video Store | |
| 2 | Lot 1 (No. 88) and Lot 3 (No. 96) Grandstand Road and Lot 51 (No. 2) Raconteur Drive, Ascot | • Aged or Dependent Persons Dwelling<br>• Amusement Facility | Residential dwellings shall not be located on the ground floor. |



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| | | | |
|---|---|---|---|
| | | • Art Gallery<br>• Betting Agency<br>• Car Park<br>• Caretaker's Dwelling<br>• Child Care Premises<br>• Civic Use<br>• Club Premises<br>• Consulting Rooms<br>• Dry Cleaning Premises<br>• Educational Establishment<br>• Exhibition Centre<br>• Fast Food Outlet/Lunch Bar<br>• Health Centre<br>• Health Studio<br>• Home Business<br>• Home Occupation<br>• Hosted Short Term Rental Accommodation<br>• Laundromat<br>• Liquor Store-Small<br>• Liquor Store-Large<br>• Lunch Bar<br>• Massage Parlour<br>• Medical Centre<br>• Mobile Phone Tower & Associated Facilities<br>• Multiple Dwelling<br>• Office<br>• Public Amusement<br>• Restaurant/Café<br>• Restricted Premises<br>• Shop<br>• Small Bar<br>• Tavern<br>• Telecommunications Infrastructure<br>• Unhosted Short Term Rental Accommodation<br>• Veterinary Centre<br>• Vet Consulting Rooms<br>• Video Store | Retail floorspace is restricted to 1,200m$^2$ increasing up to 3,000m$^2$ where a Net Benefit Test is provided to the satisfaction of the Local Government.<br><br>'Fast Food Outlet/Lunch Bar' shall only be permitted where it forms part of and is integrated with the built form of the precinct, and where no drive-through facilities are proposed. |

7. Amending the Scheme Map accordingly.

Pursuant to Regulation 37 of the *Planning and Development (Local Planning Schemes) Regulations 2015*, Amendment No. 24 was referred to the WAPC for consent to advertise. The Minister for Planning and Lands (or as delegated) has since directed the City to modify the amendment pursuant to Section 83A(2)(b) of the *Planning and Development Act 2005*.



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As a result, the amendment is no longer consistent with Council's resolution of 25 November 2025. Comments included within the Report section reflect Council's 25 November 2025 resolution.

**Planning Context**

Statutory Planning Framework

Local Planning Scheme Amendments

Section 75 of the *Planning and Development Act 2005* provides for an amendment to be made to a local planning scheme. The procedures for amending a local planning scheme, including public consultation requirements are set out within Part 5 of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)* (The Regulations).

The Regulations specify three different types of scheme amendments being 'basic', 'standard', and 'complex'. Clause 35(2) of the Regulations requires a resolution of the local government which specifies the amendment type and the reasons for the classification.

When a local government resolves to amend a scheme, the proposed scheme amendment is required to be referred to the Department of Planning Lands and Heritage (DPLH) to obtain consent to advertise. Where an amendment is deemed to have an environmental impact, it is also required to be referred to the Environmental Protection Authority.

Following consent to advertise, the responsible authority shall advertise the amendment in accordance with the Regulations by:

- Displaying the amendment and associated public notice on the local government's website.
- Publishing the notice in a local newspaper and displaying this on the local government's public notice boards.
- Giving a copy of the notice to each public authority that the local government considers is likely to be affected by the amendment.

After the conclusion of the advertising period, Council is required to consider the submissions and pass a resolution to either support the amendment, with or without modification, or not support the amendment. After passing a resolution, the amendment is to be forwarded to the Western Australian Planning Commission (WAPC) to review and provide a recommendation to the Minister for Planning.

Metropolitan Region Scheme

The subject land area is primarily zoned 'Private Recreation' under the Metropolitan Region Scheme (MRS), with the balance zoned 'Urban' and land abutting the Swan River is reserved 'Parks and Recreation' (refer to Figure 2). The proposed Scheme Amendment is able to be accommodated under the current MRS zoning.




*Figure 2: MRS Zones and Reserves (Amendment Area outlined Red)*

Local Planning Scheme No. 15

The subject land is predominantly zoned 'Place of Public Assembly – Racecourse' under LPS 15. The southern portion of the subject land abutting Resolution Drive, is zoned 'Mixed Use', Lot 23 (No. 2) Carbine Street is zoned 'Residential and Stables', and a separate portion of land adjacent to Grandstand Road is not currently assigned a zone or reserve (refer to Figure 3).

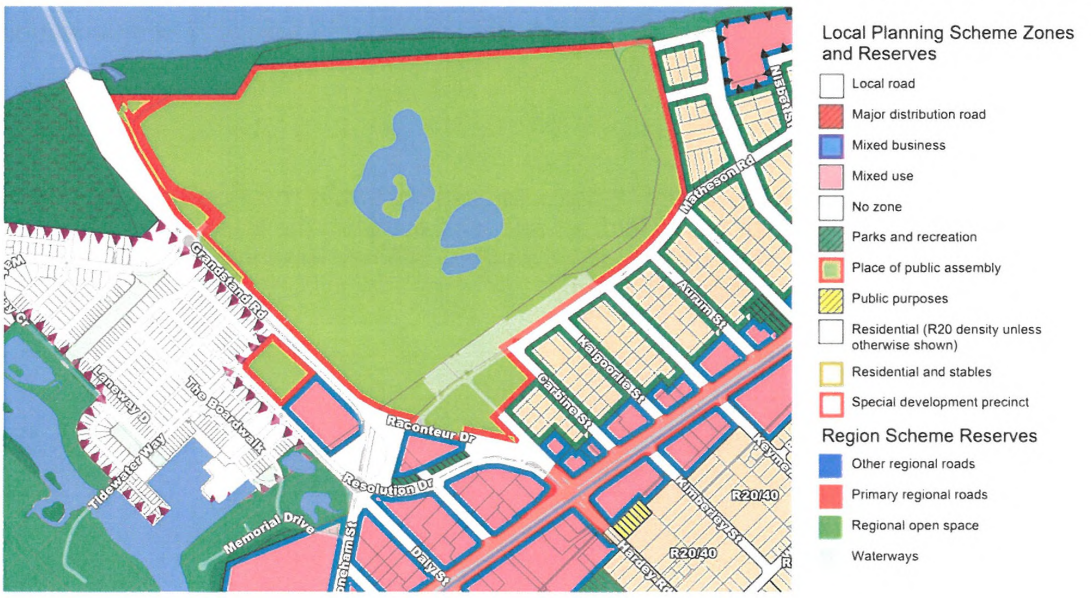



*Figure 3: LPS 15 Zones and Reserves*



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The objectives of the 'Place of Public Assembly', 'Mixed Use' and 'Residential and Stables zones are as follows:

> *"The 'Places of Public Assembly' zone is intended to allow for special places of assembly, such as halls, private schools, grounds for athletics, sports grounds with provision for spectators, racecourses, trotting track, stadia and/or showgrounds."*
>
> *"The Mixed Use Zone is intended to allow for the development of a mix of varied by compatible land uses such as housing, offices, showrooms, amusement centres, eating establishments and appropriate industrial activities which do not generate nuisances detrimental to the amenity of the district or to the health, welfare and safety of its residents. Buildings should be of a high standard of architectural design set in pleasant garden surrounds with limited vehicular access from properties to primary roads.*
>
> *To provide for a wide variety of active uses on street level which are compatible with residential and other non-active uses on upper levels."*
>
> *"The Residential and Stables Zone is intended to provide for compatible and environmentally responsible use of land in proximity to the Ascot Racecourse and the Swan River by residential accommodation and stables and ancillary functions of the horse racing industry."*

Table 1 (Zoning Table) of LPS 15 sets out the permissibility of uses using the symbols of 'P', 'D', 'A', and 'X'. The meaning of the symbols is listed below:

'P' means the use is permitted by the Scheme providing the use complies with the relevant development standards and the requirements of the Scheme;

'D' means that the use is not permitted unless the local government has exercised its discretion by granting Development Approval;

'A' means the use is not permitted unless the local government has exercised its discretion by granting Development Approval after giving special notice in accordance with the provisions contained in Clause 64 of the *Planning and Development (Local Planning Schemes) Regulations 2015* Schedule 2;

'X' means a use that is not permitted by the scheme.

Clause 3.5 addresses Additional Uses and outlines that, regardless of the use class designation in the zoning table, land uses for areas specified in Schedule No. 2 can receive approval, subject to the specific conditions being met.

Schedule No. 3 of LPS 15 and Clause 3.6 relate to Restricted Uses. Clause 3.6 sets out the purpose of Restricted Uses as follows:

> *"Despite anything contained in the Zoning Table, the land specified in Schedule 3 may only be used for the specific use or uses that are listed and subject to the conditions set out in Schedule 3 with respect to that land."*

There are currently no restricted uses under LPS 15.

Residential Design Codes

The Residential Design Codes (R-Codes) establish built form controls for all residential development within Western Australia and are used in the assessment of residential development and subdivision proposals. Volume 1 of the R-Codes establishes standards for single houses, grouped dwellings, and multiple dwellings up to R60. Volume 2 of the R-Codes specifically relates to multiple dwelling developments at the R80 code and above. Any future residential development will be assessed against the PSP and the R-Codes.

Strategic Planning Framework

Perth and Peel @ 3.5 Million

Perth and Peel @ 3.5 Million provides a strategic framework to guide development across the Perth and Peel regions, in response to a projected population of 3.5 million by 2050. The document divides the Perth metropolitan area into four sub-regions: Central, North-West, North-East, and South. The subject land is located within the Central Sub-region.

The strategy also outlines Urban Consolidation Principles and identifies corresponding precincts. Of particular relevance to this amendment are the 'Green Network', 'Urban Corridor' and 'Activity Centres' principles and precincts.

The racecourse is identified as part of the 'Green Network' that extends along the Swan River. The document highlights the importance of supporting population growth and higher-density living with a connected network of public and private open spaces.

Great Eastern Highway, located south of the subject land, is identified as an 'Urban Corridor', intended to accommodate higher-density residential development that leverages proximity to public transport while minimising impacts on surrounding areas and maintaining the efficiency of the regional transport network. Great Eastern Highway, Grandstand Road, and Resolution Drive are also identified as high-frequency public transit routes.

The document references State Planning Policy SPP 4.2 (SPP 4.2) and the hierarchy of centres based on the future importance of each centre from a network perspective. Additionally, the document identifies the important role that activity centres have in being a focal point for commercial and social activity and the importance of these areas being designed to be walkable and near public transport to support these means of access.

State Planning Policy 4.2

State Planning Policy 4.2 guides the planning and development of activity centres in the Perth and Peel region. The document emphasises the importance of activity centres having a compact urban form with pedestrian-focused streetscapes. The City's Activity Centre Planning Strategy (ACPS) identifies a local centre within the broader Golden Gateway precinct, which includes part of Perth Racing's landholdings subject to the draft PSP. State Planning Policy 4.2 states that neighbourhood and local centres should cater to daily and weekly household shopping needs, provide community facilities, and offer a small range of convenience services. Neighbourhood centres typically include a supermarket, personal services, and convenience shops, supported by small-scale offices. Local centres share these characteristics but operate on a smaller scale.

State Planning Policy 4.2 emphasises that development in activity centres should generally align with the floorspace requirements set out in local planning strategies or structure plans. Where a proposal exceeds that floorspace need, the proposal is to demonstrate a net benefit to the community. A net benefit test is to be prepared in accordance with Section 7.8 of SPP 4.2 and address matters included in Section 5.3 of the Implementation Guidelines.

City of Belmont Local Planning Strategy

The City of Belmont Local Planning Strategy is the strategic planning document that broadly sets out the long-term planning direction for the City. The Strategy also informed the preparation of LPS 15. The key objectives of the Local Planning Strategy and relevant sub strategies for this precinct are as follows:

- To enhance the north-west entrance to the City.
- To encourage landmark development.
- Acknowledge that Ascot Racecourse and the Swan River are 'strategic tourism sites' of State significance to benefit future tourism development.



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This amendment is not considered to be addressed by the Local Planning Strategy.

Activity Centre Planning Strategy

The ACPS was prepared to guide the future planning and coordination of activity centres within the City of Belmont and was adopted by Council at the February 2024 Ordinary Council Meeting (OCM). The ACPS identifies a future local centre within the broader Golden Gateway precinct, which includes a portion of Perth Racing's land and outlines that it is to be 1,200m$^2$ in the first instance. The ACPS states that following further residential development within the Golden Gateway precinct, it may be appropriate for this figure to be reviewed through a Needs Assessment or Net Benefit Test.

Draft Ascot Racecourse Precinct Structure Plan

The draft PSP (refer to Figure 4) has been prepared to guide the future use and development of land in and around Ascot Racecourse. At the 15 April 2025 Ordinary Council Meeting, Council resolved to recommend that the WAPC approve the draft PSP and supporting technical appendices subject to modifications.

The amendment request lodged by the applicant seeks to apply zones, density codes and land use permissibility consistent with the draft PSP for Precincts B, C, D and E. The applicant has advised that a request to rezone Precinct A under LPS 15 will be prepared and submitted for consideration in due course.

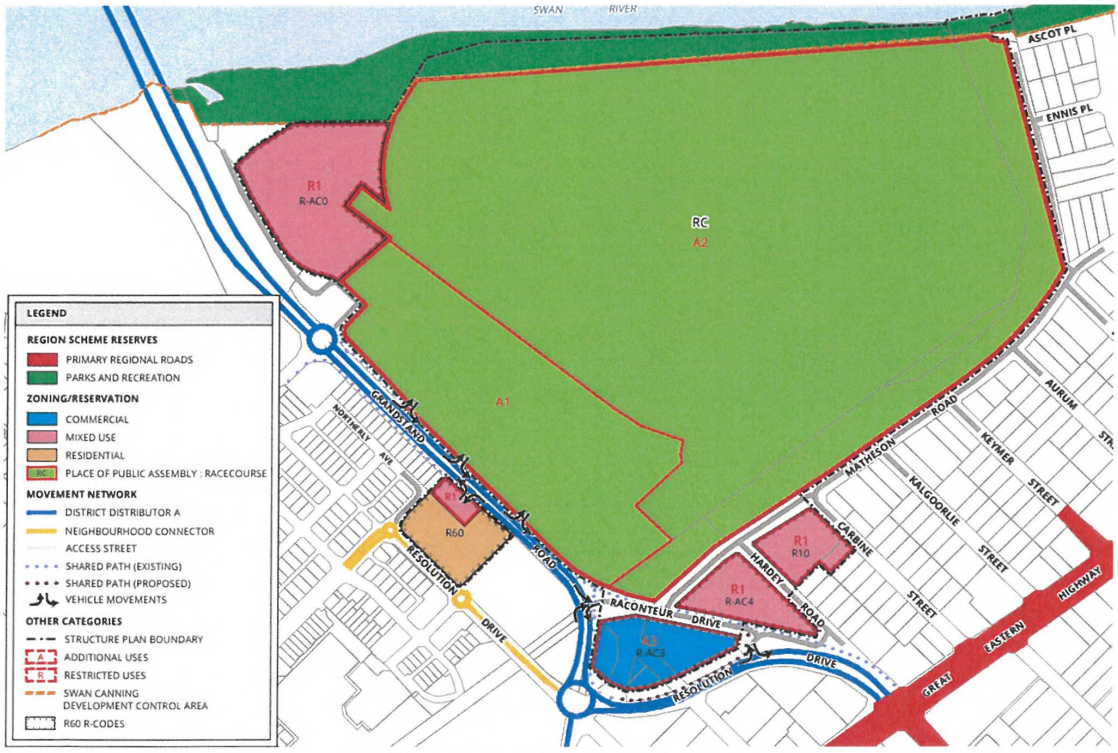



*Figure 4: Draft Ascot Racecourse Precinct Structure Plan*



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# Report

## Zoning and Density

This Amendment proposes zones and density codes consistent with the draft PSP and modifications endorsed by Council. An overview of the changes is included below:

Lot 452 (No. 70) Grandstand Rod, Ascot

Lot 452 (No. 70) Grandstand Road (refer to Figure 5) is proposed to be rezoned from the 'Place of Public Assembly' zone to the 'Residential' and 'Mixed Use' zone with an R60 density code assigned. This is considered appropriate for the following reasons:

- Applying the 'Residential' zone will largely provide for a 'Residential' interface to Ascot Waters.
- The 'Mixed Use' zone will allow for a range of land uses that can take advantage of the site's strategic location along Grandstand Road, while use restrictions (as outlined in the Land Use Permissibility section) will ensure potential amenity impacts are appropriately managed.
- The R60 density code will enable building heights of up to three storeys, consistent with the two to four storey character of the Ascot Waters Estate. To ensure an appropriate interface between the 'Mixed Use' portion and adjoining residential properties, modifications recommended to the PSP include a 3 metre landscaped setback.

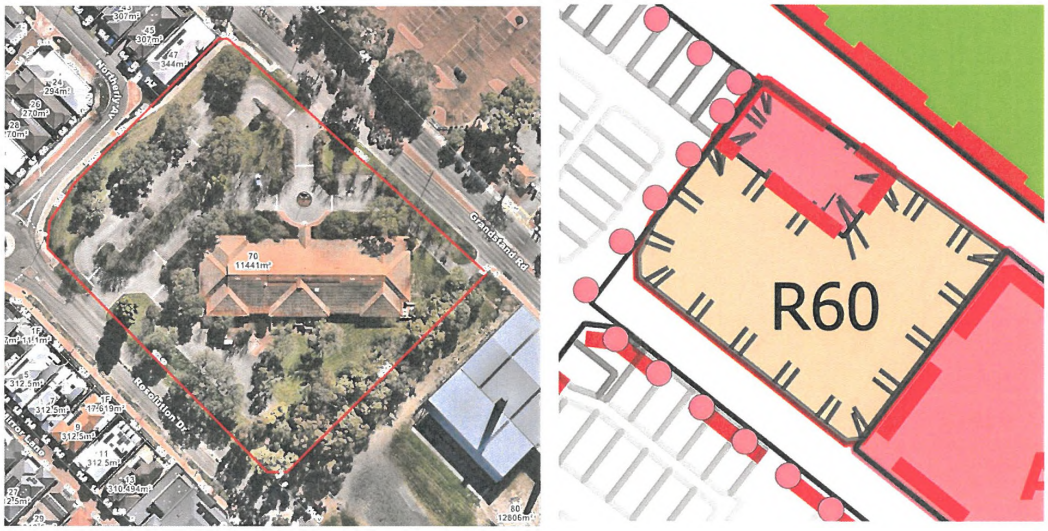



*Figure 5: Lot 452 (No. 70) Grandstand Road*

Lot 100 (No. 1) Raconteur Drive and Lot 23 (No. 2) Carbine Street, Ascot

Lot 100 (No. 1) Raconteur Drive is proposed to be rezoned from the 'Place of Public Assembly' zone to the 'Mixed Use' zone with a density code of R-AC4 applied to land west of Hardey Road and a density code of R10 applied to land east of Hardey Road (refer to Figure 6). Lot 23 (No. 2) Carbine Street is proposed to be rezoned from the 'Residential and Stables' zone to the 'Mixed Use' zone with a density code of R10 (refer to Figure 7). The proposed zoning and density codes are considered appropriate for the following reasons:

- The 'Mixed Use' zone will allow for a range of land uses with use restrictions applied to ensure that potential amenity impacts are appropriately managed.
- The draft PSP proposes a maximum building height of two storeys east of Hardey Road and includes setback controls to Carbine Street and adjoining properties. These controls and the proposed R10 density code will ensure that new developments align with the scale



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of residential buildings within the residential and stables area and create a suitable interface.

- A density code of R-AC4 is proposed for land west of Hardey Road which will provide for a maximum building height of three storeys. It is considered that this height is acceptable, as future development will be sufficiently separated from existing residential development.




*Figure 6: Lot 100 (No.1) Raconteur Drive*

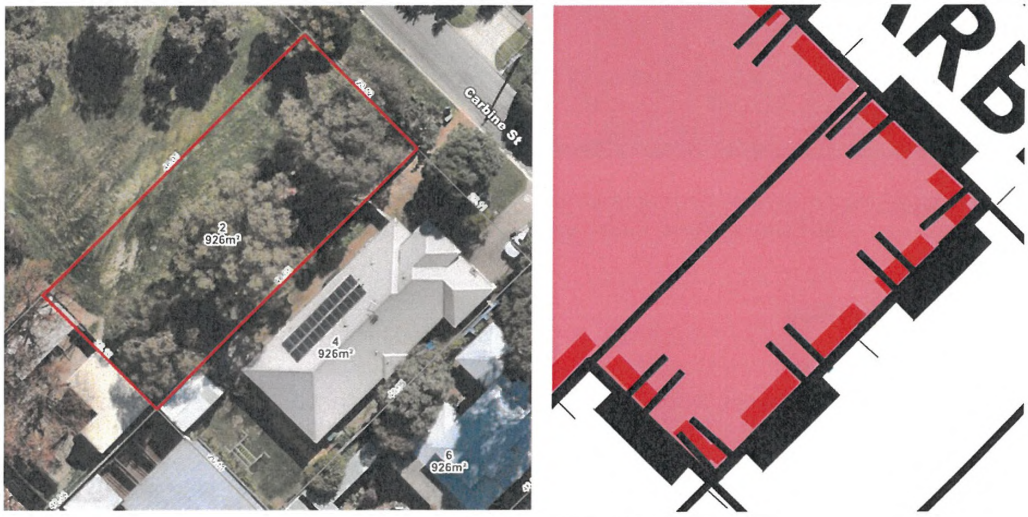



*Figure 7: Lot 23 (No. 2) Carbine Street*

Residual Alignments of Grandstand Road and Matheson Road and Part Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive

The redundant residual alignments of Grandstand Road and Matheson Road and part Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive (refer to Figure 8) are proposed to be rezoned from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone with a density code of R-AC3 applied. The proposed zoning and density code is considered appropriate for the following reasons:

- The draft Golden Gateway LSP and draft Ascot Racecourse PSP both support the development of a local centre within the precincts. The proposed 'Commercial' zone would facilitate this and is therefore considered appropriate.



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- The R-AC3 density code would provide for a maximum height of six storeys. It is considered that the proposed heights are acceptable due to the separation from residential areas.

In addition to the above, it should be noted that the subject land accommodates major water distribution mains owned and managed by the Water Corporation. While zoning applied to land does not automatically enable development without due consideration of existing infrastructure assets, Water Corporation in their referral response for the PSP opposed the rezoning stating that the infrastructure cannot be moved or built on. However, the applicant further engaged with Water Corporation who advised that car parking over the assets is possible. This amendment will be referred to Water Corporation for further comment.

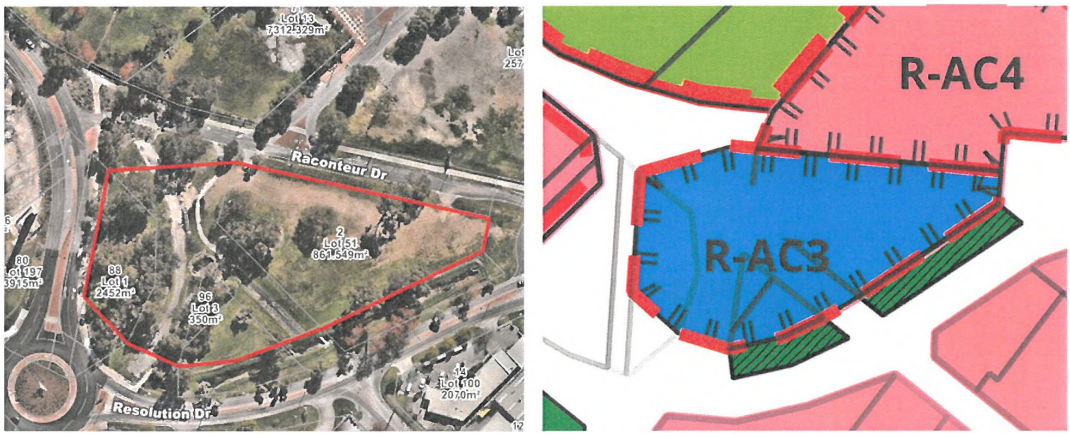



*Figure 8: Residual alignments of Grandstand Road and Matheson Road, Part Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive*

**Land Use Permissibility**

Additional Uses

Clause 3.5 of LPS 15 addresses Additional Uses and outlines that, regardless of the use class designation in the zoning table, land uses for areas specified in Schedule 2 can receive approval, subject to the specific conditions being met. Portions of the Amendment area are currently subject to Additional Use 18 (A18) which provides for 'Horse Sales' and 'Stables' to be approved on No. 71 Grandstand Road and No. 1 Raconteur Drive (refer to Figure 9).

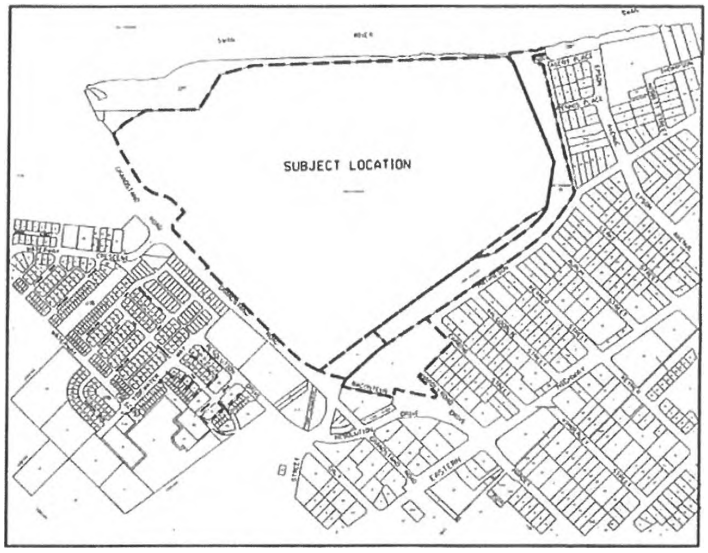



*Figure 9: Area currently subject to A18*

Consistent with the draft PSP, the Amendment initiated by Council at the 25 November 2025 Ordinary Council Meeting proposed to delete the Additional Use of 'Horse Sales' and update A18 to apply the uses of 'Office', 'Hotel', 'Reception Centre', 'Restaurant' and 'Tavern' to Precinct B of the draft PSP, and 'Stables' and 'Veterinary Centre' to Precinct C. These uses were considered appropriate as they support the function of the racecourse and entertainment precinct.

The A18 plan was also proposed to be updated to reflect these changes. As it is not appropriate for the scheme to reference the PSP, Precinct B of the draft PSP was proposed to be labelled as Precinct A on the A18 plan, and Precinct C labelled as Precinct B.

The Minister's directed modifications have resulted in the following changes:

- Precinct A of A18 is now proposed to be referred to as A18 and Precinct B as A21. This is reflected on the updated Amendment Map.
- Land use permissibility symbols have been applied to the uses.
- The additional use location plan has been replaced with textual descriptions of the areas.
- 'Animal Establishment' has been included as an additional use for A21 (previously labelled Precinct B under A18).

Restricted Uses

Restricted Use areas are a mechanism in local planning schemes that limit land to specific permitted uses. This means that only the designated use(s) are allowed on a particular site, and any other uses that would typically be permissible within the zone are not permitted.

The Amendment initiated by Council at the 25 November 2025 Ordinary Council Meeting proposed to introduce two Restricted Use areas into LPS 15. The first was proposed to apply to the portions of the Amendment area that are proposed to be zoned 'Mixed Use' and included land uses capable of approval within the 'Mixed Use' zone except the following:

- 'Amusement Facility'
- 'Amusement Parlour'
- 'Auction Mart'
- 'Garden Centre'
- 'Industry-Light'
- 'Industry – Service'

- 'Motor Vehicle Repair'
- 'Warehouse'
- 'Fast Food Outlet/Lunch Bar'
- 'Funeral Parlour'
- 'Pet Day Care'
- 'Night Club'
- 'Radio or Tv Installation'
- 'Restricted Premises'
- 'Service Station'
- 'Vet Hospital'
- 'Showroom'

These uses were not considered appropriate within proximity to residential development as they are likely to have adverse amenity impacts or do not align with the intent of the precinct in the draft PSP. Additionally, with respect to 'Showrooms' the following was considered relevant:

- The original version of the PSP lodged by Perth Racing indicates that 9,600m$^2$ of other retail floorspace will establish within the 'Mixed Use' portion of Precinct E. The addition of 9,600m$^2$ of retail floorspace represents a significant change that is not contemplated in the City's strategic planning framework and would undermine the centres intended role and hierarchy of the centre by effectively making it the secondary designation.
- Irrespective of the abovementioned floorspace matter, the appropriateness of bulky goods showrooms in this location must be further considered having regard to the following:
  - There are distinct differences between establishing a bulky goods showroom on Great Eastern Highway compared to locating it adjacent to a local or neighbourhood centre. The latter is subject to significant transformation under relevant Structure Plans, with a key focus on active uses that foster walking or cycling.
  - The land identified for bulky goods showrooms by the original version of the draft PSP is located directly adjacent to the designated future local centre. In accordance with the principles of SPP 4.2, local centres should have a compact urban form with pedestrian orientated streetscapes. Where activity is concentrated along key public streets and open spaces. Introducing bulky goods showrooms in this location contradicts these outcomes. The use is inherently car dependent and fundamentally undermines the intended function of the local centre as a pedestrian friendly, mixed use environment.
  - State Planning Policy 4.2 designates 'Showroom' as a desired use adjacent to district centres but does not extend this designation to local and neighbourhood centres. Furthermore, while SPP 4.2 states that 'Showrooms' are appropriate within activity centre frame areas, it also acknowledges that smaller centres may not have a frame. In this instance, a frame is not considered appropriate, particularly where the retail floorspace within the frame exceeds that of the centre itself.

Having regard to the above, 'Showroom' was not considered an appropriate use within the proposed 'Mixed Use' zone was therefore not included as a 'Restricted Use' within the Amendment initiated by Council at the 25 November 2025 Ordinary Council Meeting.

The second Restricted Use area was proposed to apply to the land that is proposed to be zoned 'Commercial'. This provided for uses capable of approval within the 'Commercial' zone excluding the following:

- 'Garden Centre'
- 'Radio or Tv Installation'
- 'Showroom'
- 'Single House'
- 'Grouped Dwelling'



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In addition, the 'Health Centre' land use was proposed to be included as a use that could be considered as it a use complementary to the intended function as a local centre. 'Fast Food Outlet/Lunch Bar' was also proposed to be included as a use that may be considered; however, it was proposed to be subject to a condition limiting its development to circumstances where it does not include drive-through facilities. This approach would enable the consideration of a use that may complement the local centre while ensuring that a standalone, car-oriented development would not establish within it.

In considering why the abovementioned uses were not considered appropriate, the following is relevant:

- The intent of the 'Commercial' zoned land is to facilitate the development of an activity centre. A 'Garden Centre' that includes the propagation, rearing and sale of plants and the storage of produces associated with horticulture and gardens is not considered to be consistent with this intent.
- 'Radio or Tv Installations' could occur elsewhere within the City of Belmont and are not required within a 'Mixed Use' precinct within proximity to the Kilns site, Ascot Racecourse and future development within the Golden Gateway precinct.
- As detailed above, 'Showrooms' were considered more appropriate in existing planned precincts, such as those along Great Eastern Highway and within the City's business park.
- Low density dwelling typologies such as 'Single House' and 'Grouped Dwelling' are not consistent with the intent of this area to facilitate the development of an activity centre. Additionally, Council in its previous resolution have requested development provisions that require activation of all street frontages. It is considered that this should occur through active commercial uses on the ground floor supported by residential development on upper floors.

Having regard to the above, these land uses were not included within the Restricted Use area. Additionally, a condition was proposed to be applied to the 'Multiple Dwelling' land use to ensure that multiple dwellings would not locate on the ground floor.

A condition was also recommended to limit retail floorspace to 1,200m$^2$ having regard to the following:

- The Retail Assessment provided in support of the PSP concludes that the proposed 3,400m$^2$ retail floorspace aligns with the City's strategic framework, this view is not considered to reflect the intent of the City's ACPS. The City's ACPS anticipates incremental expansion over time.
- The Retail Assessment states that the centre will be sustainable by 2026 without broader precinct development and with minimal impact on adjacent centres. This assumption relies on sufficient demand from the immediate trade area. However, as the draft Golden Gateway LSP has not been finalised, development within the precinct is unlikely to progress within this timeframe.
- Population growth projections also indicate that growth may not materialise until 2031–2041. As a result, the local population base in 2026 may be insufficient to support a 3,400m$^2$ neighbourhood centre without significantly drawing sales from existing centres. The claim that the centre will be sustainable by 2026 is therefore considered overly optimistic and requires further justification.
- Section 2.1 of the Retail Assessment mentions the key considerations outlined in SPP 4.2's Implementation Guidelines for preparation and assessment of retail assessments. However, the report does not provide clear responses to address these matters. The Retail Assessment is therefore not satisfactory in its current form.

Considering the above and in the absence of a modified Retail Assessment, it was considered appropriate to restrict retail floorspace within the 'Commercial' portion of Precinct E of the



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draft PSP to 1,200m$^2$ in the first instance through LPS 15. It was considered that this figure could be reviewed upon receipt of a Net Benefit Test which provides clear justification for a higher figure and addresses the above points.

The Minister's directed modifications have resulted in the following changes:

- Land use permissibility symbols have been applied to all uses.
- Restricted Use Area 1 now applies only to Lot 452 (No. 70 Grandstand Road).
- A new Restricted Use Area 3 has been introduced. This applies to Lot 100 (No. 1 Raconteur Drive) and Lot 23 (No. 2 Carbine Street), replacing the previous Restricted Use Area 1 designation. It provides a largely similar list of uses, with the addition of 'Showroom' and 'Vet Hospital'.
- 'Convenience Store' is now included as a use capable of approval within Restricted Use Area 2.
- The conditions applicable to Restricted Use Area 2 have been removed and replaced with the following:

  "*The following land uses are not to be located on the ground floor:*
  - *Aged or Dependent Persons Dwelling;*
  - *Caretaker's Dwelling;*
  - *Multiple Dwelling;"*

**Scheme Amendment Classification**

The Amendment initiated by Council at the 25 November 2025 Ordinary Council Meeting and the Modified Amendment are considered to be 'complex' amendments because the intended zones, density codes and land use permissibility for the subject land is not addressed by the City's Local Planning Strategy.

## Conclusion

The Amendment initiated by Council at the 25 November 2025 Ordinary Council Meeting proposed updates to LPS 15 to align it with Council's resolution at the 15 April 2025 Ordinary Council Meeting. This resolution recommended approval of the draft PSP subject to modifications. It also reflected further consideration of suitable land use and development controls for land proposed to be zoned 'Commercial'. Overall, it aimed to establish appropriate zones, density codes and land use permissibility provisions to guide the development of Perth Racing's landholdings.

Consistent with the direction from the Minister (or as delegated) Amendment No. 24 has been updated.



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*Planning and Development Act 2005*

**City of Belmont**
**Local Planning Scheme No. 15**

**Scheme Amendment No. 24**

The local government as directed by the Minister for Planning and Lands (or as delegated) pursuant to Section 83A(2)(b) of the Planning and Development Act 2005 amend the above Local Planning Scheme by:

1. Rezoning a portion of Lot 452 No. 70 Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Residential' R60 zone.

2. Rezoning a portion of Lot 452 (No. 70) Grandstand Road, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' R60 zone and including a Restricted Use (R1) designation.

3. Rezoning Lot 100 (No. 1) Raconteur Drive, Ascot from the 'Place of Public Assembly' zone to the 'Mixed Use' zone, rezoning Lot 23 (No. 2) Carbine Street, Ascot from the 'Residential and Stables' zone to the 'Mixed Use' zone, deleting the Additional Use (A18) designation, inserting residential density codes of R10 and R-AC4, and including a Restricted Use (R3) designation.

4. Rezoning the redundant residual alignments of Grandstand Road and Matheson Road and part of Lot 1 (No. 88), Lot 3 (No. 96) Grandstand Road, and Lot 51 (No. 2) Raconteur Drive, Ascot from the 'Mixed Use' zone and 'no zone' to the 'Commercial' zone, inserting a residential density coding of R-AC3 and applying a Restricted Use (R2) designation.

5. Modifying the designation of Additional Use (A18) to only apply to a portion of Lot 9002 (No.71) Grandstand Road, Ascot.

6. Designating Additional Use (A21) over portions of Lots 9002 and 50 and Lot 13 (No.71) Grandstand Road, and portions of Lot 7705 (No.71) Matheson Road, Ascot.

7. Modifying Schedule No. 2 - Additional Uses as follows:

| No. | Location and Additional Uses |
|---|---|
| 18 | For portions of Lot 9002 on DP60342 (No.71) Grandstand Road, Ascot (near Grandstand Road) as depicted on the Scheme Map, the following Additional Uses are permitted:<br>P- Hotel;<br>P- Office;<br>P- Reception Centre;<br>P- Restaurant;<br>P- Tavern; |
| 21 | For:<br>• portions of Lot 9002 on DP60342 (No.71) Grandstand Road;<br>• Lot 13 on D26760 (No.71) Grandstand Road;<br>• portions of Lot 50 on P5729 (No.71) Grandstand Road; and<br>• portions of Lot 7705 on DP209359 (No.71) Matheson Road; |



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| | each of Ascot as depicted on the Scheme Map, the following Additional Uses are permitted:<br>P- Animal Establishment;<br>P- Stables;<br>P- Veterinary Centre; |

8. Inserting the following into Schedule No. 3 - Restricted Uses and deleting the Text "There are no restricted uses which apply to the Scheme" in Schedule No. 3 and Clause 3.6 Restricted Uses:

| No. | Description of Land | Restricted Use | Conditions |
|---|---|---|---|
| 1 | Portion of Lot 452 on DP60339 (No.70) Grandstand Road, Ascot as depicted on the Scheme Map | D- Aged or Dependent Persons Dwelling;<br>D- Ancillary Dwelling;<br>D- Art Gallery;<br>D- Betting Agency;<br>D- Car Park;<br>D- Caretakers Dwelling;<br>D- Child Care Premises;<br>D- Child Family Day Care;<br>D- Civic Use;<br>D- Club Premises;<br>D- Community Home;<br>D- Consulting Rooms;<br>A- Convenience Store;<br>D- Dry Cleaning Premises;<br>D- Educational Establishment;<br>A- Exhibition Centre;<br>D- Grouped Dwelling;<br>D- Health Centre;<br>D- Health Studio;<br>P- Home Business;<br>P- Home Occupation;<br>D- Home Store;<br>A- Hospital;<br>P- Hosted Short Term Rental Accommodation;<br>D- Hotel;<br>D- Laundromat;<br>D- Lunch Bar; | Nil. |



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| | | A- Massage Parlour;<br>A- Liquor Store – Small;<br>D- Medical Centre;<br>D- Mobile Phone Tower & Associated Facilities;<br>D- Multiple Dwelling;<br>D- Nursing Home;<br>D- Office;<br>D- Private Recreation;<br>A- Place of Worship;<br>D- Public Amusement;<br>A- Reception Centre;<br>D- Residential Building;<br>D- Restaurant/Café;<br>D- Single House;<br>A- Small Bar;<br>D- Studio;<br>A- Tavern;<br>P- Telecommunications Infrastructure;<br>D- Tourist and Visitor Accommodation;<br>A- Unhosted Short term Rental Accommodation;<br>A- Veterinary Centre;<br>D- Vet Consulting Rooms;<br>D- Video Store; | |
| 2 | • Lot 51 on P15104 (No.2) Raconteur Drive;<br>• Lot 3 on D55346 (No.96) Grandstand Road;<br>• portions of Lot 1 on D55346 (No.88) Grandstand Road; and<br>• portions of road reserve;<br>each of Ascot as depicted on the Scheme Map | D- Aged or Dependent Persons Dwelling;<br>D- Amusement Facility;<br>D- Art Gallery;<br>D- Betting Agency;<br>D- Car Park;<br>D- Caretaker's Dwelling;<br>D- Child Care Premises;<br>D- Civic Use;<br>D- Club Premises;<br>D- Consulting Rooms;<br>D- Convenience Store;<br>D- Dry Cleaning Premises; | 1. The following land uses are not to be located on the ground floor:<br>• Aged or Dependent Persons Dwelling;<br>• Caretaker's Dwelling;<br>• Multiple Delling |



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| | | D- Educational Establishment;<br>D- Exhibition Centre;<br>D- Fast Food Outlet/Lunch Bar;<br>D- Health Centre;<br>D- Health Studio;<br>P- Home Business;<br>P- Home Occupation;<br>P- Hosted Short Term Rental Accommodation;<br>D- Laundromat;<br>D- Liquor Store-Small;<br>A- Liquor Store-Large;<br>D- Lunch Bar;<br>D- Massage Parlour;<br>D- Medical Centre;<br>D- Mobile Phone Tower & Associated Facilities;<br>D- Multiple Dwelling;<br>D- Office;<br>A- Public Amusement;<br>D- Restaurant/Café;<br>D- Restricted Premises;<br>D- Shop;<br>A- Small Bar;<br>A- Tavern;<br>P- Telecommunications Infrastructure;<br>A- Unhosted Short Term Rental Accommodation;<br>A- Veterinary Centre;<br>D- Vet Consulting Rooms;<br>P- Video Store; | |
| 3 | • Lot 100 on DP60341 (No.1) Raconteur Drive; and<br>• Lot 23 on P2198 (No.2) Carbine Street;<br>both of Ascot | D- Aged or Dependent Persons Dwelling;<br>D- Ancillary Dwelling;<br>D- Art Gallery;<br>D- Betting Agency;<br>D- Car Park;<br>D- Caretakers Dwelling;<br>D- Child Care Premises; | Nil. |

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| | | D- Child Family Day Care;<br>D- Civic Use;<br>D- Club Premises;<br>D- Community Home;<br>D- Consulting Rooms;<br>A- Convenience Store;<br>D- Dry Cleaning Premises;<br>D- Educational Establishment;<br>A- Exhibition Centre;<br>D- Grouped Dwelling;<br>D- Health Centre;<br>D- Health Studio;<br>P- Home Business;<br>P- Home Occupation;<br>D- Home Store;<br>A- Hospital;<br>P- Hosted Short Term Rental Accommodation;<br>D- Hotel;<br>D- Laundromat;<br>A- Liquor Store – Small;<br>D- Lunch Bar;<br>A- Massage Parlour;<br>D- Medical Centre;<br>D- Mobile Phone Tower & Associated Facilities;<br>D- Multiple Dwelling;<br>D- Nursing Home;<br>D- Office;<br>D- Private Recreation;<br>A- Place of Worship;<br>D- Public Amusement;<br>A- Reception Centre;<br>D- Residential Building;<br>D- Restaurant/Café;<br>D- Single House;<br>D- Showroom;<br>A- Small Bar;<br>D- Studio; | |

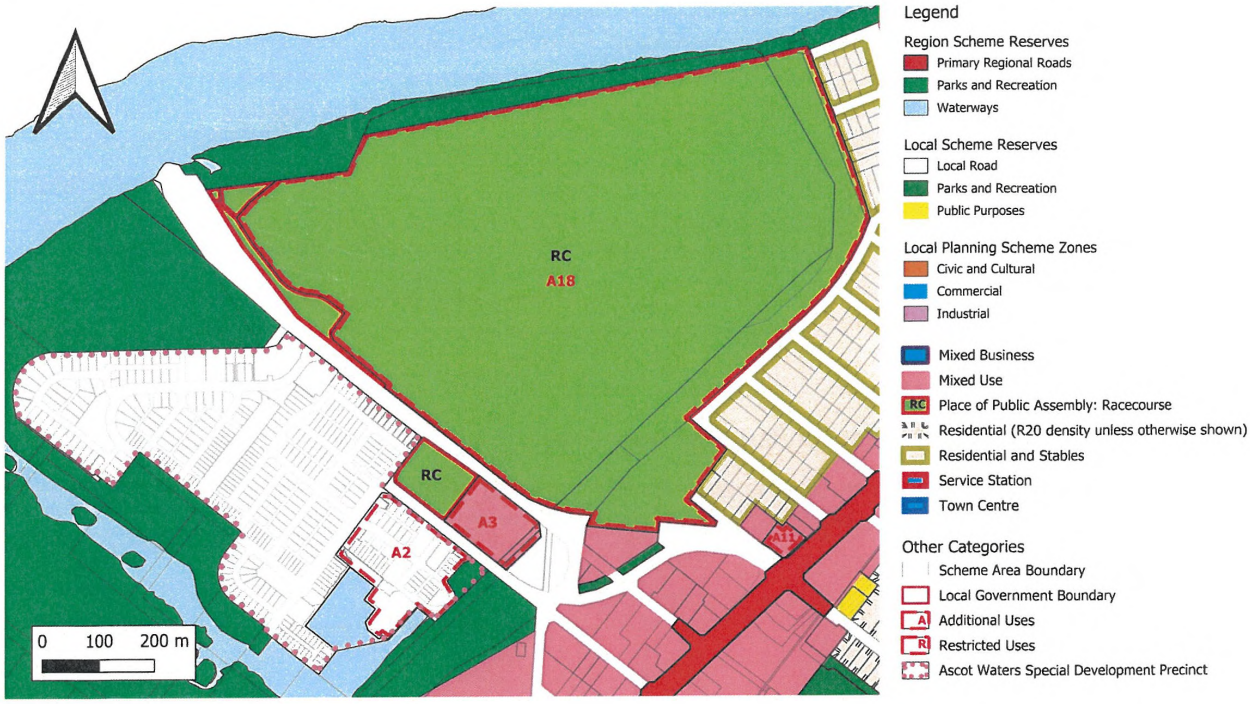


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| | | A- Tavern;<br>P- Telecommunications Infrastructure;<br>D- Tourist and Visitor Accommodation;<br>A- Unhosted Short term Rental Accommodation;<br>A- Veterinary Centre;<br>D- Vet Consulting Rooms;<br>A- Vet Hospital;<br>D- Video Store; | |

9. Amending the Scheme Map accordingly.

## EXISTING SCHEME MAP




## AMENDMENT MAP






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**Council adoption for advertising**

Adopted for advertising by resolution of the Council of the City of Belmont at the Ordinary Meeting of the Council held on this 25th day of November 2025.



Mayor

Chief Executive Officer

**Council recommended/submitted for approval**

Supported for submission to the Minister for Planning for approval by resolution of the City of Belmont at the Ordinary Meeting of the Council held on this day of

Mayor

Chief Executive Officer

**WAPC recommended/submitted for approval**

Delegated under S.16 of the
*Planning and Development Act 2005*

Date

**Approval granted**

Minister for Planning
S.87 of the *Planning and Development Act 2005*

Date

## SCHEDULE OF SUBMISSIONS

| No. | Name and Address | Summary of Submission | Officer Comment |
|---|---|---|---|
| 1. | Public Submitter | States that they are a resident of Carbine Street, Ascot and that the proposed amendment will directly impact the street and surrounding residential area by facilitating commercial and retail activity on land currently used for residential and stable purposes. | The Amendment does not broadly facilitate commercial and retail activity on any land currently used for residential and stables purposes. Only one lot currently zoned 'Residential and Stables' is proposed to be rezoned. All other 'Residential and Stables' zoned land is not subject to this Amendment. Notwithstanding, the submitters specific concerns are addressed in subsequent sections. |
| | | Considers that the proposal is inappropriate for the location and will significantly and negatively impact the amenity, safety and character of the area. | The submitters specific concerns are addressed in subsequent sections. |
| | | States that the traffic conditions are already unacceptable and that residents have been raising concerns with the City for years regarding speeding, congestion rat running particularly during race events and peak traffic periods. States that while the City has recently commenced speed monitoring activity, the response has taken approximately three years despite ongoing community concern. | Refer to Movement section of the Report. |
| | | States that race day traffic already creates substantial congestion, noise, unsafe driving | Refer to Movement section of the Report. |

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| | | conditions and difficulty accessing residential properties. Considers that the surrounding road network is not coping with existing demand and that introducing or encouraging further commercial and retail activity will inevitably increase vehicle movements, parking pressure, delivery traffic, noise and pedestrian risk in an area that is fundamentally residential in nature.<br><br>States that residents purchased in the area with an expectation that it would remain a residential and stables environment and not transition into a mixed commercial precinct. Considers that incremental commercial encroachment risks permanently altering the character of Ascot and diminishing residential amenity for existing homeowners and families.<br><br>Is particularly concerned that:<br><br>• The existing road infrastructure is inadequate to support increased commercial traffic;<br>• Local streets are already being used as through roads and rat runs; | It should be noted that only one lot currently zoned 'Residential and Stables' is proposed to be rezoned as part of this Amendment. As such, the area will remain a residential and stables precinct. Notwithstanding, the appropriateness of the proposed zones and the interface with the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables area section of the officer's report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom.<br><br>Refer to Movement section of the Report |

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| | | • Increased traffic volumes will create additional safety risks for residents, pedestrians and children;<br><br>• Parking overflow from retail and commercial activity will impact surrounding residential streets;<br><br>• Increased noise, lighting and operational activity will reduce residential amenity;<br><br>• The proposal represents further commercial creep into a long established residential area; | Refer to Movement section of the Report<br><br>Refer to Movement section of the Report<br><br>Refer to Movement section of the Report<br><br>Amenity impacts will be further considered as part of future development applications.<br><br>It should be noted that only one lot currently zoned 'Residential and Stables' is proposed to be rezoned as part of this Amendment. As such, the area will remain a residential and stables precinct. Notwithstanding, the appropriateness of the proposed zones and the interface with the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity |

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| | | • Insufficient weight appears to have been given to the cumulative impact of existing racecourse traffic and event related congestion.<br><br>Considers that before any rezoning or commercial expansion is considered that there should first be a comprehensive and transparent traffic and infrastructure assessment addressing:<br><br>• Cumulative traffic impacts;<br>• Pedestrian safety;<br>• Parking impacts;<br>• Event day congestion;<br>• Intersection performance;<br>• Speeding and traffic calming measures; and<br>• The suitability of surrounding residential roads for increased commercial use.<br><br>States that at present, residents are already experiencing significant impacts from existing traffic conditions. States that it is unreasonable to intensify development before these longstanding issues have been properly resolved.<br><br>States that there is also a significant and unique safety issue in the area that does not appear to have been properly considered. Notes that horses still regularly walk along Carbine Street and surrounding roads multiple times each day as part of the established racing and stable operations in Ascot and that increasing commercial and retail traffic in close proximity to horse movements will | Centre Retail Floorspace and Showroom.<br><br>Refer to Movement section of the Report.<br><br>Refer to Movement section of the Report.<br><br>Refer to Movement section of the Report<br><br>Refer to Movement section of the Report |

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| | | create a serious risk to both riders, handlers, motorists and the animals themselves. States that many members of the general public who are unfamiliar with horses do not understand how to safety drive near them, including appropriate speed, noise, spacing and general caution around horse movement. Considers that introducing additional retail and commercial traffic into an already congested area materially increases the likelihood of accidents, distress to animals and dangerous interactions between vehicles and horses. States that the proposal appears focused on maximising development and commercial opportunity without adequately considering the practical safety consequences or the unique operational character of the area.<br><br>Strongly opposes the proposed amendment and requests the City retain the existing residential zoning at Carbine Street and character of the area. | Noted |
| 2. | Public Submitter | States that they are a resident of 4 Carbine Street, Ascot and strongly oppose the proposed amendment. States that the proposal would directly impact the street and surrounding residential area by introducing commercial and retail activity onto land currently used for residential and stable purposes. | The Amendment does not facilitate commercial and retail activity on any land currently used for residential and stables purposes. Only one lot currently zoned 'Residential and Stables' is proposed to be rezoned. All other 'Residential and Stables' zoned land is not subject to this Amendment. Notwithstanding, the appropriateness of the proposed zones and the interface to the residential and stables area is |

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| | | | addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom. |
| | | Considers that the proposal is unsuitable for the location and will negatively affect the safety, amenity and character of the area. | The submitters specific concerns are addressed in subsequent sections. |
| | | States that traffic in the precinct is already a serious issue, with residents having raised ongoing concerns with the City for years regarding speeding, congestion and rat running, particularly during race events and peak periods. Notes that despite repeated community concerns, only limited speed monitoring has been introduced after a lengthy period. | Refer to Movement section of the Report. |
| | | States that race day traffic already results in major congestion, excessive noise, unsafe driving conditions and difficulty accessing residential properties. Considers that the surrounding road network is already under strain and that additional commercial or retail activity will further increase vehicle movements, delivery traffic, parking demand, noise and pedestrian safety risks in a predominantly residential area. | Refer to Movement section of the Report. |

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| | | States that residents purchased in the area on the expectation that Ascot would remain a residential and stables precinct rather than transition towards a mixed commercial environment. Considers that ongoing commercial expansion risks permanently altering the character of the neighbourhood and reducing residential amenity.<br><br>States that key concerns include:<br>• existing road infrastructure is already inadequate to accommodate additional commercial traffic;<br>• local streets are heavily used as through-roads and rat runs;<br>• increased traffic volumes will create additional risks for residents, pedestrians and children;<br>• overflow parking from retail and commercial activity will impact surrounding residential streets; | It should be noted that only one lot currently zoned 'Residential and Stables' is proposed to be rezoned as part of this Amendment. As such, the area will remain a residential and stables precinct. Notwithstanding, the appropriateness of the proposed zones and the interface with the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom.<br><br>Refer to Movement section of the Report<br><br>Refer to Movement section of the Report<br><br>Refer to Movement section of the Report<br><br>Refer to Movement section of the Report |

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| | | • increased noise, lighting and business activity will reduce residential amenity;<br><br>• the proposal represents continued commercial encroachment into a long-established residential area; and<br><br>• insufficient consideration has been given to cumulative impacts of racecourse traffic and event-related congestion.<br><br>Considers that, prior to any rezoning or commercial expansion, a comprehensive and transparent traffic and infrastructure assessment should be undertaken addressing:<br><br>• cumulative traffic impacts; | Amenity impacts will be further considered as part of future development applications.<br><br>It should be noted that only one lot currently zoned 'Residential and Stables' is proposed to be rezoned as part of this Amendment. As such, the area will remain a residential and stables precinct. Notwithstanding, the appropriateness of the proposed zones and the interface to the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom.<br><br>Refer to Movement section of the Report.<br><br>Refer to Movement section of the Report. |

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| | | • pedestrian safety;<br>• parking impacts;<br>• race day and event congestion;<br>• intersection performance;<br>• speeding and traffic calming measures; and<br>• the suitability of surrounding residential roads for increased commercial activity.<br><br>States that residents are already experiencing significant impacts from existing traffic conditions and considers it unreasonable to intensify development before these issues are properly addressed. Notes that there is also a specific safety issue not adequately considered, with horses regularly being walked along Carbine Street and surrounding roads as part of established racing and stable operations. States that increased commercial and retail traffic in proximity to horse movements creates safety risks for riders, handlers, motorists and animals. Considers that many drivers are unfamiliar with how to safely interact with horses, including appropriate speed, noise and distance, increasing the likelihood of accidents, distress to animals and unsafe interactions.<br><br>States that overall the proposal appears focused on development and commercial opportunity without sufficient regard to the practical safety implications or the unique character of the area.<br><br>Strongly opposes the proposed amendment and requests that the City retain the existing residential | Refer to Movement section of the Report.<br><br>Refer to previous responses |

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| | | zoning and character of the Carbine Street precinct and surrounding area. | Noted |
| 3. | Public Submitter | Would like to have everything demolished and turned into a big farm full of abundant crops. | The submitters suggestion is not relevant to what is being proposed by Amendment No. 24. |
| 4. | Public Submitter | States that they are a resident of Ascot and that the proposed amendment will directly impact the street and surrounding residential area by facilitating commercial and retail activity on land currently used for residential and stable purposes.<br><br>Considers that the proposal does not represent orderly and proper planning and that the changes do not reflect what is best for existing residents, families, or the long established character of Ascot. | The Amendment does not broadly facilitate commercial and retail activity on any land currently used for residential and stables purposes. Only one lot currently zoned 'Residential and Stables' is proposed to be rezoned. All other 'Residential and Stables' zoned land is not subject to this Amendment. Notwithstanding, the appropriateness of the proposed zones and the interface to the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom.<br><br>The submitters specific concerns are addressed in subsequent sections. |

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| | | States that traffic in the precinct is already a serious issue, with residents having raised ongoing concerns with the City for years regarding speeding, congestion and rat running, particularly during race events and peak periods. States that on race days, congestion, noise, unsafe driving behaviour and difficulty accessing homes is common. Considers that the existing network is not coping with current demand let alone any increase.<br><br>States that introducing or encouraging further commercial and retail activity will inevitably increase vehicle movements, parking pressure, delivery traffic, noise and pedestrian risk in an area that is fundamentally residential.<br><br>States that many residents purchased in this area with the reasonable expectation that it would remain a residential/stables environment and not transition into a mixed use commercial precinct. | Refer to Movement section of the Report.<br><br>Refer to Movement section of the Report. Regarding noise, amenity impacts will be further considered when development applications are lodged.<br><br>It should be noted that only one lot currently zoned 'Residential and Stables' is proposed to be rezoned as part of this Amendment. As such, the area will remain a residential and stables precinct. Notwithstanding, the appropriateness of the proposed zones and the interface to the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses |

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| | | | section under the headings Activity Centre Retail Floorspace and Showroom. |
| | | Is particularly concerned that:<br>• The existing road infrastructure is inadequate to support increased commercial traffic;<br>• Local streets are already being used as through roads and rat runs;<br>• Increased traffic volumes will create additional safety risks for residents, pedestrians and children;<br>• Parking overflow from retail and commercial activity will impact surrounding residential streets;<br>• Increased noise, lighting and operational activity will reduce residential amenity;<br>• The proposal represents further commercial creep into a long established residential area; | Refer to Movement section of the Report<br>Refer to Movement section of the Report<br>Refer to Movement section of the Report<br>Refer to Movement section of the Report<br>Amenity impacts will be further considered as part of future development applications.<br>It should be noted that only one lot currently zoned 'Residential and Stables' is proposed to be rezoned as part of this Amendment. As such, the area will remain a residential and stables precinct. Notwithstanding, the appropriateness of the proposed |

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| | | • Insufficient weight appears to have been given to the cumulative impact of existing racecourse traffic and event related congestion.<br><br>States that the proposal is inconsistent with the purpose and intent of the Local Planning Scheme which is meant to provide certainty for residents and ensure compatible land uses.<br><br>Considers that allowing commercial creep into a stable residential environment undermines that certainty and conflicts with the established planning framework for Ascot. | zones and the interface to the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom.<br><br>Refer to Movement section of the Report.<br><br>The purpose of the Local Planning Scheme is to provide a framework to guide land use and development within the locality. Where considered appropriate and justified, the Scheme can be amended through the statutory amendment process.<br><br>It should be noted that only one lot currently zoned 'Residential and Stables' is proposed to be rezoned as part of this Amendment. As such, the area will remain a residential and stables precinct. Notwithstanding, the appropriateness of the proposed zones and the interface with the |

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| | | Believes that the proposal fails to meet the requirements of State Planning Policy 7.0 (Design of the Built Environment), which emphasises the protection of residential amenity, including noise, traffic, safety, access and neighbourhood character. States that the impacts of the amendment would significantly reduce amenity for existing residents. | residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom.<br><br>It should be noted that State Planning Policy 7.0 – Design of the Built Environment does not specifically apply to the consideration of scheme amendments. Notwithstanding, for comments relating to traffic and access refer to the Movement section of the Report. For comments relating to neighbourhood character, the appropriateness of the proposed zones and the interface to the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officer's report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom. Matters relating to noise |

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| | | States that under State Planning Policy 7.2 (Precinct Design), precinct planning must demonstrate safe and efficient movement networks, consider cumulative impacts, and ensure streets are suitable for their intended function. Considers these requirement have not been met and that no comprehensive traffic impact assessment has been provided to demonstrate that the network can safely accommodate increased commercial activity.<br><br>Notes that Ascot is a unique precinct where horses are still walked along local streets multiple times a day as part of established racing and stables operations. States that increase commercial traffic in close proximity to horse movements creates serious risks for riders, handlers, motorists and the animals themselves. Considers that many drivers are unfamiliar with how to safely navigate around horses and that safety issues appear to have been overlooked in the amendment and is inconsistent with planning principles relating to public safety and movement networks.<br><br>Considers that, prior to any rezoning or commercial expansion, a comprehensive and transparent assessment of:<br><br>• Cumulative traffic impacts<br>• Pedestrian safety<br>• Parking demand and overflow<br>• Event day congestion | and other potential amenity impacts will be considered at the development application stage.<br><br>Refer to Movement section of the Report<br><br>Refer to Movement section of the Report<br><br>Refer to Movement section of the Report |

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| | | • Intersection performance<br>• Speeding and traffic calming requirements<br>• Suitability of residential streets for commercial use<br><br>States that none of this work has been made available for public review and that proceeding without this evidence is inconsistent with the Planning and Development Act's requirements for informed, evidence based decision making.<br><br>Concludes by stating that for the reasons mentioned above - including inconsistency with State Planning Policy, failure to meet the requirements of orderly and proper planning, inadequate assessment of traffic and safety impacts, and the erosion of established residential character, they strongly oppose the proposed development.<br><br>Requests that the City retain the existing residential zoning and protect the safety, amenity and character of the Ascot community. | Refer to Movement section of the Report<br><br>Noted<br><br>Land subject to the amendment is not zoned 'Residential'. Notwithstanding, the appropriateness of the proposed zones and the interface to the residential and stables area is further addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is |

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| | | | addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom. |
| 5 | Public Submitter | States that they are a resident of Carbine Street, Ascot and that the proposed amendment will directly impact the street and surrounding residential area by facilitating commercial and retail activity on land currently used for residential and stable purposes. | The Amendment does not facilitate commercial and retail activity on any land currently used for residential and stables purposes. Only one lot currently zoned 'Residential and Stables' is proposed to be rezoned. All other 'Residential and Stables' zoned land is not subject to this Amendment. Notwithstanding, the appropriateness of the proposed zones and the interface to the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom. |
| | | Considers that the proposal is inappropriate for the location and will significantly and negatively impact the amenity, safety and character of the area. | The submitters specific concerns are addressed in subsequent sections. |
| | | States that the traffic conditions are already unacceptable and that residents have been raising concerns with the City for years regarding | Refer to Movement section of the Report. |

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| | | speeding, congestion rat running particularly during race events and peak traffic periods. States that while the City has recently commenced speed monitoring activity, the response has taken approximately three years despite ongoing community concern.<br><br>States that race day traffic already creates substantial congestion, noise, unsafe driving conditions and difficulty accessing residential properties. Considers that the surrounding road network is not coping with existing demand and that introducing or encouraging further commercial and retail activity will inevitably increase vehicle movements, parking pressure, delivery traffic, noise and pedestrian risk in an area that is fundamentally residential in nature.<br><br>States that residents purchased in the area with an expectation that it would remain a residential and stables environment and not transition into a mixed commercial precinct. Considers that incremental commercial encroachment risks permanently altering the character of Ascot and diminishing residential amenity for existing homeowners and families. | Refer to Movement section of the Report.<br><br>It should be noted that only one lot currently zoned 'Residential and Stables' is proposed to be rezoned as part of this Amendment. As such, the area will remain a residential and stables precinct. Notwithstanding, the appropriateness of the proposed zones and interface to the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is |

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| | | | addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom. |
| | | Is particularly concerned that:<br><br>• The existing road infrastructure is inadequate to support increased commercial traffic;<br><br>• Local streets are already being used as through roads and rat runs;<br><br>• Increased traffic volumes will create additional safety risks for residents, pedestrians and children;<br>• Parking overflow from retail and commercial activity will impact surrounding residential streets;<br>• Increased noise, lighting and operational activity will reduce residential amenity;<br><br>• The proposal represents further commercial creep into a long established residential area; | Refer to Movement section of the Report<br><br>Refer to Movement section of the Report<br><br>Refer to Movement section of the Report<br><br>Refer to Movement section of the Report<br><br>Amenity impacts will be further considered as part of future development applications.<br><br>It should be noted that only one lot currently zoned 'Residential and Stables' is proposed to be rezoned as part of this Amendment. As such, the area will remain a residential |

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| | | • Insufficient weight appears to have been given to the cumulative impact of existing racecourse traffic and event related congestion.<br><br>Considers that before any rezoning or commercial expansion is considered that there should first be a comprehensive and transparent traffic and infrastructure assessment addressing:<br><br>• Cumulative traffic impacts;<br>• Pedestrian safety;<br>• Parking impacts;<br>• Event day congestion;<br>• Intersection performance;<br>• Speeding and traffic calming measures; and<br>• The suitability of surrounding residential roads for increased commercial use.<br><br>States that at present, residents are already experiencing significant impacts from existing | and stables precinct. Notwithstanding, the appropriateness of the proposed zones and the interface to the residential and stables area is addressed in the Zoning and Interface with the Residential and Stables Area section of the officers report. The appropriateness of the proposed level of retail floorspace is addressed in the Restricted Uses section under the headings Activity Centre Retail Floorspace and Showroom.<br><br>Refer to Movement section of the Report.<br><br>Refer to Movement section of the Report. |

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| | | traffic conditions. States that it is unreasonable to intensify development before these longstanding issues have been properly resolved.<br><br>States that there is also a significant and unique safety issue in the area that does not appear to have been properly considered. Notes that horses still regularly walk along Carbine Street and surrounding roads multiple times each day as part of the established racing and stable operations in Ascot and that increasing commercial and retail traffic in close proximity to horse movements will create a serious risk to both riders, handlers, motorists and the animals themselves. States that many members of the general public who are unfamiliar with horses do not understand how to safety drive near them, including appropriate speed, noise, spacing and general caution around horse movement. Considers that introducing additional retail and commercial traffic into an already congested area materially increases the likelihood of accidents, distress to animals and dangerous interactions between vehicles and horses. States that the proposal appears focused on maximising development and commercial opportunity without adequately considering the practical safety consequences or the unique operational character of the area.<br><br>Strongly opposes the proposed amendment and requests the City retain the existing residential zoning at Carbine Street and character of the area. | Refer to Movement section of the Report<br><br>Refer to Movement section of the Report |

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| | | | Noted |
| 6 | Public Submitter | States that they act on behalf of the owner of a commercial property within close proximity to the Ascot Racecourse Precinct.<br><br>Acknowledges the strategic intent of the amendment and the potential for long-term uplift associated with redevelopment and increased activity within the precinct. Requests the City address several considerations from a commercial asset management and leasing perspective as part of the amendment process as detailed below.<br><br><u>Short Term – Impacts (Construction Phase)</u><br>Considers that the construction phase associated with the proposed amendment and structure plan has the potential to materially impact surrounding commercial properties, particularly in relation to:<br><br>• Access and connectivity: Disruptions to vehicular and pedestrian access may affect tenant trade and customer visitation.<br>• Amenity impacts: Noise, dust, vibration and general construction activity may reduce the attractiveness and usability of nearby premises.<br>• Parking and traffic congestion: Temporary reductions in parking availability and increased traffic volumes may further deter customers and service providers.<br>• Business continuity risks: Tenants may experience reduced turnover, which in turn | Noted<br><br>Noted<br><br>The matters raised by the submitter relate to potential impacts at construction stage. They are not relevant to planning processes such as Amendment No. 24. |

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| | | impacts rental sustainability and occupancy levels.<br><br>Given the above, requests the City clearly outline:<br><br>• The construction staging and anticipated timelines<br>• Measures to ensure continued access to adjacent properties at all times.<br>• Strategies for minimising amenity impacts, including noise, dust and traffic management.<br>• Whether any form of business support or relief framework is contemplated for affected operators.<br><br><u>Medium – Term Considerations (Post-Construction Environment)</u><br>States that following completion, the nature of the precinct is likely to evolve. Considers that while this may present opportunities, it also warrants careful consideration of:<br><br>• Changes in traffic patterns and accessibility, including any permanent alterations to road networks.<br>• Land use interface issues, particularly where residential expansion may create sensitivity to existing commercial uses (e.g. noise, hours of operation).<br>• Pressure on parking and infrastructure, particularly if density increases significantly. | Refer to previous response.<br><br>The matters raised by the submitter are not directly relevant to Amendment No. 24. Notwithstanding, it should be noted that the pattern of development, interfaces, traffic and public realm were all considered as part of the Ascot Racecourse Precinct Structure Plan. This project was advertised and Council provided its recommendation to the Western Australian Planning Commission for approval subject to modifications. |

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| | | • Public realm and safety outcomes, which will influence the attractiveness of the surrounding area.<br><br>Requests clarity on:<br><br>• How the City intends to integrate existing commercial assets into the evolving precinct.<br><br>• Measures to manage land use conflicts, particularly between new residential development and existing commercial operations.<br><br>• Planning infrastructure upgrades to support increased density.<br><br>• Ongoing management and activation strategies to ensure the precinct remains commercially viable and accessible. | It should be noted that the submitters requests are not relevant to Amendment No. 24. Notwithstanding, the following comments are provided:<br><br>Integration of existing commercial assets will be considered on a case by case basis when development applications are lodged.<br><br>Land use conflicts will be considered on a case by case basis when development applications are lodged.<br><br>Infrastructure upgrades are addressed by the Ascot Racecourse Precinct Structure Plan.<br><br>It is unclear what specifically the submitter is referring to. However, it should be noted that the City is not the developer and so it will not be taking any specific action to ensure the Ascot Racecourse Precinct Structure Plan area is commercially viable. Regarding access, this is addressed by the Ascot Racecourse Precinct Structure Plan. |

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| | | <u>Leasing and Commercial Impacts (Forward Outlook)</u><br>States that from a leasing and investment perspective, the amendment introduces a level of uncertainty that may impact decision making in the near to medium term.<br><br>Lists the following considerations:<br>• Tenant hesitancy to commit to new leases during periods of prolonged construction or uncertainty.<br>• Potential downward pressure on rents or incentives, particularly if trading conditions are affected.<br>• Lease term structuring challenges, with tenants seeking shorter terms or additional flexibility.<br>• Asset value implications, where perceived risk impacts investor sentiment.<br><br>Acknowledges that if appropriately delivered, the longer term outcome may enhance demand, particularly if the precinct successfully delivers increased population density and amenity.<br><br>Requests the City to advise: | The matters raised by the submitter relate to potential impacts at construction stage. They are not relevant to the consideration of Amendment No. 24.<br><br>Noted<br><br>The matters raised by the submitter relate to potential construction-stage impacts and are not relevant to Amendment No. 24. Notwithstanding this, the following comments are provided: |

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| | | • How it intends to communicate and stage the development to provide certainty to market participants.<br><br>• Any engagement plan with local property owners and tenants throughout delivery.<br><br>• Whether there are economic development or activation initiatives planned to support leasing outcomes during transition.<br><br><u>Request for Mitigation and Management Strategies</u><br>Requests that the City provide detailed information on the strategies it will implement to mitigate and manage impacts arising from the proposed amendment including:<br>• Clear project timelines and staging.<br>• Traffic, access and parking management plans.<br>• Construction management protocols to minimise disruption.<br>• Ongoing stakeholder communication frameworks.<br>• Measures to support local businesses and maintain commercial viability through the transition. | Development contemplated by the Ascot Racecourse Precinct Structure Plan is not proposed to be undertaken by the City of Belmont. Therefore, specific staging and timing will be at the discretion of Perth Racing.<br><br>Community consultation may occur as part of the assessment of future development applications.<br><br>There are no economic development or activation initiatives proposed by the City to support leasing outcomes.<br><br>As detailed in responses to previous comments, these matters are not relevant to Amendment No. 24. |

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| | | Summary<br>States that their client is broadly supportive of strategic planning initiatives that enhance the long term viability of the locality. Consider that it is critical that the short and medium term impacts on existing commercial assets are carefully managed, particularly where they directly influence tenant retention, leasing activity and asset performance. | Noted |
| 7 | Public Submitter | States that they oppose the amendment.<br><br>Does not believe converting additional land to residential is in the interests of any future and current residents of the area.<br><br>Considers that there is very little public green space in Ascot and that there should be more. States that there are no large green spaces easily accessible other than Garvey Park ad Kuljak Island which need to be driven to. | Noted<br><br>Noted. The submitters specific concerns are addressed below.<br><br>Of all suburbs in the City of Belmont, Ascot has the highest proportion of properties within 100m of any public open space, mainly due to its proximity to the Swan River. The City's Public Open Space Strategy proposes to investigate acquiring additional land or repurposing existing City owned land to create new POS opportunities. Additionally, the Ascot Racecourse Precinct Structure Plan proposes a parkland area that is intended to be publicly accessible, attracting visitors to the site outside of racing events. This area is intended to be landscaped and include a playground and picnic facilities. |

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| | | State that it will create further traffic congestion in a small area particularly where there are limited public amenities. | Refer to Movement section of the report. |
| 8 | Public Submitter | Appreciates the opportunity to provide feedback on the amendments and is supportive of the vision for the area, particularly the transition towards more mixed use and commercial zones. However, considers that there may be a missed opportunity to fully realise the potential of the precinct. | Noted. The vision for the area is set out in the Ascot Racecourse Precinct Structure Plan as follows:<br><br>*"To support ongoing horse racing activities at Ascot Racecourse through improved facilities and community infrastructure, and business development opportunities, planned in a manner that is financially sustainable and responsive to site context and community needs."*<br><br>Amendment No. 24 is being progressed to facilitate implementation of the structure plan. |
| | | Understands the intent to create a "village" atmosphere but is concerned that the current plans may skew too heavily toward a retirement-style community. While recognising value in accommodating this demographic, considers that the development should achieve a more balanced and diverse population mix. | While it is noted that the Ascot Racecourse Precinct Structure Plan designated Precinct A for retirement living purposes, this precinct is not subject to Amendment No. 24. Regarding the other precincts, a range of residential typologies can be considered. |

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| | | Raises concern that the emphasis on "small-scale" outcomes within the precinct objectives may limit the long-term viability of commercial uses.<br><br>Questions whether proposals such as a small shopping centre will be commercially sustainable given reliance on sufficient population density and diversity, and notes that the timing and nature of population growth may not adequately support these outcomes.<br><br>Is concerned that references to aged care facilities and housing for those retiring from the racing industry indicate a relatively narrow demographic focus. Considers that a broader age profile would contribute to a more vibrant and sustainable community. | The objectives of the various precincts are contained within the Ascot Racecourse Precinct Structure Plan and are therefore not directly relevant to Amendment No. 24. Notwithstanding, references to "small-scale" commercial uses are limited to the objectives for Precincts A and D, where such uses are considered appropriate given the intended role and function of those precincts. Larger-scale commercial development is intended to be accommodated within Precinct E.<br><br>Refer to the Activity Centre Retail Floorspace heading under the Restricted Uses section of the Officers Report.<br><br>References to retirement living are contained within the Ascot Racecourse Precinct Structure Plan for Precinct A. Precinct A is not subject to this Amendment. Notwithstanding, Amendment No. 24 provides for a range of different residential typologies including aged or dependent persons dwellings, ancillary dwellings, caretakers dwellings, community homes, |

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| | | | grouped dwellings, multiple dwellings, nursing homes, residential buildings and single houses. |
| | | In relation to building height and density, notes that the proposed 3–6 storey outcomes appear to depart from earlier higher-density aspirations. Considers that higher density is important to support residential diversity and local businesses, and expresses concern that the current approach may limit the precinct's overall success. Also notes that achieving a more targeted demographic profile, including working-age residents, would likely require higher density development. | It is unclear what earlier height aspirations are being referred to by the submitter. The proposed building heights were supported by Council in its consideration of the draft Ascot Racecourse Precinct Structure Plan. Building heights are further discussed in the Zoning section of the Officer's report. |
| | | Raises concern that reduced building heights in Precinct E reflect a strong response to community feedback, and considers that this may not fully align with longer-term strategic objectives for growth and activation. Notes that while community consultation is important, it should be balanced with achieving the intended outcomes for the precinct. | Heights within Precinct E have not been reduced in response to community feedback. |
| | | Questions the feasibility of childcare provision within the proposed demographic context, noting that demand may be limited if the area predominantly attracts older residents. | The feasibility of a Child Care Premises land use is not a matter relevant to Amendment No. 24 and would need to be considered further by the proponent. Notwithstanding, if a Child Care Premises is ultimately determined to be unfeasible, there are a range of other land uses that may be able to establish on the site. |

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| | | In relation to access, considers that limited or constrained access arrangements may affect the ability of commercial uses to attract sufficient patronage, which in turn may impact their viability.<br><br>Refers to neighbouring riverside precincts such as Burswood, Applecross and South Perth, noting that these areas demonstrate how higher density development can support diverse populations, active street life and sustained local economies. | Traffic related matters are addressed within the Movement section of the Officers report.<br><br>Noted. Council's recommendation on the draft Ascot Racecourse Precinct Structure Plan and the original version of Amendment No. 24 aimed to support the development of a high-amenity mixed-use precinct (within Precinct E). This included restrictions on certain land uses that were not considered consistent with the desired character and function of the activity centre and surrounding areas as detailed within the Restricted Uses section of the officers report. For example, Council did not support the establishment of 'Showrooms'. Council also supported 'Fast Food Outlet/Lunch Bar' land uses only where they do not incorporate drive-through facilities. The Minister for Planning (or as delegated) subsequently recommended modifications to the Amendment, as discussed further in the Restricted Uses section of the Officer's Report. |

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| | | Considers that the Kilns area is currently underutilised and presents an opportunity for improved activation. Suggests that rather than being fenced off, the area could incorporate seating, recreational facilities such as basketball and pickleball courts, and more open spaces that encourage broader community use, including families and younger residents.<br><br>Overall, considers that the current proposal may not fully support even the intended "small-scale" amenities and that further consideration of density, demographic mix and activation opportunities would better realise the potential of the precinct as a vibrant and economically sustainable area. | The Kilns site is not subject to Amendment No. 24. This site is subject to the draft Golden Gateway Precinct Structure Plan and Amendment No. 25. The submitter is welcome to contact the City's planning team for more information.<br><br>The submitters conclusion is addressed in response to the above comments. |
| 9 | Public Submitter | States that given mixed uses will back onto and is surrounded by residential housing, there must be restrictions on what can be allowed. Provides examples of some inappropriate uses including massage parlours, brothels, drive through bottle shops, tattoo parlours, smoke shops, fast food outlets or short term accommodation. States that without these restrictions, values in the area will be lower and the family community will be at risk. | The appropriateness of land uses has been considered in preparing Amendment No. 24 through the application of Restricted and Additional Uses as further detailed within the Officers report. In doing so, it was not considered that massage parlours, liquor store-small or short-term accommodation are inherently inappropriate land uses. Any potential amenity impacts associated with these uses can reasonably be considered through the development application process, having regard to the specific circumstances of the proposal. |

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| | | | Brothels are unlawful in Western Australia and therefore cannot be approved.<br><br>Regarding tattoo parlours (which would generally be classified as a 'Shop'), smoke shops (which would generally be classified as 'Restricted Premises') and fast-food outlets, these uses are only proposed to be provided for within the Commercial zoned land. This area is separated from surrounding residential properties, reducing the potential for impacts on residential amenity. |
| 10 | Public Submitter | States that Precinct D & E should have a shopping area with a major general supermarket. States that this is not found along Great Eastern Highway and that getting to Belmont or the City is not easy for people using public transport. Considers that as the population along the highway increases, more convenient shopping facilities are needed.<br><br>Would like to see a sub-branch of the library, council office and leisure centre be located along Great Eastern Highway. | The City's activity centre planning strategy acknowledges the need for retail floorspace within the area. As detailed within the officers report, it is considered appropriate to limit this to 1,200m2 in the first instance with potential to increase in the future.<br><br>The submitters comment is not relevant to Amendment No. 24. |
| 11 | Public Submitter | Requests references to Funeral Parlour be removed. | Reference to funeral parlour refers to it being not appropriate within the precinct. Therefore, no modification to this aspect is required. |
| 12 | Public Submitter | States that feedback provided across the iterations of the different projects over many years has been | A succinct two-page notification letter was provided to the submitter |

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| | | consistent. Suggests that in future a 1-2 page summary that is not AI generated be provided in layman's terms. | outlining the proposed Amendment. In addition, a summary of the Amendment was published on Belmont Connect to assist the community in understanding the proposal.<br>The Amendment Report itself also provides a clear explanation of the proposal, with pages 1 to 6 setting out the key elements of the Amendment, and pages 7 onwards providing more detailed supporting information. |
| | | States that they acknowledge balancing interests of all parties is difficult however the impact on residents is paramount who have to live with:<br>• Safe traffic ingress and egress for the neighbourhood<br>• Sufficient infrastructure like public transport and utilities that can withstand greater density to support existing/future residents | Refer to Movement section of the report.<br><br>This comment is not directly relevant to the scheme amendment. Notwithstanding, the Structure Plan adequately details the availability of services for future development. |
| | | Provides a map taken from the Structure Plan and states they have concerns about traffic congestion resulting from the densities. States that the existing roundabouts already struggle and that they recall when the traffic lights were installed at the Resolution Drive/Grandstand intersection that | Refer to Movement section of the report. |

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| | | this had a "knock on effect" with traffic back up to Great Eastern Highway in two directions.<br><br>States that they attended a meeting in November 2024 and raised the issue of emergency management, given the unique circumstances of living on a 100 year flood plain given the devastating floods in Spain that were occurring at the time. Provides a photo of the November 2024 meeting.<br><br>Asks that the scheme amendment be mindful of who is responsible to pay for any future issues relating to waste, environment, traffic management and maintenance issues that arise in the Ascot Racecourse precinct.<br><br>States that the multimillion dollar restoration of the Kilns and stacks was appreciated but there are signs the stacks and reinforcements are shifting with seismic movement. Questions who maintains | While this comment is not directly relevant to the scheme amendment, the Structure Plan was referred to the Department of Water and Environmental Regulation (DWER). They advised that a small portion of Precinct A is located within the floodway and as such any future development would have to comply with floodplain management and meet minimum habitable floor levels. A minimum habitable floor level of 0.5m above the adjacent 1% AEP flood level was recommended to ensure adequate flood protection. The Structure Plan complies with this and requires that all structures are built 0.5m above the flood level.<br><br>This comment is not relevant to the Scheme Amendment. These matters were considered as part of the Structure Plan.<br><br>While this comment is not relevant to the Scheme Amendment, DPLH as the landowner is responsible for the ongoing maintenance of the Kilns. |

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| | | the integrity of the stacks or any development across the three projects.<br><br>Thanks the City for allowing for feedback. States that they have been a resident since 2001 and that its not a case of being a nimby but a limby. Invites all decision makers to 'live in my backyard'. | Noted |
| 13 | Public Submitter | Have undertaken a detailed review of Amendment No. 24 as advertised and are concerned that it is inconsistent with key elements of the City's well established contemporary local planning framework including the adopted Activity Centre Planning Strategy. As a result, considers this has the potential to jeopardise the planned development of the Golden Gateway Activity Centre and undermine the established activity centre hierarchy envisaged by the City's strategic planning documents.<br><br>Supports Amendment No. 24 in the form endorsed by Council on 25 November 2025, including the restriction limiting retail floorspace within the proposed Commercial zone to 1,200m$^2$ in the first instance, with any increase up to 3,000m$^2$ being subject to a Net Benefit Test (NBT) being prepared that demonstrates compliance with the requirements of SPP 4.2 to the satisfaction of the local government.<br><br>Respectfully requests that the restrictions originally endorsed by Council, or alternative provisions that achieve the same or similar outcomes be reinstated. States that this will ensure that future retail development within the Ascot Racecourse | Officers support the submitters comments and refer the submitter to the Officers Report for further information. |

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| | | Precinct occurs in an orderly and proper manner consistent with the City's activity centre hierarchy and the retail planning outcomes contemplated by both the City's Activity Centre Planning Strategy and the Council endorsed draft PSP.<br><br>**Background**<br><br>Provides detailed project background consistent with the background mentioned in the officer's report. Mentions that they lodged a submission in December 2024 requesting an amendment to the PSP such that the development of a new/future local centre is limited to 1,200m$^2$ and not 3,400m$^2$ as proposed.<br><br>**Matters for Consideration**<br>Notes that the Minister's modifications substantially depart from the Council's resolution of 25 November 2025. In particular, notes that the modifications entirely remove the retail floorspace controls proposed by the City to land proposed to be zoned Commercial, resulting in no planning scheme based limitation on the amount of retail floorspace that may be developed within the precinct.<br><br>Also notes that the modifications expand the range of retail related land uses capable of development within the PSP area by introducing 'Showroom' as a discretionary land use on Lot 100 Raconteur Drive and Lot 23 Carbine Street despite the City's | |

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| | | position that this land use is inconsistent with the strategic intent of the precinct.<br><br><u>Restricted Uses and Retail Floorspace Controls</u><br>Notes that Amendment No.24 as initiated by Council proposed to introduce two Restricted Use areas into LPS 15, aligned with the strategic objectives of the draft PSP and the City's Activity Centre Planning Strategy (ACPS). States that in their view this represents an orderly and proper planning approach.<br><br>Notes that the first Restricted Use area was proposed to apply to the portions of the Amendment area that are proposed to be zoned 'Mixed Use' and included land uses capable of approval within the 'Mixed Use' zone except for several land uses that were considered inappropriate for the precinct, including 'Showroom'.<br><br>States that they continue to support the City's assessment which concluded that 'Showroom' was not considered an appropriate use within the proposed Mixed Use zone due to its potential amenity impacts, car-oriented nature and inconsistency with the intended function of the precinct. Highlights that the City recognised that the original version of the PSP contemplated up to 9,600m² of additional retail floorspace within Precinct E, a scale of development that was not anticipated by the City's strategic planning framework and which had the potential to | |

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| | | undermine the well-established activity centre hierarchy.<br><br>Further highlights that the City identified that bulky goods showroom development is fundamentally different from the pedestrian-oriented, mixed-use environment intended for the future local centre and states that the draft PSP seeks to create a walkable, active centre focused on local services and community activity. Considers that the introduction of 'Showroom' immediately adjacent to the proposed local centre would be inconsistent with the principles of SPP 4.2, which promotes compact urban form, active street frontages and pedestrian-focused centres and would inappropriately draw patronage from a much wider catchment, exacerbating local traffic issues and departing from the proposed 'local' focus for the area. Highlights that the City also noted that SPP 4.2 generally contemplates 'Showroom' as a desired use in association with higher-order centres and activity centre frame areas, rather than local and neighbourhood centres such as that proposed within the Ascot Racecourse/Golden Gateway Precinct.<br><br>Notes that the second Restricted Use area was proposed to apply to the land that is proposed to be zoned 'Commercial'.<br><br>Supports the City's recommendation that the proposed local centre within the Ascot Racecourse/Golden Gateway precinct should be | |

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| | | restricted to 1,200m² of retail floorspace in the first instance, with any increase up to 3,000m² requiring a NBT demonstrating compliance with the requirements of SPP 4.2.<br><br>Understands that the City expressed concern that the supporting retail assessment prepared for the PSP did not adequately demonstrate the need for, or strategic justification of, the proposed 3,400m² of retail floorspace. Notes that the City considered that the assessment overstated the timing and extent of population growth within the trade area and relied upon development assumptions that may not occur within the forecast timeframe. States that the City concluded that the retail assessment did not sufficiently address the requirements of the SPP 4.2 Implementation Guidelines and therefore did not provide an adequate basis to support the proposed retail floorspace quantum.<br><br>Supports the City's assessment and agrees with Council's determination that a conservative retail floorspace limit of 1,200m² is appropriate until a more robust strategic justification can be provided that is genuinely consistent with the requirements and intent of SPP 4.2. Considers this would reflect an orderly and proper planning approach, rather than being an unjustified and opportunistic attempt to maximise land values and land use flexibility to the detriment of the intent of the City's Local Planning Framework. States this approach will allow for the orderly expansion of retail | |

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| | | development over time while protecting the integrity of the City's activity centre hierarchy and avoiding adverse impacts on existing centres.<br><br>**Conclusion**<br>Is of the opinion that the amendment, in its modified form, is not consistent with key elements of the City's well-established contemporary planning framework, including the adopted Activity Centre Planning Strategy. States that as a consequence, it has the potential to prejudice the planned development of the Golden Gateway Activity Centre and undermine the established activity centre hierarchy envisaged by the City's strategic planning documents.<br><br>Emphasises previously mentioned points and requests that the amendment be modified as follows:<br><br>• **Reinstate retail floorspace controls within the proposed Commercial zone**, including a maximum retail floorspace cap of 1,200m² in the first instance, with any increase up to 3,000m² requiring a NBT demonstrating compliance with the requirements of SPP 4.2 to the satisfaction of the local government; and<br><br>• **Remove 'Showroom' as a discretionary land use** on Lot 100 Raconteur Drive and Lot 23 Carbine Street within the proposed Mixed Use zone. | |

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| | | Considers the above amendments will ensure that future retail development occurs in a manner consistent with the intent and requirements of the City's activity centre hierarchy and the retail planning outcomes contemplated by the City's ACPS and the Council endorsed draft PSP. | |
| 14 | Public Submitter | States that opening up Ennis place will cause a big problem with extra traffic noise and impact the safety of kids and elderly residents.<br><br>States that when there is a function at the pub, the cars overflow into Ennis Place and down the backtrack for parking meaning floats can't get up or down the road and there is no walkway.<br><br>Notes that there are established trees with birds in them.<br><br>States that if the project goes ahead, house prices will drop.<br><br>States that losing this part of Ascot will be a big loss for the City of Belmont. | Refer to Movement section of the Officers Report.<br><br>If the submitter has concerns about parking associated with the Tavern, the submitter is welcome to contact the City separately about this matter.<br><br>Noted. This was considered as part of the PSP. Council recommended that the PSP be modified to better identify opportunities for tree retention.<br><br>The value of properties within the area is not a relevant planning consideration.<br><br>The residential and stables precinct is not proposed to be altered. Landowners will have the opportunity to continue on with their |

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| | | | existing activities (including stabling). |
| 15 | Public Submitter | Opposes the Amendment particularly in relation to Precinct B.<br><br>Raises concern with the amount of traffic that will use Ennis Place. Notes that Ennis Place is a no though road and is one of the quietest streets/areas in the City of Belmont and it is for this reason that they choose to raise their children there.<br><br>States that the views toward the racetrack of the sunset are one in a million and the mature aged trees are homes to the Carnaby and red tailed cockatoos. States that they have many photos and videos of the birds and that it would be devastating to lose them.<br><br>Notes that the back track is still used and is a beautiful place to sit outside in the early mornings.<br><br>Considers that there are already amazing stables in the City of Belmont and that anyone who visits the area will comment on it being one of the most amazing spots in the City. | Noted<br><br>Refer to Movement section of the Officers Report.<br><br>Views are not a relevant planning consideration. Regarding vegetation, Council has recommended that the PSP and supporting Environment Report be modified to better identify opportunities for tree retention.<br><br>Noted.<br><br>It should be noted that the Amendment does not propose any changes to what can be approved within Precinct B. Stables can already be established and the land has always been able to support more intensive horse related activities. In addition, the amendment does not propose to remove existing stables from |

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| | | States that Ennis Place is quiet, odour free and peaceful and would like to keep it that way. | properties within the residential and stables area.<br><br>Stables can already be developed within the Amendment area. Notwithstanding, future stables will need to be managed in accordance with the City's Consolidated Local Law which requires stables to be kept in a clean and sanitary condition and as far as practicable, free from flies, rats, other vectors of disease and offensive odours. |
| 16 | Department of Housing and Works<br>16 Parkland Road<br>Osborne Park WA 6017 | The Department of Housing and Works supports, in principle, the proposed structure plan/scheme amendment. The amendment seeks to facilitate a mix of land uses that support the racecourse while creating opportunities for the development of currently vacant / underdeveloped land parcels.<br><br>To ensure these objectives are realised, the Department strongly encourages the city to incorporate minimum density and height controls within the locality. In the absence of such provisions, there is a risk that development may occur at a scale or intensity that underutilises strategically located land.<br><br>Minimum controls provide a clear and consistent framework to guide development outcomes, offering greater certainty to both proponents and the decision-maker. They also assist in preventing | Minimum density controls are not proposed to be introduced through Amendment No. 24 for the following reasons:<br><br>• Amendment No. 24 is a procedural step to align LPS 15 with the PSP. The Structure Plan does not prescribe minimum density requirements or minimum building heights and, accordingly, these controls have not been incorporated into Amendment No. 24.<br><br>• The absence of minimum density controls provides flexibility to respond to site-specific constraints, interface |

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| | | ad hoc or fragmented development patterns, ensuring that land is developed in a manner that aligns with the long-term vision of the structure plan. | considerations and the staged delivery of development, while still requiring proposals to achieve the objectives and development outcomes of the PSP.<br><br>• The planning framework established by Amendment No. 24, together with the PSP, provides sufficient guidance to proponents and decision-makers to ensure development is consistent with the long-term vision for the precinct. |
| 17 | Department of Planning Lands and Heritage - Land Management Team<br>140 William Street<br>Perth WA 6000 | Thankyou for your letter dated 18 May 2026 and the opportunity to provide comments in relation to Amendment No. 24 to Local Planning Scheme No. 15 and the draft Ascot Racecourse Precinct Structure Plan.<br><br>I note that the structure plan includes Lot 9002 on DP60342, a portion of which (marked 'A' on DP431474) is Crown Grant in Trust (CGIT) as per the land's certificate of title, deeming the land solely be used as a public racecourse.<br><br>Any non-racecourse development must be contained within the (western) area of Lot 9002 not impacted by 'A' on DP 431474. | Noted<br><br>Amendment No. 24 does not propose changes to the conditions of the Crown Grant In Trust. Modification 68 of Council's resolution on the Ascot Racecourse |

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| | | Please note that the structure plan also appears to potentially include or impact the following crown land parcels:<br><br>• Reserve 40689, managed by the City of Belmont;<br><br>• Reserve 38783, managed by Water Corporation for the purpose 'Water Supply'; and<br><br>Accordingly, should any changes be proposed to these Reserves, please notify this office accordingly. | Precinct Structure Plan sought to require that all text and plans relating to Precinct A make it clear that no development will occur within the Crown Grant in Trust land.<br><br>Noted. Reserve 40689 is not within the Amendment No. 24 area.<br><br>Changes to Reserve 38783 were considered as part of Council's consideration of the draft Ascot Racecourse Precinct Structure Plan. Modification 47 recommended that the Structure Plan incorporate advice provided by Water Corporation and the Department of Planning Lands and Heritage as follows:<br><br>*"We have received advice from the Department of Lands that indicates the land is capable of accommodating car parking above it (it was previously a road) and thus the intention is that the land will be utilised and leased to provide parking of the commercial. Water* |

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| | | | *Corporation have confirmed the requirements for building parking above the mains in the old road reserve which can be accommodated."* |
| 18 | Department of Water and Environmental Regulation<br>7 Ellam St<br>Victoria Park WA 6100 | The Department of Water and Environmental Regulation has assessed the below Local Planning Scheme Amendment and has no objections, as the proposed amendment is in line with the Local Structure Plan and associated approved Local Water Management Strategy. | Noted |
| 19 | Public Transport Authority<br>PO Box 8125, Perth Business Centre 6849 | The PTA has no objection to the proposed amendments which form part of this proposal. Notwithstanding, given this amendment is predicated on the adoption of the Draft Ascot Racecourse Precinct Structure Plan (PSP), we wish to reiterate one of our comments made in response to the draft PSP when it was advertised.<br><br>The draft PSP circulated with this amendment retains an indicative provision for a Left-in-Left-out vehicle access crossover along Grandstand Road where there is currently an embayed bus stop for route 998 (Stop ID 11660). The PTA continues to require an embayed bus stop at this location to support bus operations. It is acknowledged that this is not a consideration for a Scheme Amendment of this nature, however the PTA strongly encourage that the City and the applicants reconsider the location of this intersection to | Noted<br><br>The specific location of crossovers will further be considered at development application stage. The position of Stop ID 11660 will be taken into account at that stage. |

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| | | ensure the bus stop embayments can remain, prior to the adoption of the Structure Plan. | |
| 20 | Western Power<br>95 William Street<br>Perth WA 6000 | Western Power has reinstated the Strategic Planning Referrals (SPR) Program to support the review of referrals to better integrate electricity network requirements into the strategic planning process and renewable energy development applications. Please refer all strategic planning and renewable energy development application referrals to strategic.planning.referrals@westernpower.com.au.<br><br>Regarding the City's advertised Scheme Amendment No. 24 to Local Planning Scheme No. 15, the amendment proposes to update zones, density codes and land use permissibility under Local Planning Scheme No. 15 and guide future use and development of approximately 61.3ha of land bound by the Swan River, Ascot Waters Estate, Grandstand Road, Resolution Drive, Hardey Road, and Carbine Street, in Ascot. The Amendment 24 is consistent with the draft Ascot Racecourse Precinct Structure Plan area, which is pending approval by the WAPC.<br><br>In accordance with Network Capacity Mapping Tool \| Western Power the subject site is serviced by the Belmont substation, which currently has a capacity of 20 - 25 MVA (2026). However, the capacity is unreserved and network infrastructure requirements, development projects and timings are subject to change over time. | Noted<br><br>Noted<br><br>Noted |

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| | | While Western Power supports the proposed Scheme Amendment No. 24 to Local Planning Scheme No. 15, as part of the future proposed infill development, the relevant agency or proponents are to engage with Western Power to inform specific development requirements, upgrading and provision of additional power infrastructure as required.<br><br>Western Power advise that depending on the proposed maximum demand, a network reinforcement may be required. A detailed network study will be carried out to determine the scope of work and the level of reinforcement based on present network conditions when the formal load connection request from the developer is received by Western Power.<br><br>Any development application or subdivision will need to be referred to Western Power prior to the approval of any development or works located within proximity to Western Power infrastructure. Written advice is to be obtained from Western Power and is to be given due regard when determining any development application or subdivision.<br><br>**Western Power Asset Easements and Safe Clearances**<br>Western Power requires the protection of the transmission lines and assets and the required safety clearance distances with the subject site. Western Power easements constrain the land in-so- | This will be considered at later subdivision and/or development stages.<br><br>This will be considered at later subdivision and/or development stages.<br><br>This will be considered at later subdivision and/or development stages.<br><br>This will be considered at later subdivision and/or development stages. |

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| | | far as it imposes restrictions on what development and works can occur within the easement. Where Western Power does not have easements on freehold land, it relies on safe clearances to ensure appropriate development occurs in the vicinity of its assets. This includes appropriate setbacks of buildings, vegetation and use of land in the vicinity of power lines and assets:<br><br>**Table 1: Safe Clearance**<br>**Clearance (horizontal and vertical from centre of line)**<br>***Transmission***<br>66 kV — 8.0m<br>132 kV — 10.0m<br>220 kV — 30.0m<br>330 kV — 35.0m<br>***Distribution***<br>≤ 33 kV — 3.0m<br><br>Western Power recommends the following standard Advice Notes prior to development or subdivision approval as required, pursuant to Section 167 of the Planning and Development Act 2005:<br><br>Advice Notes:<br><br>i) The development shall be designed and constructed to protect Western Power infrastructure and interests from potential land use conflict.<br>ii) No development (including drainage, fill, fencing, storage or parking) will be permitted within Western Power line and cable easements or safe clearance zones without the prior written approval of Western Power. | This will be considered at later subdivision and/or development stages. |

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| | | iii) The applicant should formally progress the Western Power network connection arrangements with Western Power.<br>iv) Arrangements being made to the specifications of Western Power for the provision of necessary electricity easements as required | |
| 21 | Department of Planning Lands and Heritage – Heritage and Property Services Team<br>140 William Street<br>Perth WA 6000 | Thank you for your enquiry dated 20 May 2026 regarding the proposed Local Planning Scheme 15 Amendment no 24 relating to Ascot Racecourse Precinct Structure Plan, as described in the documentation provided on your website.<br><br>A review of the Register of Places and Objects concludes that the proposed activity area is within the public boundary of Registered Aboriginal site Perth? (ID 3753), as it appears on the Aboriginal Cultural Heritage Inquiry System (ACHIS). However, the activity is not within the restricted site boundary as administered by the Department. Due to cultural sensitivity, information about the specific location of the site is publicly restricted and a larger dithered boundary is represented on ACHIS. Please note that the subject area is also in proximity to Aboriginal Registered Site Swan River (ID 3536).<br><br>The Department advises that the approval of a scheme amendment is an administrative process only and, as such, does not require approval under the *Aboriginal Heritage Act 1972* (AHA).<br>Based on current information held by the Department, any future development within the | Details of Aboriginal Heritage are included within the Precinct Structure Plan.<br><br>Noted |

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| | | Amendment land area will not intersect the actual boundary of Aboriginal Registered sites or heritage places. As such, approval under the AHA would not be required.<br><br>The Department recommends that future proponents contact Whadjuk Aboriginal Corporation to provide them with the opportunity to comment on upcoming developments and potential impacts to heritage.<br><br>Please note that the proposed activity area may not have been comprehensively surveyed, so there may be unrecorded Aboriginal heritage in the area. The AHA protects all Aboriginal sites in Western Australia, regardless of their presence on the Register or not. Should a person become aware of unreported Aboriginal heritage while undertaking an activity or project, they are required to report it to the Department.<br><br>The public Aboriginal Cultural Heritage Inquiry System (ACHIS) is updated as new information about Aboriginal heritage is recorded. The Department recommends regularly checking ACHIS in case any new information is reported within the proposed activity area. Search tips and user guides can be accessed at Find Aboriginal cultural heritage in WA. | Noted<br><br>Noted<br><br>Noted |
| 22 | ATCO<br>81 Prinsep Road<br>Jandakot WA 6164 | ATCO Gas Australia (ATCO) has no objection to the proposed City of Belmont Scheme Amendment No. 24, based on the information and plan provided, subject to the following advice notes: | Noted |

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| | | • ATCO Gas Australia (ATCO) has critical high pressure natural gas pipeline (DN100ST 1900kPa) located within the road reserve of Garratt Rd, Grandstand Rd and Waterway Cres<br><br>• The proposed areas fall within the WAPC Draft Development Control 4.3 Trigger Distance for ATCO Infrastructure (area hatched blue in attachment). Any sensitive land use or high-density community use developments within this Trigger Distance of a High Pressure Gas Pipeline requires further consultation with ATCO prior to preliminary designs being finalised. Please consider the WAPC's draft DC4.3 and also the site; PlanWA for development planning.<br><br>• ATCO identifies that the proposed future development may require additional safety measures to be considered, identified and in place for the high-pressure gas pipeline risk mitigation<br><br>• The planned commercial zone/supermarket (R-AC3) will require further constatation with ATCO engineering services team for the existing 160PE 70kPa, 155 PVC 70kPa and other gas assets located in this area. If relocation is possible, relocations costs meet by the developer/enquirer prior to proposed works being undertaken. | |

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| | | • Anyone proposing to carry out construction or excavation works within 15 metres of Critical Asset Infrastructure must contact 'Before You Dig Australia' (www.byda.com.au) to determine the location of buried gas infrastructure. Refer to ATCO document AGA-O&M-PR24- Additional Information for Working Around Gas Infrastructure https://www.atco.com/en-au/for-home/natural-gas/wa-gas-network/working-around-gas.html<br><br>• All works occurring within 15 metres of Critical Asset Infrastructure must undergo ATCO Engineering Assessment to determine if additional safety measures are required. Risk mitigation and asset protection measures may be necessary. Notification for the works must be submitted to ATCO via the online web portal.<br><br>• All works occurring within 15 metres of Critical Asset Infrastructure must comply with the ATCO document Additional Information for Working Around Gas Infrastructure - AGA-O&M-PR24 https://www.atco.com/en-au/for-home/natural-gas/wa-gas-network/working-around-gas.html<br><br>• Future construction and any proposed access roads across the ATCO Critical Asset gas | |

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| | | mains (including proposed roads and road upgrades) need to be managed in accordance with the ATCO document Additional Information for Working Around Gas Infrastructure - AGA-O&M-PR24 https://www.atco.com/en-au/for-home/natural-gas/wa-gas-network/working-around-gas.html<br><br>• Anyone proposing to carry out construction or excavation works must contact 'Before You Dig Australia' (www.byda.com.au) to determine the location of buried gas infrastructure. Refer to ATCO document AGA-O&M-PR24- Additional Information for Working Around Gas Infrastructure https://www.atco.com/en-au/for-home/natural-gas/wa-gas-network/working-around-gas.html<br><br>• If the disconnection and/or removal of an ATCO gas service is required, a request can be submitted via the online ATCO portal found here. | |
| 23 | Water Corporation<br>PO Box 100<br>Leederville WA 6902 | Major water and sewer upgrades will be required to service the proposed developments identified in the Structure Plan. These will be done at the developers cost. The proponent should get in contact with the Water Corporation early to discuss what is needed. | Noted |

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| | | There are significant Water Corporation assets located in the "A3" R-AC3 Commercial reserved lot. This includes major water distribution mains that cannot be moved or built on top of and a number of open channel drains. These assets are essential and cannot be moved or built around. Water Corporation objects to the rezoning of this section of the Structure Plan to commercial. | The applicant has advised that they have engaged further with Water Corporation on this matter with Water Corporation advising that parking could be built over the assets. A modification was recommended by Council to the PSP to acknowledge this.<br><br>Officers have also engaged further with Water Corporation who have since advised that they can in principle support Amendment No. 24 noting that any future development that impacts Water Corporation assets will need to be assessed by their Protection of Assets team. |
| 24 | Department of Education<br>151 Royal Street<br>East Perth WA 6004 | The subject area falls within the student enrolment intake areas for Belmont Primary School and Belmay Primary School. Whilst the subject primary schools are currently operating within the respective student accommodation capacity, the potential delivery of residential development within the Structure Plan area would still have an impact on the student enrolment demand of the locality and capacity of the primary schools in the long term.<br><br>The Department will continue to monitor the student enrolment demand as residential development progresses in the future to ensure that the public education needs of the locality is adequately met in line with the provisions of the | Noted<br><br>Noted |

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| | | Western Australian Planning Commission's *Operational Policy 2.4 – Planning for School Sites* (OP 2.4). In addition, any requirements for primary school developer contributions will be considered and applied at the subdivision stage in accordance with the OP 2.4.<br><br>In view of the above, the Department has no in-principle objection to the proposed Scheme Amendment. However, any future changes to zoning, residential density coding, or dwelling lot numbers that may increase the student yield in the locality will require prior consultation with the Department. | Noted |
| 25 | Main Roads Western Australia<br>PO Box 6202<br>East Perth WA 6892 | Main Roads understands the amendment seeks to facilitate redevelopment of the Ascot Racecourse precinct by rezoning land for residential, mixed-use and commercial development, and introducing density and land-use controls to guide future development. Traffic impacts are likely to increase as the amendment facilitates higher-density residential, mixed-use and commercial development. It is important the current and future transport impacts of the proposal are appropriately assessed and demonstrated to ensure the safe and efficient operation of the road network.<br><br>The Traffic Impact Assessment (TIA) prepared by PJA Australia Pty Ltd, Version B – final, dated 8 May 2024 should be revised in accordance with the Transport Impact Assessment Guidelines (August 2016) addressing the following comments: | The comments provided by Main Roads Western Australia were generally received and considered as part of the PSP advertising process. As outlined in the Movement section of the Officer's Report, the City has provided its recommendations to DPLH, including recommended amendments to the TIA.<br><br>Refer to previous comment |

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| | | <u>Pedestrian Connectivity</u><br><br>• Section 7.3 of the TIA provided recommendations to improve pedestrian connectivity, however no detailed assessment has been undertaken. Assess and determine necessary upgrades to pedestrian facilities surrounding the Ascot Racecourse and along the Great Eastern Highway (such as Staged Pedestrian Crossings at the signalised intersections which may assist with more efficient green times utilisation to reduce the performance impacts for the GEH intersections).<br>• Model alternate pedestrian treatments within SIDRA to evaluate their viability.<br>• Assess geometric requirements, land boundaries, and potential signal modifications.<br>• Detail mechanisms for future delivery of pedestrian facilities is required to inform costings for a development contribution plan.<br><br><u>SIDRA Assessment</u><br><br>• Coordinated SIDRA network model is required for the signalised intersections replicating the existing coordinated operation on GEH and to observe any impacts due to scenarios as proposed in the draft Ascot Racecourse PSP and Golden Gateway LSP. | This comment was provided as part of the PSP advertising process. Officers provided the following response: |

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| | | • Existing cycle lengths for the GEH signalised intersections is required to be utilised in the SIDRA modelling existing scenarios.<br>• Similar cycle lengths should be used to the Stoneham Street and Resolution Drive intersections with GEH in a coordinated network.<br><br><u>General Comments</u><br><br>Further statutory approvals required from Main Roads are outlined below:<br><br>• Road Traffic Code 2000 – Main Roads approval is required for any signage, pavement marking modifications, speed zoning changes and regulatory traffic controls on all roads in Western Australia.<br>• Main Roads Act 1930 - Main Roads approval is required for works and access on our road network.<br>• Road Traffic (Vehicles) Act 2012 and Road Traffic Code 2000 – RAV (Restricted Access Vehicle) requirements for haulage | *"this matter has been addressed in response to MRWA comments on the Golden Gateway Local Structure Plan. In that case, coordination between the two signalised intersection was not done because it makes the models unstable."*<br><br>These comments were provided as part of the PSP advertising process. Officers provided the following response:<br><br>*"The PSP does not extend towards Great Eastern Highway and as such, improvements to pedestrian connectivity along Great Eastern Highway are not considered relevant."*<br><br>Noted. |

| | | | |
|---|---|---|---|
| | | movements during construction of the development is subject to a separate approval process.<br><br>This section of Great Eastern Highway is constructed to its ultimate configuration, comprising six lanes, including bus lanes and a dedicated left and right turn lane into Resolution Drive.<br><br>The upgrading of Great Eastern Highway east of Tonkin Highway is not in Main Roads current 4-year forward estimated construction program and all projects not listed are subject to change without notice, and Main Roads assumes no liability for the information provided. | Noted.<br><br>Noted. |

# 12.2 Local Planning Strategy and Local Housing Strategy

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 116/134<br>116/090 |
| Location/Property Index | : | various |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | • 27 October 2020 Ordinary Council Meeting Item 12.1 - Report of Review<br>• 23 May 2023 Ordinary Council Meeting Item 12.2 - Economic Development Strategy<br>• 27 June 2023 Ordinary Council Meeting Item 12.1 - Local Heritage Survey and List<br>• 25 July 2023 Ordinary Council Meeting Item 12.4 - Public Open Space Strategy<br>• 31 October 2023 Ordinary Council Meeting Item 12.4 - Environment and Sustainability Strategy<br>• 27 February 2024 Ordinary Council Meeting Item 12.1 - Activity Centre Planning Strategy<br>• 22 October 2024 Ordinary Council Meeting Item 12.3 - Great Eastern Highway Urban Corridor Strategy<br>• 25 March 2025 Ordinary Council Meeting Item 12.1 - Draft Local Planning Strategy<br>• 26 May 2026 Ordinary Council Meeting Item 12.1 - Draft Local Planning Scheme |
| Applicant | : | N/A |
| Owner | : | Various |
| Responsible Division | : | Development and Communities |

## Council role

| | |
|---|---|
| **Legislative** | The making and adopting of local laws, local town planning schemes and Council policies. |

## Purpose of report

For Council to consider the draft Local Planning Strategy (Attachment 12.2.1) and draft Local Housing Strategy (Attachment 12.2.2) following public advertising.

## Summary and key issues

- At the 25 March 2025 Ordinary Council Meeting (OCM), Council resolved to adopt the draft Local Planning Strategy (Draft LPS) and draft Local Housing Strategy (draft LHS) for the purpose of advertising.
- On 31 March 2025, the draft LPS was submitted to the Western Australian Planning Commission (WAPC) seeking consent to advertise.
- In April 2026, the WAPC granted consent to advertise, subject to minor modifications. Officers incorporated the required modifications into the draft LPS and also updated the draft LHS to be consistent with the WAPC resolution.
- In May 2026, Council adopted the draft Local Planning Scheme for the purpose of advertising. Minor modifications are recommended to the draft LHS to ensure consistency with this document.
- The draft LPS and draft LHS were advertised between 11 June 2026 and 9 July 2026 (28 days). A total of 20 submissions were received.
- The submissions have been reviewed, and a number of minor modifications are recommended.
- It is recommended that Council adopt the modified draft LHS and endorse the modified draft LPS for final approval by the WAPC.

**Officer Recommendation**

That Council:

1. Support the modified draft Local Planning Strategy (Attachment 12.2.1) pursuant to Regulation 14(2)(b) of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA).*
2. Rescind the 2011 Local Housing Strategy.
3. Adopt the modified Local Housing Strategy (Attachment 12.2.2).
4. Direct the Chief Executive Officer to:
   a) Refer the modified draft Local Planning Strategy to the Western Australian Planning Commission for final endorsement pursuant to Regulation 14(3) of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA).*

b) Notify those who made a submission of Council's resolution.

c) Make any further minor administrative amendments/layout changes to the modified draft Local Planning Strategy and modified draft Local Housing Strategy as required prior to publication.

d) Display the adopted Local Housing Strategy on the City's website.

e) Following endorsement of the modified draft Local Planning Strategy by the Western Australian Planning Commission, notify submitters of the Commission's decision and publish the endorsed Local Planning Strategy in accordance with Regulations 16(2) and 76A of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)*.

## Location

The draft LPS and draft LHS are applicable to the entire City of Belmont local government area.

## Consultation

The draft LPS and draft LHS were advertised from 11 June 2026 to 9 July 2026 (28 days) by way of the following:

- Information and copies of the strategies being made available on Belmont Connect.
- A public notice being published in the PerthNow newspaper on 11 June 2026.
- A public notice being displayed on the City's website and at the Civic Centre.
- A copy of the public notice being sent to public authorities.
- Information being included in the Belmont Bulletin distributed from 15 June 2026.

The City received 20 submissions during the advertising period. Key matters raised in submissions relate to:

- Requests from the Public Transport Authority to update relevant sections of the strategies to reflect the current public transport network.
- Requests from residents to upcode R20 coded land.
- A proposal to investigate a pathway for the retention and upgrading of existing dwellings as part of the new planning framework.
- Comment from a landowner within the Belvidere Street Neighbourhood Centre precinct regarding retail floor space.

- Comments from the Department of Education regarding the consideration of public education facilities.

Submissions received during the advertising period have been comprehensively reviewed and are not considered to require significant modifications to the draft Strategies. A summary of the submissions and officers' responses is provided in the Schedule of Submissions (Attachment 12.2.3 and Confidential Attachment 12.2.4).

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Place**
**Outcome:** 6. Sustainable population growth with responsible urban planning.

## Policy implications

The draft LPS and LHS identify a number of actions relating to the City's suite of local planning policies, including the review, amendment or revocation of existing policies and the preparation of new policies where required.

These investigations are already underway and are being progressed in conjunction with the progression of the new Local Planning Scheme.

## Statutory environment

### *Planning and Development (Local Planning Schemes) Regulations 2015*

Regulation 11(1) requires a local government to prepare a Local Planning Strategy.

Regulation 11(2) sets out the statutory requirements for a Local Planning Strategy, including that it must:

- Be prepared in a manner and form approved by the Commission;
- Set out the long-term planning directions for the local government;
- Apply any State or regional planning policy that is relevant to the Strategy; and
- Provide the rationale for any zoning or classification of land under the Local Planning Scheme.

Before advertising a draft Local Planning Strategy, a copy must be provided to the WAPC for certification. At this stage the WAPC may require modifications before advertising takes place. Following certification, the Local Planning Strategy must be advertised by publishing a notice in a local newspaper and on

the local government's website and giving a copy of the notice to each public authority that may be affected. The draft Local Planning Strategy can also be advertised in any other way as directed by the WAPC or considered appropriate by the local government.

The Regulations require a draft Local Planning Strategy to be advertised for a 21-day period unless the WAPC approves a longer period.

Following advertising, the submissions and the draft Local Planning Strategy are required to be reviewed by officers prior to a report being presented to Council. Council has the option to either support the Local Planning Strategy without modification, or with modifications to address issues raised in the submissions in accordance with Regulation 14(2) of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)*. Following Council's consideration, the draft Local Planning Strategy must be submitted to the WAPC for consideration.

## Background

### Local Planning Strategy

The City of Belmont's current Local Planning Strategy was endorsed by the Minister for Planning at the time Local Planning Scheme No. 15 was approved in 2011.

On 21 December 2020, the WAPC endorsed Council's resolution to repeal the existing Local Planning Scheme and Local Planning Strategy and prepare new documents to replace them.

To support the preparation of the draft LPS, a number of sub-strategies have been prepared, and adopted by Council. This includes the following:

- Economic Development Strategy– 23 May 2023 OCM
- Local Heritage Survey and List – 27 June 2023 OCM
- Public Open Space Strategy – 25 July 2023 OCM
- Environment and Sustainability Strategy – 31 October 2023 OCM
- Activity Centre Planning Strategy – 27 February 2024 OCM
- Great Eastern Highway Urban Corridor Strategy – 22 October 2024 OCM.

The draft LHS was prepared concurrently with the draft LPS, as the LPS relies on housing analysis and modelling undertaken as part of the LHS.

At the 25 March 2025 OCM, Council endorsed the draft LPS and draft LHS for the purpose of advertising.

On 15 April 2026, the WAPC considered the draft LPS and requested minor modifications prior to granting consent to advertise (refer to Attachment 12.2.5).

To ensure consistency between the two Strategies, corresponding changes were also made to the draft LHS, together with a number of minor formatting and editorial modifications (refer to Attachment 12.2.6). The draft LPS was subsequently resubmitted to the WAPC, which granted final consent to advertise.

The draft LPS and draft LHS were advertised between 11 June 2026 and 9 July 2026.

### Draft Local Planning Scheme

As part of certifying the draft Local Planning Strategy for advertising, the WAPC did not identify any fundamental concerns with its overall strategic direction, and the modifications it directed were minor.

On this basis, the City progressed the preparation of the draft Local Planning Scheme concurrently with the finalisation of the LPS. This is an established approach, and the Department of Planning, Lands and Heritage (DPLH) did not raise any concerns with the concurrent progression of the documents. Progressing the Scheme at this stage also supports the timely establishment of a contemporary planning framework for the City.

At its 26 May 2026 OCM, Council adopted the draft Local Planning Scheme for the purpose of seeking approval to advertise.

The draft Local Planning Scheme has been referred to the Environmental Protection Authority and is currently being considered by the WAPC, which will determine whether approval should be granted to advertise the Scheme.

## Report

### Scope

In considering the officer recommendation and any proposed changes to the draft Strategies, it is important to understand the different roles of a Local Planning Strategy and a Local Planning Scheme.

The Local Planning Strategy establishes the long-term planning direction for the City and provides the rationale for future land use, housing and development. The Local Planning Scheme implements that direction through statutory zoning, residential density coding and development controls.

Requests to change zoning, residential density coding or other statutory planning controls, whether for individual properties, particular areas or the City more broadly, are therefore more appropriately considered through the draft Local Planning Scheme process. The future advertising of the draft Scheme will provide the community and affected landowners with an opportunity to comment on those proposed statutory controls. However, consideration of this matter requires the matters raised to be assessed at a higher strategic level,

including whether they warrant any change to the direction established through the draft Strategies.

It is also important to note that the draft Local Planning Scheme has already been prepared and progressed on the basis of the direction established through the draft Strategies. Any changes to that direction should therefore be carefully considered, having regard to their implications for the consistency and continued progression of the draft Scheme.

**Residential Matters**

Four submissions requested the upcoding of areas currently coded R20.

While any change to the residential density coding would occur through the draft Local Planning Scheme process, officers have considered whether the requests provide a strategic planning basis for modifying the draft Local Planning Strategy or draft Local Housing Strategy. Officers note the following:

- The strategies adopt a targeted approach to residential density. Rather than broadly upcoding large areas of the City, they focus higher densities in appropriate strategic locations. This approach is consistent with the strategic direction of Perth and Peel @ 3.5 Million, which seeks to concentrate higher density housing within and surrounding activity centres, station precincts and urban corridors where residents have convenient access to services, employment and public transport.
- The areas identified by submitters for upcoding fall outside the walkable catchments of activity centres, station precincts and urban corridors.
- The modelling undertaken to support the draft strategies demonstrates that the City can achieve its allocated dwelling targets without broadly increasing densities across R20 areas. This targeted approach was recognised and supported by the WAPC in its consideration of the draft LPS and by a number of agencies in their submissions.
- It is noted that in July 2026 the State Government announced proposed amendments to the Residential Design Codes (R-Codes) that would remove the average lot size requirement in R20 areas. If implemented, these amendments may increase subdivision opportunities within existing R20 areas without the need for upcoding. However, the changes require regulatory amendment and public advertising before they can take effect, and it is not yet known whether they will be implemented in their announced form. While the proposed changes may provide additional opportunities for some R20 landowners, it would be premature to rely on them at this stage, and they do not alter the broader direction established through the draft Strategies.

Having regard to the above, officers do not recommend any modifications to the Strategies that would support broad upcoding of R20 land within the draft Local Planning Scheme.

A submission proposed that the City investigate a performance-based assessment pathway for proposals that retain and substantially upgrade existing dwellings, where measurable public benefits can be demonstrated.

In consideration of this, it is important to note that one of the overarching directions of the draft Strategies is to align the City's local planning framework more closely with the State planning framework. The State planning framework, including the R-Codes, does not currently provide for this type of assessment pathway. In addition, the proposed removal of the flexible density provisions in Clause 4.7.3 of Local Planning Scheme No. 15 will give landowners greater flexibility to choose whether to retain or redevelop an existing dwelling, subject to meeting the applicable Residential Design Code requirements. For these reasons, no modification to the draft Strategies is recommended in response to the submission.

**Post Advertising Modifications**

Several minor modifications are recommended to the draft LPS and draft LHS following public advertising. The recommended modifications are detailed in the schedules of modifications (Attachments 12.2.7 and 12.2.8).

The Public Transport Authority requested that the Strategies be updated to reflect the current public transport network. In response, the relevant text and mapping have been modified to incorporate the latest available network information.

A modification is also proposed to the Local Planning Strategy in response to a submission from a landowner within the Belvidere Street Neighbourhood Centre precinct to clarify that the reference to 3,500m² of retail floor space represents the indicative level of retail demand identified through the 2020 Retail Needs Assessment. It is noted that development approval has been granted for retail floor space exceeding this figure. However, the approval of additional floor space does not alter the forecast population, retail demand or intended role and function of the Centre on which the identified need is based. The additional floor space was considered having regard to the particular proposal and its supporting Net Benefit Test. The existing figure does not operate as a statutory cap, and proposals for additional retail floor space can be considered in accordance with State Planning Policy 4.2, including through a Net Benefit Test where required.

In response to a submission from the Department of Education, the Local Planning Strategy has been updated to acknowledge the role of public education facilities in supporting population growth. The modification recognises that additional housing and population growth will increase demand for education infrastructure and notes the Department of Education's role in monitoring student enrolment demand and planning for future education infrastructure through relevant planning processes.

Other minor modifications reflect changes to the City's planning framework that have occurred since preparation of the draft Strategies commenced, including Council's adoption of Local Planning Policy No. 20, 21 and 22, as well as further investigations undertaken during preparation of the draft Local Planning Scheme, which indicate that revocation of Local Planning Policy No. 2, 3 and 4 may be appropriate.

Further modifications are recommended to the draft LHS following investigations undertaken through the preparation of the draft Local Planning Scheme. These modifications ensure the draft LHS aligns with the planning approach endorsed by Council through its consideration of the draft Local Planning Scheme and include:

- including reference to the proposed R40 upcoding around the Belmay Local Centre and Ascot Local Centres;
- including reference to the proposed application of a 'Residential' zone and Additional Use Area to the Residential and Stables precinct;
- removing references to the requirement for a Local Development Plan or Structure Plan for certain sites;
- identifying an R-AC1 density code as an appropriate outcome for lots immediately north of the Springs Precinct; and
- clarifying that the flexible density code criteria contained within Local Planning Scheme No. 15 will not be carried forward into the new Local Planning Scheme.

Further modifications are also recommended to the draft LHS in relation to land north of Great Eastern Highway in Rivervale. At its March 2025 OCM, Council resolved to include an action in the draft LPS to investigate the preparation of a structure plan for land east of Brighton Road in Rivervale. The WAPC subsequently directed that this action be removed from the draft LPS. In response to this direction, and following further investigations undertaken through the preparation of the draft Local Planning Scheme, it is recommended that the draft LHS be modified to:

- include supporting text and an action to investigate the appropriateness of applying a 'Mixed Use' zone to lots currently zoned 'Residential' north of Great Eastern Highway and east of Brighton Road;

- include supporting text and an action to investigate the appropriateness of applying an R-AC0 density code to all lots north of Great Eastern Highway and east of Brighton Road. It is considered appropriate that an R-AC0 density code be applied, with Local Planning Policy No. 20 updated accordingly to support development consistent with the surrounding built form and development pattern; and
- include supporting text and an action to investigate the appropriateness of applying an R-AC1 density code to 'Residential' zoned lots north of the Springs Precinct and west of Brighton Road. The R-AC1 density code would facilitate building heights of up to nine storeys, more closely aligning with the scale of development established within the Springs Precinct.

**Conclusion**

The draft LPS and draft LHS will guide future planning within Belmont and support the establishment of a contemporary planning framework through the progression of the new Local Planning Scheme.

The submissions received during advertising have been considered and do not identify a need for any significant change to the direction established through the draft Strategies. A number of modifications are recommended in response to matters raised by submitters and to ensure the Strategies remain aligned with the outcomes of investigations undertaken through the preparation of the draft Local Planning Scheme.

It is recommended that Council endorse the modified draft LPS and recommend that it be approved by the WAPC. It is also recommended that Council adopt the modified draft LHS.

## Financial implications

There are no financial implications associated with this report.

## Environmental implications

The draft Strategies include actions relating to the protection of natural areas and the management of environmental impacts, to the extent these matters can be influenced through the local planning framework.

## Social implications

The draft Strategies provide a framework to accommodate future population growth and support a greater diversity of housing in locations with access to public transport, employment, services and community infrastructure.

## Attachment details

| Attachment No and title |
|---|
| 1. Draft Local Planning Strategy [**12.2.1** - 123 pages]<br>2. Draft Local Housing Strategy [**12.2.2** - 281 pages]<br>3. Schedule of Submissions [**12.2.3** - 47 pages]<br>4. CONFIDENTIAL REDACTED - Schedule of Submissions (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(b)) [**12.2.4** - 47 pages]<br>5. Schedule of Modifications to Local Planning Strategy - Prior to Advertising [**12.2.5** - 11 pages]<br>6. Schedule of Modifications to Local Housing Strategy - Prior to Advertising [**12.2.6** - 1 page]<br>7. Schedule of Modifications to Local Planning Strategy - Post Advertising [**12.2.7** - 2 pages]<br>8. Schedule of Modifications to Local Housing Strategy - Post Advertising [**12.2.8** - 10 pages] |

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# City of Belmont

# Draft Local Planning Strategy

2025

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# Part 1 – Strategy

The City of Belmont acknowledges the Whadjuk Noongar people as the Traditional Owners of this land and we pay our respects to Elders, past, present and emerging. We further acknowledge their cultural heritage, beliefs, connection and relationship with this land which continues today.

We acknowledge all Aboriginal and Torres Strait Islander peoples living within the City of Belmont.

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# 1 Introduction

The City of Belmont Local Planning Strategy comprises:

- Part 1 – Strategy and
- Part 2 – Background Information and Analysis

The Local Planning Strategy applies to the area shown in Figure 1 – Local Planning Strategy Map.

This Local Planning Strategy comes into operation on the day on which it is endorsed by the Western Australian Planning Commission (WAPC) and revokes the City's preceding local planning strategy, endorsed by the WAPC on 4 November 2011.

As required by Regulation 11 of the Planning and Development (Local Planning Schemes) Regulations 2015, the purpose of the local planning strategy is to:

a) set out the long-term planning directions for the local government

b) apply any State or regional planning policy that is relevant to the local planning strategy and

c) provide the rationale for any zoning or classification of land under the local planning scheme.

The local planning strategy forms the strategic basis for the preparation, implementation and review of the City of Belmont Local Planning Scheme No. 15 (LPS 15).

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# 2 Strategy Map

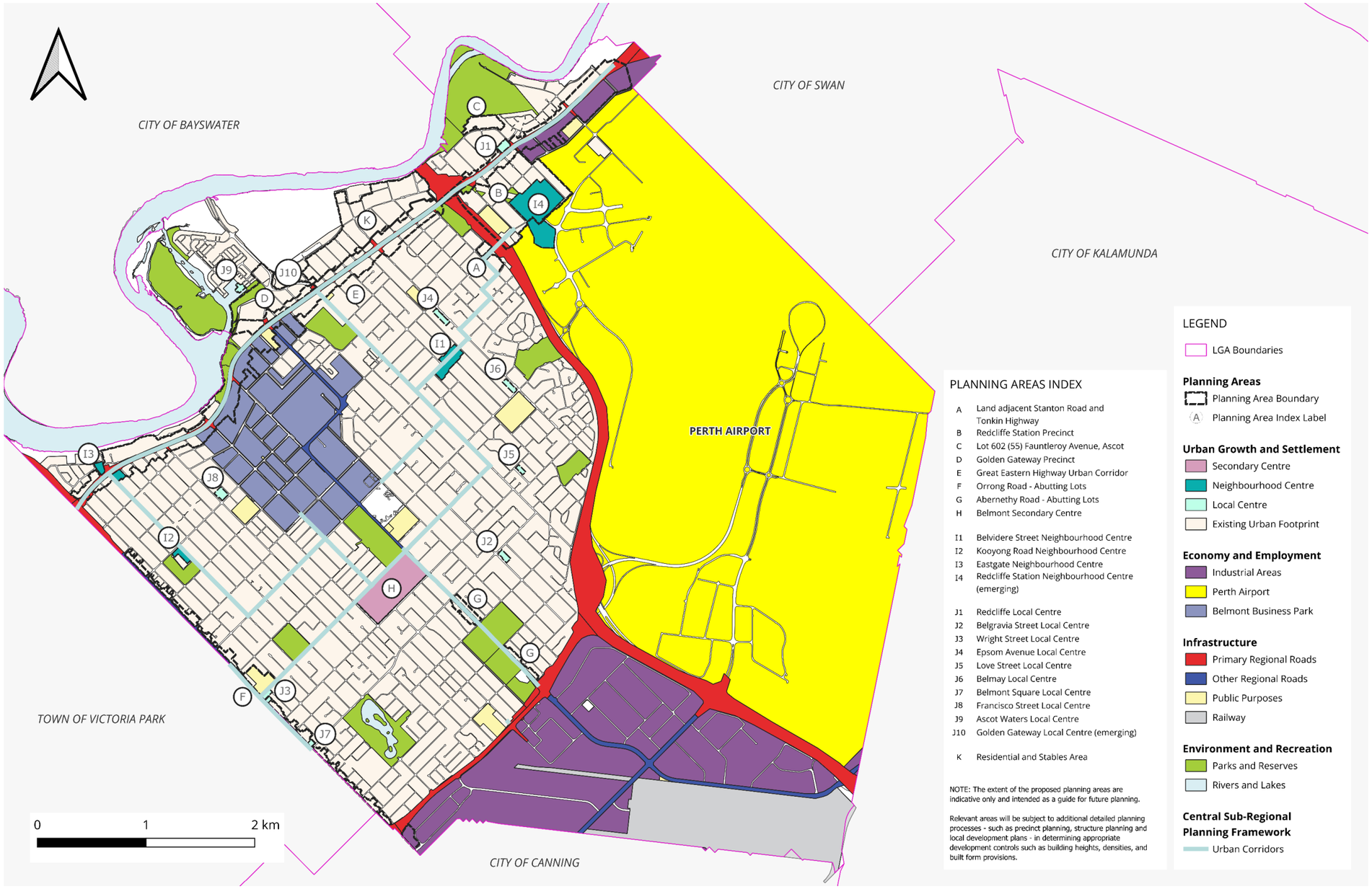



Figure 1: Local Planning Strategy Map

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# 3 Vision

The vision of the local planning strategy is:

*"The City of Belmont is a dynamic, liveable and well-connected riverside city, committed to sustainable growth, diversity in housing options, and vibrant activity centres that enhances the quality of life for all. Our City fosters a strong sense of belonging and inclusivity, celebrating the rich diversity of our population."*

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# 4 Considerations/Opportunities

## 4.1 Overview

Consistent with the State Planning Framework, planning considerations of relevance to the City are presented under the following themes:

- Community, urban growth, and settlement
- Economy and employment
- Environment
- Infrastructure

For each of the above, planning directions and actions have been identified. Planning directions are short statements that specify what is to be achieved or desired for the consideration/opportunity. Each planning direction is supported by an action(s), that outlines what is proposed and how it is to be undertaken, rationale and timeframe.

## 4.2 Community, Urban Growth, and Settlement

### 4.2.1 Key Consideration/Opportunity 1 - Housing

Single houses with 3 to 4 bedrooms remain the dominant housing type across the City. The City has a growing number of 1 or 2 person households, a trend that has continued since 2011 and is expected to persist. While there was an increase in 1 and 2 bedroom dwellings between 2011 and 2021, more of these are needed to meet the demand from the rising lone-person household population.

The Strategy outlines actions to review existing density codes, apply appropriate density codes where residential development is suitable, remove dual density codes, and review and implement suitable land use definitions and development requirements through the preparation of a new local planning scheme.

Table 1 demonstrates how the development of Planning Areas and activity centres, even with a low growth (25% uptake of additional dwellings) provides for the City to achieve the additional dwelling target of Perth & Peel @ 3.5 Million Planning Framework. Further additional dwellings are achievable should other areas be applied with an increased density code, such as along other Urban Corridors that are not identified as Planning Areas.

Table 1 – Estimated Dwelling Yield (Net Yield)

| Estimated Dwelling Yield (Net Yield) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **PLANING AREA** | **DENSITY CODE APPLIED FOR MODELLING** | **EXISITING DWELLINGS** | **DWELLING TOTAL CAPACITY** | **POTENTIAL ADDITIONAL DWELLINGS** | **LOW GROWTH (25% of Additional Dwellings)** | **MEDIUM GROWTH (50% of Additional Dwellings)** | **HIGH GROWTH (75% of Additional Dwellings)** |
| A – Land adjacent Stanton Road and Tonkin Highway | R30-40 | 12 | 121 | 109 | 28 | 55 | 82 |
| B – Redcliffe Station Precinct | The potential of this land is being explored through the Redcliffe Station Precinct Improvement Plans/Schemes | | | | | | |
| C – Lot 602 (55) Fauntleroy Avenue, Ascot | R20-30 | 0 | 129 | 129 | 32 | 65 | 97 |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| D – Golden Gateway Precinct | R-AC0 (Plot ratio ranging between 3.0 and 5.0) | 0 | 2,196 | 2,196 | 549 | 1,098 | 1,647 |
| E – Great Eastern Highway and adjacent transition areas | R-AC0 (Plot ratio ranging between 2.5 and 7.0) | 1,107 | 29.045 | 27,938 | 6,985 | 13,969 | 20,954 |
| F – Orrong Road – Abutting Lots | R60 (50% multiple dwellings based on average site area of 85m$^2$ and 50% grouped dwellings based on 150m$^2$ average lot size) | 279 | 1,048 | 769 | 192 | 385 | 577 |
| G – Abernethy Road – Abutting Lots | R60 (50% multiple dwellings based on average site area of 85m$^2$ and 50% grouped dwellings based on 150m$^2$ average lot size) | 52 | 315 | 263 | 66 | 132 | 197 |
| H – Belmont Secondary Centre | R40, R60, R100 and R-AC1 | 1,778 | 10,935 | 9,157 | 2,289 | 4,579 | 6,868 |
| I – Neighbourhood Centres | R40, R60 and R100 | 788 | 2,330 | 1,542 | 386 | 771 | 1,157 |
| J – Local Centres | R40, R50, R60 and R100 | 2,205 | 5,397 | 3,192 | 798 | 1,596 | 2,394 |
| K – Residential and Stable Areas | R10 | 241 | 455 | 214 | 54 | 107 | 161 |
| Residential zone (outside Planning Areas) | R-Code as per LPS15 | 7,299 | 15,176 | 7,877 | 1,969 | 3,939 | 5,908 |
| Total number of dwellings | | 13,761 existing | 67,147 capacity | 53,386 potential additional | 13,348 additional | 26,696 additional | 40,042 additional |

### 4.2.2 Key Consideration/Opportunity 2 - Built form and character

There are various Local Planning Policies and Local Planning Scheme provisions which currently guide residential and commercial development across the City. Five Special Development Precincts delineated on the Scheme Map are also subject to unique local planning policies. Whilst the associated local planning policy and requirement for development approval has facilitated high quality development outcomes, most of these areas have now been built out. Additionally, certain provisions are now covered by the Residential Design Codes.

The Local Planning Strategy includes actions to investigate the rationalisation of the 'Special Development Precinct' zone and review existing local planning policies and scheme provisions to determine whether these are retained (with modifications) or revoked. For certain types of development, high quality design outcomes will continue to be achieved with the assistance of the City's Design Review Panel. The Panel provides constructive feedback and guides design, assessment and decision-making processes.

The built form and character associated with Great Eastern Highway is addressed in Planning Area E.

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### 4.2.3 Key Consideration/Opportunity 3 - Historic heritage

The City of Belmont contains a wide range of historical places with:

- 91 places on the Local Heritage Survey;
- 30 places on the Local Heritage List;
- 10 Registered Aboriginal Heritage Sites; and
- 6 places listed on the State Register of Heritage Places.

These places/sites are scattered throughout the City of Belmont, with concentrations along and surrounding the Swan River Foreshore, and in residential areas in Ascot and Rivervale.

The City is committed to protecting and conserving places of heritage significance in accordance with the Heritage Act 2018. This includes ensuring the Local Heritage Survey and Heritage List are updated and reviewed as required. The City's Local Heritage Survey and Heritage List were recently reviewed in accordance with the Guidelines for Local Heritage Surveys. Due to the recent adoption of this framework, it is not envisaged that the City's heritage-protected places will change under this Local Planning Strategy. In keeping with its ongoing approach, the City will continue to review and update the Local Heritage Survey and Heritage List as needed, with a major review to be conducted alongside the next review of the Local Planning Strategy, in accordance with the Heritage Council's Guidelines for Local Heritage Surveys.

### 4.2.4 Key Consideration/Opportunity 4 - Public open space and community facilities

Public Open Space

The City has a total of approximately 284 hectares of public open space, comprised of a mix of regional open spaces (reserved under the Metropolitan Region Scheme), neighbourhood open spaces, district open spaces and other spaces.

*Objectives*

The key objectives for the provision of public open space within the City are shown in Figure 2:

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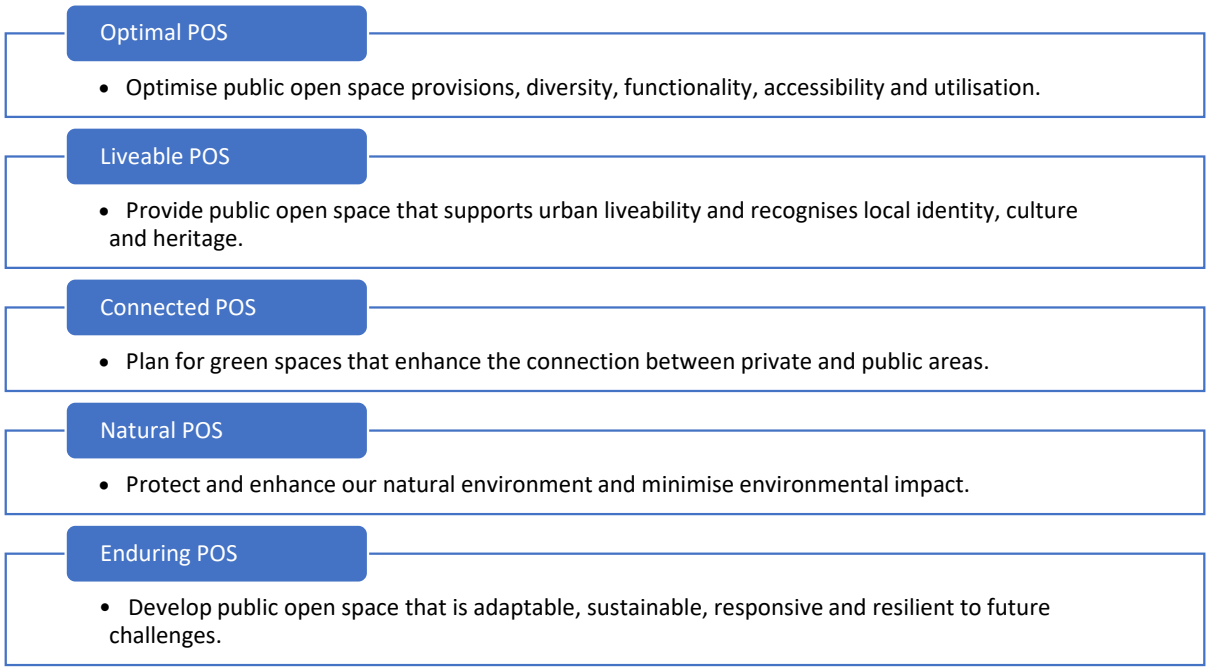



*Figure 2: Public open space objectives*

The City's existing Local Planning Scheme No.15 contains local reserves which are not consistent with the Model Provisions of the Regulations. Two examples of this include the 'Parks and Recreation' and Parks and Recreation: Water Supply Sewerage and Drainage' reserves. As part of the preparation of a new local planning scheme there is an opportunity to introduce the 'Public Open Space and 'Drainage/Waterway reserves, consistent with Planning and Development (Local Planning Schemes) Regulations 2015.

Community Facilities

Community facilities include built or hard infrastructure such as spaces and physical assets for community activities, including social, cultural, or physical engagement.

The City of Belmont has adopted a Community Infrastructure Plan 2022-2040 to guide resource allocation in achieving key economic, social, environmental and community goals over the next 20 years. The Plan will serve as a guide for future planning and development of community facilities.

As part of the preparation of a new local planning scheme there is an opportunity to introduce the private clubs, institutions and places of worship zone, consistent with the Planning and Development (Local Planning Schemes) Regulations 2015.

### 4.2.5 Key Consideration/Opportunity 5 - Hazards

Certain areas within the City are subject to bushfire and flood risk.

Properties at risk of bushfire are primarily located near Tonkin Highway, Leach Highway and the Swan River. Future planning proposals within bushfire prone areas will be assessed

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against *State Planning Policy 3.7 – Planning in Bushfire Prone Area* and appropriate management measures will be implemented as required.

Development within the floodway should continue to be restricted by the local planning scheme. Development within the flood fringe and in proximity to open Water Corporation drains should be required to meet a minimum finished floor level. This could be addressed by providing mechanisms through appropriate provisions, which will be further investigated as part of the preparation of the new local planning scheme.

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Table 2: Community, Urban Growth and Settlement – Planning Directions and Actions

| **Consideration/ opportunity** | **Planning Direction** | **Action** | **Rationale** | **Timeframe** |
|---|---|---|---|---|
| Housing | 1. Continue to provide for higher density housing within proximity to activity centres, urban corridors, high frequency public transport routes and the Redcliffe Station Precinct. | 1a. Investigate and rationalise flexible density codes across the City of Belmont.<br><br>1b. Investigate and apply appropriate density codes for land that can accommodate residential development that does not currently have an allocated density code.<br><br>1c. Apply density codes to Urban Corridors with a stepping down towards adjacent areas.<br><br>1d. Apply density codes to activity centres and surrounds to address the dwelling targets of State Planning Policy 4.2 – Activity Centres. | Section 9.3.1 of Part 2 | Short term (1-5 years) |

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| | 2. Facilitate the delivery of a diverse range of housing, particularly for an ageing population and to accommodate smaller household sizes consistent with population trends. | 2a. Apply densities and zonings that facilitate the delivery of housing for aged and dependent persons, particularly in proximity to activity centres, Redcliffe Station and high frequency bus stops.<br><br>2b. Apply densities and zonings that facilitate the development of 1 and 2 bedroom dwellings within 200m of activity centres and within 200m of high frequency public transport stops to align with household composition data and trends.<br><br>2c. Identify and explore opportunities to align land uses in the current planning scheme with the Model Provisions and any relevant Position Statement as part of developing a new local planning scheme.<br><br>2d. Investigate the appropriateness of developing a 'Shared Living' Local Planning Policy. | Section 9.3.1 of Part 2 | Short term (1-5 years) |

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| | 3. Promote well planned residential development by applying appropriate density codes through the preparation of a new local planning scheme. | 3a. Review the appropriateness of existing density codes under Local Planning Scheme No. 15 and make any required amendments through the preparation of a new local planning scheme.<br><br>3b. Consider updating density codes where ANEF noise contours have changed since the preparation of Local Planning Scheme No. 15.<br><br>3c. Review existing scheme provisions for residential development, including the appropriateness of retaining the R30 density bonus for R20-coded corner sites and the requirement to construct to plate height prior to subdivision above the R30 density code. | Section 9.3.1 of Part 2 | Short term (1-5 years) |
| Built form and character | 4. Identify and explore opportunities to align non-standard zones in the current planning scheme with the Model Provisions as part of developing the new local planning scheme. | 4a. Replace areas of 'Special Development Precinct' zone with the appropriate zoning.<br><br>4b. Rationalise Development Areas and Special Control Areas, with application of the Urban Development zone where necessary. | Section 9.3.2 of Part 2 | Short term (1-5 years) |
| | 5. Review existing built form provisions contained within the City's local planning policies. | 5a. Through the preparation of a new local planning scheme, investigate the appropriateness and necessity of existing built form and character provisions within the City's local planning policies.<br><br>5b. Review local planning policies relating to built form and character, and amend to make these consistent with the template drafted by the Department of Planning, Lands and Heritage. | Section 9.3.2 of Part 2 | Short term (1-5 years) |

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| | 6. Facilitate high-quality built form outcomes. | 6a. Undertake a review of existing built form provisions in the Local Planning Scheme relating to each zone. | Section 9.3.2 of Part 2 | Short term (1-5 years) |
| Historic heritage | 7. Continue to protect and conserve places of historic heritage significance in accordance with the Heritage Act 2018. | 7a. Ensure the City's Local Heritage Survey and Heritage List are updated and reviewed as required in accordance with the Heritage Council's Guidelines for Local Heritage Surveys. | Section 9.3.3 of Part 2 | Ongoing |
| Public open space and community facilities/services | 8. Facilitate the delivery of high quality public open space. | 8a. Investigate opportunities to achieve a higher level of service within the City's existing public open space areas where there are existing shortfalls.<br><br>8b. Investigate the appropriate mechanism through the preparation of the new local planning scheme to improve the visual permeability of fences facing public open space, encourage passive surveillance, and enhance connectivity. | Section 9.3.5 of Part 2 | Ongoing |
| | 9. Investigate opportunities to increase the amount of useable public open space. | 9a. Investigate the acquisition or transfer of land to increase net public open space area.<br><br>9b. Investigate the feasibility of levying developer contributions for public open space and/or requiring developers to provide public open space as part of subdivision.<br><br>9c. Investigate and identify appropriate opportunities to convert or enhance existing water supply, sewerage and drainage land to serve as a form of public open space.<br><br>9d. Co-locating and developing green space in activity centres, schools and high-density areas. | Section 9.3.5 of Part 2 | Ongoing |

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| | 10. Identify and explore opportunities to align non-standard zones in the current planning scheme with the Model Provisions as part of developing the new local planning scheme. | 10a. Investigate the appropriateness of introducing the 'Private clubs, institutions and places of worship' zone.<br><br>10b. Investigate the appropriateness of replacing the 'Parks and Recreation' reserve under the existing local planning scheme with the 'Public Open Space' reserve. | Section 9.3.5 of Part 2 | Short term (1-5 years) |
| | 11. Continue to provide community facilities and services that meet the needs of the City's population. | 11a. Investigate opportunities to deliver new and/or upgraded community facilities in accordance with the City's Community Infrastructure Plan. | Section 9.3.5 of Part 2 | Ongoing |
| | 12. Provide for adequate passive surveillance between public open space areas and private properties. | 12a. Investigate the appropriate mechanism to require appropriate passive surveillance between public open space areas and private properties. | Section 9.3.5 of Part 2 | Short term (1-5 years) |

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| Hazards | 13. To ensure safe and prepared planning regarding the City's natural hazards. | 13a. Investigate the appropriate mechanism through the preparation of the new local planning scheme to prohibit development within the flood way and facilitate appropriate development within the flood fringe and in proximity to open Water Corporation drains. | Section 9.3.6 of Part 2 | Short term (1-5 years) |

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## 4.3 Economy and employment

### 4.3.1 Key Consideration/Opportunity 6 - Activity Centres & Industry

The City's Activity Centres play a vital role in Belmont's economy as key employment hubs, driven by their retail and commercial functions. To guide future development, the City adopted the Activity Centre Planning Strategy (ACPS) on 27 February 2024. This Strategy is supported by a Retail Needs Assessment (RNA), which contains recommendations for future retail growth, which is identified in Table 3 along with the minimum dwelling target for each activity centre as per State Planning Policy 4.2 – Activity Centres.

Applying appropriate zones, density codes and land use permissibility is critical to ensuring these centres effectively contribute to the local economy. Additionally, applying appropriate parking standards and enhancing the movement networks and visual appeal of these centres, as highlighted in the ACPS, will attract both investment and visitors.

The future planning of the City's Secondary, Neighbourhood and Local Centres should align with Planning Areas H, I & J.

Table 3 – Forecast Net Lettable Area

| Activity Centre | SPP4.2 Dwelling Target (walkable catchment) | Forecast Net Lettable Area ($m^2$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Shop/ Retail | | | | | Other Retail | | | | |
| | | 2016 | 2021 | 2026 | 2031 | 2036 | 2016 | 2021 | 2026 | 2031 | 2036 |
| Perth Airport - West Specialised Centre | - | - | 28,000 | 28,000 | 28,000 | 28,000 | - | - | 5,000 | 5,000 | 5,000 |
| Perth Airport - South Specialised Centre | - | - | - | - | - | - | - | 5,000 | 5,000 | 5,000 | 5,000 |
| Belmont Secondary Centre - H | 1,000 dwellings (40ha, 400m) | 43,148 | 50,000 | 55,500 | 61,500 | 67,000 | 40 | 40 | 500 | 1,000 | 2,000 |
| Belvidere Street NC – I1 | 225 dwellings (9ha, 200m) | 2,958 | 3,500 | 3,500 | 3,500 | 3,500 | 33 | 33 | 33 | 33 | 33 |
| Kooyong Road NC – I2 | 225 dwellings (9ha, 200m) | 2,276 | 2,500 | 2,500 | 2,500 | 2,500 | - | - | - | - | - |
| Eastgate NC – I3 | 225 dwellings (9ha, 200m) | 1,938 | 2,720 | 3,500 | 3,500 | 4,000 | - | - | 3,000 | 3,000 | 3,000 |
| Redcliffe Station NC – I4 | 1,800 dwellings (59ha, 800m) | - | - | 1,000 | 2,000 | 3,000 | - | - | - | 500 | 500 |
| Redcliffe LC – J1 | 225 dwellings (9ha, 200m) | 355 | 360 | 360 | 360 | 360 | 170 | 170 | 170 | 170 | 170 |
| Belgravia Street LC – J2 | 225 dwellings (9ha, 200m) | 942 | 1,000 | 1,000 | 1,000 | 1,000 | - | - | - | - | - |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Wright Street LC – J3 | 225 dwellings (9ha, 200m) | 675 | 700 | 700 | 700 | 700 | - | - | - | - | - |
| Epsom Avenue LC – J4 | 225 dwellings (9ha, 200m) | 1,140 | 1,200 | 1,200 | 1,200 | 1,200 | - | - | - | - | - |
| Love Street LC – J5 | 225 dwellings (9ha, 200m) | 370 | 400 | 500 | 500 | 500 | 799 | 799 | 799 | 799 | 799 |
| Belmay LC – J6 | 225 dwellings (9ha, 200m) | 180 | 180 | 180 | 180 | 180 | - | - | - | - | - |
| Belmont Square LC – J7 | 225 dwellings (9ha, 200m) | 580 | 600 | 600 | 600 | 600 | - | - | - | - | - |
| Francisco Street LC – J8 | 225 dwellings (9ha, 200m) | - | - | - | - | - | - | - | - | - | - |
| Ascot Waters LC – J9 | 225 dwellings (9ha, 200m) | - | - | 500 | 500 | 500 | - | - | - | - | - |
| Golden Gateway LC (emerging) – E | 225 dwellings (9ha, 200m) | - | - | - | 1,200 | 1,200 | - | - | - | - | - |
| **Other Precincts** | | | | | | | | | | | |
| Belmont Business Park | - | 14,111 | 14,111 | 14,111 | 14,111 | 14,111 | 29,962 | 29,962 | 29,962 | 29,962 | 29,962 |
| Redcliffe North | - | 710 | 710 | 910 | 910 | 910 | - | - | - | - | - |
| Kewdale | - | 3,357 | 3,357 | 3,357 | 3,357 | 3,357 | 30,613 | 30,613 | 30,613 | 30,613 | 30,613 |
| Great Eastern Highway - West | - | 1,605 | 1,700 | 1,700 | 1,700 | 1,700 | 98 | 98 | 98 | 98 | 98 |
| Great Eastern Highway – Central | - | 4,286 | 4,500 | 4,500 | 5,500 | 5,500 | 2,345 | 2,345 | 2,345 | 2,345 | 2,345 |
| Great Eastern Highway - East | - | 4,286 | 4,300 | 4,300 | 4,300 | 4,300 | 2,345 | 2,345 | 2,345 | 2,345 | 2,345 |

Specialised and employment centres also play a significant role in supporting the local economy and generating employment opportunities. These centres are hubs for regionally significant economic or institutional activities that attract high volumes of workers and visitors. The City has the Perth Airport Specialised Centre, as identified in SPP4.2 – Activity Centres, and the following four employment precincts:

- Belmont Business Park
- Great Eastern Highway
- Kewdale Industrial Area
- Redcliffe Industrial Area

An overview of these employment precincts is included in Part 2 Section 4.3.

To ensure these activity centres continue to play an important role in Belmont's economy and serve as key employment hubs, the City should investigate the following having regard to Part 2:

- Appropriate zones for the intended function of these centres.

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- Appropriate land use permissibility to encourage suitable and compatible land uses.
- Appropriate interfaces to adjoining land uses.
- Appropriate development controls.

Regarding Perth Airport, the City should continue to engage with Perth Airport on future development.

### 4.3.2 Key Consideration/Opportunity 7 - Tourism

While the City does not have designated tourist sites, several locations provide local and regional tourism value, attracting visitors to the City of Belmont. These include:

- Perth Airport (including Costco and DFO)
- Swan River Foreshore areas (including Garvey Park, Adachi Park, Kuljak Island, Bilya Kard Boodja Lookout and Ascot Marina)
- Ascot Racecourse
- Ruth Faulkner Library and Belmont Museum

Recreational facilities, such as iFLY Indoor Skydiving and go-karting, further strengthen the City's tourism appeal by offering unique experiences that attract both residents and visitors. While these sites have tourism value, applying a dedicated 'Tourism' zoning is unnecessary as they are not exclusively used as tourist sites. Instead, they can be subject to other appropriate zones. The City will explore appropriate zoning and reserves for each area as part of the new local planning scheme, in alignment with the model provisions of the Planning and Development (Local Planning Schemes) Regulations 2015.

Short-Term Rental Accommodation

The City recognises the importance of short-term rental accommodation in supporting tourism while addressing its potential impact on affordable housing availability and residential amenity if not effectively managed. To address these challenges, the City has implemented Local Planning Policy No. 19 – Short-Term Rental Accommodation, developed in alignment with the State's Position Statement and Guidelines for Planning for Tourism and Short-Term Rental Accommodation.

This Policy aims to facilitate short-term rental accommodation in strategic locations, including areas near high-frequency public transport stops along Great Eastern Highway and tourist accommodation uses. The City will continue to enforce and refine this Policy to balance tourism growth with community needs and protect the availability of long-term housing supply.

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Table 4: Economy and Employment – Planning Directions and Actions

| Consideration/ opportunity | Planning Direction | Action | Rationale | Timeframe |
|---|---|---|---|---|
| Activity Centres & Industry | 14. Identify and explore opportunities to align non-standard zones in the current planning scheme with the Model Provisions as part of developing the new local planning scheme, as well as appropriate associated development provisions. | 14a. Investigate the appropriateness of applying a 'Service Commercial' zone to land currently zoned 'Mixed Business' under the existing local planning scheme, with the exception of lots directly adjacent to Great Eastern Highway.<br><br>14b. Investigate the replacement of the existing 'Industrial' zone with the 'Light Industry' and 'General Industry' zones.<br><br>14c. Apply appropriate land use permissibility's for the various zones contained within the local planning scheme.<br><br>14d. Investigate appropriate development provisions for the 'Service Commercial', 'Light Industry' and 'General Industry' zones. Provisions relating to built form and interface should also be considered. | Section 9.4.1 of Part 2 | Short term (1-5 years) |
| | 15. Protect key employment hubs and industrial areas from encroachment of incompatible land uses. | 15a. Revoke Local Planning Policy No. 10 – Residential Land Uses in the 'Mixed Business' zone. | Section 9.4.1 of Part 2 | Short term (1-5 years) |
| | 16. Ensure employment floorspace is not decreased as a result of introducing residential land uses to activity centres, urban corridors and employment precincts. | 16a. In preparation of the new local planning scheme, consider appropriate scheme or local planning policy provisions to ensure residential land uses do not impede employment floorspace, in particular on the ground floor fronting streets, in zones that allow for a mixed use developments. | Section 9.4.1 of Part 2 | Short term (1-5 years) |

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| Tourism | 17. Identify and explore opportunities to align non-standard zones in the current planning scheme with the Model Provisions as part of developing the new local planning scheme. | 17a. Investigate replacing the 'Place of Public Assembly' zone currently applied to the Ascot Racecourse with an appropriate zone or reservation.<br><br>17b. Investigate replacing the 'Civic and Cultural' reserve currently applied to the Ruth Faulkner Library and Belmont Museum with a 'Civic and Community' reserve. | Section 9.4.2 of Part 2 | Short term (1-5 years) |
| | 18. Continue to protect the availability of long-term and affordable housing across the City of Belmont by facilitating short-term rental accommodation near high-frequency public transport stops along Great Eastern Highway and existing tourist accommodation. | 18a. Amend Local Planning Policy No. 19 – Short Term Rental Accommodation to reflect the land use permissibility in the Zoning Table following Amendment No. 23 to LPS 15. | Section 9.4.2 of Part 2 | Ongoing |

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## 4.4 Environment

### 4.4.1 Key Consideration/Opportunity 8 - Natural Areas

Most natural areas within the City are publicly managed, designated as Public Open Space under the Metropolitan Region Scheme (MRS) or Local Planning Scheme No. 15 (LPS 15), and overseen by the City and/or the Department of Planning, Lands, and Heritage (DPLH). As part of the preparation of the new local planning scheme, the City should continue to preserve these areas by applying appropriate reservations to ensure their protection. Additionally, an Implementation Plan for the Environment and Sustainability Strategy 2023-2033 has been developed. This plan outlines objectives, targets, and indicators to monitor environmental performance and support the preservation and enhancement of natural areas while mitigating environmental impacts.

### 4.4.2 Key Consideration/Opportunity 9 - Climate Change/Tree Protection

In planning for the future of the City of Belmont, it is important to address the challenges posed by climate change. As extreme weather events become more frequent, the City must adapt its planning to strengthen resilience and sustainability.

As part of a new local planning scheme, the City will explore offering development incentives where certain sustainability criteria are met. The City will also investigate introducing a sustainable development guide to encourage environmentally conscious development outcomes.

Recognising the role of trees in mitigating the impacts of climate change, the City will examine the most appropriate methods to encourage and/or incentivise tree retention on private land. The City will also investigate the appropriateness of introducing additional guidance regarding new crossovers that conflict with existing street trees. Additionally, tree planting in car parking areas as well as deep-soil requirements for non-residential development will be considered.

Furthermore, the City will continue to facilitate higher-density development within and around activity centres, and near high-frequency public transport routes, including the areas surrounding Redcliffe Station. This approach supports sustainable urban growth and reduces reliance on cars.

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Table 5: Environment – Planning Directions and Actions

| Consideration/ opportunity | Planning Direction | Action | Rationale | Timeframe |
|---|---|---|---|---|
| Natural Areas | 19. Continue to preserve natural areas by applying an appropriate reservation over natural areas. | 19a. Apply an appropriate reservation over natural areas, such as Public Open Space or Environmental Conservation. | Section 9.5.1 of Part 2 | Short term (1-5 years) |
| | 20. Continue to support the objectives within the Environment and Sustainability Strategy. | 20a. Review local planning instruments and amend where necessary to ensure sustainable development principles are appropriately considered. | Section 9.5.1 of Part 2 | Short term (1-5 years) |
| Climate Change/Tree Protection | 21. Facilitate and encourage sustainable growth and greening. | 21a. Investigate the appropriateness of providing development incentives where certain sustainability criteria and/or a significant tree(s) is retained. Alternatively, investigate the appropriateness of developing a City policy/guidance which encourages/incentivises sustainability measures to be incorporated into residential and commercial developments.<br><br>21b. Investigate introducing a ratio of trees to car parking bays on non-residential properties.<br><br>21c. Investigate introducing deep soil zone requirements on non-residential properties.<br><br>21d. Investigate the appropriateness of introducing guidance for new crossovers that conflict with existing street trees. | Section 9.5.2 of Part 2 | Short term (1-5 years) |

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| | | 21e.Investigate the appropriateness of a Significant Tree Register within the local planning scheme. | | |

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## 4.5 Infrastructure

### 4.5.1 Key Consideration/Opportunity 10 - Transport Network

*Public Transport*

The City of Belmont contains two train stations; Redcliffe Station and the Airport Central Station which are located on the Airport Line. In addition to rail services, the City is serviced by several bus routes, including high-frequency options that connect to key locations within the City of Belmont and surrounding areas.

The City will continue to monitor development across the municipality and engage with the Public Transport Authority regarding the adequacy of public transport services where necessary.

*Road Network*

The City of Belmont is connected by several key roads, including Great Eastern Highway, Graham Farmer Freeway, Tonkin Highway, Leach Highway, Abernethy Road, and Orrong Road. These major routes provide convenient vehicle access within Belmont and to surrounding suburbs, supporting both local and regional travel. However, they also present challenges, including access and egress safety, congestion, and noise.

As part of the preparation of a new local planning scheme, the City will seek to continue minimising direct vehicle access onto primary and other regional roads. Additionally, the City will continue to implement State Planning Policy 5.4 - Road and Rail noise in the assessment of relevant development applications.

The City will also continue to engage with and monitor the progress of the Orrong Road Connect project. Through this project, Main Roads is investigating ways to improve safety, reduce congestion and enhance connectivity and liveability for people who travel along or live near Orrong Road.

*Parking*

For residential development, the City of Belmont applies the standards set out in the Residential Design Codes and will continue to do so.

For non-residential development, the City uses the standards outlined in Table 2 – Car Parking Requirements of Local Planning Scheme No. 15. As part of preparing a new local planning scheme, the City will review these standards, taking into account the recently released WA Planning Manual – Non-Residential Car Parking Rates in Perth and Peel.

The City will also consider the appropriateness of developing a payment in lieu of parking plan to guide how funds collected from developers, in lieu of meeting minimum on-site parking requirements, will be used.

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*Walking and Cycling*

The City of Belmont is committed to enhancing active transport options for residents and visitors through a well-connected walking and cycling network. This network includes a variety of pedestrian and cyclist paths that link key areas of the City, promoting sustainable and healthy transportation. These aim to improve safety, accessibility, and convenience for pedestrians and cyclists, while supporting a more active and connected community.

Additionally, the City has prepared the Great Eastern Highway Urban Corridor Strategy, which provides an extensive movement network along the urban corridor. This includes a series of on-street and off-street cycle paths, ensuring continuous cycling access along the length of the corridor. It also proposes a principal shared path along the northern side of the corridor, providing a direct and safe route for pedestrians commuting from Belmont to the City and reaching key areas of amenity. This approach supports the establishment of a robust movement network that will encourage and increase active transportation.

### 4.5.2 Key Consideration/Opportunity 11 - Airports and Aviation

Perth Airport is Western Australia's primary hub for domestic and international travel, with an area of approximately 2,105 hectares and predominantly located within the City of Belmont.

To protect Perth Airport from unreasonable encroachment by incompatible (noise-sensitive) development, while minimising the impact of airport operations on communities, the City will seek to require development approval for lots within the airport height referral area and ANEF (Australian Noise Exposure Forecast) contours. This could be addressed by providing appropriate provisions, which will be further investigated as part of the preparation of the new local planning scheme. The City will also continue to engage with Perth Airport regarding future development proposals.

### 4.5.3 Key Consideration/Opportunity 12 -Telecommunications

Recognising the potential amenity impacts of telecommunications infrastructure, the City should seek to direct future installations to the Redcliffe and Kewdale Industrial areas and the Belmont Business Park. It may be appropriate for this infrastructure to locate within activity centres, subject to a development application being submitted to assess any amenity impacts. The permissibility of this use within these zones will be further investigated through the preparation of a new local planning scheme.

### 4.5.4 Key Consideration/Opportunity 13 - Servicing

The City of Belmont is well-serviced with reticulated infrastructure for water, power, gas, and telecommunications. While most areas, including the majority of Redcliffe industrial area, are connected to reticulated sewerage, a few sections remain unsewered, particularly in the Kewdale industrial area and certain lots adjacent to Hay Road in Ascot and Redcliffe Road. In areas anticipated to undergo significant redevelopment, such as Golden Gateway and the Redcliffe Station Precinct, upgrades to existing services may be necessary.

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The City's existing local planning scheme includes a requirement for all residential development, apart from a single house or existing development to be connected to a reticulated sewerage system. If no sewerage is available, development in excess of a single house is not permitted unless such development complies with the Government Sewerage Policy. The inclusion of this provision will be further examined as part of the preparation of the new local planning scheme.

Additionally, the City is actively engaging with Western Power on its Targeted Underground Power Programme which relocates overhead powerlines underground providing significant amenity improvements for the community. The opportunity to underground powerlines outside of the Western Power programme may also be considered (cost dependent) in conjunction with major projects, such as the Belvidere Street Revitalisation project.

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Table 6: Infrastructure – Planning Directions and Actions

| Consideration/ opportunity | Planning Direction | Action | Rationale | Timeframe |
|---|---|---|---|---|
| Transport Network | 22. Facilitate the use of sustainable transport modes. | 22a. Monitor development across the City and advocate the Public Transport Authority for additional or changes to services where required.<br><br>22b. Advocate Main Roads and the Department of Transport for the provision of a principle shared path along the northern side of Great Eastern Highway. | Section 9.6.1 of Part 2 | Ongoing |
| | 23. Support and implement safe vehicle access and egress. | 23a. Include provisions within the local planning scheme requiring alternative access arrangements for development adjacent to regional roads such as Great Eastern Highway, Abernethy Road, Belgravia Street and Orrong Road.<br><br>23b. Engage with and monitor the Orrong Road Connect project to support safety, reduce congestion, and enhance connectivity and liveability along the corridor. | Section 9.6.1 of Part 2<br><br>Section 9.6.1 of Part 2 | Short term (1-5 years)<br><br>Ongoing |
| | 24. Facilitate the appropriate provision of parking within the City of Belmont. | 24a. Review non-residential parking standards, considering the WA Planning Manual – Non Residential Car Parking Rates in Perth and Peel and apply appropriate parking standards through the preparation of a new local planning scheme.<br><br>24b. Investigate the appropriateness of preparing a payment in lieu of parking plan for the City of Belmont to guide the use of collected funds. | Section 9.6.1 of Part 2<br><br>Section 9.6.1 of Part 2 | Short term (1-5 years)<br><br>Short term (1-5 years) |

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| | 25. Facilitate active transportation by developing a well-connected system. | 25a. Implement a continuous pedestrian and cycling network through the provision of safe, accessible and convenient paths and crossings, supplemented by a diverse range of landscaped areas. | Section 9.6.1 of Part 2 | Ongoing |
| Airports and Aviation | 26. Continue to support the airport's primary function as Perth's gateway to the world. | 26a. Continue to engage with Perth Airport regarding future development on their land.<br><br>26b. Through the preparation of the new local planning scheme apply the appropriate mechanism to protect Perth Airport from incompatible development and minimise aircraft noise impacts on the community. | Section 9.6.2 of Part 2 | Ongoing<br><br>Short term (1-5 years) |
| Telecommunications | 27. Minimise amenity impacts associated with telecommunications infrastructure. | 27a. Encourage telecommunications infrastructure in the 'Light Industry', 'General Industry', 'Service Commercial' or 'Centre' zones. | Section 9.6.3 of Part 2 | Short term (1-5 years) |
| Servicing | 28. Support highest and best use of land within the Industrial Estates. | 28a. Advocate Water Corporation to provide sewer connections throughout the Kewdale Industrial Estate and Redcliffe industrial area. | Section 9.6.4 of Part 2 | Ongoing |
| | 29. Enhance streetscape amenity throughout the City. | 29a. Continue to engage with Western Power on its Targeted Underground Power Programme. | Section 9.6.4 of Part 2 | Ongoing |

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| | 30. Continue to facilitate development that aligns with the Government Sewerage Policy. | 30a. Investigate the appropriateness of carrying forward provisions from the existing scheme for residential development relating to sewerage. | Section 9.6.4 of Part 2 | Short term (1-5 years) |

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## 4.6 Planning Areas

This section outlines in greater detail planning directions and actions for specific planning areas (for extent of planning areas, see Figure 1 Local Planning Strategy map).

The Local Planning Strategy identifies 11 planning areas for investigation, land use intensification and further development. The rationale, context, proposed land use and density arrangements for each planning area is summarised in Table 7.

It should be noted that planning areas may be subject to further minor refinements throughout detailed planning stages.

Table 7: Planning Areas – Planning Directions and Actions

| ***Planning Area*** | ***Planning Direction*** | ***Action*** | ***Rationale*** | ***Timeframe*** |
|---|---|---|---|---|
| A - Land adjacent Stanton Road and Tonkin Highway | 1. Ensure coordinated development within the precinct that addresses access constraints while supporting housing near high-frequency public transport. | 1a. Facilitate alternative access options within the precinct, as the section of Stanton Road adjacent to the area is a primary regional road with vehicle access controls.<br><br>1b. Identify land bound by Ryans Court, Morrison Street, Greenshields Way and Tonkin Highway as being subject to additional site and development requirements within the new local planning scheme that requires coordination of vehicle access and tree retention.<br><br>1c. Through the preparation of a new local planning scheme, investigate the appropriate zoning and density code. | This 2.4-hectare precinct is largely vacant with only three houses fronting Morrison Street. There are also several irregular shaped lots.<br><br>Some lots lack direct access to public roads, relying on neighbouring lots for access. Alternative access arrangements are necessary for lots fronting Stanton Road, as that portion is classified as a 'Primary Regional Road.'<br><br>The precinct's proximity to Redcliffe Station, less than 800 meters away, makes it well-suited for residential development. However, fragmented land ownership and access considerations require coordinated planning. This could be facilitated through a structure plan or local development plan. | Short-term (1-5 years) |

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| B – Redcliffe Station Precinct. | 2. To support the development of a vibrant, transit-oriented precinct that includes a mix of suitable land uses around the train station and Great Eastern Highway, with higher-density residential development throughout the rest of the precinct. | 2a. Continue to liaise with the Department of Planning, Lands and Heritage regarding the development and implementation of the Improvement Scheme for the Redcliffe Station Precinct. | Redcliffe Station is located within the centre of the precinct, making it a suitable area for increased residential development. Future residents within the precinct will be serviced by a neighbourhood centre which is partly located within the Perth Airport Estate and will also immediately surround Redcliffe Station.<br><br>By supporting higher density residential development surrounding the station, the precinct can establish itself as a key transport-orientated hub. | Ongoing |
| C – Lot 602 (55) Fauntleroy Avenue, Ascot | 3. Ensure coordinated development within the precinct that addresses environmental constraints while supporting appropriate housing options. | 3a. Identify appropriate requirements within the new local planning scheme for development to address the environmental considerations for the site. | Lot 602 Coolgardie Avenue, Ascot is approximately 3.89 hectares in area. The land holds significant development potential, but key environmental and infrastructure challenges must first be addressed. A geotechnical report highlights the need for substantial remediation due to variable soil conditions.<br><br>This instability is attributed to the historical alignment of the Swan River and further worsened by illegal dumping of materials.<br><br>Additionally, the precinct lies within the flood fringe, is designated as bushfire-prone, and contains a conservation | Short-term (1-5 years) |

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| | | | category wetland that requires careful management and protection. The lot also accommodates sewer and drainage infrastructure that need to be considered as part of any future development. | |
| D - Golden Gateway: Land generally bound by Great Eastern Highway, the Swan River, the Ascot Waters precinct, and Ascot Racecourse. | 4. Ensure coordinated development within the precinct that addresses access constraints while supporting housing near high-frequency public transport. | 4a. Finalise the draft Golden Gateway Structure Plan.<br><br>4b. Continue to liaise with Perth Racing to ensure compatible development outcomes are achieved between land subject to the draft Golden Gateway Structure Plan and Perth Racing's landholdings. | The Golden Gateway Planning Precinct has been identified as a suitable location for mixed-use development, featuring higher-density residential options. The precinct benefits from its strategic location near high-frequency public transport and its proximity to the Swan River foreshore.<br><br>The Golden Gateway precinct contains several Perth Racing landholdings. The draft Structure Plan identifies that this land is subject to a separate planning process, which Perth Racing are currently undertaking.<br><br>The area faces challenges relating to land fragmentation and access. Fragmented landholdings could impede cohesive development. Careful consideration of access is also required due to Great Eastern Highway and regional through-traffic using key roads, including Stoneham Street and Resolution Drive.<br><br>The draft structure plan will address these key planning considerations. | Short-term (1-5 years) |
| E –Great Eastern Highway and | 5. Promote mixed-use and higher density | 5a. Through the preparation of a new local planning scheme, investigate the appropriate | Great Eastern Highway is a key primary regional road which dissects the City. Perth and Peel@3.5 Million identifies the | Short-term (1-5 years) |

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| adjacent transition areas | residential development along Great Eastern Highway, that interacts with and enhances the public realm, while being designed to mitigate impacts on surrounding lower density residential areas.<br><br>6. Support an appropriate transition in development intensity back from Great Eastern Highway. | zoning and density code and possible local planning policy for the Great Eastern Highway Urban Corridor.<br><br>5b. Investigate suitable mechanisms to fund key pedestrian and cyclist infrastructure along the Corridor.<br><br>5c. Investigate the suitable density code for the land in Rivervale, bound by the Swan River (to the north), Great Eastern Highway (to the south), Brighton Road (to the west) and the boundary extending northwest from Acton Avenue (to the east), and mechanisms to remove vehicle access from Great Eastern Highway.<br><br>6a. Investigate suitable density codes for land behind the Corridor as part of the preparation of the new local planning scheme. | road as an urban corridor which should be a focus for higher-density residential development. The Corridor benefits from its strategic location, including its proximity to high-frequency public transport and the Swan River.<br><br>Traditionally, land adjacent to the road was developed for single houses, warehouses and light industrial uses. This has transformed over time with the highway now accommodating a range of shops, hotels, eateries, multiple dwellings, offices and showrooms.<br><br>This area faces challenges such as land fragmentation, road network limitations, and access considerations. Fragmented land holdings may hinder cohesive development and limit development of desired land uses. Careful consideration of access and road networks is also required, given Great Eastern Highway's designation as a primary regional road used for both traffic and freight. | |
| F –Orrong Road – Abutting Lots | 7. Ensure coordinated development within the | 7a. Identify additional site and development requirements within the new local planning scheme to require vehicle | Alternative access arrangements should be implemented for lots fronting Orrong Road, as it is classified as an 'Other | Short-term (1-5 years) |

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| | precinct that addresses access constraints while supporting housing near high-frequency public transport. | access to be taken from roads other than Orrong Road.<br><br>7b. Review the existing local planning policy relating to land adjacent to Orrong Road to determine whether it continues to be necessary or can be revoked. If it is determined the policy should be retained, make any necessary modifications. | Regional Road' and sections are located within Planning Control Area 183.<br><br>Fragmented land ownership and access considerations require coordinated planning. This could continue to be facilitated through the local planning scheme and/or a local planning policy. | |
| G –Abernethy Road – Abutting Lots | 8. Ensure coordinated development within the precinct that addresses access constraints while supporting housing near high-frequency public transport. | 8a. Identify additional site and development requirements within the new local planning scheme to require vehicle access to be taken from roads other than Abernethy Road.<br><br>8b. Review the existing local planning policy relating to land adjacent to Abernethy Road to determine whether it continues to be necessary or can be revoked. If it is determined the policy should be retained, make any necessary modifications. | Alternative access arrangements should be implemented for lots fronting Abernethy Road, as it is classified as a 'Other Regional Road.<br><br>fragmented land ownership and access considerations require coordinated planning. This could continue to be facilitated through the local planning scheme and/or a local planning policy. | Short-term (1-5 years) |
| H – Belmont Secondary Centre | 9. Support the development of a diverse range of compatible and appropriate land uses within the centre, while | 9a. Investigate applying a 'Centre' zone over land within the Belmont Secondary Centre.<br><br>9b. Investigate and apply an appropriate density code to | Belmont Secondary Centre is identified by SPP 4.2 as a Secondary Centre. It performs an important role in the overall economy of the Perth Metropolitan Area while providing essential services to Belmont and surrounding areas. | Short-term (1-5 years) |

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| | also encouraging residential development to enhance its ongoing economic viability. | land within and surrounding the centre. | The Centre is currently zoned 'Town Centre' in the City's Local Planning Scheme No. 15. Given the 'Town Centre' zone is not a model zone in the Planning and Development (Local Planning Schemes) Regulations 2015, it may be appropriate to apply a 'Centre' zone through the preparation of a new local planning scheme.<br><br>The City will only consider new or expanded land uses within the Town Centre where they are consistent with State Planning Policy 4.2.<br><br>Land within the Centre does not currently have an allocated residential density coding. There is also currently no residential development within the Centre. A residential density coding should be applied to land within the Centre to facilitate a mix of residential and retail commercial land uses, whilst promoting economic sustainability.<br><br>Through the preparation of a new local planning scheme, appropriate density codes surrounding the centre should be investigated to encourage residential development within the walkable catchment of the centre.<br><br>Such provisions being contained within the new local planning scheme, may forgo the need for a Precinct Structure Plan for the Secondary Centre as per SPP 4.2. | |

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| I - Neighbourhood Centres | 10. Support the development of a diverse range of compatible and appropriate land uses within the centre, while also encouraging residential development to enhance its ongoing economic viability. This should be achieved without eroding the primary intent of the centre. | 10a. Investigate the appropriate zoning and land use permissibility for land within the City's neighbourhood centres.<br><br>10b. Apply an appropriate density code to land within and surrounding the neighbourhood centres through the preparation of a new local planning scheme.<br><br>10c. Investigate appropriate planning controls in a new local planning scheme to prevent residential development without commercial components and to ensure a suitable transition between commercial and residential land uses. | There are currently three neighbourhood centres within the City of Belmont including; Belvidere Street, Eastgate, and Kooyong Road. There is also a future neighbourhood centre planned surrounding Redcliffe Station.<br><br>The future zoning, density, and land use permissibility of the Redcliffe Neighbourhood Centre will need to consider the Improvement Scheme being prepared by the Department of Planning, Lands and Heritage (DPLH). In the meantime, the City should continue engaging with the State Government to support the development and delivery of the Improvement Scheme.<br><br>Regarding the existing neighbourhood centres, the future zoning should be reviewed having regard to the Planning and Development (Local Planning Schemes) Regulations 2015. In this respect, it is understood that the Western Australian Planning Commission is proposing to introduce 'a Local and Neighbourhood Centre' zone. Therefore, it may be appropriate to apply a 'Neighbourhood Centre' zoning to land within neighbourhood centres through the preparation of a new local planning scheme. Land use permissibility should be carefully considered in a new local planning scheme to ensure these centres accommodate uses consistent with their intended function. | Short-term (1-5 years) |

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| | | | The Scheme does not currently assign residential density codes to land within neighbourhood centres. To promote a balanced mix of residential, retail, and commercial uses while encouraging economic sustainability, an appropriate residential density code should be explored in a new local planning scheme. However, controls may be needed to ensure residential development supports the centres' primary function of providing services to the community. This could include limiting residential development on ground floors and requiring a commercial component in redevelopment proposals. Appropriate density codes for surrounding areas should also be reviewed to support additional housing within the centres' walkable catchments. | |
| J - Local Centres | 11. Support the development of a diverse range of compatible and appropriate land uses within the centre, while also encouraging residential development to enhance its ongoing economic viability. This should be achieved without | 11a. Investigate the appropriate zoning and land use permissibility for land within the City's local centres.<br><br>11b. Apply an appropriate density code to land within and surrounding the local centres through the preparation of a new local planning scheme.<br><br>11c. Investigate appropriate planning controls in a new local planning scheme to prevent residential development without | The City of Belmont includes nine existing local centres and one future local centre.<br><br>Local Centres are intended to provide convenience retail for daily needs and serve as social meeting points.<br><br>Future zoning for the City's local centres should align with the Planning and Development (Local Planning Schemes) Regulations 2015. As the Western Australian Planning Commission is proposing to introduce 'Local and Neighbourhood Centre' zones, it may be appropriate to apply a 'Local Centre' zone to land within local centres. | Short-term (1-5 years) |

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| | eroding the primary intent of the centre. | commercial components and to ensure a suitable transition between commercial and residential land uses. | Land use permissibility should also be reviewed to ensure the centres accommodate uses that align with their intended function.<br><br>Currently, Local Planning Scheme No. 15 does not assign residential density codes to local centres. To encourage a balanced mix of residential, retail, and commercial uses while promoting economic sustainability, suitable residential density codes should be considered in a new local planning scheme.<br><br>Controls may also be required to ensure residential development complements the centres primary role of providing for the daily needs of residents. This could involve restricting residential development on ground floors and requiring a commercial component in redevelopment proposals.<br><br>Where appropriate, density codes for areas surrounding local centres should be reviewed to support more housing within the centres walkable catchments. | |
| K – Residential and Stables Area – Land generally bound by Hardey Road, Matheson Road, Ascot Racecourse, the Swan River foreshore, Tonkin | 12. Support development that is currently compatible with horse stabling and related activities, while recognising the | 12a. Investigate and apply an appropriate zone and density code to the area to support the stabling of horses, with consideration for exclusion closest to the Swan River foreshore. | A portion of Ascot is zoned 'Residential and Stables' in LPS15. This area currently supports compatible and environmentally responsible land uses near the Ascot Racecourse and the Swan River, accommodating residential uses, stables, and ancillary functions related to the horse racing industry. | Ongoing<br><br>Short-term (1-5 years) |

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| Highway and Mixed Use zoned lots fronting Great Eastern Highway. | declining demand for stables and increasing trend for residential only development. Monitor the number of horses and active stable licenses to guide this transition and ensure future development aligns with evolving land use and environmental considerations. | 12b. Investigate the appropriate mechanism to inform prospective purchasers of potential amenity impacts associated with horse-related activities in the area.<br><br>12c. Review the existing site and development requirements applicable to the area and make any necessary modifications. | While there is currently no formal density coding applied under the existing Scheme, the Scheme mandates a minimum lot size of 1,000m² per dwelling, with open space and setbacks adhering to the R10 density code. Given this context, the City should explore the appropriateness of applying a density code to the area in the preparation of a new local planning scheme.<br><br>The Scheme currently requires applications for Development Approval for either a stable or a residence to provide for both a residence and a minimum of two stables on the lot. According to the City's Consolidated Local Law 2020, this results in a total area of 70m² being allocated for future stabling. Currently, 48.1% of lots containing a dwelling also have licensed stables, a figure that decreases to 28.6% for dwellings constructed after 2001. Of all licensed stables, 46.4% are in use, representing 22.3% of all lots. The City should continue to monitor the number of active stables and, in preparing a new local planning scheme, assess whether the requirement for lots to accommodate both a residence and stables should be retained.<br><br>To inform prospective purchasers of potential amenity impacts associated with horse-related activities in the area, | |

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| | | | the City should investigate the appropriateness of including a provision in the Local Planning Scheme requiring, where appropriate, a Section 70A Notification to be placed on Titles at the development or subdivision stage. Additionally, the City should explore the appropriateness of providing an information sheet to purchasers at the time of purchase, when Orders and Requisitions are issued, outlining potential impacts such as noise, dust, and odour associated with horse-related activities in the area. Legal advice should also be obtained to better understand what reasonable impacts (e.g. noise, dust and odour) are.<br><br>The future zoning of this area should also be reviewed through the preparation of a new local planning scheme. It should be noted that the 'Residential and Stables' zone is not a model zone under the Planning and Development (Local Planning Schemes) Regulations 2015. In preparing a new local planning scheme, the City should engage with the Department of Planning, Lands and Heritage (DPLH) on the preferred approach for this area. Potential options include:<br><br>• Designating a Special Control Area to manage residential and equine-related uses, with a provision | |

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| | | | requiring development approval for all single houses.<br>• Retaining the non-model 'Residential and Stables' zone and its associated scheme provisions.<br>• Introducing a 'Special Use' zone that facilitates, but does not mandate, the stabling of horses.<br><br>Additionally, several lots within the 'Residential and Stables' zone are located in the Swan Canning Development Control Area and require consideration of potential impacts. The City should investigate the appropriateness of applying a zoning (e.g. Residential) to lots directly adjoining the Swan River that does not permit equine-related uses. This would help reduce nutrient and organic matter runoff into the river and align with the objectives of the Swan Canning River Protection Strategy.<br><br>To ensure an appropriate interface with developments directly abutting Great Eastern Highway, the City should also investigate the establishment of a transition area over a portion of lots currently zoned 'Residential and Stables.' | |

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# 5 Implementation and Review

The Local Planning Strategy outlines the City's intentions for long-term sustainable growth and development, ensuring alignment with community aspirations and State/ regional planning frameworks. The implementation of the Strategy will occur primarily through preparation and review of the City's Local Planning Scheme, as well as updates to relevant structure plans and local planning policies. These planning instruments will provide the mechanisms to deliver the Strategy's objectives and ensure responsiveness to emerging land use considerations and opportunities over the next 10-15 years.

The Strategy is not a static document and will undergo continuous review within the next 10-15 years to maintain its relevance in guiding future land use, infrastructure, and development opportunities. The implementation of actions is expected to occur within defined timeframes, and progress will be regularly monitored. A comprehensive review of the Local Planning Scheme and Strategy will be undertaken every 5 years, as required by the Planning and Development (Local Planning Schemes) Regulations 2015. This review will assess the status of all actions—whether they are completed, in progress, not commenced, or no longer relevant—through a Report of Review, ensuring that the Strategy remains aligned with current and future needs.

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# Part 2 - Background Information and Analysis

## 6 Introduction

The purpose of Part 2 is to provide the rationale and evidence base for Part 1. It provides the relevant background information and analysis which supports the planning directions and actions outlined within Part 1 of the local planning strategy. This part provides a summary of the relevant State, regional and local planning contexts and their implications for the local planning strategy. A local government profile is also included that provides a presentation and analysis of information relating to the demographic profile of the City and the key planning issues and opportunities influencing future development and land use of the City.

## 7 State and Regional Planning Context

### 7.1 State Planning Strategy 2050

The State Planning Strategy provides the strategic context and basis for the coordination and integration of land use planning and development across Western Australia, regional and local levels. It contemplates a future in which high standards of living, improved public health and an excellent quality of life are enjoyed by present and future generations of Western Australians.

The State Planning Strategy proposes that diversity, liveability, connectedness, and collaboration must be central to achieving the vision of sustained growth and prosperity, and establishes principles, strategic goals and directions to ensure the development of the State progresses towards this vision. The Local Planning Strategy has been developed to align with the State Planning Strategy as demonstrated in the vision for the document:

*"The City of Belmont is a dynamic, liveable and well-connected riverside city, committed to sustainable growth, diversity in housing options, and vibrant activity centres that enhances the quality of life for all. Our City fosters a strong sense of belonging and inclusivity, celebrating the rich diversity of our population."*

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## 7.2 State Planning Policies

State Planning Policies (SPPs) are prepared under Part 3 of the *Planning and Development Act* 2005 and provide the highest level of planning policy control and guidance in Western Australia. SPPs considered to be specifically relevant to the City are outlined and described in Table 8.

Table 8: State Planning Policy Overview and local planning strategy implications and responses

| ***State Planning Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| **State Planning Policy 1 – State Planning Framework (SPP 1.0)** | SPP 1.0 restates and expands on the key principles of the State Planning Strategy in planning for sustainable lands use and development. It brings together existing State and regional policies, strategies and guidelines within a central State Planning Framework, which provides a context for decision making on land use and development in Western Australia.<br><br>The Framework informs the Western Australian Planning Commission (WAPC), local government and others involved in the planning process on State level planning policy which is to be taken into consideration, and given effect to, in order to ensure integrated decision making across all spheres of planning.<br><br>The Framework identifies relevant policies and strategies used by the WAPC in making decisions and may be amended from time to time. The framework is the overarching SPP. Additional SPPs set out the WAPC's policy position in relation to aspects of the State Planning Strategy principles. | This Strategy has been developed in line with the broader State Planning Framework. |
| **State Planning Policy 2 – Environment and Natural Resources Policy (SPP 2.0)** | SPP 2.0 is a broad sector policy and provides guidance for the protection, management, conservation and enhancement of the natural environment. The policy promotes responsible planning by integrating environment and natural resource management with broader land use planning and decision-making.<br><br>SPP 2.0 outlines general measures for matters such as water, air quality, soil and land quality, biodiversity, agricultural land and rangelands, basic raw materials, marine resources, landscapes, and energy efficiency. These general measures should be considered in conjunction with | The Strategy identifies the key natural areas within the City and includes actions relating to investigating an appropriate reservation to ensure their ongoing protection.<br><br>The Strategy also includes reference to investigating the appropriateness of providing |

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| ***State Planning Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
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| | environmentally based, issue-specific State planning polices which supplement SPP 2.0. | development incentives where certain sustainability criteria and/or a significant tree is retained. |
| **State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region** | SPP 2.8 seeks to provide a policy and implementation framework that will ensure bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision-making. The primary purpose of the policy is to secure the long-term protection of biodiversity and associated environmental value sites, being Bush Forever areas.<br><br>The policy recognises the protection and management of significant bushland areas as a fundamental consideration in the planning process, while also seeking to integrate and balance wider environmental, social and economic considerations.<br><br>The policy supports the preparation of local bushland protection strategies to enable the identification of locally significant bushland sites for protection and management outside Bush Forever areas. | There are two Bush Forever sites located within the City, which are both reserved in the Metropolitan Region Scheme (Site 313 is reserved Public Open Space and Site 386 is reserved Public Purposes – Commonwealth Government).<br><br>The City adopted Environment and Sustainability Strategy identifies developing a local Bushland Protection Plan. |
| **State Planning Policy 2.9 –Water** | SPP 2.9 seeks to ensure that planning and development considers water resource management and includes appropriate water management measures to achieve optimal water resource outcomes. The policy establishes objectives relating to improving environmental, social, cultural and economic values of water resources; protecting public health through appropriate water supply and waste water infrastructure; sustainable use of water resources and managing the risk of flooding and water related impacts of climate change on people, property and infrastructure. | Local Government to advocate to Water Corporation to provide sewer connections through the industrial areas.<br><br>Consider appropriate local planning scheme reservations for land adjacent to the Swan River to ensure appropriate protection and conservation.<br><br>Local Government to develop a Foreshore Management Plan to continue foreshore restoration |

| ***State Planning Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
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| | | programs, to increase habitat and parkland amenity.<br><br>Local Government to investigate introducing a local planning scheme special control area and relevant provisions for properties located within the floodway and/or flood fringe.<br><br>Water Management Reports will be required to support subsequent planning stages, including the preparation of a new local planning scheme and amendments, and structure planning. |
| **State Planning Policy 3 – Urban Growth and Settlement (SPP 3.0)** | SPP 3.0 is a broad sector policy that sets out the principles and considerations which apply to planning for urban growth and settlement in Western Australia. The purpose of the policy is to facilitate sustainable patterns of urban growth and settlement by setting out the requirements of sustainable settlements and communities and the broad policy for accommodating growth and change.<br><br>SPP 3.0 outlines general measures to create sustainable communities, plan liveable neighbourhoods, coordinate services and infrastructure, manage rural-residential growth and plan for aboriginal communities. These general measures should be considered in conjunction with issue-specific urban growth and settlement state planning polices which supplement SPP 3.0. | The Local Planning Strategy promotes higher intensity development within and surrounding activity centres, high frequency public transport stops and Redcliffe Station, as well as along urban corridors. |
| **State Planning Policy 3.5 – Historic Heritage** | SPP 3.5 sets out the principles of sound and responsible planning for the conservation and protection of Western Australia's historic heritage. The policy seeks to conserve places and areas of historic heritage significance | The City has adopted a Heritage List to identify and protect properties of significant heritage value. |

| ***State Planning Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
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| **Conservation (SPP 3.5)** | and to ensure development does not adversely affect the significance of heritage places and areas.<br><br>SPP 3.5 primarily relates to historic cultural heritage noting that aboriginal heritage and natural heritage are protected by other legislative instruments. Historic cultural heritage includes heritage areas, buildings and structures, historic cemeteries and gardens, man-made landscapes and historic or archaeological sites with or without built features.<br><br>The policy contains development control principles and considerations for decision-makers for where development is proposed within a heritage place and heritage area. The policy also states that care should be taken by decision-makers to minimise the extent to which land use zoning and other planning controls conflict with, or undermine, heritage conservation objectives. | Development on heritage-listed properties is assessed on a case-by-case basis, considering heritage values contained within the Heritage List and SPP 3.5 principles. |
| **State Planning Policy 3.6 – Infrastructure Contributions (SPP 3.6)** | SPP 3.6 sets set out the principles and requirements that apply to the establishment and collection of infrastructure contributions in new and established areas. The policy establishes objectives to coordinate the efficient and effective delivery of infrastructure to support population growth and development; provide clarity on the acceptable methods of collecting and coordinating contributions for infrastructure and provide the framework for a transparent, equitable, and accountable system for apportioning, collecting and spending contributions. | As part of future structure plans, the City will consider the need for infrastructure and associated contributions in accordance with SPP 3.6 – Infrastructure Contributions. |
| **State Planning Policy 3.7 – Bushfire** | SPP 3.7 provides a framework in which to implement effective, risk-based land use planning and development outcomes to preserve life and reduce the impact of bushfire on property and infrastructure. The policy emphasises the need to identify and consider bushfire risks in decision-making at all stages of the planning and development process whilst achieving an appropriate balance between bushfire risk management measures, biodiversity conservation and environmental protection.<br><br>The policy applies to all land which has been designated as bushfire prone by the Fire and Emergency Services Commissioner as well as areas that | Properties at risk of bushfire are primarily located near Tonkin Highway, Leach Highway and the Swan River. Future planning proposals within bushfire prone areas will be assessed against SPP3.7 and appropriate management measures will be implemented as required. |

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| ***State Planning Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
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| | may have not yet been designated as bushfire prone but is proposed to be developed in a way that introduces a bushfire hazard. | |
| **State Planning Policy 4.1 – Industrial Interface (SPP 4.1)** | Draft SPP 4.1 guides planning decisions with the aim of protecting the long-term future operation of industry and infrastructure facilities, by avoiding encroachment from sensitive land uses and potential land use conflicts. The policy encourages the use of statutory buffers, facilitating industrial land uses with offsite impacts within specific zones and compatible interface between strategic/general industry zones and sensitive zones.<br><br>Draft SPP 4.1 supports land use conflict being addressed as early as possible in the planning process. It is also expected that land use conflict will be subsequently considered at each stage of the planning framework, increasing in detail at each level.<br><br>The policy recognises the overlap of various environmental, health and safety regulations and guidelines and outlines considerations for decision-makers in this regard. | The Strategy recognises the importance of both the Redcliffe and Kewdale industrial areas, as well as the role of the Mixed Business zone (which aligns with the Service Commercial zone in the Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 1 Model Provision).<br><br>The Strategy aims to facilitate a more appropriate interface between the Redcliffe Industrial Area and adjacent 'Residential' zoned land by replacing a portion of the existing 'Industrial' zone with a 'Light Industry' zone.<br><br>To further facilitate an appropriate interface between 'Light Industry' zoned land and adjacent 'Residential' zoned land, appropriate provisions will be investigated for inclusion in the new local planning scheme.<br><br>Additionally, the Strategy includes actions to investigate the appropriateness of residential land uses within the 'Mixed Business' zone. |

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| ***State Planning Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
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| **State Planning Policy 4.2 – Activity Centres for Perth and Peel (SPP 4.2)** | SPP 4.2 and its Implementation Guidelines applies to the preparation and assessment of planning instruments and certain subdivision and development applications that relate to activity centres within the Metropolitan (Perth), Peel and Greater Bunbury Region Scheme areas. Where appropriate, SPP 4.2 may also apply outside of these region scheme areas at the discretion of the WAPC.<br><br>SPP4.2 seeks to locate people and the employment, goods and services they need close to each other within activity centres. SPP 4.2 seeks to provide for a consistent approach for the planning and development of a network of multi-functional activity centres of various levels within a hierarchy in order to meet community needs, provide economic, social and environmental benefits and enable the distribution of a broad range of jobs, goods and services. SPP 4.2 seeks to provide for a diversity of land uses within activity centres including retail, commercial, food and hospitality, medium and high-density housing, entertainment, tourism, civic/community, higher education and medical services. The precise land use mix should be informed by a range of factors including the need to provide for employment opportunities.<br><br>SPP 4.2 identifies that a needs analysis should be prepared as part of the background analysis step of preparing a local planning strategy. The analysis (Needs Assessment) provides an information base to support decision making by including an assessment of projected activity centre land use needs of communities in a local government area and its surrounds.<br><br>SPP 4.2 requires the preparation of precinct structure plans for strategic, specialised, secondary and district centres, although in limited circumstances this may not be required. Neighbourhood and local activity centres may require either a precinct structure plan or local development | To inform the Activity Centre Planning Strategy (ACPS), a Retail Needs Assessment was prepared. This contains recommendations for future retail growth which have been incorporated into the ACPS document.<br><br>Consistent with SPP4.2 and SPP7.2 a precinct structure plan may be required to be prepared for Belmont Secondary Centre.<br><br>SPP4.2 sets dwelling density targets for walkable catchments around all activity centres in the hierarchy, which this Strategy addresses. |

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| ***State Planning Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| | plan, at the discretion of the decision-maker. This requirement or otherwise should be outlined in the local planning strategy in order to provide certainty. | |
| **State Planning Policy 5.1 – Land Use Planning in the Vicinity of Perth Airport (SPP 5.1)** | SPP 5.1 applies to land within the Cities of Canning, Gosnells, Kalamunda, Belmont, Swan and Mundaring, that is in the vicinity of Perth Airport, which is, or may be in the future affected by aircraft noise. This policy provides guidance in respect to determining appropriate zoning, residential density, development and subdivision outcomes for land located within a specified range of noise exposure levels as determined by Air Services Australia.<br><br>Considerations for decision-makers include protecting Perth Airport from unreasonable encroachment by incompatible development and to minimise the impact of airport operations on existing and future communities. | Areas of land within the City are subject to aircraft noise and building height restrictions associated with Perth Airport. This has implications regarding zoning, density, and future development. The Strategy contains an action to investigate establishing a special control area requiring approval for development on lots located within the airport height referral area and ANEF contours.<br><br>In accordance with SPP5.1, the City will continue to refer applications and planning instruments to Perth Airport for comment. |
| **State Planning Policy 5.2 – Telecommunications Infrastructure (SPP 5.2)** | SPP 5.2 recognises telecommunications infrastructure as an essential service and aims to balance the need for this infrastructure and the community interest in protecting the visual character of local areas. The policy aims to provide clear guidance pertaining to the siting, location and design of telecommunications infrastructure and sets out specific exemptions for where the policy requirements do not apply. Decision-makers should ensure that telecommunications infrastructure services are located where it will facilitate continuous network coverage and/or improved telecommunications services to the community whilst not comprising environmental, cultural heritage, social and visual landscape values. | Review local planning scheme zoning table to ensure Telecommunication Infrastructure is permissible in all zones, but encouraged within certain zones, including industrial and business park areas. |

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| ***State Planning Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| **State Planning Policy 5.4 – Road and Rail Noise (SPP 5.4)** | SPP 5.4 provides guidance for the performance-based approach for managing and mitigating transport noise associated with road and rail operations.<br><br>This policy applies where noise sensitive land uses are located within a specified distance of a transport corridor, new or major road or rail upgrades are proposed or where works propose an increase in rail capacity resulting in increased noise. The policy also sets out specific exemptions for where the policy requirements do not apply.<br><br>SPP 5.4 supports noise impacts being addressed as early as possible in the planning process to avoid land use conflict and achieve better land use planning outcomes. Considerations for decision-makers include ensuring that the community is protected from unreasonable levels of transport noise, whilst also ensuring the future operations of transport corridors.<br><br>SPP 5.4 is supplemented by the Road and Rail Noise Guidelines | Future planning instruments and development applications subject to transport noise considerations will need to be prepared having regard to SPP5.4. |
| **State Planning Policy 7.0 – Design of the Built Environment (SPP 7.0)** | SPP 7.0 is a broad sector policy relevant to all local governments. The policy sets out the objectives, measures, principles and processes which apply to the design and assessment of built environment proposals through the planning system. It is intended to apply to activity precinct plans, structure plans, local development plans, subdivision, development and public works.<br><br>The policy contains 10 design principles which set out specific considerations for decisionmakers when considering the above proposals. These include, context and character, landscape quality, built form and scale, functionality and build quality, sustainability, amenity, legibility, safety, community and aesthetics. The policy also encourages early and on-going discussion of design quality matters and the use of design review.<br><br>These principles should be considered in conjunction with the range of supporting State Planning Policies that provide design quality guidance for specific types of planning and development proposals. | Future development applications and planning instruments will be considered against SPP7.0. The City also has a Design Review Panel that reviews various planning and development proposals.<br><br>A planning direction contained within Part 1 of this Strategy also relates to facilitating the delivery of high-quality built form outcomes. |

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| ***State Planning Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| **State Planning Policy 7.2 – Precinct Design (SPP 7.2)** | SPP 7.2 provides guidance for precinct planning with the intent of achieving good planning and design outcomes for precincts within Western Australia. The policy recognises that there is a need to plan for a broader range of precinct-based contexts and conditions to achieve a balance between greenfield and infill development. Objectives of the policy include ensuring that precinct planning and design processes deliver good-quality built environment outcomes that provide social, economic and environmental benefit to those who use them.<br><br>Precinct types include activity centres, station precincts, urban corridors, residential infill and heritage precincts. These areas are recognised as requiring a high-level of planning and design focus in accordance with a series of precinct outcome considerations as outlined in the policy. The policy also encourages the use of design review. | A precinct structure plan that may be prepared for the Belmont Secondary Centre, is to be prepared in accordance with SPP 7.2. |

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## 7.3 Regional Planning Context

The WAPC prepares various regional planning instruments to guide land use and development at the regional and sub-regional level, including:

- Regional and Sub-regional planning strategies and structure plans
- Regional Planning Schemes

Regional planning instruments considered to be specifically relevant to the City are outlined and described in Table 9.

Table 9: Regional planning instrument overview and local planning strategy implications and responses

| ***Regional Planning Instrument*** | ***Regional Planning Instrument Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| Regional Planning Scheme | | |
| **Metropolitan Region Scheme** | The Metropolitan Region Scheme (MRS) outlines objectives for regional development and provides a statutory mechanism to assist strategic planning, by setting out broad land-use zones, setting aside areas for regional open space, protection of environmental values and other regional infrastructure purposes, and assisting in coordinating the provision of major infrastructure. Local government planning (including local planning schemes) is required to be consistent with the broad land uses under the MRS. | Ensure the City's Local Planning Scheme and planning instruments are consistent with the zones and reserves contained within the MRS. |
| Regional & Sub Regional Planning Strategies | | |
| **Perth and Peel @ 3.5 million (2018) and Central Sub-regional Planning Framework (2018)** | The Perth and Peel@3.5million suite of strategic land use and infrastructure plans, including four Sub-regional Planning Frameworks (north-west, northeast, central and south metropolitan peel), seek to guide the future growth of the Perth and Peel regions as a compact, consolidated and connected city that can accommodate a population of 3.5 million by 2050.<br><br>The four Perth and Peel@3.5million frameworks seek to balance the social, economic and environmental factors that underpin new communities and sustain existing ones through clear land use and infrastructure guidance.<br><br>The Central Sub-regional Planning Framework (Framework) provides high level guidance for the growth of the Central sub-region of the Perth Metropolitan Area, and forms part of the Perth and Peel@3.5 Million suite of strategic land use and infrastructure plans. | The Central Sub-regional planning framework has set the following targets for additional dwellings being delivered within the City:<br><br>2031: 6,100 dwellings<br><br>2050: 10,410 dwellings<br><br>The Framework required an additional 1,860 dwellings between 2011-2016 and an additional 1,410 dwellings between 2016-2021 to be provided within the City. 2,346 and 1,901 dwellings were delivered during these periods, |

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| ***Regional Planning Instrument*** | ***Regional Planning Instrument Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| | The Central Framework provides high-level guidance regarding where new homes and jobs will be located, how to make best use of existing and proposed infrastructure and how best to protect the natural environment to allow sustainable growth within the Central sub-region. | exceeding the targets by 486 and 491 dwellings respectively. This was largely due to development in The Springs precinct.<br><br>To continue meeting these targets, the Strategy promotes increased residential densities along urban corridors, surrounding activity centres, Redcliffe Station, and areas adjacent to high-frequency bus stops/routes. This approach supports the Central Sub-regional Planning Framework's goal of delivering 215,000 new dwellings in the central sub-region, contributing to the overall need for 800,000 new homes in the wider Perth and Peel area. |

## 7.4 Operational Policies

Operational policies guide decision-making in relation to subdivision and development applications. Those operational policies considered relevant to the local planning strategy are listed and described in Table 10.

Table 10 – Operational Policies

| ***Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| **1.6 - Planning to support transit use and development** | The policy supports higher residential densities, mixed-use developments, and walkable environments near key transit nodes, such as train stations and high-frequency bus routes.<br><br>The policy aims to integrate land use with public transport infrastructure, reduce car dependency, and create vibrant precincts. | The Strategy promotes transit-oriented development around Redcliffe Station, near the Great Eastern Highway urban corridor, and high-frequency bus stops. |

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| ***Policy*** | ***Policy Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| **2.2 - Residential subdivision** | The policy establishes standards for residential subdivision. More specifically, the policy addresses considerations such as lot size, shape, battleaxe configurations, access requirements, and utility provisions, promoting consistent subdivision practices across Western Australia.<br><br>The policy does provide for variations greater than five percent to the average lot size where various criteria are met, including that the site is a corner lot with frontage to two different streets. | The Strategy outlines directions and actions to support a diverse range of housing densities and more intensive development near activity centres, urban corridors, high-frequency public transport routes, and Redcliffe Station.<br><br>It also includes an action to assess the suitability of retaining the density bonus for subdivision of R20 coded corner lots. |
| **2.4 - School sites** | The policy outlines criteria for school site size, placement within neighborhoods, and compatibility with surrounding land uses.<br><br>Additionally, it includes guidelines for co-location with community facilities and the facilitation of a safe, accessible movement network. | The Great Eastern Highway Urban Corridor Strategy identifies a potential opportunity for the relocation of Belmont Primary School to a location that better serves the local community. If pursued, this relocation would be considered in accordance with Operational Policy 2.4. |
| **4.1 - Industrial subdivision** | The policy aims to prevent conflicts and encroachment between industrial and sensitive land uses. | The Strategy contains actions to align the existing industrial zone with zones contained within the Model Provisions. These changes would also result in a more appropriate interface being achieved between sections of the Redcliffe Industrial area that are located adjacent to existing residential zoned land.<br><br>Additionally, the Strategy contains an action to investigate appropriate built form provisions for the industrial zones which consider interface. |

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## 7.5 Position Statement and Guidelines

Position statements are prepared by the WAPC to set out its policy position or advice on a particular planning practice or matter. Guidelines provide detailed guidance on the application of WAPC policies. Those WAPC position statements or guidelines considered relevant are included in Table 11.

Table 11 – Position statement and guidelines

| ***Position statement/ guidelines*** | ***Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| Public Open Space (December 2025) | This Position Statement has been prepared by the WAPC to outline how public open space (POS) should be considered and assessed in the Western Australian planning system. The Position Statement seeks to:<br>• Ensure POS is an essential consideration across the planning framework;<br>• Ensure all communities have well-planned POS that adequately provides for evolving community needs in a predictable and equitable manner;<br>• Establish a consistent minimum standard for contributions towards POS, where the creation of additional lots generates the need for an increase in either POS quantity or functionality; and<br>• Provide guidance on the collection, expenditure and management of cash in lieu contributions towards POS to benefit the community. | To be consistent with the Model Provisions a 'Public Open Space' reservation will be applied to appropriate land across the City under the new Local Planning Scheme.<br><br>The City's Public Open Space Strategy provides an analysis of:<br>• The varying forms of public open space within the City of Belmont<br>• Demographic needs<br>• How the City will meet the public open space needs of the community |
| Residential Accommodation for Ageing Persons (December 2020) | This Position Statement has been prepared by the WAPC to outline the requirements to support the provision of residential accommodation for ageing persons within Western Australia's local government planning framework. The position statement seeks to achieve consistent strategic planning consideration of residential accommodation needs for ageing persons in local planning strategies and consistent statutory planning guidance to standardise land-use definitions and zoning permissibility for residential accommodation for ageing persons in local planning schemes. | The City aims to promote a range of residential densities and dwelling types to ensure diverse housing options.<br><br>'Residential Care Facility' and 'Independent Living Complex' land use terms that are not in the Model Provisions are to be included in the new Scheme. |

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| ***Position statement/ guidelines*** | ***Overview*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|
| | | Additionally, the Strategy supports housing for aged and dependent persons near activity centres, Redcliffe Station, and high-frequency bus stops. |
| Container Deposit Scheme Infrastructure (September 2020) | The position statement has been prepared by the WAPC to outline how container deposit scheme (CDS) infrastructure should be considered and assessed in the Western Australian planning system. The position statement seeks to ensure:<br>• a coordinated approach to the provision of CDS infrastructure throughout WA<br>• that appropriate locations are chosen for the installation of CDS infrastructure<br>• the timely roll-out of infrastructure in support of the scheme's establishment and ongoing operational needs<br>• minimum development requirements are established to exempt certain CDS infrastructure from requiring planning approval, for adoption by local governments. | The City will continue to encourage Container Deposit Scheme Infrastructure in appropriate locations.<br><br>This infrastructure and appropriate locations will be guided by the City's Local Planning Policy– Container Deposit Scheme Infrastructure. |
| Renewable Energy Facilities (March 2020) | This position statement has been prepared by the WAPC to outline the requirements to support the consistent consideration and provision of renewable energy facilities within Western Australia. The position statement seeks to:<br>• guide the establishment of renewable energy facilities to support the State Energy Transformation Strategy (March 2019)<br>• outline key planning and environmental considerations for the location, siting and design of renewable energy facilities<br>• promote the consistent consideration and assessment of renewable energy facilities<br>• facilitate appropriate development of renewable energy facilities while minimising any potential impact upon the environment, natural landscape, and urban areas<br>• encourage informed public engagement early in the renewable energy facility planning process. | The Model Provision land use term of 'Wind Farm' is to be replaced by 'Renewable Energy Facility' in the new scheme. |

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# 8 Local Planning Context

## 8.1 Strategic Community Plan

The City of Belmont Strategic Community Plan 2024-2034 was adopted on 25 June 2024. Key outcomes and objectives which are relevant to land use planning are outlined in Table 12.

This Plan shapes all other strategies across the City, outlining the way Council will guide the future of Belmont, in collaboration with the community.

The Strategic Community Plan sets the long-term direction and focus for Council's planning, budget and resource allocation process. It also describes how Council priorities and strategies will be managed, and the services, programs and projects to be delivered.

Table 12 – Strategic Community Plan Summary

| ***Performance Areas*** | ***Outcomes*** | ***Objectives*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|---|
| People | • A safe, healthy community.<br>• A strong sense of pride, belonging and creativity.<br>• People of all ages and abilities feel connected and supported. | • Facilitate community health and wellbeing.<br>• Respect, protect and celebrate our shared living histories, heritage and cultural diversity. | The Strategy contains actions relating to the investigation of opportunities to improve the quality and quantity of public open space.<br><br>Additionally, the Strategy provides for the continued protection of places with historic heritage significance. |
| Planet | • Healthy and sustainable ecosystems.<br>• Climate resilience. | • Protect and enhance our natural environment.<br>• Improve management of the Swan River and local waterways.<br>• Grow our urban forest.<br>• Adopt sustainable practices to reduce waste, emissions and water usage. | The Strategy outlines actions to explore the inclusion of sustainability criteria within the planning framework. The Strategy also contains an action about investigating the suitability of offering development incentives where a significant tree is retained as part of a development. |

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| | | • Build our resilience to cope with natural disasters and emergencies, including storms, flooding and fire. | |
| Place | • Sustainable population growth with responsible urban planning.<br>• Attractive and welcoming places.<br>• A city that is easy to get around safely and sustainably. | • Responsible planning and development to enhance liveability, with consideration for supporting infrastructure and services.<br>• Improve access to safe, affordable and diverse housing options.<br>Provide quality community buildings, halls and toilets.<br>• Provide attractive green spaces, streetscapes, parks and playgrounds for recreation, relaxation and enjoyment.<br>• Make our city more enjoyable, connected and safe for people to walk and cycle. | The Strategy contains actions relating to investigating appropriate density codes surrounding activity centres, urban corridors and high frequency public transport routes/train stations. Higher density development in these locations aims to support the use of active transportation methods including walking and cycling.<br><br>The Great Eastern Highway Urban Corridor Strategy, the Golden Gateway Structure Plan and the Redcliffe Station Improvement Scheme also propose the delivery of public open space, assisting with the creation of attractive and welcoming places. |
| Prosperity | • A progressive, vibrant and thriving economy with active participation in lifelong learning. | • Attract public and private investment and support the attraction, retention, growth and prosperity of local businesses.<br>• Plan and deliver vibrant, attractive, safe and economically sustainable activity centres. | The Strategy includes actions to investigate appropriate provisions in a new local planning scheme to prevent residential development without a commercial component within activity centres and to ensure a suitable transition is achieved between commercial and residential uses.<br><br>Additionally, the Strategy aims to protect key employment hubs and industrial areas from encroachment of incompatible land uses. |

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| | | | The City's ACPS also includes actions relating to the investigation of streetscape upgrades to facilitate vibrant and attractive activity centres. |
| Performance | • A happy, well-informed and engaged community. | • Effectively inform and engage the community about local services, events and Council matters. | Continue to ensure appropriate consultation and engagement is undertaken with the community on planning proposals. |

## 8.2 Previous local planning strategy(s)

The City of Belmont did not previously have a local planning strategy endorsed by the Western Australian Planning Commission. However, when Town Planning Scheme No. 14 was reviewed and in support of Local Planning Scheme No. 15, a supporting report was prepared. The key recommendations of the supporting report relating to residential development and zoning are summarised below and compared against the direction of this Strategy.

Table 13: Previous planning strategies/sub-strategies

| **Local Planning Scheme No. 15 Scheme Report (Incorporating Local Planning Strategy)** | **Current Strategy** |
|---|---|
| Retain low densities for areas impacted by ANEF noise contours, areas with unique characters, areas within 400m of schools, and areas outside the 400m ped shed of commercial centres. | Density codes will largely remain unchanged, except within and surrounding activity centres, transport corridors, or areas no longer impacted by ANEF contours. In some cases, the potential introduction of medium density codes near schools and within 400m of these locations will be investigated. Increasing density near schools does not exclude families or require high-density development, as family needs vary, and not all prefer standalone single houses. |
| Provide for higher density development surrounding commercial centres (e.g. R20/50/100 surrounding Belmont Secondary Centre). | Provides for the investigation of higher density codes surrounding commercial centres. Also proposes to investigate applying a density code to activity centres to encourage residential development within them. |
| Apply an R20 density code to the DA 6 area pending outcomes of the structure planning process which could see densities up to R100. | Provides for the City to review the zoning and density code of this area through the preparation of a new local planning scheme having regard to the Improvement Scheme prepared by the Department of Planning Lands and Heritage. |
| Retain the 'Residential and Stables' zone and associated scheme provisions. | Provides for the City to investigate an appropriate zoning, density code and scheme provisions for the Residential and Stables area. |
| Introduce three special zones (service station, place of public assembly and special development precinct). | Provides for the City to investigate applying zones consistent with the Planning and Development (Local Planning Schemes) Regulations 2015. |

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## 8.3 Local Planning Scheme

Local Planning Scheme No.15, adopted in 2011, is the primary document for controlling land use and development within the City.

At the 27 October 2020 Ordinary Council Meeting, Council approved the Report of Review prepared in relation to the City of Belmont Local Planning Strategy and Local Planning Scheme No. 15. The Report recommended that:

- The City of Belmont Local Planning Strategy be repealed, and a new local planning strategy be prepared in its place; and
- The City of Belmont Local Planning Scheme No. 15 be repealed, and a new local planning scheme be prepared in its place.

The Report was considered by the Western Australian Planning Commission on 21 December 2020, who advised that they agree with the recommendations of the Report.

A new local planning scheme is being prepared to align with the local planning strategy.

## 8.4 Other planning schemes

The State Government has prepared an Improvement Plan (Improvement Plan No. 45) and Improvement Scheme for the Development Area 6 precinct. The Improvement Scheme remains in draft form and unadvertised at the time of writing this Strategy.

## 8.5 Local Planning Policies

Local planning policies can be prepared by the City in accordance with Division 2 Schedule 2 of the Regulations in respect of a particular class or classes of matters specified in the policy; and may apply to the whole Scheme area or part of the Scheme area. An overview of the City's local planning policies and implications for the local planning strategy are provided in Table 14.

Table 14: Local Planning Policies

| **Name of Local Planning Policy** | **Date of Adoption/ Last Amendment** | **Purpose of Local Planning Policy** | **Local Planning Strategy Implications and Responses** |
|---|---|---|---|
| Local Planning Policy 1 - Performance Criteria – Town Centre Density Bonus Requirements (LPP 1) | 14/02/2011 | Contains criteria for the assessment of development applications proposed in excess of R50 and up to a maximum density of R100, within the Belmont Secondary Centre precinct. The criteria facilitate the delivery of a diverse range of dwellings and high-quality development outcomes. | It is anticipated that this policy will be revoked, with development around the Town Centre instead guided by the City's new Local Planning Scheme, the updated Residential Design Codes, which have been introduced since the policy's adoption, and possibly a precinct structure plan for the Town Centre and surrounding areas. Multiple Dwelling proposals will also be |

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| | | | reviewed by the City's Design Review Panel. |
| Local Planning Policy 2 - Orrong Road (LPP 2) | 14/02/2011 | Contains criteria to guide development abutting Orrong Road and adjacent land. The Policy aims to achieve high quality development outcomes and limit direct vehicular access to Orrong Road. | It is anticipated that this local planning policy will be revoked with development controls instead included within the Local Planning Scheme. |
| Local Planning Policy 3 – Abernethy Road (Gabriel Street to Dempsey Street) (LPP 3) | 14/02/2011 | Contains criteria to guide development abutting Abernethy Road and adjacent land. The Policy aims to achieve high quality development outcomes and minimise direct vehicular access to Abernethy Road. | It is anticipated that this local planning policy will be revoked with development controls instead included within the Local Planning Scheme. |
| Local Planning Policy 4 – Belgravia/Barker Streets (LPP 4) | 14/02/2011 | Contains provisions to guide the development of land generally bound by Barker Street, Belgravia Street, Hehir Street and 'Mixed Business' zoned properties in Belmont. The Policy encourages lot amalgamation to support high-quality development outcomes and aims to minimise vehicular access to Belgravia Street. | It is anticipated that this local planning policy will be revoked with development controls instead included within the Local Planning Scheme. |
| Local Planning Policy 5 – Belgravia Residential Estate (LPP 5) | 14/02/2011 | Contains provisions to guide development and facilitate high quality built form outcomes. | It is anticipated that this local planning policy will be revoked, with development guided by the Residential Design Codes. While the policy has facilitated high-quality development outcomes, it includes provisions that duplicate requirements in the City's Local Planning Scheme No. 15 and/or the R-Codes. |
| Local Planning Policy 6 – Ascot Waters (LPP 6) | 14/02/2011 | Contains provisions to guide development and facilitate high quality-built form outcomes. | It is anticipated that this local planning policy will be revoked and development guided by the Residential Design Codes and potentially additional site and development requirements contained within the new local planning scheme. These |

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| | | | requirements may relate to areas not addressed by the R-Codes including:<br>- location of vehicle access points<br>- fencing to secondary streets and public open space<br>- finished floor levels |
| Local Planning Policy 7 – The Springs Design Guidelines (LPP 7) | 26/07/2011 | Contains provisions and guidelines to guide and development within The Springs Precinct. | It is anticipated this Policy will be remain operational under the new local planning scheme. |
| Local Planning Policy 8 – Invercloy Estate (LPP 8) | 24/05/2016 | Contains provisions that aim to facilitate a high standard of development, which complements the presence and cultural significance of the heritage listed 'Invercloy' building. | It is anticipated that this local planning policy will be revoked. |
| Local Planning Policy 9 – Child Care Premises and Child Family Day Care (LPP 9) | 14/02/2011 | Contains Provisions to ensure childcare premises are located in areas of compatible uses, not affecting residential amenity of the locality. | It is anticipated this Policy will continue to operate under the new local planning scheme. |
| Local Planning Policy 10 – Residential Landuses in the Mixed Business Zone (LPP 10) | 14/02/2011 | Identifies appropriate locations and development standards for residential land uses within the 'Mixed Business' zone. | Given the potential land use conflict associated with residential uses occurring within a mixed business area, it is proposed that this Policy be updated or revoked based on investigations in line with Planning Direction 16 of this Strategy. |
| Local Planning Policy 11 – Public Art Contribution (LPP 11) | 26/11/2024 | Contains provisions to facilitate the delivery of public art across the City. | It is anticipated this Policy will continue to operate under the new local planning scheme. |
| Local Planning Policy 12 – Advertisement Signs (LPP 12) | 27/08/2019 | Contains provisions to guide advertising signs within the City of Belmont. | It is anticipated this Policy will continue to operate under the new local planning scheme. |
| Local Planning Policy 13 – Vehicle Access for Residential Development (LPP 13) | 14/02/2011 | Provides controls on vehicular access to residential development with an aim to reduce the number of vehicle crossovers. | Review Policy in accordance with the R-Codes and if necessary seek WAPC approval to retain aspects of the Policy. |
| Local Planning Policy 14 – | 23/02/2016 | Articulates the City of Belmont and Perth Airport's | It is anticipated that this local planning policy will be |

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| Development Area 6 (DA6) Vision (LPP 14) | | vision for Development Area 6. | revoked as DPLH are currently drafting an Improvement Scheme for the precinct based on the City's draft Redcliffe Station Precinct Activity Centre Plan. |
| Local Planning Policy 15 – Belvidere Main Street Precinct Design Guidelines (LPP 15) | 24/05/2016 | Contains design guidelines that aim to facilitate high quality development outcomes within the Belvidere Main Street Precinct. | There is an opportunity to establish consistent provisions across all activity centres. This could be done through:<br>• Local Planning Scheme provisions for the 'Centre' zones;<br>• Designated activity centre precinct planning;<br>• Detailed local development plans; and/or<br>• An activity centre local planning policy.<br>Therefore, LPP 15 should be reviewed and potentially revoked through the preparation of a new local planning scheme. |
| Local Planning Policy 16 – Service Stations (LPP 16) | 24/04/2018 | Contains guidance for the development of service stations within the City of Belmont. | It is anticipated this Policy will continue to operate under the new local planning scheme. |
| Local Planning Policy 18 – Container Deposit Scheme Infrastructure (LPP 18) | 22/09/2020 | Contains provisions to ensure container deposit infrastructure is established in appropriate locations and does not impact on the amenity of an area. The Policy also outlines instances where infrastructure does not require development approval. | It is anticipated this Policy will continue to operate under the new local planning scheme. |
| Local Planning Policy 19 – Short Term Rental Accommodation | 23/07/2024 | Contains provisions for the assessment of short-term rental accommodation proposals. | It is anticipated this Policy will continue to operate under the new local planning scheme. |
| Local Planning Policy 20 – Great Eastern Highway Urban Corridor | | Sets out the standards and objectives the City will use to assess development applications for land adjacent to Great Eastern Highway. These standards align with the Great Eastern | It is anticipated this Policy will be reviewed and updated in light of the new scheme. Modifications may include applying development provisions to the Eastgate and Ascot |

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| | | Highway Urban Corridor Strategy. | centres, clarifying that plot ratio does not apply to the commercial portion of sites, including all 'Mixed Use' zoned lots behind Great Eastern Highway, and including lots along Nannine Place and Tanunda Drive east of Brighton Road. |
| Local Planning Policy 21 – Tree Development Exemption and Assessment Policy | | Sets out the circumstances in which tree damaging activity is exempt from the requirement to obtain development approval. It also provides guidance for the assessment of applications proposing tree damaging activity, having regard to the matters outlined in Schedule 2, Part 9, Clause 67(2)(p) of the *Planning and Development (Local Planning Schemes) Regulations 2015*. | It is anticipated this Policy will continue to operate under the new local planning scheme. |
| Local Planning Policy 22 – Design Review Panel | | Specifies which proposals should be referred to the Design Review Panel, the matters to be considered by the Panel and its operation. | It is anticipated this Policy will continue to operate under the new local planning scheme. |

## 8.6 Structure Plans

Structure plans (including standard structure plans and precinct structure plans) can be prepared in accordance with Division 2 of Schedule 2 of the Regulations for land within the Scheme area to provide the basis for zoning and subdivision of land. Precinct structure plans can also be used to inform built form outcomes and the design of public open spaces. An overview of the structure plans within the City, and implications for the local planning strategy are provided in Table 15.

Table 15 – Structure Plans

| ***Name of Structure Plan*** | ***Date of WAPC Approval/Last Amendment*** | ***Purpose of Structure Plan*** | ***Local Planning Strategy Implications and Responses*** |
|---|---|---|---|
| Dod Reserve Structure Plan - (Development Area 3) (DA3) | 29/08/2008 | To guide the subdivision and development of land and facilitate dwellings fronting both Kew Street and Dod Green. | The Structure plan has been largely implemented, with only Lot 132 remaining undeveloped.<br><br>Additional site and development requirements can be introduced |

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| | | | within the Local Planning Scheme to ensure that the development of this lot adheres to the precinct's established character.<br><br>Therefore, it is anticipated this Structure Plan will be revoked. |
| Development Area 7 (DA7) | 04/04/2013 | To guide the subdivision and development of Lot 602, and numbers 85-97 Coolgardie Avenue, Ascot. | The Structure Plan has partially fulfilled its purpose, with 85-97 Coolgardie Avenue now recoded to R20/40 and removed from the DA7 precinct as part of an amendment to Local Planning Scheme No. 15.<br><br>However, investigation and planning for Lot 602 remains outstanding. This lot presents several challenges including:<br><br>• A geotechnical report indicates substantial remediation is required.<br>• The site is within a flood fringe and is designated as bushfire-prone.<br>• A conservation category wetland is located on the lot.<br>• The lot is intersected by sewer and drainage infrastructure.<br><br>Given that the DA7 precinct now only applies to Lot 602 and further investigations are pending, with no updates of these investigations occurring by the owner for a long time, it may be appropriate to revoke the Structure Plan.<br>It is not considered appropriate to retain a Structure Plan solely based on further investigations that appear not to be progressing, particularly when it applies to a single site. Accordingly, a new structure plan or other planning instrument can be prepared in the future to guide future subdivision and development of this land, which addresses the various site constraints. |

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| Development Area 9 (DA9) | 05 January 2023 | To guide the subdivision and development of land bound by Hay Road, Fauntleroy Avenue, and 'Mixed Use' zoned land on Hay Road and Great Eastern Highway. | The Structure Plan has partially fulfilled its purpose, with 52-54, 56, 58, 60, 62, 64 and 66 Hay Road and 101 Fauntleroy Avenue now recoded to R20/60 as part of an amendment to Local Planning Scheme No. 15.<br><br>MRS Amendment 1399/57 recently rezoned parts of land adjacent to Hay Road and Ivy Street from 'Parks and Recreation' to 'Urban,' with some areas reclassified concurrently to 'Mixed Use' and 'Residential' under Local Planning Scheme No. 15.<br><br>Considering the above, it may be appropriate to revoke the Structure Plan. |
| Development Area 10 (DA10) | 01/02/2012 | To guide the development of land bound by Thomson Street, Nisbet Street, Epsom Avenue, 13 Epsom Avenue and the Swan River foreshore, which provides an appropriate interface to adjacent 'Residential and Stables' zoned land. | The Swan River Hotel at 1 Epsom Avenue is the key development in this area. Nearby, the land at 7 Thompson Street and a significant portion of 13 Epsom Avenue remains vacant, although part of the hotel's parking and access way occupies 13 Epsom Avenue. Additionally, a single house was recently constructed on the property at 9 Thompson Street.<br><br>The Structure Plan has been partially realised; however it is not considered necessary to retain the Structure Plan. The future development of 7 Thompson Street and 13 Epsom Avenue can be guided by additional site and development requirements contained within the Local Planning Scheme, to ensure an appropriate interface is achieved to adjacent low scale residential development. |
| The Springs Structure Plan | 18/12/2009 | To guide future subdivision, zoning, reservation, and density as well as containing built form controls | A significant amount of development has occurred in accordance with this Structure Plan. Therefore, it may be appropriate to revoke the |

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| | | which apply to land bound by Great Eastern Highway, Graham Farmer Freeway, Brighton Road and the Swan River foreshore. | Structure Plan and for the associated zonings and density codes to be normalised in the new local planning scheme. If necessary, additional site and development requirements can be investigated for individual sites which have not been redeveloped.<br><br>DevelopmentWA (formerly Landcorp) funded and delivered all necessary infrastructure within this precinct. As properties develop, the City collects the associated development contribution and provides this to DevelopmentWA. It is anticipated this arrangement will continue under the new local planning scheme. |

## 8.7 Other relevant Strategies, plans and Policies

Table 16: other relevant strategies, plans and policies

| ***Name of strategy, plan, policy*** | ***Date approved*** | ***Purpose*** | ***Local planning strategy implications and responses*** |
|---|---|---|---|
| *Local Housing Strategy* | | The City of Belmont Local Housing Strategy establishes a strategic framework to guide the City's future housing needs. The Strategy has been formed following a review of the current strategic planning context, demographic and housing trends, and the City's existing statutory planning framework. | The Local Housing Strategy provides a thorough analysis of the City's current housing stock, identifying opportunities and actions to address the housing needs of both current and future residents while accommodating population growth. This research underpins the Strategy and will guide the development of the new Local Planning Scheme. |

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| Activity Centre Planning Strategy | 27 February 2024 | The Activity Centre Planning Strategy has been developed to guide the future planning and coordination of activity centres. | This guidance has been used to inform this Local Planning Strategy and will also inform aspects of the new Local Planning Scheme. |
| Public Open Space Strategy | 25 July 2023 | The Public Open Space Strategy aims to provide a strategic framework to guide the provision of public open space to help achieve a vibrant, desirable, and liveable City that demonstrates care and appreciation of the natural environment. | The Public Open Space Strategy considers:<br>- Relevant State and local planning legislation and policy frameworks<br>- Current public open space<br>- How the City will address any shortfall<br><br>This guidance has been used to inform this Local Planning Strategy and will also inform aspects of the new Local Planning Scheme. |
| Great Eastern Highway Urban Corridor Strategy | 22 October 2024 | The Great Eastern Highway Urban Corridor Strategy was developed to outline the long-term vision for planning and development along part of Great Eastern Highway. It addresses matters relating to land use, vehicle and pedestrian access, buildings and public spaces. | The Great Eastern Highway Urban Corridor Strategy provides the vision and development controls for appropriate and desired development along Great Eastern Highway. This guidance has been used to inform this Local Planning Strategy and will also inform aspects of the new Local Planning Scheme. |
| Environment and Sustainability Strategy | 31 October 2023 | The Environment and Sustainability Strategy has been developed to guide the City's approach to environmental management and set clear objectives for continuous performance improvements. | The Environment and Sustainability Strategy reviews the City's current approach to environmental and sustainability practices and highlights key considerations for the future. This guidance has been used to inform this Local Planning Strategy and will also inform aspects of the new Local Planning Scheme. |

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# 9 Local Government Profile

## 9.1 Demographic Profile

### 9.1.1 Population Characteristics

Current Population

As of 2021, 42,257 people live in the City of Belmont (ABS 2021). Census data from the Australian Bureau of Statistics shows an increase of 7,048 persons from 2011 to 2021 in the City of Belmont. Rates of growth were relatively steady reaching a peak in 2012, then noticeably slowing in 2013 through to 2018. The population increased noticeably in 2019 before reducing again in 2021 (Figure 3).

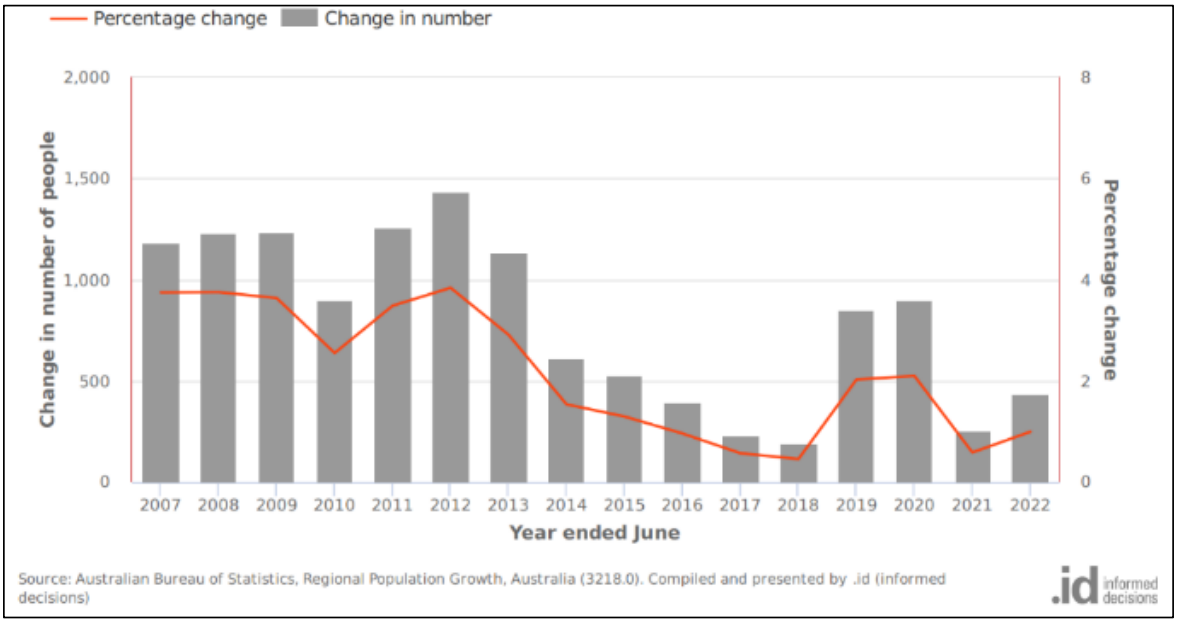



Figure 3: Changes in Population Since 2007

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The greatest increase in population between 2016 and 2021 occurred in Rivervale (see Figure 4 below) predominantly due to subdivision and development of The Springs in accordance with 'The Springs Structure Plan' and Local Planning Policy No. 7.

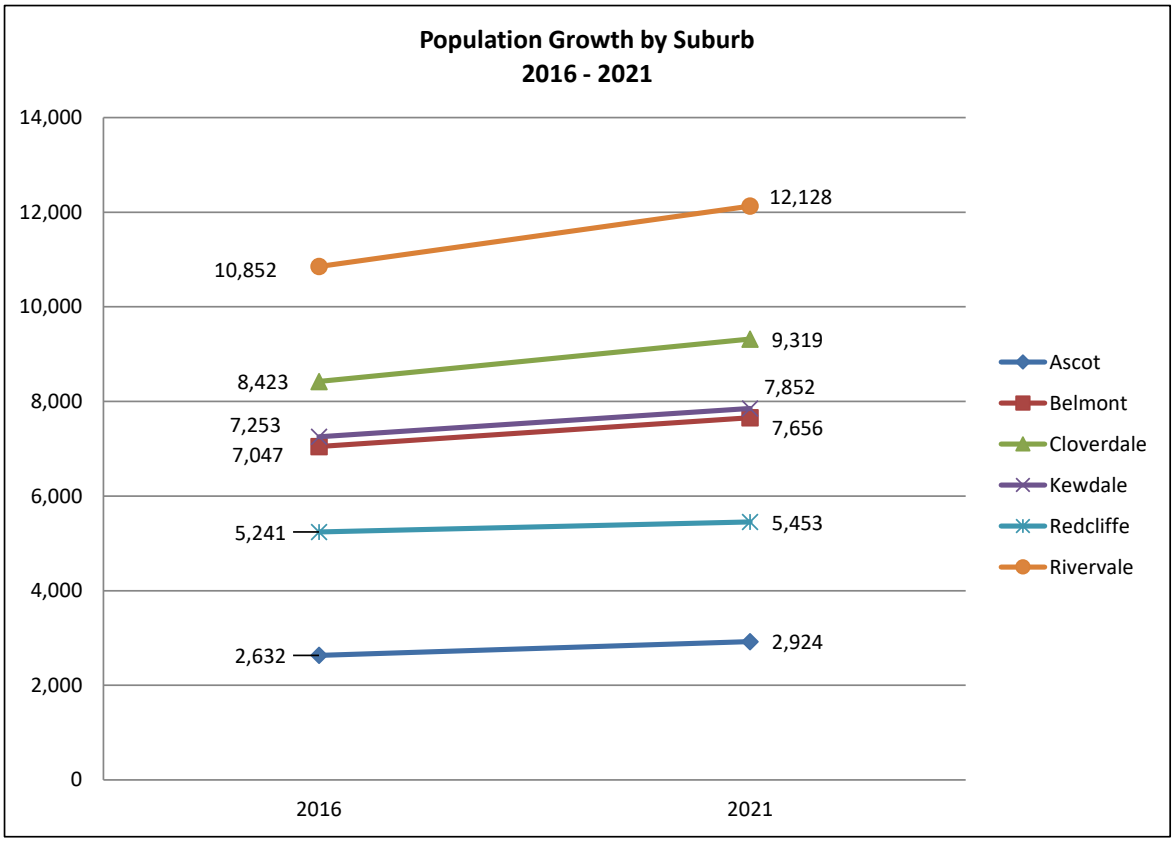



Figure 4: Population Growth by Suburb 2016-2021

Future Population Projections

The WA Government's "Western Australia Tomorrow" report provides medium-term population projections for the State and its sub-regions from 2016 to 2031. These projections have been extended to align with the local planning strategy period, covering 2025 to 2040. According to the report, Band C is deemed appropriate for estimating the City's future population. This is because it represents the median forecast, providing a balanced estimate of population growth. Using Band C ensures planning decisions are based on a moderate and probable scenario rather than high or low scenarios, which could lead to inaccurate estimates. Table 17 indicates that, based on Band C, the City's population is projected to grow by 8,917 people, reaching 55,360 by 2041. It will be necessary for the City to facilitate the delivery of adequate and diverse housing to accommodate this growth.

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Table 17: WA Tomorrow population forecast (WA Government 4 February 2025)

| | ***Persons per WA Tomorrow Band*** | | | | |
|---|---|---|---|---|---|
| **Year** | **A** | **B** | **C** | **D** | **E** |
| 2026 | 47,000 | 47,000 | 47,000 | 47,000 | 47,000 |
| 2031 | 48,790 | 49,430 | 49,787 | 50,040 | 50,713 |
| 2036 | 50,580 | 51,860 | 52,573 | 53,080 | 54,427 |
| 2041 | 52,370 | 54,290 | 55,360 | 56,120 | 58,140 |
| Population difference 2041-2026 | 5,370 | 7,290 | 8,360 | 9,120 | 11,140 |
| Average annual increase | 358 | 486 | 557 | 608 | 743 |

Age Structure

The age structure of an area provides key insights into the level of demand for housing, services and facilities within an area.

According to the Australian Bureau of Statistics, the City of Belmont exhibits a slightly lower median age of 36 in comparison to the Perth metropolitan area's median age of 37.

Figure 5 compares service age groups within the City of Belmont compared to Greater Perth. This shows that there was a lower proportion of people in the younger age groups (0 to 24 years) as well as a lower proportion of people in the older age groups (50+ years). The City had a significantly higher young workforce (25-34 years) population (20.2%) when compared to Greater Perth (14.2%).

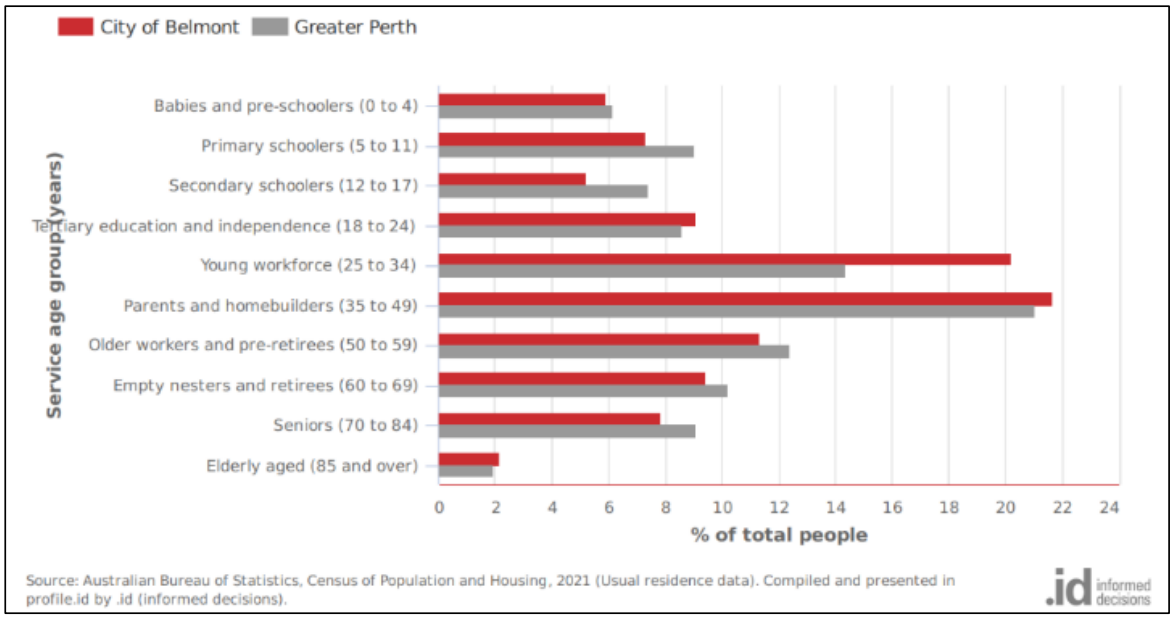



Figure 5: Age Structure – Service Age Groups 2021

From 2011 to 2021, the largest changes in age structure were in the following service age groups as visualised in Figure 6:

- Young workforce (25 to 34) +1,850 people
- Parents and homebuilders (35 to 49) +1,745 people
- Empty nesters and retirees (60 to 69) +1,041 people

While growth was experienced between 2011 and 2021 in all of the service age groups, it is worth noting that Belmont has experienced a decrease in the proportion of babies and pre-schoolers (0 to 4 years), secondary schoolers (12 to 17), tertiary education and independence (18 to 24) and seniors (70 to 84) while all other service age groups have increased. However, it is worth noting that since 2016 Belmont has experienced a 276 person increase in seniors. This indicates that the population is ageing overtime.

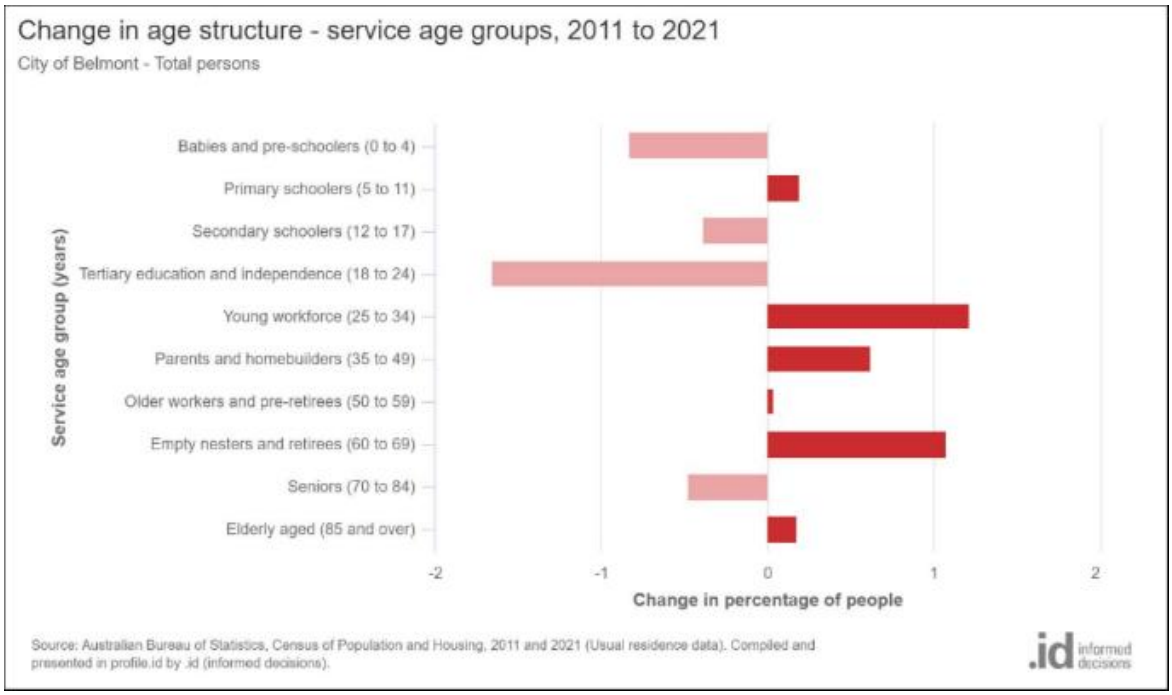



Figure 6: Change in Age Structure – Service Age Groups – 2011 to 2021

The age structure forecasts for the City of Belmont between 2021 and 2031 indicate a 28.3% increase in population under working age, a 41.4% increase in population of retirement age, and a 19% increase in population of working age. This suggests that overtime Belmont's population will experience ageing. The City's planning framework needs to respond to this trend by considering the needs of an older population.

Migration Patterns

Since 2016, the City of Belmont has seen a net migration loss of 398 people. The age-specific net migration graph below (Figure 7) identifies what age ranges had the largest increase or decrease in migration. The 18-24 age group had the largest increase with an additional 815

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people, while the 5-11 age group and 35-44 had the largest decrease with -477 and -714 respectively.

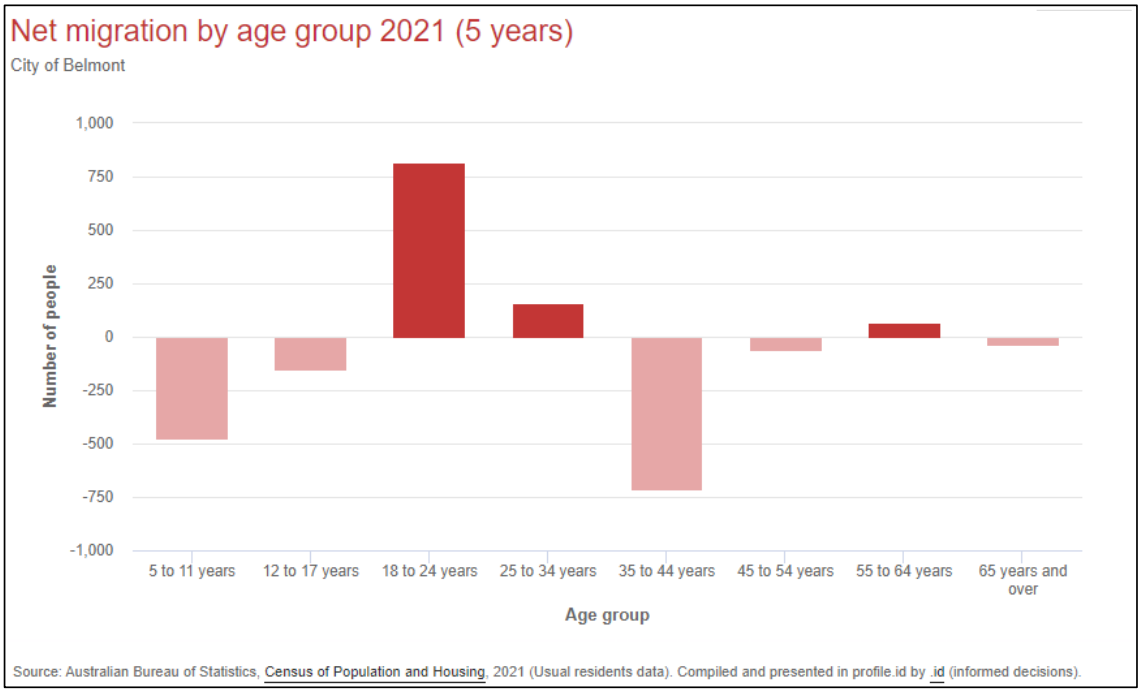



Figure 7: Net migration by age group 2021

This data shows that a large percentage of migrants into Belmont are young adults, whilst families with children are migrating out of Belmont. Belmont's proximity to Perth CBD, employment and entertainment facilities may be attractive for young adults. Families with younger children may be seeking to purchase their first home and may be attracted to areas with cheaper land values.

Figure 8 shows the migration flows within the City of Belmont between 2016-2021. This shows that the largest demographic entering the City was from overseas (1,823), and the highest internal migration being from Victoria Park (365). There were also large amounts of people who moved from South Perth, Perth, Kalgoorlie-Boulder and Greater Geraldton. Those leaving the City of Belmont most commonly moved to Swan, Kalamunda, Gosnells or Armadale.

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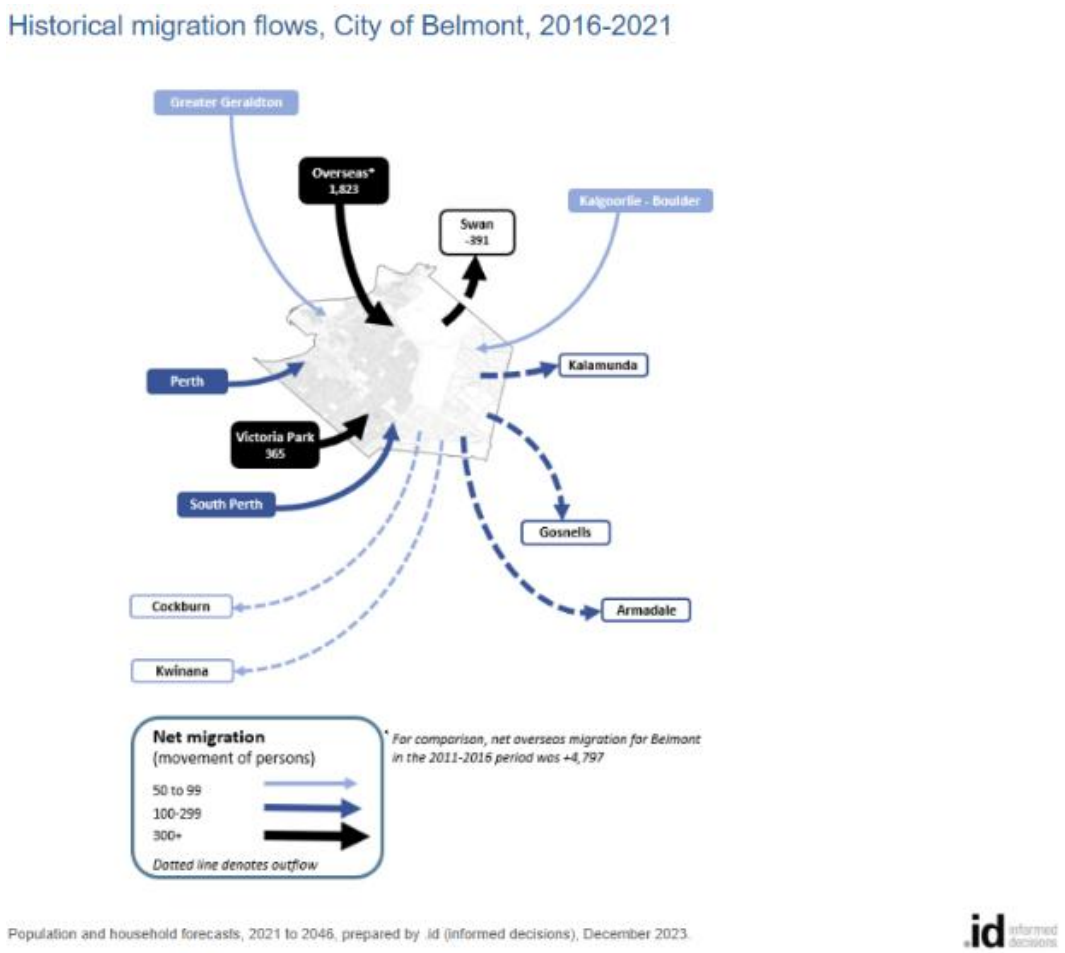



Figure 8: Migration flows in the City of Belmont between 2016-2021

It should be noted that the 2021 census was undertaken during the pandemic, therefore it is suggested that border restrictions halted overseas migration for 15 months prior and may have had large impacts on this data. For comparison, net overseas migration for Belmont in the 2011-2016 period was +4,797, and in the 2016-2021 period had dropped to +1,823.

Population Characteristics: Key Points

- The City of Belmont's population was 42,257 in 2021, and is forecasted to reach 50,451 by 2031, with an annual average growth of 2.1%.
- The population distribution across service age groups shows a higher proportion of young workforce and elderly compared to Greater Perth, forecasted to have an increased ageing population over time.
- In terms of migration, young adults are the largest demographic entering the City, and the 35–44-year age group is the largest demographic leaving the City.
- Rivervale has experienced a substantial population increase in recent years, driven by subdivision and development within The Springs.

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- Significant growth is anticipated in Redcliffe due to future development proposed around Redcliffe Station.
- There is an ongoing need for a diverse range of housing, which is essential for providing family homes, offering low maintenance options for younger people and the ageing population, and providing affordable housing.

### 9.1.2 Household Characteristics

Family Structure

The City has a larger proportion of lone person and group households compared to Greater Perth (Figure 9). Most notably, the proportion of lone person households was 31.1% compared to 24.0% in Greater Perth. The City also has a much lower proportion of couples with children (22.4%) compared to Greater Perth (32%).

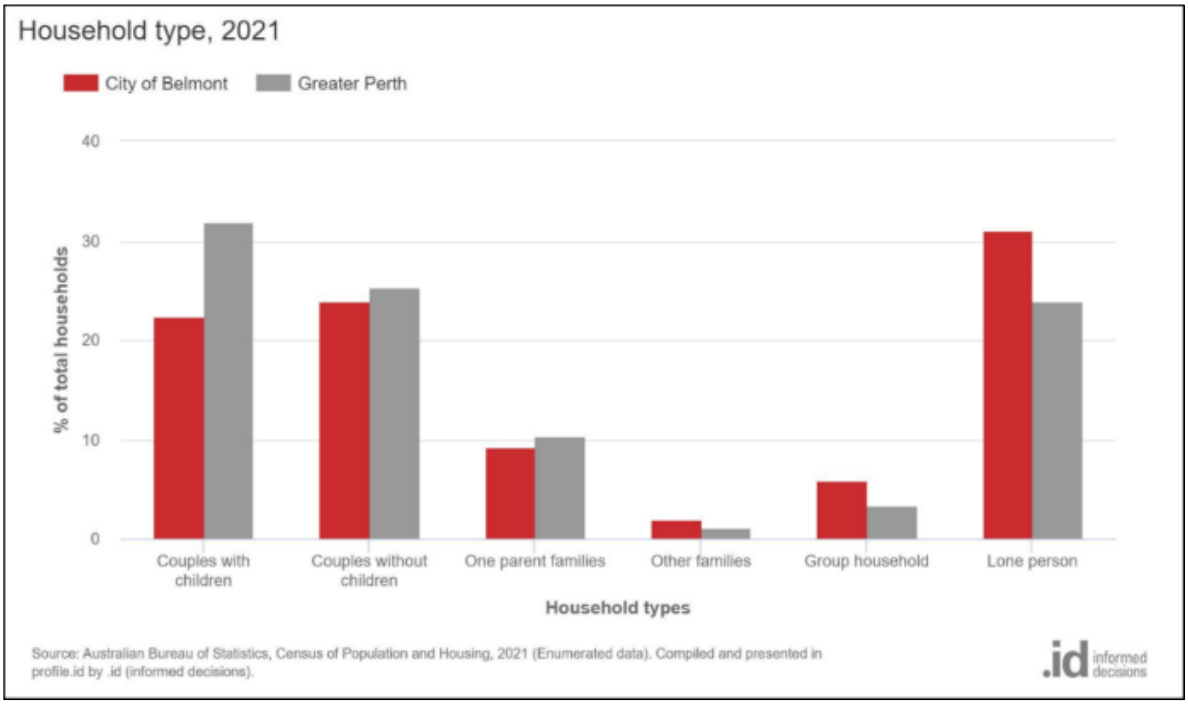



Figure 9: Household Type 2021

The largest changes in family/household types in the City of Belmont between 2011 and 2021 were:

- Lone persons (+1,505 households)
- Couples without children (+811 households)
- Couples with children (+695 households)

In terms of percentage however, only lone person households and couples without children saw an increase while couples without children, couples with children, group households, other families, decreased (see Figure 10).

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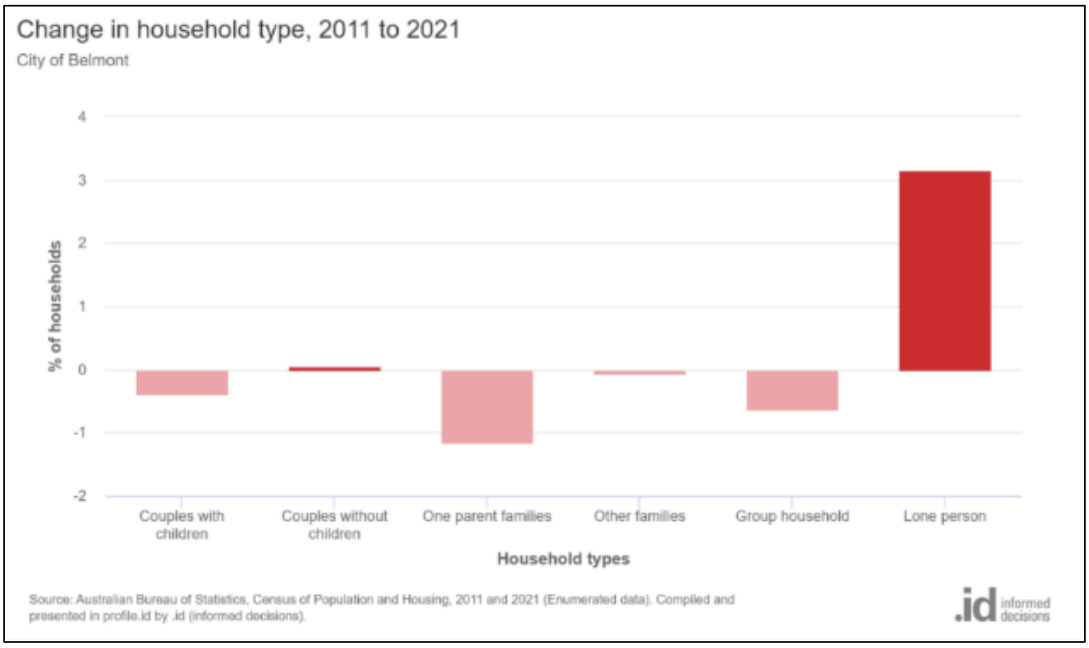



Figure 10: Change in Household Type 2011 to 2021

In 2021, lone-person households emerged as the prevailing household type in the City of Belmont. Projections suggest that this trend will persist, with the number of lone-person households expected to rise by 3,461 constituting 34.1% of the total households by 2041 (refer to 11).

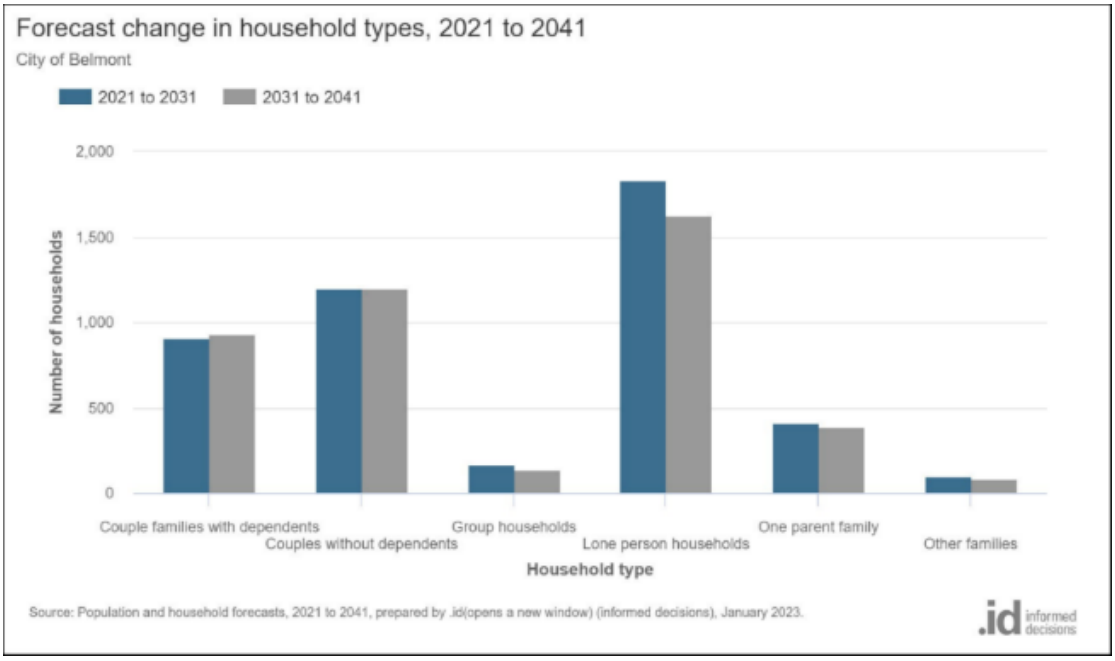



Figure 11: Forecast Change in Household Types 2021 to 2041

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Household Size

Household size typically mirrors the life cycle of families, starting smaller when it is a lone person or couple, and expanding when children are added to the family. This size often decreases again when children have moved out.

The City of Belmont has generally followed Australia's trend of reducing household sizes. 1 person households have increased since 1991, whilst all other household sizes have decreased. Analysis of the number of persons usually resident in a household in the City of Belmont compared with Greater Perth shows that there were a higher proportion of lone person households, and a lower proportion of larger households (those with 4 persons or more) (Figure 12).

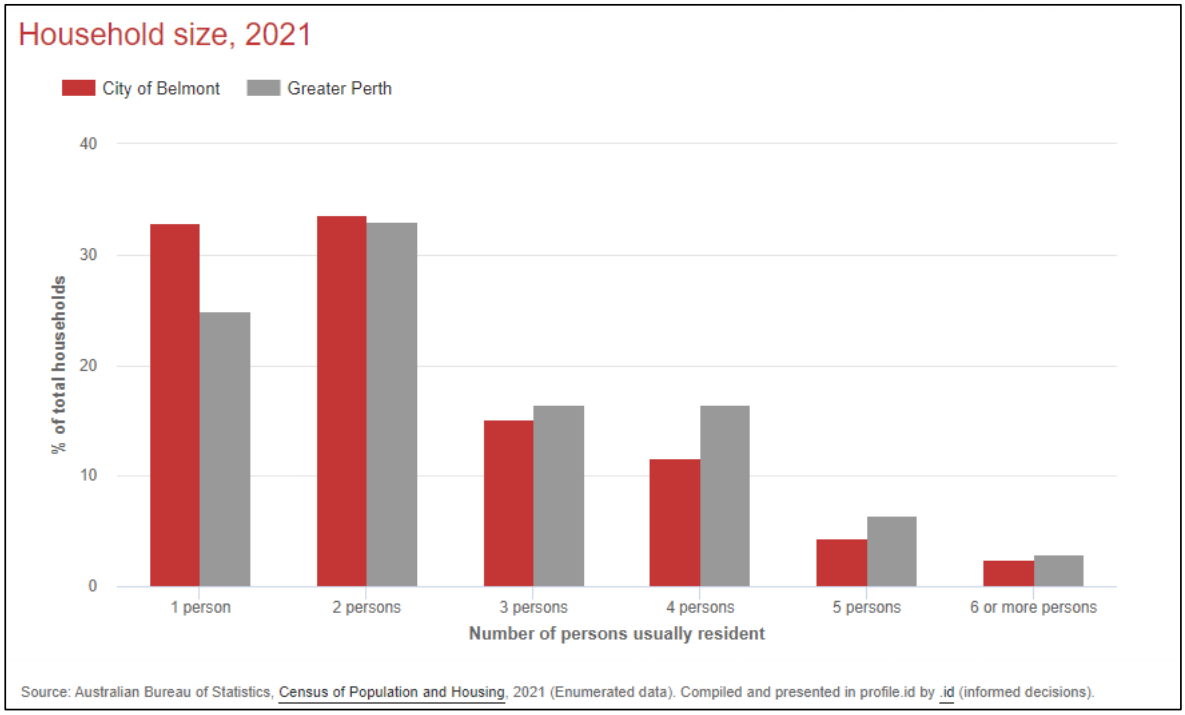



Figure 12: Household size in the City of Belmont and Greater Perth 2021

While the percentage of households of 2 or more people are slowly declining as visualised by Figure 13, it should be noted that the overall number is still increasing. Since 2011, the City has seen the following changes:

- +1,506 lone persons households.
- +987 two persons households.
- +349 three persons households.
- +361 four persons households.
- +66 five persons households.
- +52 six or more persons households.

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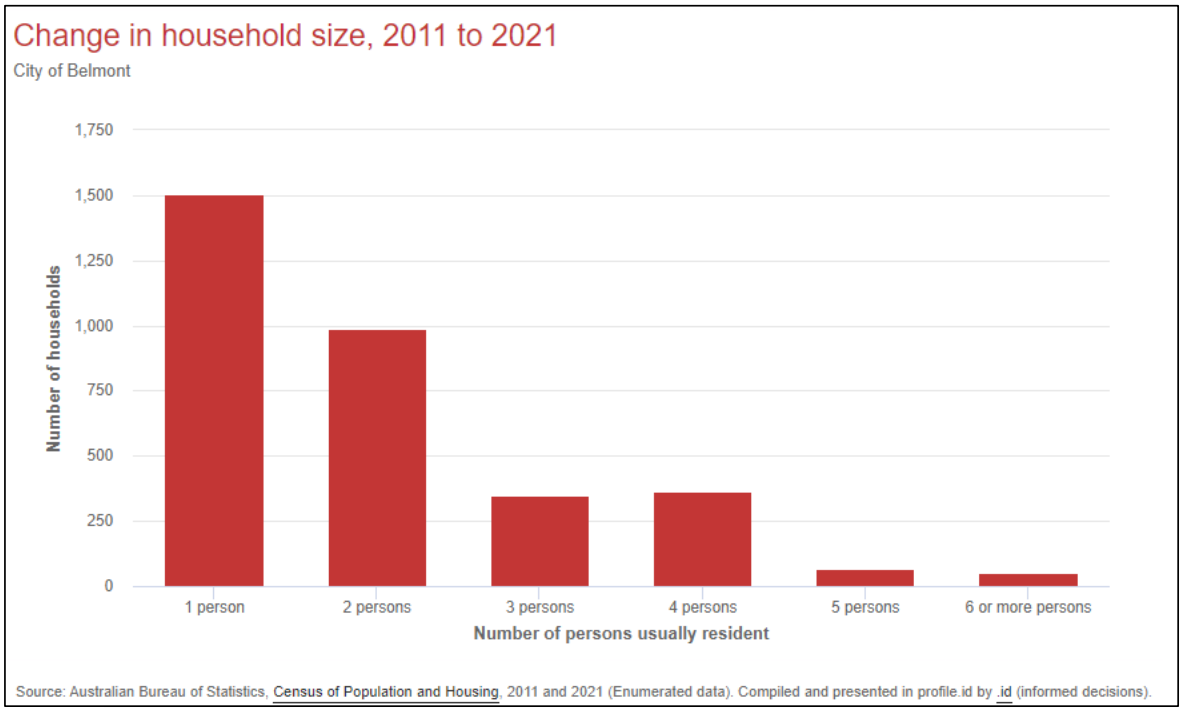



Figure 13: Change in Household Size 2011 to 2021

While forecasts indicate that lone person households will experience the largest increase between 2021 and 2031 and account for 33.5% of all households, the average number of persons per household is forecast be 2.21.

Household Characteristics: Key Points

- Lone-person households are a significant and growing demographic in Belmont.
- Demand for family-sized homes is relatively low compared to Greater Perth.
- Household sizes are decreasing, with more one and two person households.
- Forecasts indicate continued growth in smaller households, especially lone-person households.

## 9.2 Dwelling Yield Analysis

Of the 800,000 new homes targeted to be constructed in the Perth and Peel area, approximately 215,000 (56%) of these are expected to be delivered in the central sub region. To achieve this, the *Central Sub-Regional Planning Framework* includes housing targets for local governments.

As demonstrated by Table 18 below, Belmont has been able to meet its additional dwelling targets thus far identified in the *Central Sub-Regional Planning Framework*.

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Table 18 – Infill Targets

| | **Target** | **Delivered** |
|---|---|---|
| **2011-2016** | 1,860 | 2,346 |
| **2016-2021** | 1,410 | 1,899 |
| **Total 2011-2021** | **3,270** | **4,245 (975 surplus)** |
| **2021-2026** | 1,560 | TBD |
| **2026-2031** | 1,270 | TBD |
| **2031-2050** | 4,310 | TBD |
| **Total 2011-2050** | **10,410** | **4,245 (6,165 outstanding)** |

Whilst the City has been able to meet its additional dwelling targets to date this is largely attributed to development within The Springs precinct.

Modelling was undertaken to analyse the City's future dwelling yields. An overview of the modelling and associated considerations are outlined below:

- The modelling concentrates on areas within the City that have the potential for residential development. It specifically targets land within 11 planning areas, as well as 'Residential' zoned land outside these areas.

- The data includes the number of residential dwellings currently within each planning area, as well as those outside the planning areas, as identified by the Valuer General's Office.

- The modelling is based on the development potential of land. Therefore, for the purpose of the modelling the following density codes were applied:

    - In areas with existing flexible density codes, the highest applicable code was used. For example, in R20/50/100 areas, an R100 code was applied.

    - For land within the Golden Gateway precinct and subject to the Great Eastern Highway Urban Corridor Strategy, the density codes outlined in the Structure Plan and Strategy were applied.

    - For land within one street block of Great Eastern Highway, density codes ranging from R40-R160 were applied. This excluded the Residential and Stables area and land east of Tonkin Highway.

    - In planning areas where a structure plan has not yet been prepared, density codes ranging from R20 to R40 have been applied. This includes land within Development Areas 4, 5, and 7.

    - Consistent with the modelling undertaken for the Activity Centre Planning Strategy, an R60 density code has been applied to land within both local and neighbourhood centres.

    - An R10 density code has been applied to the Residential and Stables zone, aligning with the existing density for land within the precinct.

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  - For the Redcliffe Station Precinct, DPLH provided dwelling estimates, as they are currently preparing a draft Improvement Scheme to guide development in this area.

- For the purpose of the modelling, all land is assessed under three growth scenarios: low, medium, and high. The low scenario assumes a 25% development uptake, the medium scenario assumes 50%, and the high scenario assumes 75% of additional dwellings. The existing dwelling numbers have been considered in the City's analysis to facilitate in the accuracy of the data.

- Land identified as Urban Corridors by Perth and Peel @ 3.5 Million, but are not within a Planning Area of this Strategy have not been provided with an increased density code for the purpose of this modelling. Increased dwelling capacity is achievable in these Urban Corridors following future investigations.

Table 19 provides an overview of the dwelling yield analysis within and outside each of the Planning Areas based on low, medium and high growth scenarios.

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Table 19: Dwelling yield analysis

| Estimated Dwelling Yield (Net Yield) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **PLANNING AREA** | **INDICATIVE DENSITY CODE APPLIED FOR MODELLING** | **EXISTING DWELLINGS** | **DWELLING TOTAL CAPACITY** | **POTENTIAL ADDITIONAL DWELLINGS** | **LOW GROWTH (25% of Additional Dwellings)** | **MEDIUM GROWTH (50% of Additional Dwellings)** | **HIGH GROWTH (75% of Additional Dwellings)** |
| A – Land Adjacent Stanton Road and Tonkin Highway | R30-40 | 12 | 121 | 109 | 28 | 55 | 82 |
| B - Redcliffe Station Precinct | The potential of this land is being explored through the Redcliffe Station Precinct Improvement Plans/Schemes | | | | | | |
| C - Lot 602 (55) Fauntleroy Avenue, Ascot | R20-30 | 0 | 129 | 129 | 32 | 65 | 97 |
| D - Golden Gateway: Land generally bound by Great Eastern Highway, the Swan River, the Ascot Waters precinct, and Ascot Racecourse | R-AC0 (Plot ratio ranging between 3.0 and 5.0) | 0 | 2,196 | 2,196 | 549 | 1,098 | 1,647 |
| E - Great Eastern | R-AC0 | 1,107 | 29,045 | 27,983 | 6,985 | 13,969 | 20,954 |

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| Highway and adjacent transition areas | (Plot ratio ranging between 2.5 and 7.0) | | | | | | |
| F - Orrong Road – Abutting Lots | R60 (50% multiple dwellings based on average site area of 85m2 and 50% grouped dwellings based on 150m2 average lot size) | 279 | 1,048 | 769 | 192 | 385 | 577 |
| G - Abernethy Road – Abutting Lots | R60 (50% multiple dwellings based on average site area of 85m2 and 50% grouped dwellings based on 150m2 average lot size) | 52 | 315 | 263 | 66 | 132 | 197 |
| H - Belmont Secondary Centre | R40, R60, R100 and R-AC1 | 1,778 | 10,935 | 9,157 | 2,289 | 4,579 | 6,868 |
| I - Neighbourhood Centres | R40, R60 and R100 | 788 | 2,330 | 1,542 | 386 | 771 | 1,157 |
| J - Local Centres | R40, R50, R60 and R100 | 2,205 | 5,397 | 3,192 | 798 | 1,596 | 2,394 |
| K - Residential and Stable Area – Land generally bound by Hardey Road, Matheson | R10 | 241 | 455 | 214 | 54 | 107 | 161 |

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| Road, Ascot Racecourse, the Swan River foreshore, Tonkin Highway and Mixed Use zoned lots fronting Great Eastern Highway. | | | | | | | |
| Residential zone (outside Planning Areas) | R-Code as per LPS15 | 7,299 | 15,176 | 7,877 | 1,969 | 3,939 | 5,908 |
| Total number of dwellings | | 13,761 existing | 67,147 capacity | 53,386 potential additional | 13,348 additional | 26,696 additional | 40,042 additional |

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In considering the statistics contained within Tables 19 the following should be noted:

- Taking into account the City's existing dwellings and uptake rates, there is sufficient capacity to meet the dwelling targets outlined in the Perth and Peel @ 3.5 Million framework.

- Caution should be taken when considering the model outputs in isolation. It is necessary to consider that densities simply enable development and the actual uptake of development is influenced by a variety of factors including:

    - Landowner development intentions
    - The age and condition of existing housing stock
    - Market conditions
    - On-site constraints (such as servicing and lot shape)
    - Financial considerations

- Considering the various factors influencing development uptake, including landowner intentions, market conditions, and on-site constraints, the medium growth scenario provides a balanced and realistic basis for densities in the new local planning scheme.

While the medium growth scenario may project a dwelling yield beyond current targets, it is important to recognise that not all development potential will be realised due to factors such as landowner decisions, site constraints, and market conditions. For this reason, reducing densities is not considered appropriate. Maintaining and not reducing densities ensures there is enough capacity to accommodate growth over time.

## 9.3 Community, Urban Growth and Settlement

### 9.3.1 Housing

Current Density Codes

Residential zoned land within the City of Belmont is assigned various density codes ranging from R12.5 through to R100. These consist of single density codes and flexible density codes as detailed below and shown in Figure 14:

- R20, which is the most prevalent density code within the City of Belmont.
- R12.5 which was historically applied to land which is close to Perth Airport's cross runway.
- R30 which is located in a pocket of Rivervale bound by Knutsford Avenue, Esther Street, Acton Avenue and Campbell Street.
- R40 which is applied to a section of Kewdale bound by Keane Street, Belmont Avenue, Scott Street and Knutsford Avenue.
- R20/50/100 surrounding the Belmont Secondary Centre. Development of this land is subject to Local Planning Policy No. 1 – Town Centre Density Bonus Requirements.
- R20/40 surrounding local and neighbourhood activity centres and along roads containing high frequency bus routes such as Alexander Road, Kooyong Road and Hardey Road.
- R20/50 within a portion of Belmont located on Hehir Street, Barker Street and Lapage Street. Development within this area is guided by Local Planning Policy No. 4: Belgravia/Barker Streets.

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- R20/60 adjacent to a portion of Belgravia Street which is also subject to Local Planning Policy No. 4: Belgravia/Barker Streets.
- R20/60 adjacent to Abernethy Road and Orrong Road. This land is subject to either Local Planning Policy No. 2 Orrong Road or Local Planning Policy No. 3 Abernethy Road. These policies aim to achieve coordinated vehicle access and high-quality development.

Flexible density codes are not a contemporary approach, the City is to explore the application of singular density codes as part of preparing a new local planning scheme. During this process, the existing flexible density code provisions within LPS 15 and relevant local planning policies should be reviewed to determine whether any of these provisions should be incorporated into the new scheme.

The City should also review all other scheme provisions relating to subdivision and development. An example of this is the bonus of R30 for R20 coded corner lots. In such situations, subdivision can be proposed at the R30 code if the lot has frontage to two constructed roads and any dwellings which are of low quality and incapable of being upgraded or poorly sited are demolished. This provision has promoted positive outcomes, encouraging development that addresses both streets and enhancing street surveillance. Another example is the requirement to construct to plate height prior to subdivision in excess of R30. This requirement has facilitated coordinated development outcomes, avoiding ad hoc developments at the highest density code. Therefore, it may be appropriate for these provisions and others to be carried forward into a new local planning scheme.

There are other areas within the City which are not currently subject to a density code under LPS 15 and are capable of accommodating residential development. These include:

- The Residential and Stables zone, although LPS 15 currently requires land to be developed in accordance with an R10 density code.
- Mixed Use and Commercial zoned land
- The Belgravia Residential Estate – subject to Local Planning Policy 5
- The Springs – subject to Local Planning Policy 7
- Ascot Waters – subject to Local Planning Policy 6
- Inverlcoy Estate – subject to Local Planning Policy 8
- Belvidere Street Neighbourhood Centre – subject to Local Planning Policy 15

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Appropriate density codes for this land will be investigated through the preparation of a new local planning scheme.

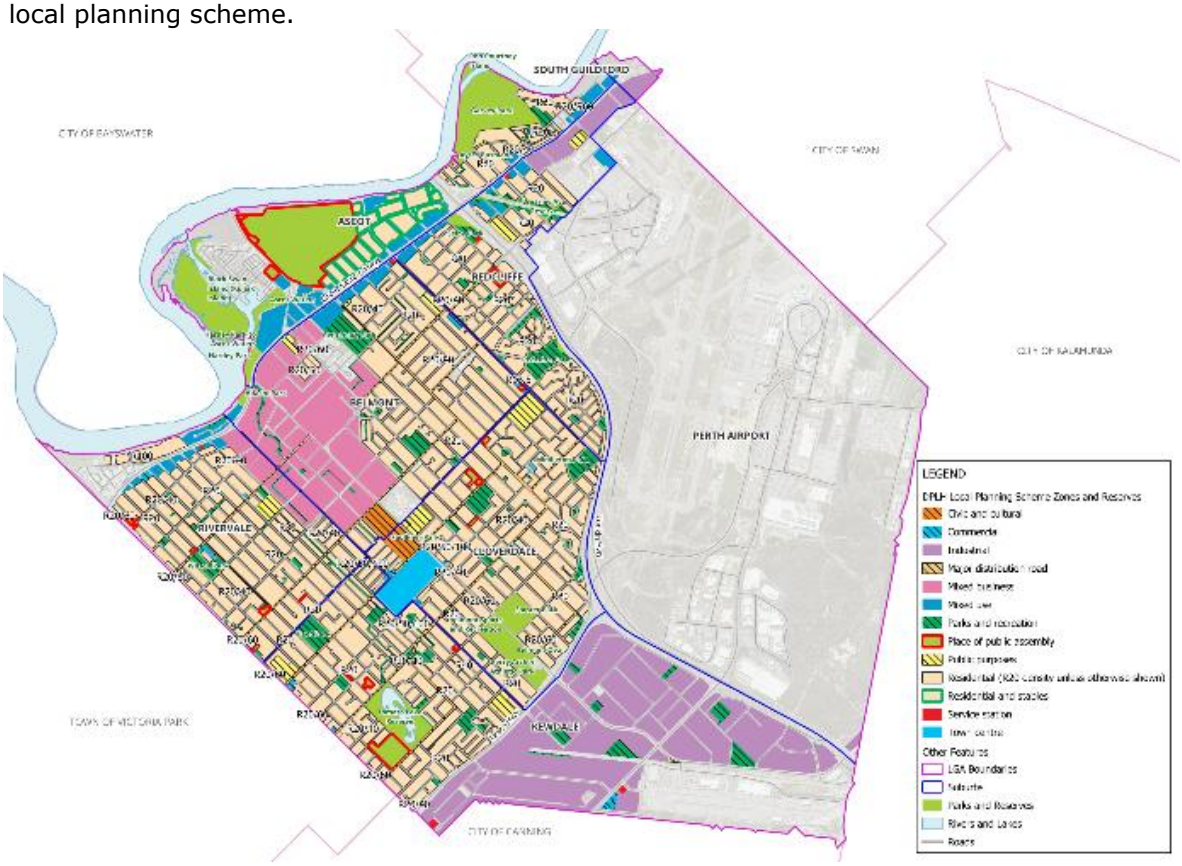



Figure 14: Local Planning Scheme No. 15 Zoning Map

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Areas subject to Future Planning

The City of Belmont currently contains several areas requiring further detailed planning to guide development. These include the City's Special Control Areas (Development Areas) which require an approved Structure Plan to guide subdivision and development. The necessity of each of these development areas will be further considered during the preparation of a new local planning scheme, considering comments included in previous sections of this Strategy. Additionally, the City will evaluate whether structure plans should be required for land outside existing development areas.

There are areas which align with the urban consolidation principles contained within Perth & Peel @ 3.5 Million which are not currently identified as requiring detailed planning instruments to be prepared to guide holistic and high-quality development outcomes. These include the Golden Gateway precinct and land within proximity to Great Eastern Highway. These areas have been identified within this Strategy, and will assist the City in continuing to meet its designated infill targets as well as providing diversity in dwelling types, particularly 1 and 2 bedroom dwellings.

Housing Stock

Housing and Population Needs

In 2021, dwellings in the City of Belmont primarily comprised of separate houses (65%), followed by semi-detached dwellings, townhouses (20.3%), and apartments (14.4%). Greater Perth followed a similar trend with 77.8% separate houses, 14.2% semi-detached dwellings and townhouses and 7.6% apartments.

Although separate houses remain the dominant housing type, has been notable growth in semi-detached dwellings, townhouses, and apartments. Between 2011 and 2021, the largest increase was in semi-detached dwellings and townhouses (+1,378), followed by separate houses (+1,075) and flats/apartments (+852). The proportion of separate houses decreased from 73% in 2011 to 65% in 2021, while semi-detached dwellings and townhouses rose from 15.1% to 20.3%, and flats/apartments increased from 11.6% to 14.4%. This trend is expected to continue as demand for more affordable medium- and high-density housing options grows.

Analysis highlights a significant contrast between the bedroom numbers and household sizes. As shown in Figure 15, the City of Belmont has a larger number of 3 and 4 bedroom dwellings (44.4%) than households with 3 or 4 residents (15.1%). In contrast, 32.9% of households are lone-person households, while 7.7% of dwellings are one-bedroom units. This data reveals a shortfall of one and two-bedroom dwellings to meet the demand, alongside an oversupply of larger homes. As Belmont's population grows, particularly with an increase in lone-person households, it is essential for the City's new local planning scheme to facilitate housing types that address this demographic shift.

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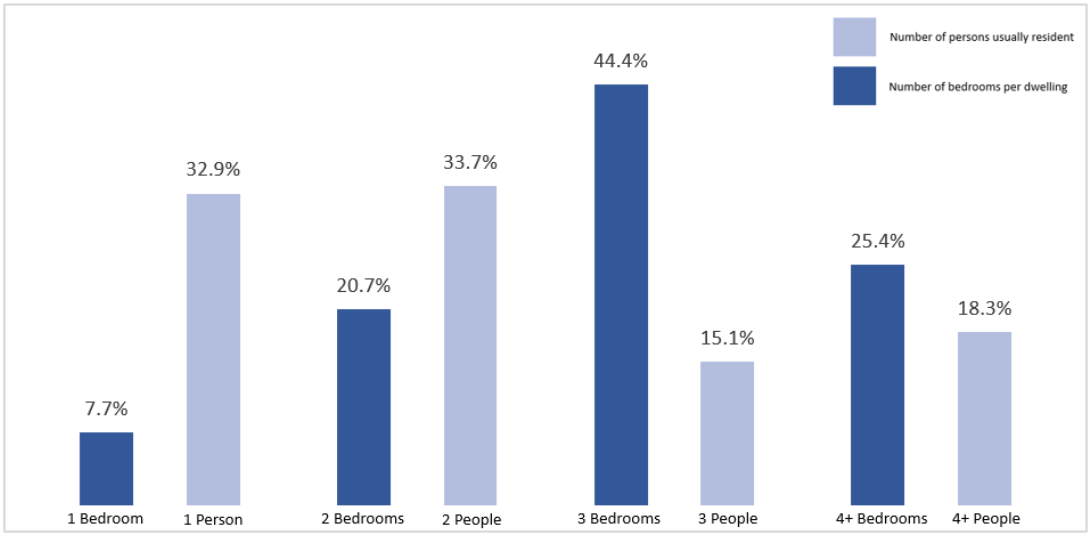



Figure 15: Size of Houses and Number of residents (ABS, 2021)

Housing diversity is a key consideration in planning for the City's future housing needs. While Belmont is expected to see a large number of lone-person households, there is currently a shortage of single-bedroom dwellings. To address this, the City should focus on encouraging smaller dwelling types, particularly within walkable catchments of activity centres and public transport stops. This could include promoting ancillary dwellings, single-bedroom units, and smaller homes, which are more affordable options for many residents.

Additionally, with Australia's ageing population there is an increasing demand for aged persons' dwellings. Projections indicate a significant rise in the senior population, with Belmont expecting a 41.4% increase in its retirement-age population between 2021 and 2031. Housing for seniors should be well-connected to public transport and services to ensure convenient access to essential amenities.

Shared Living

In recent years, the City has seen an increase in 'Residential Building' proposals, often involving six bedrooms, each with their own ensuite, kitchenette and external access all under one roof. However, the current local planning framework and R-Codes lack clear guidelines for assessing such proposals. The City may need to consider a local planning policy to provide guidance for decision-making in these cases.

The City of Belmont has also seen an increase in proposals for 'Community Homes.' These facilities provide accommodation for individuals who are physically or intellectually handicapped or socially disadvantaged. Residents may live together with or without paid supervision or care, with operations managed by a constituted community-based organisation, a recognised voluntary, charitable, or religious organisation, or a government department or agency of the State or local government.

While 'Community Home' is not a defined use under the Model Provisions, it may align with the definition of 'Community Purpose.' Appropriate land use definitions and permissibility will be further considered through the preparation of a new local planning scheme.

Short-Term Rental Accommodation

Short-Term Rental Accommodation (STRA) has grown in Belmont, driven by proximity to Perth Airport, the CBD, Optus Stadium, and the Swan River. This rise has largely been facilitated by online platforms and has reduced long-term housing availability, exacerbated affordability challenges, and undermined residential density goals in flexible density-coded areas. STRA uses have also caused land use conflicts, particularly in residential areas.

Key issues with STRA in Belmont include:

- An adequate supply of visitor accommodation already exists.
- STRA reduces long-term housing stock and affordability.
- STRA undermines intended residential density outcomes.
- STRA creates conflicts, especially in areas without tourist amenities or transport access.

In response, the City adopted a STRA Local Planning Policy on 25 July 2024. The policy supports STRA within 400 metres of high-frequency public transport on Great Eastern Highway and an existing tourist accommodation use. This approach aims to protect long-term housing supply and reduce amenity impacts associated with these uses.

### 9.3.2 Built Form and Character

Until the 1930s, Belmont was largely rural, characterised by varied agricultural activities. Post-war immigration fuelled rapid population growth, followed by signs of industrialisation in the 1930s when land east of the Highway between Hardey Road and Knutsford Avenue was designated as a factory area, marking the start of Belmont's industrial activities.

Belmont's residential growth surged in the 1950s and 1960s, fuelled by the State Housing Commission's post-war construction programme in Rivervale and Belmont. Much of the housing stock was developed during this period, driving population growth and demand for services. While many original homes have since been demolished and redeveloped, Belmont predominantly remains characterised by low-density single houses, though grouped and multiple dwelling developments have also occurred.

In the early 1950s, the State Government designated Welshpool for heavy industry, leading to the construction of railway marshalling yards in Kewdale and Forrestfield. This area became the Kewdale Industrial Area, which remains a key industrial hub.

In 1951, an 80-hectare area north of Alexander Road was designated for industry. While historically industrial, it has since evolved to accommodate commercial and large-format retail uses, forming today's Belmont Business Park with more appealing built forms.

Organised horse racing in Belmont began with a temporary track in 1948, followed shortly after by a permanent track at the current Ascot Racecourse site. Under Town Planning Scheme No. 4, the Belmont Roads Board restricted all training stables to the north side of Great Eastern Highway near Ascot, shaping the area into the racing precinct it is known as today. The area generally contains larger lots that accommodate both residential and stables uses with development in this area guided by the City's Local Planning Scheme No. 15 and

the City of Belmont Consolidated Local Law 2020. The future planning of this area is discussed in Planning Area L.

Historically, land along Great Eastern Highway was developed for single homes, warehouses, and light industry. Today, it hosts a mix of shops, hotels, restaurants, residential units, offices, and showrooms. Planning Area E addresses its future development.

Local Planning Scheme No. 15 delineates five special development precincts on the Scheme Map, each guided by specific local planning policies:

- **Ascot Waters**: The Ascot Waters residential estate is generally bound by Grandstand Road, Resolution Drive, and the Swan River in Ascot. Development has been guided by Local Planning Policy No. 6 – Ascot Waters Special Development Precinct, facilitating high-quality built form outcomes that reflect designs from the 1990s and early 2000s. The precinct has largely been developed, with fewer than ten vacant lots remaining.
- **Invercloy Estate**: Invercloy Estate is generally bound by Hay Road, Fauntleroy Avenue, and Great Eastern Highway in Ascot. Local Planning Policy No. 8 – Invercloy Estate Special Development Precinct guides development within the precinct, ensuring high-quality built form outcomes that respect the State and local heritage-listed property at 4 Wedderburn Place. The precinct is fully developed for residential purposes.
- **The Springs**: The Springs precinct is generally bound by Graham Farmer Freeway, Great Eastern Highway, Brighton Road, and the Swan River in Rivervale. Development has been guided by The Springs Structure Plan and the design guidelines in Local Planning Policy No. 7 – The Springs Design Guidelines, supporting mixed-use and residential development. These guidelines were prepared prior to the adoption of Volume 2 of the R-Codes.
- **Belgravia Residential Estate**: Belgravia Residential Estate is generally bound by Belgravia Street, Barker Street, Daly Street, and Mixed Business zoned lots fronting Daly Street and Belgravia Street. Local Planning Policy No. 5 – Belgravia Residential Estate was prepared in 2003 and adopted under the City's previous Town Planning Scheme No. 14 in 2004, guiding development of the former Belmont Western Power Depot site. The precinct is almost fully developed, with only four vacant lots remaining. While it has produced high-quality built form outcomes, some provisions duplicate requirements of Local Planning Scheme No. 15 and/or the R-Codes.
- **Belvidere Main Street Precinct**: Local Planning Policy No. 15 – Main Street Precinct Design Guidelines guides development within the Belvidere Neighbourhood Centre, encouraging residential development above commercial land uses on the ground floor. Despite the policy's adoption in 2016, no development has occurred in accordance with it. However, a new commercial development was recently approved, which may lead to the relocation of the existing IGA supermarket to the southwest portion of the centre.

Through preparation of a new local planning scheme, the City should investigate rationalising these special development precincts and review existing local planning policies and scheme provisions to determine whether they should be retained (with modifications) or revoked. The City should also review existing provisions within Local Planning Scheme No. 15 and other local planning policies to ensure they effectively guide the built form and character of Belmont's residential and commercial developments.

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In considering significant development proposals, the City of Belmont currently seeks advice from the City's Design Review Panel. Consistent with State Planning Policy 7.0 – Design of the Built Environment, the City should continue to seek constructive feedback from the Panel regarding the built form and character of proposed developments.

### 9.3.3 Historic Heritage

The City acknowledges its rich and diverse heritage and has measures in place to protect key sites, enhancing quality of life and strengthening cultural identity.

There are a number of registered Aboriginal Heritage Sites located within the City of Belmont. These sites are outlined in Table 20 below. These are administered under the Aboriginal Heritage Act 1972.

Table 20 – Aboriginal Heritage Sites located within the City of Belmont

| Registered Aboriginal Site No. | Name | Location description/address | Type |
|---|---|---|---|
| 3536 | Swan River | - | Mythological |
| 16694 | Redcliffe Wetlands | Redcliffe Road, Redcliffe | Historical, Mythological, Camp, Meeting Place, Natural Feature, Water Source |
| 37868 | Modified Tree | Swan River banks, adjacent to the Tonkin Highway south bound lanes | Modified Tree |
| 17061 | Old Campsite 1 | Swan River banks adjacent to 60 Great Eastern Highway, Rivervale | Camp |
| 15916 | Burswood Island | Balbuk Reserve, Rivervale | Artefacts/Scatter, Water Source |
| 3717 | Rivervale Camp | Wilson Park, Rivervale | Camp |
| 31744 | Pa1001 | Located within the Perth Airport Estate (between Airport Drive, Anderson Place and Horrie Miller Drive | Artefacts/Scatter |
| 3994 | Kewdale: Abernethy Road | 518 Abernethy Road, Kewdale | Artefacts/Scatter |
| 3891 | Aitken Way N W | Corner Kewdale Road and Aitken Way, Kewdale | Artefacts/Scatter |
| 3936 | Kewdale: Franco A & B | 543 Abernethy Road, Kewdale | Artefacts/Scatter |

These sites are located across various zones, including areas reserved for 'Parks and Recreation,' as well as land within the R100, R20, and Industrial zones. One of these sites is within the Perth Airport Estate, where Perth Airport implements practices outlined in their Master Plan 2020. Any subdivision or development on these sites is required to be in accordance with the requirements of the Aboriginal Heritage Act 1972.

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The City's Local Heritage Survey and Heritage List were recently reviewed in accordance with the Planning and Development (Local Planning Schemes) Regulations 2015 and the Guidelines for Local Heritage Surveys 2022. The sites outlined in Table 21 below are contained on the City's Heritage List. Their location is shown in Figure 16.

Table 21 – Sites on the City of Belmont Heritage List

| Inherit Place No. | Site | Description | Significance |
|---|---|---|---|
| 16882 | Bound by Wright Street, Abernethy Road and Robinson Avenue and Alexander Road | Faulkner Civic Precinct | Category 2 |
| 15629 | Within Faulkner Civic Precinct - Bound by Wright Street, Abernethy Road and Robinson Avenue and Alexander Road | Belmont War Memorial | Category 2 |
| 11490 | 300 Belgravia Street, Cloverdale | All Saint's Anglican Church | Category 2 |
| 8638 | 324 Belmont Avenue, Cloverdale | Belmont Christian Fellowship Church | Category 2 |
| 13071 | 354 Daly Street, Cloverdale | Notre Dame Church | Category 2 |
| 8648 | 1 Epsom Avenue, Ascot | Ascot Hotel | Category 2 |
| 6122 | 254 Fulham Street, Cloverdale | Bell Residence | Category 2 |
| 6123 | 71 Grandstand Road, Ascot | Ascot Racecourse Complex | Category 1 |
| 868 | 80 Grandstand Road, Ascot | Bristile Kilns | Category 1 |
| 16779 | Area bound by Hardey Road, Great Eastern Highway, Tonkin Highway and the Swan River | Ascot Residential and Stables Area | Category 2 |
| 8653 | 130 Great Eastern Highway, Belmont | Brisbane and Wunderlich Doll's House | Category 2 |
| 6124 | 213 Great Eastern Highway, Belmont | Belmont Primary School | Category 2 |
| 3123 | 517 Great Eastern Highway, Redcliffe | Tampina | Category 1 |
| 00138 | 13 Hehir Street, Belmont | St Anne's Church Complex | Category 2 |
| 24560 | 264 Kew Street, Kewdale | Kewdale Primary School | Category 2 |
| 8643 | 314 Kew Street, Cloverdale | Stella Hay's House | Category 2 |
| 27282 | 128 Kooyong Road, Rivervale | Wilson Park | Category 2 |
| 16785 | 91 Leake Street; Belmont | RAAF Headquarters Bunker (fmr) | Category 1 |
| 25897 | 34 Oats Street; Kewdale | Tomato Lake Park | Category 2 |
| 16850 | 67 Riversdale Road, Rivervale | The Taylor Place (fmr) | Category 2 |
| 27267 | 35 St Kilda Road, Rivervale | Residence, 35 St Kilda Rd | Category 2 |
| 25894 | 96 Sydenham Street, Kewdale | Peet Park | Category 2 |

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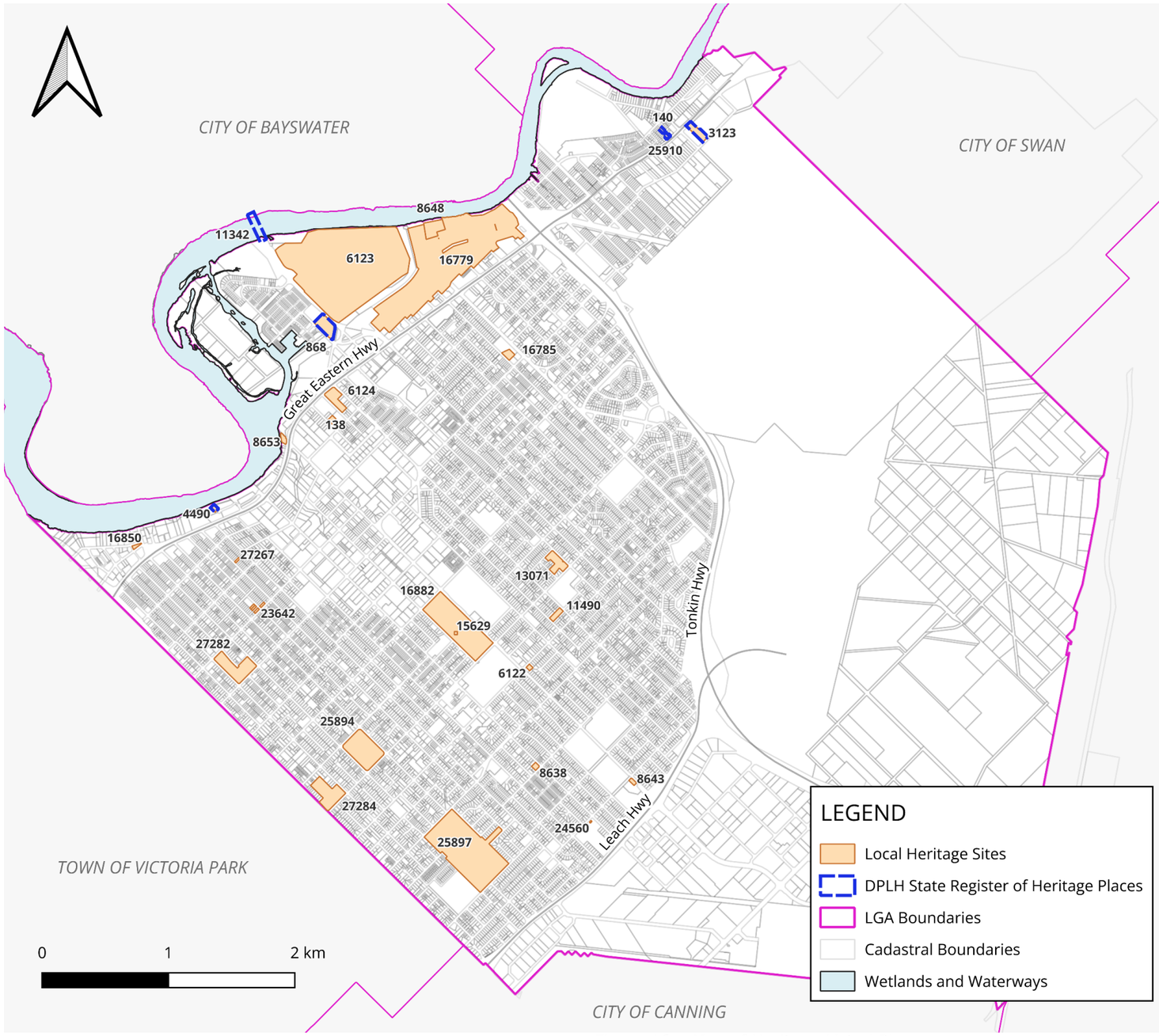
| | | | |
|---|---|---|---|
| 4490 | 16 Tanunda Drive, Rivervale | Hill 60 | Category 1 |
| 23642 | 72 Toorak Road, Rivervale | Residence, 72 Toorak Rd | Category 1 |
| 23642 | 74 Toorak Road, Rivervale | Residence, 74 Toorak Rd | Category 1 |
| 23642 | 77 Toorak Road, Rivervale | Residence, 77 Toorak Rd | Category 1 |
| 23642 | 78 Toorak Road, Rivervale | Residence, 78 Toorak Rd | Category 1 |
| 140 | 4 Wedderburn Place, Ascot | Nulsen Haven, (Invercloy) | Category 1 |
| 25910 | 11 Wedderburn Place, Ascot | Invercloy Park | Category 1 |
| 27284 | 1 Wright Street, Kewdale | Carlisle Primary Street | Category 2 |

Category 1 places are of exceptional significance, being essential to the heritage of the City of Belmont. These places are currently included, or recommended for inclusion, on the State Register of Heritage Places. Places included on the State Register are afforded statutory protection under the Heritage Act 2018. These places should be retained and conserved, and alterations or extensions should reinforce the significance of the place.

Category 2 places are of considerable significance, being very important to the heritage of the City of Belmont. These places have a high degree of integrity and authenticity, and conservation is highly desirable. Any alterations or extensions should reinforce the significance of the place.

Management of these places through the City's planning framework is undertaken in a manner consistent with the Heritage Act 2018 and the Planning and Development (Local Planning Schemes) Regulations 2015.

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| Place Number | Place Name |
|---|---|
| 138 | St Anne's Church Complex |
| 140 | Nulsen Haven, (Invercloy) |
| 868 | Bristile Kilns |
| 3123 | Tampina |
| 4490 | Hill 60 |
| 6122 | Bell Residence |
| 6123 | Ascot Racecourse Complex |
| 6124 | Belmont Primary School |
| 8638 | Belmont Christian Fellowship Church |
| 8643 | Stella Hay's House |
| 8648 | Ascot Hotel |
| 8653 | Brisbane and Wunderlich Doll's House |
| 11342 | Garratt Road Bridge |
| 11490 | All Saint's Anglican Church |
| 13071 | Notre Dame Church |
| 15629 | Belmont War Memorial |
| 16779 | Ascot Residential and Stables Area |
| 16785 | RAAF Headquarters Bunker (fmr) |
| 16850 | The Taylor Place (fmr) |
| 16882 | Faulkner Civic Precinct |
| 23642 | Residence, 72 Toorak Road |
| 23642 | Residence, 74 Toorak Road |
| 23642 | Residence, 77 Toorak Road |
| 23642 | Residence, 78 Toorak Road |
| 24560 | Kewdale Primary School |
| 25894 | Peet Park |
| 25897 | Tomato Lake Park |
| 25910 | Invercloy Park |
| 27267 | Residence, 35 St Kilda Street |
| 27282 | Wilson Park |

Figure 16 – Map of Heritage Listed Places

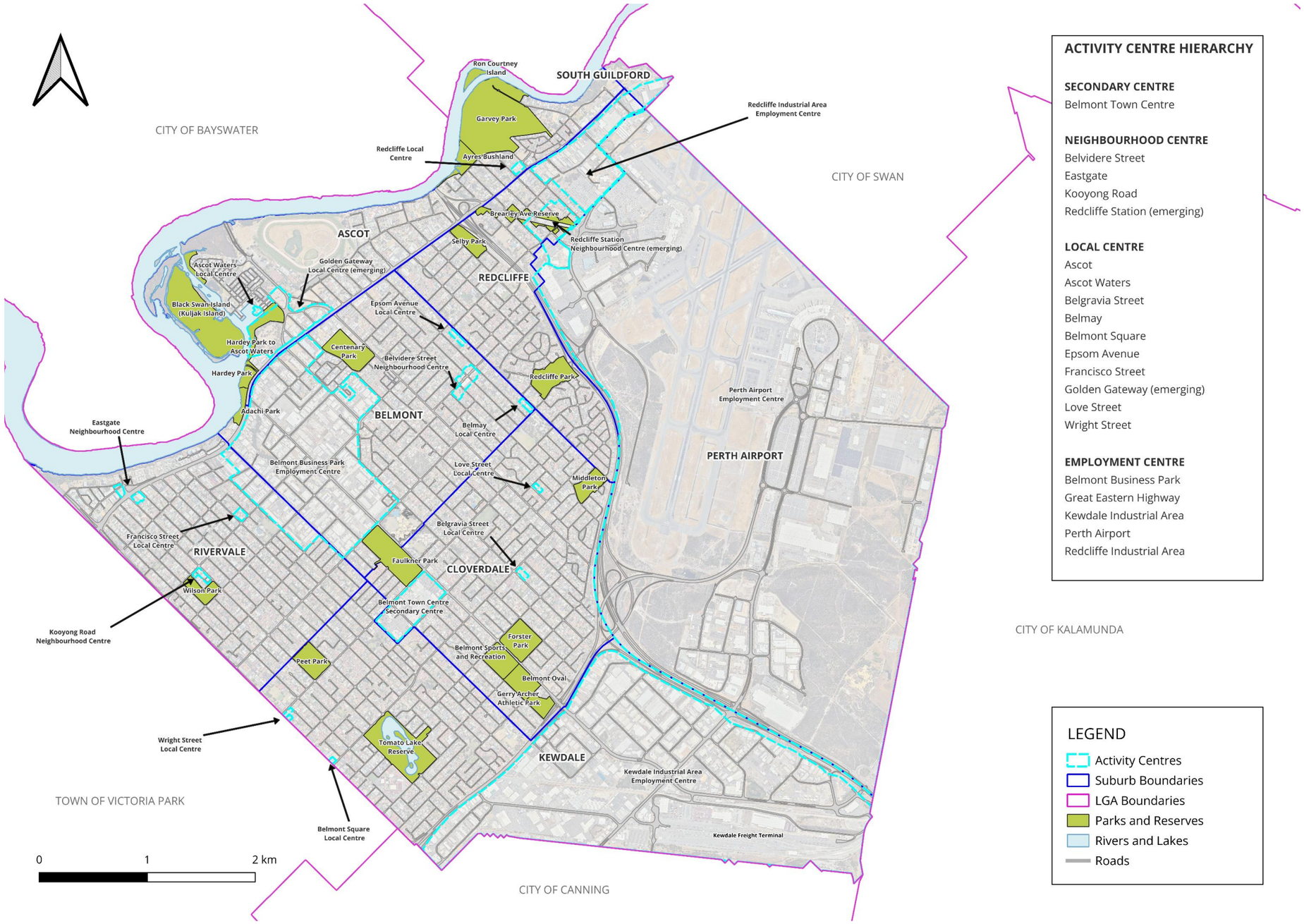
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### 9.3.4 Activity Centres

Activity centres are community focal points, attracting people for a variety of reasons including to shop, work, study and live. Activity centres typically contain a range of land uses including retail, entertainment, tourism, civic/community, and medical services. They are often combined with a varying proportion of medium to high density housing and open space. Activity centres vary in size, role and function, and should be designed to maximise use of public transport and accessibility for pedestrians, cyclists and other modes of transport. This is with the exception of specialised centres which perform their own unique functions.

The City contains one secondary centre, four neighbourhood centres, nine existing local centres, one future local centre, one specialised centre and four other employment precincts as shown on Figure 17:

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## ACTIVITY CENTRE HIERARCHY

**SECONDARY CENTRE**
Belmont Town Centre

**NEIGHBOURHOOD CENTRE**
Belvidere Street
Eastgate
Kooyong Road
Redcliffe Station (emerging)

**LOCAL CENTRE**
Ascot
Ascot Waters
Belgravia Street
Belmay
Belmont Square
Epsom Avenue
Francisco Street
Golden Gateway (emerging)
Love Street
Wright Street

**EMPLOYMENT CENTRE**
Belmont Business Park
Great Eastern Highway
Kewdale Industrial Area
Perth Airport
Redcliffe Industrial Area

LEGEND
- Activity Centres
- Suburb Boundaries
- LGA Boundaries
- Parks and Reserves
- Rivers and Lakes
- Roads

Figure 17: Activity Centre Locations

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Belmont Secondary Centre

The Belmont Secondary Centre provides a mix of retail, dining, entertainment and commercial spaces, contained within a primary building under single ownership and several smaller buildings. Surrounding the Belmont Secondary Centre are businesses and residential properties that support the Centre's functions.

The future planning for Belmont Secondary Centre should align with Planning Area H. The Belmont Secondary Centre is currently zoned 'Town Centre' under the City's Local Planning Scheme. Through the preparation of a new Local Planning Scheme, the suitability of applying a 'Centre' zone to the land will be investigated.

To guide future use and development within the centre it may be necessary for a precinct structure plan to be prepared.

Local and Neighbourhood Centres

The City includes a range of existing Local and Neighbourhood Centres, with one future Local Centre and one future Neighbourhood Centre. These centres generally include supermarkets, personal services, convenience shops, and small-scale office spaces, typically arranged in smaller tenancies with fragmented ownership.

Future planning for neighbourhood centres should align with Planning Area I on the Strategy Map, while local centres should align with Planning Area J. These centres present opportunities for residential development; however, no density codes currently apply to land within them. To support residential growth, suitable density codes will be considered in the preparation of a new local planning scheme. The City will also investigate development controls to ensure that residential land uses do not undermine the centres' ability to provide essential convenience goods and services. Additionally, the City will assess the suitability of applying local and neighbourhood centre zones and the appropriateness of certain uses to ensure alignment with zone objectives.

The 2020 Retail Needs Assessment prepared to support this Strategy identifies an indicative retail floorspace need of approximately 3,500m² for the Belvidere Street Neighbourhood Centre through an assessment of forecast population growth, retail demand and the intended role and function of the Centre. It is noted that development approval has since been granted for retail floorspace exceeding this figure. However, the approval of additional floorspace does not alter the forecast population, retail demand or intended role and function of the Centre on which the identified need is based. The additional floorspace was considered having regard to the particular proposal and its supporting Net Benefit Test. The 3,500m² figure therefore represents the indicative level of retail need identified through the strategic assessment and is not a statutory cap or maximum development outcome. Proposals for additional retail floorspace may be considered in accordance with State Planning Policy 4.2, including through a Net Benefit Test where required.

Specialised and Employment Centres

Specialised and employment centres are further discussed in Section 9.4 - Economy and Employment.

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### 9.3.5 Public Open Space and Community Facilities

Public Open Space

The City has a total of approximately 284 hectares of public open space as follows (refer to Figure 18 and Figure 19):

- 94 hectares of recreational space - Neighbourhood Open Space
- 47 hectares of sporting space - Regional Open Space
- 117 hectares of nature space - District Open Space
- 26 hectares of other space such as stormwater drainage.

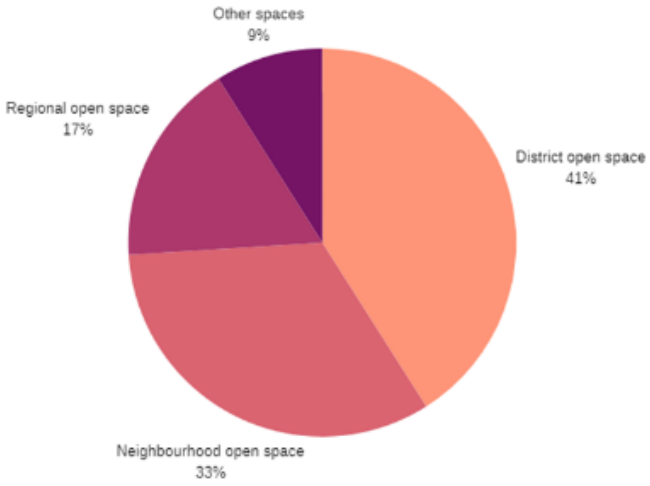



Figure 18: Public open space distribution within the City

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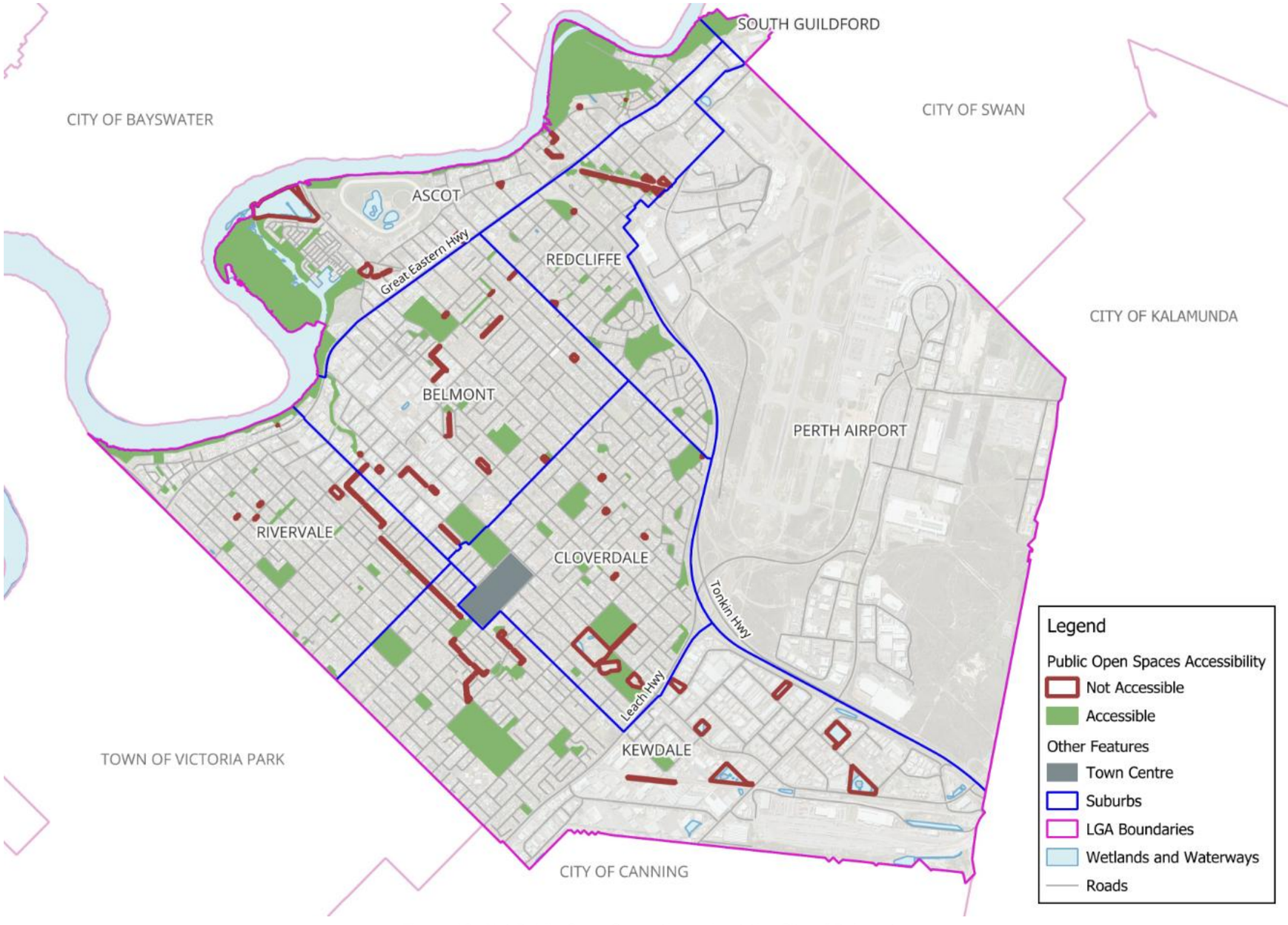



Figure 19: Net Public Open Space throughout the City of Belmont

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Ascot contains the largest amount of the City's public open space, with 43%, while Rivervale and Redcliffe have the lowest public open space cover, with 7% each (as shown in Figure 20).

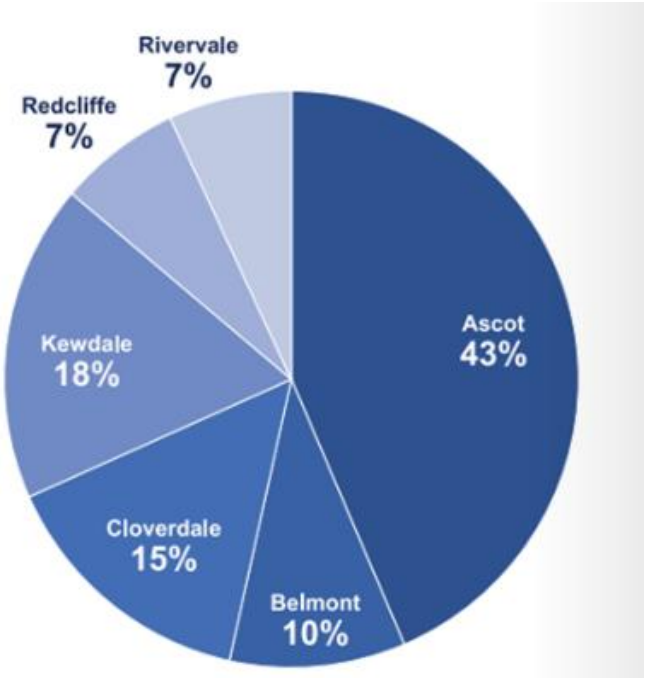



Figure 20: Public Open Space across suburbs, as a percentage of the City's total public open space.

Ascot's public open space is attributed to land along the Swan River foreshore, Kuljak Island (Black Swan Island) and Garvey Park. In terms of public open space within Rivervale and Redcliffe, there are currently upgrades proposed to Wilson Park and there may be upgrades to public open space as part of the future planning for the Redcliffe Station Precinct.The City should seek to enhance the quality and usability of public open space by:

- Investigating opportunities to upgrade areas of existing public open space to increase amenity and usability
- Investigating opportunities to convert or enhance existing land used for water supply, sewerage, and drainage for public open space
- Seeking opportunities for activity centres and schools to serve a public open space function.
- Investigating opportunities to expand public open space
- Investigating developer contributions to support the above matters. This includes considering the potential forms of levying contributions, and the potential impact of such contributions on the financial viability of development and subdivision.

*Accessibility to public open space*

The standard assessment for adequate amounts and accessibility to public open space is based on the proximity of residential dwellings to open space, defined as follows:

- Local Open Space: Within 400m or a 5 minute walk
- Neighbourhood Open Space: Within 800m or a 10 minute walk

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- District Open Space: Within 2km or a 5 minute drive

In terms of accessibility:

- 28% of residential properties within the City are located within 100 metres of some form of public open space.
- 88% of properties are within 400m of public open space.
- In the suburb of Belmont, 36% of properties require travel beyond 400m to access open space, with 2.5% of properties situated more than 700m away.

*Passive Surveillance*

Improvements to the connection between public open space and private properties has been identified as an objective in the City's Public Open Space Strategy. However, the current local planning framework and R-Codes lack clear guidelines for such measures. The City may consider incorporating appropriate mechanisms and associated provisions during the preparation of the new local planning scheme to improve the visual permeability of fences facing public open space, thereby improving the connectivity and passive surveillance.

Community facilities

Community facilities play an essential role in enhancing community life and supporting social interaction and engagement. The City has a range of community facilities including; community centres, a leisure centre, a library and museum.

The City of Belmont Community Infrastructure Plan 2022-2040, identifies the following considerations to ensure infrastructure continues to meet community needs:

- Establishing an additional dedicated art centre/space.
- Providing more flexible, smaller community centre spaces with improved amenities such as heating, carpeting and audio and visual equipment.
- Adding a second youth centre facility.
- upgrading and renewal of independent living units and related services for seniors.
- Ensuring provision is made for tennis courts, lawn bowls and indoor courts.
- Reviewing Belmont Oasis and the services it provides as it ages.
- Designing community spaces to support passive recreation activities.

It is considered that these opportunities can be accommodated within land across the City without any changes to zones or reserves. However, as outlined in Part 1, there is an opportunity to introduce the private clubs, institutions and places of worship zone, consistent with the Planning and Development (Local Planning Schemes) Regulations 2015.

Public education facilities also form an important component of community infrastructure and support the needs of growing communities. The Department of Education has advised that it will continue to monitor student enrolment demand as residential development progresses within the locality and that a range of responses may be required through future localised planning processes. These responses may include the identification and reservation of new public school sites, expansion and/or augmentation of existing school sites, and other measures necessary to ensure educational infrastructure keeps pace with residential growth.

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## 9.3.6 Hazards

Bushfire

There are some properties within the City designated as bushfire prone, primarily located near Tonkin Highway, Leach Highway and the Swan River (refer to Figure 21).

Future planning proposals within bushfire prone areas will be assessed against *State Planning Policy 3.7–Bushfire* and appropriate management measures will be implemented as required. Land within Planning Areas B, C and E are identified as being bushfire prone. Therefore, future investigations for these areas must consider and address bushfire risk.

Flood

Several properties near the Swan River are located within the floodway and flood fringe of the 100-year flood level, as shown in Figure 22. Additionally, areas containing Water Corporation drains, such as the Southern Main Drain, Smythe Lake Park, and Centenary Park, may present flooding hazards to nearby properties during extreme rainfall events. These drains are reflected in Figure 22.

To address these risks, the City will incorporate appropriate mechanism and/or provisions within the new local planning scheme to ensure the ongoing protection of properties and infrastructure within flood-affected areas.

Climate Change

Climate change may influence the extent and behaviour of natural systems across the City, including water resources such as wetlands, groundwater and drainage networks. This may have implications for how land is planned and developed over time.

Consistent with State Planning Policy 2.9 – Water, it may be appropriate for future planning to consider these potential changes where relevant, including the protection of water-dependent environments and the function of drainage systems.

The preparation of a new local planning scheme may provide an opportunity to further investigate mechanisms that respond to these matters, including supporting water-sensitive urban design, maintaining natural hydrological processes, and ensuring development considers potential constraints associated with water resources.

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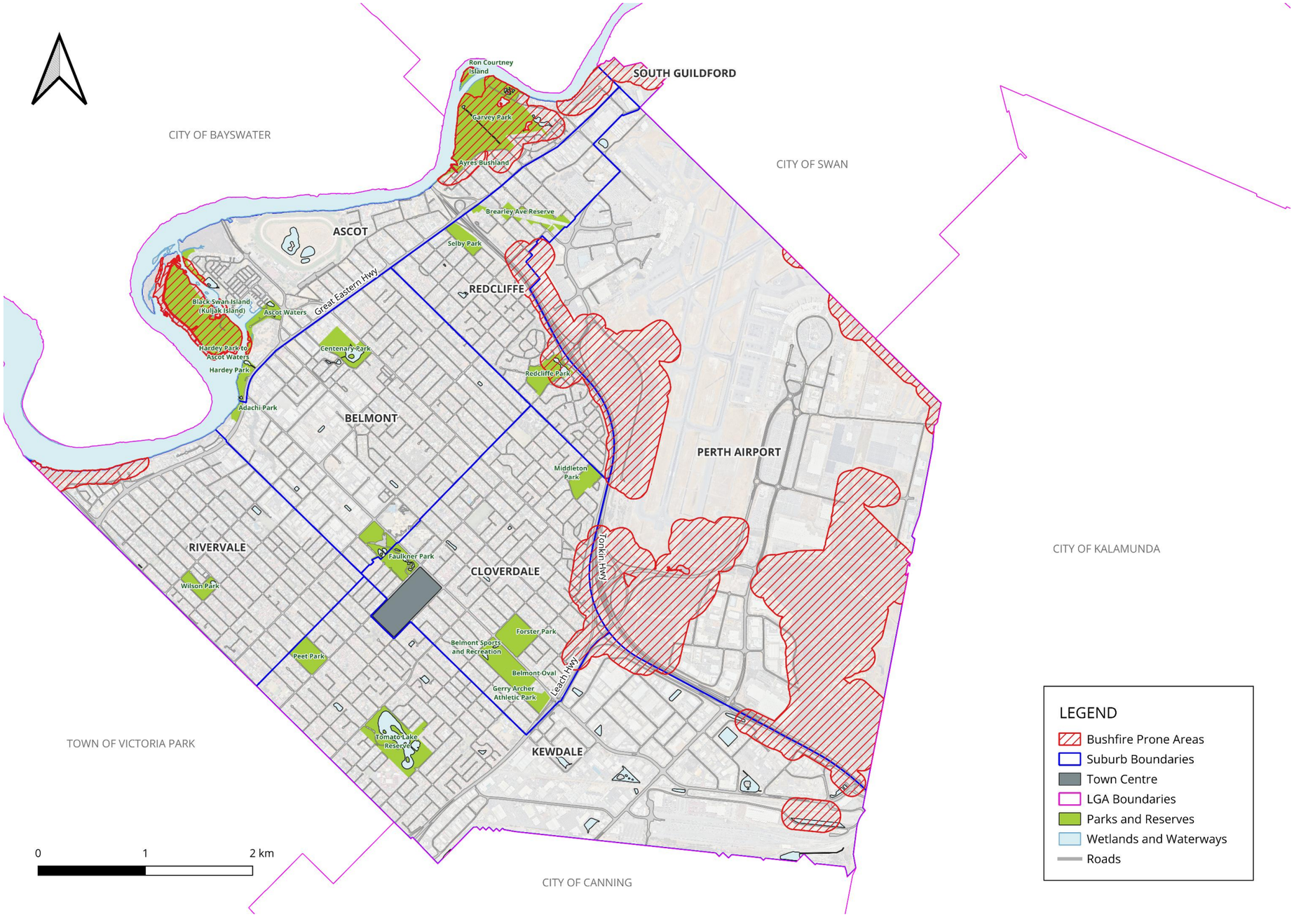



Figure 21: Bushfire Prone Areas within the City of Belmont

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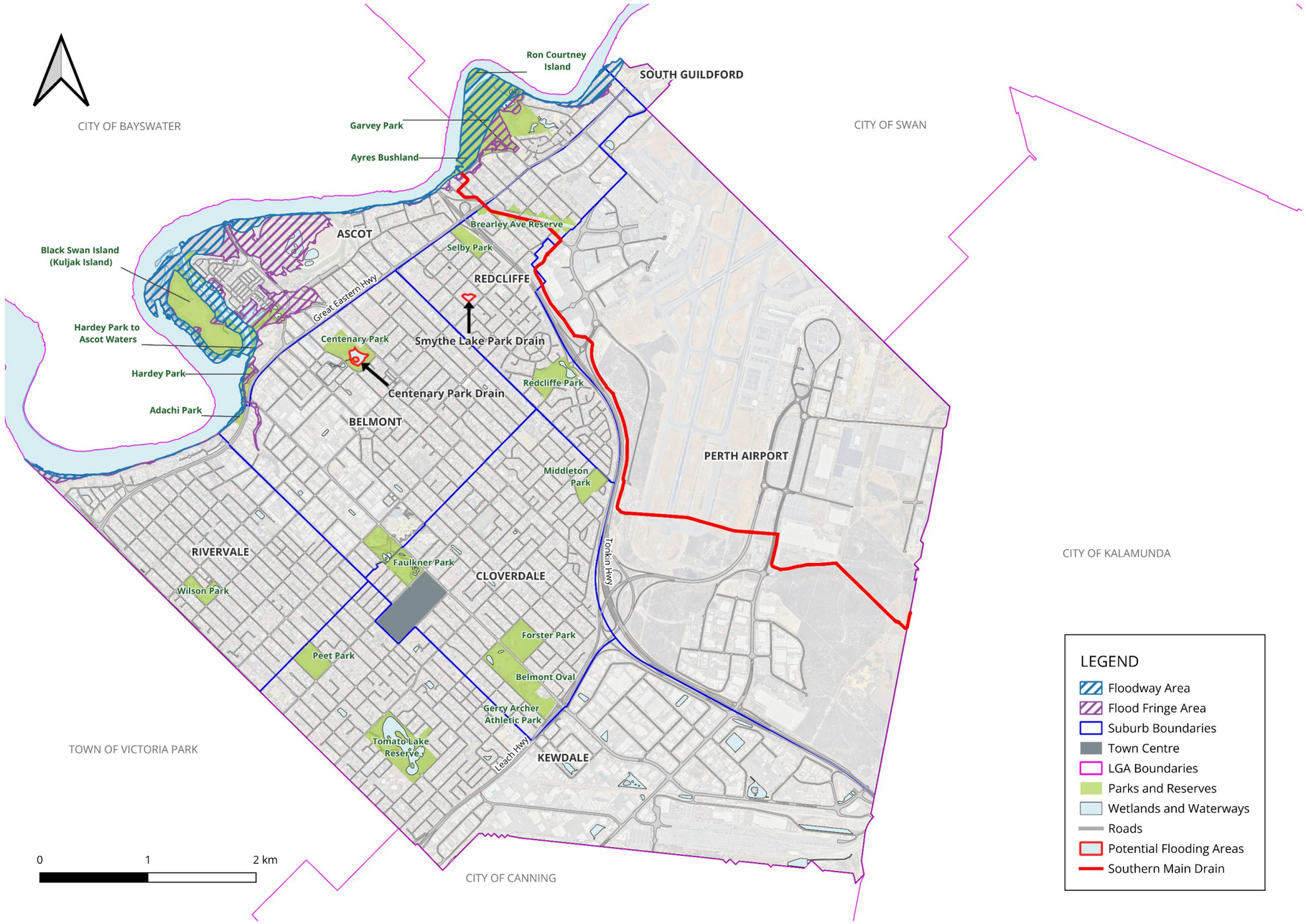



Figure 22: 100 Year Flood Level

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## 9.4 Economy and Employment

The Strategy aims to maintain appropriate zoning to support business and employment growth while protecting these areas from incompatible land uses. With a strong locational advantage only 6 kilometres from the Perth CBD and access to major highways, the City is well-positioned for economic activity, particularly in freight and logistics.

Unlike most local governments, the City has more local jobs (62,684, National Institute of Economic and Industry Research 2025) than employed residents (26,509, NIEIR 2025). This represents 2.4 jobs for every 1 employed resident from within the City. The Central Sub-regional Planning Framework identifies a target of 1.4 jobs per employed resident within the sub-region. A large proportion of the jobs within the central sub-region are located within the City of Perth (240,000, NIEIR 2025) which has 11.5 jobs per employed resident.

Transport, Postal and Warehousing is the largest employment sector (21.4%), followed by Mining (15.1%), Retail Trade (8.4%) and Health Care and Social Assistance (8.3%), reflecting the area's economic diversity. The City's Gross Regional Product is $12 billion (NIEIR, 2025), equating to 2.7% of Western Australia's GRP and reflecting strong growth, with a 27% increase in GRP compared to the WA average of 18% in the last 10 years.

The Central Sub-regional Planning Framework has identified anticipated job numbers for activity and industrial centres (employment precincts) that are wholly or partially within the City of Belmont as shown in Figure 22 below.

Table 22 – Anticipated job numbers for Activity and Industrial Centres

| **Centre** | **2011** | **2050** | **Additional** |
|---|---|---|---|
| Belmont Secondary Centre | 2,460 | 3,510 | **1,050** |
| Perth Airport Specialised Centre | 12,900 | 20,390 | **7,490** |
| Belmont Industrial Centre (Belmont Business Park) | 3,967 | 4,047 | **80** |
| Kewdale/Welshpool Industrial Centre | 28,052 | 28,775 | **723** |

### 9.4.1 Specialised Activity and Employment Centres

Specialised activity and employment centres play a valuable role in the City's economy, significantly contributing to both local and broader metropolitan and state economies. These centres support key industries that drive employment and economic output. An overview of these centres is provided below:

Belmont Business Park

Centrally located in the City of Belmont, the Belmont Business Park, bound by Daly Street, Fisher Street, Great Eastern Highway, and Knutsford Avenue serves as a major employment and activity hub, offering a diverse range of land uses (refer to Figure 23). It consists of approximately 800 businesses, representing 15% of all businesses within the City of Belmont.

The area is currently zoned 'Mixed Business' under LPS 15, which is not a standard model provision zone contained within the Regulations. The 'Mixed Business' zone objective provides for a variety of compatible business uses such as offices, showrooms, eating establishments and low-impact industrial activities. Additionally, buildings are required to be of a high

standard of architectural design, with landscaped surroundings and limited direct access to primary roads.

Whilst still home to light industrial operations and warehouses, the area has diversified overtime to include offices and other commercial activities. There are also a several residential dwellings located within the area.

The City has a Local Planning Policy (LPP No. 10 – Residential Landuses in the Mixed Business Zone) which outlines locations on the periphery of the Belmont Business Park which may be appropriate to accommodate residential land uses. However, Single House, Grouped and Multiple Dwellings are currently an 'A' use within this zone.

The appropriateness of rezoning the area to 'Service Commercial' will be explored through the preparation of a new local planning scheme, aligning with the Model Provisions. While this zone supports various commercial uses, it may be appropriate for additional objectives to include reference to low-scale light industrial activities. Residential land uses are not considered appropriate within the Model Provision 'Service Commercial' zone.

Additionally, the appropriateness of rezoning lots fronting Great Eastern Highway from 'Mixed Business' to 'Mixed Use' should be investigated to support a mix of commercial and residential uses. This is consistent with the approach of Perth and Peel @ 3.5 million, which advocates for more intensive mixed-use development and higher density residential development along urban corridors.

Great Eastern Highway

Great Eastern Highway is a primary regional road which runs east to west along the northern part of the City of Belmont, intersecting the suburbs of Rivervale, Ascot, Belmont, Redcliffe and South Guilford. It is also designated as an urban corridor under Perth and Peel@3.5 Million. Land along the Highway is subject to various zonings including 'Residential,' 'Mixed Use,' 'Mixed Business,' 'Commercial,' 'Industrial,' 'Service Station,' and 'Special Development Precinct,' supporting a diverse range of land uses. To continue to encourage appropriate and compatible land uses, suitable zones and land use permissibility should be applied to land adjacent to the Highway through the preparation of a new local planning scheme.

Kewdale Industrial Area

The Kewdale Industrial Area is located between Leach Highway and Tonkin Highway (refer to Figure 24). This area occupies a significant portion of Kewdale and is positioned in the southern corner of the City, forming part of a strategic transport and logistics hub.

The Kewdale Industrial Area contains a mix of land uses such as general industry, noxious industry, offices, warehouses, and transport depots. The lots within this area are mostly zoned 'Industrial,' which is inconsistent with the Model Provisions. The 'General Industry' zone is considered more appropriate, given the area's role in freight and logistics. Additionally, some parcels within the Kewdale area include non-industrial uses and have additional use rights (A4, A13, A15, A16, and A17). The City should evaluate these existing uses and consider potential rezonings, as well as reviewing land use permissibility, to ensure continued support for the area's industrial function during the development of the new local planning scheme.

The City of Belmont, along with Kalamunda, Swan, and Canning, regularly collaborate and have commissioned reports to streamline development provisions for key industrial areas. These reports have identified inconsistencies between local planning schemes and development provisions for major industrial zones, including the Kewdale Industrial Area.

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Recommendations from these reports will be considered by each local government when preparing new schemes, with the aim of simplifying the planning process. These considerations will be further integrated into the preparation of Belmont's new local planning scheme.

Redcliffe Industrial Area

The Redcliffe Industrial Area is located along the eastern boundary of the City, between Great Eastern Highway, Coolgardie Avenue, and the Perth Airport (refer to Figure 25). This area includes a range of land uses, with more intensive industrial activities situated east of Ivy Street and lower-intensity uses to the west.

The Redcliffe Industrial Area is located in close proximity to existing residential development. This Strategy aims to protect industrial areas from incompatible land uses. To achieve this, appropriate zoning and land use permissibility will be considered, with careful management of transitions through zoning and development controls. This approach helps support industrial activities, maintain long-term viability, and reduce conflicts with nearby non-industrial areas.

As with the Kewdale Industrial Area, the Redcliffe Industrial Area is currently zoned 'Industrial,' which does not align with the Model Provisions. In this case, it may be more appropriate to zone land west of Ivy Street as 'Light Industry' and land to the east as 'General Industry.'

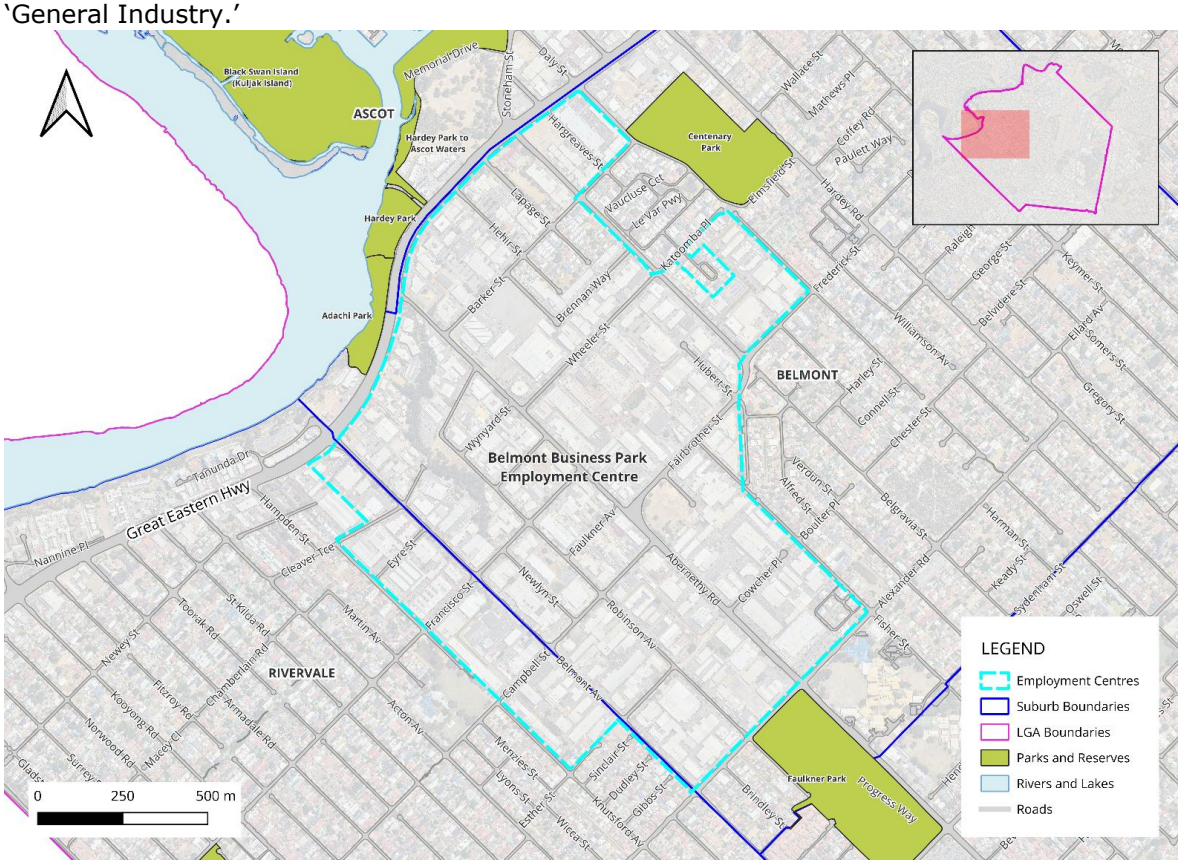



Figure 23: Belmont Business Park Location Plan

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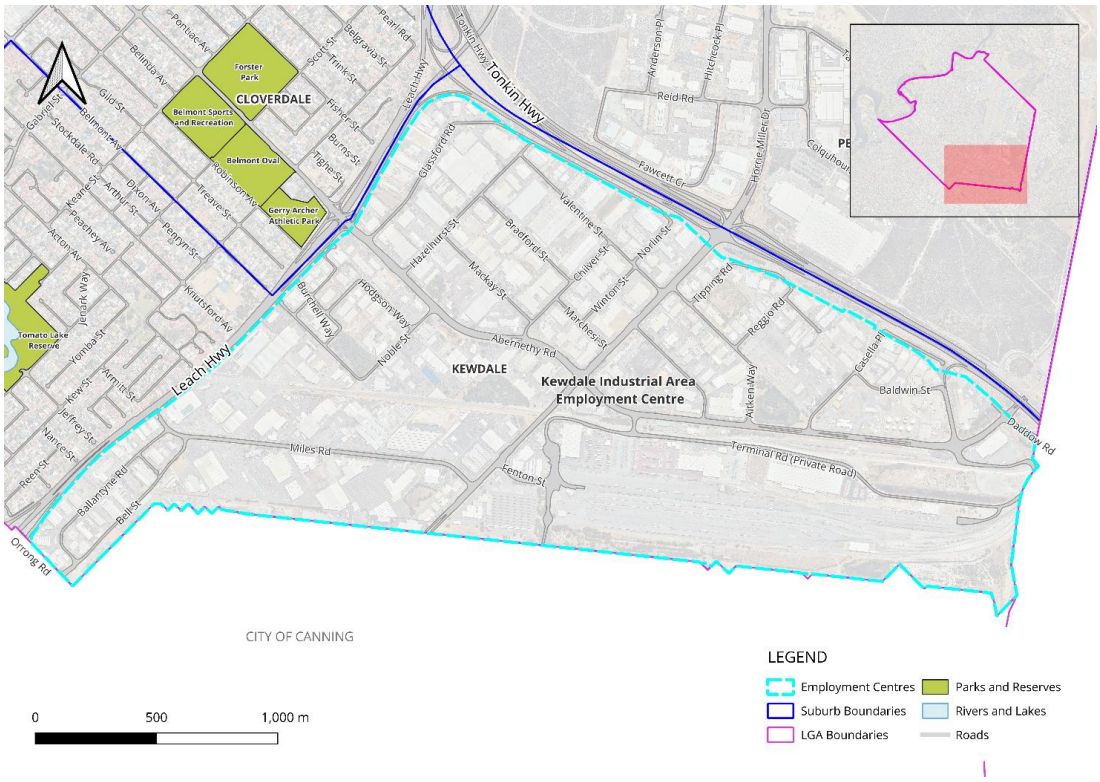



Figure 24: Kewdale Industrial Area Location Plan

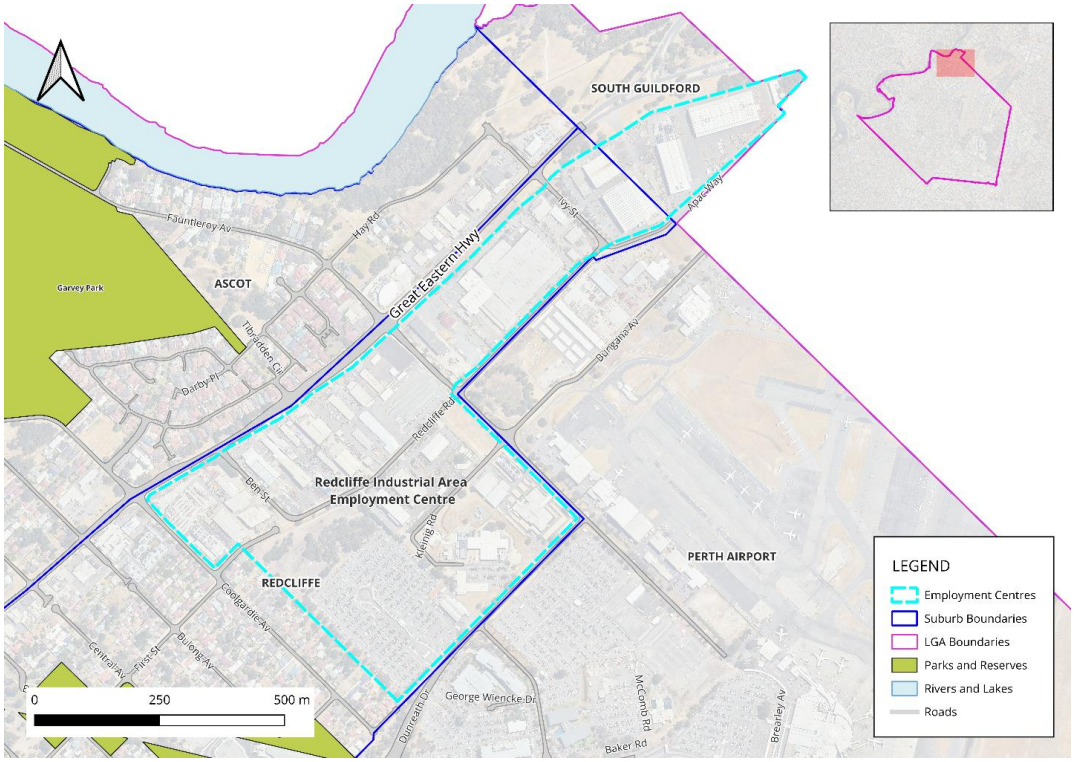



Figure 25: Redcliffe Industrial Area Location Plan

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### 9.4.2 Tourism

The City does not have any specific tourist sites, however it considered the following sites provide local and regional tourism values:

- Perth Airport: As the primary entry point for most visitors to WA, the City of Belmont is often the first place travellers experience, even if just passing through. This offers an opportunity to establish Belmont as a key player in the metropolitan tourism market by developing destination attractions that encourage visitors to stay and explore rather than simply transit.
- Swan River Foreshores: There is potential to enhance riverfront and foreshore experiences, with a focus on partnering with Aboriginal stakeholders to explore opportunities for cultural and natural attractions.
- Great Eastern Highway: This urban corridor, with a mix of accommodation and hospitality options, presents strong economic development potential. Areas currently characterised by lower-quality or low-intensity uses could be redeveloped to maximise river views and create enhanced amenities.
- Ascot Racecourse: Ascot Racecourse attracts both local and regional visitors and serves as a major draw for the City of Belmont.
- Ruth Faulkner Library and Belmont Museum: Key venues for events and community gatherings, offering spaces for social and cultural engagement within the City.
- Recreational activities including iFLY Indoor Skydiving and go-karting strengthen the City's tourism appeal by offering experiences for both residents and visitors.

Through the preparation of the new local planning scheme, the City should ensure that zones and reserves applied to the above areas under the local planning framework are consistent with the model provisions of the Planning and Development (Local Planning Schemes) Regulations 2015. Where zones and reserves are applied, they should align with the intended use of each area. For example, it may be appropriate to apply a 'Special Purpose' or 'Recreation' reservation to Ascot Racecourse and a 'Civic and Community' reserve to the Ruth Faulkner Library and Belmont Museum, replacing the existing 'Place of Public Assembly' zone and 'Civic and Cultural' reserve. These efforts combined with policies like Local Planning Policy No. 19 – Short-Term Rental Accommodation, discussed in Section 3.3.2 of Part 1, aim to balance tourism development with community needs and sustainable housing outcomes.

## 9.5 Environment

The City recognises the value of protecting and conserving the natural environment. These values include those of clean air and water, landscape amenity and recreation. This strategy, the Public Open Space Sub-Strategy and the Environment and Sustainability Sub-Strategy promote the continued protection of our natural assets, most notably the Swan River and Foreshore areas, that act as our corridor, linking the Swan Coastal Plain to the Eastern Hills.

### 9.5.1 Natural Areas

The City contains 117 hectares of natural spaces, including remnant bushlands, waterways, wetlands and the Swan River (refer to Figure 26). The Swan River runs from north-east to south-west, forming the north-western boundary of the City. With 11 kilometres of river frontage, the river foreshore remains one of the City's key natural assets.

Other natural areas of environmental significance within the City include:

- Black Swan Island (Kuljak Island)

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- Garvey Park
- Severin Walk
- Centenary Park
- Signal Hill Bushland
- Tomato Lake Reserve

These areas are reserved as Parks and Recreation under either the Metropolitan Region Scheme or Local Planning Scheme and are managed by the City or the Department of Planning, Lands and Heritage. As part of a new Local Planning Scheme, an appropriate reservation for these areas will be considered.

To further preserve and enhance natural areas, promote sustainability, and mitigate environmental impacts, the City has developed an Implementation Plan to support the objectives and strategies outlined in the Environment and Sustainability Strategy. The Strategy provides a framework for sustainable environmental management and includes initiatives such as the development of a local Bushland Protection Plan and a Foreshore Management Plan. These plans aim to continue foreshore restoration programs, enhancing habitat, connectivity, and parkland amenity.

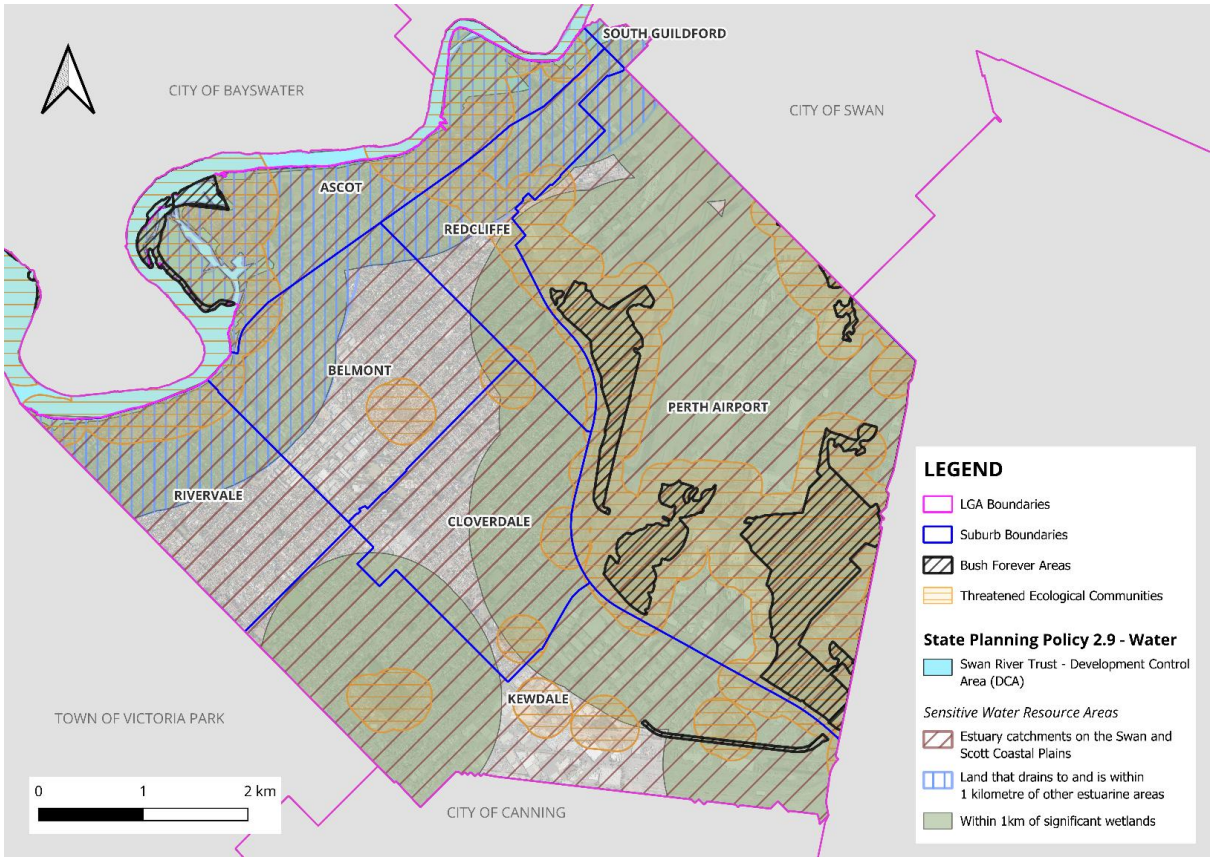



Figure 26: Natural Areas

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## 9.5.2 Climate Change/Tree Protection

Trees

*Tree Preservation Orders*

Trees are a valuable asset to our community, enhancing landscapes, providing weather protection, supporting habitats for flora and fauna, and contributing to a healthy, diverse natural environment that promotes community well-being and sustainability.

Under Clause 13 of the Supplemental Provisions to the Deemed Provisions in the City's Local Planning Scheme No. 15, a Tree Preservation Order offers a tool to protect trees on private land. This provision is applied when appropriate to safeguard trees of significant environmental, heritage, or cultural value that are at risk of removal.

The City's Tree Preservation Order Council Policy allows property owners to nominate trees on their land for protection, or for neighbouring landowners to nominate a tree if its canopy extends onto their property. Each nomination is assessed against criteria within the Policy and inspected by an arborist before it is considered for protection.

Recent local planning schemes have introduced a Significant Tree Register as an alternative to Tree Preservation Orders, with trees required to be protected where included on the register. This is understood to be the State's preferred approach to tree retention. As such, it may be appropriate to investigate replacing the current Tree Preservation Order mechanism with provisions to establish a Significant Tree Register within a new local planning scheme.

*Tree Planting Opportunities*

The preparation of a new local planning scheme presents an opportunity to prioritise additional tree planting across the City. Currently, several parking areas within the City feature limited tree cover and landscaping. To enhance the urban environment and align with the City's sustainability objectives, it may be appropriate to introduce a planning provision that mandates the inclusion of trees in parking areas. This approach will not only improve the aesthetic quality of these spaces but also contribute to broader environmental goals, such as mitigating the urban heat island effect.

The City currently applies uniform landscaping requirements for all lot sizes (3m landscaping strip within the front setback), regardless of site area, which can limit landscaping outcomes. Therefore, the City may investigate introducing deep-soil requirements for non-residential development based on lot size, ensuring meaningful landscaping and adequate space for tree planting. Additionally, consideration should be given to developing policies or guidance, such as an information sheet on managing street trees in relation to new crossovers, to promote effective integration of tree planting within the built environment.

*Sustainable design*

Integrating sustainability initiatives into urban development not only mitigates environmental impacts but also helps reduce living costs by lowering energy and water consumption. Currently, the City's Local Planning Scheme mandates the incorporation of solar design principles in the design and orientation of dwellings proposed above the base density code. Several Local Planning Policies further support sustainability, addressing key areas such as

energy efficiency, renewable materials, solar access, water management, vegetation, and green roof design.

As part of the development of a new Local Planning Scheme, it may be appropriate to explore opportunities to enhance sustainable design outcomes. This could include investigating the potential for development incentives when certain sustainability criteria are met or when significant trees are retained. Additionally, it may be appropriate to consider the introduction of a policy or guidance that encourages the incorporation of sustainability measures in both residential and commercial development.

It is also appropriate to continue supporting higher-density development within and around activity centres, particularly in areas near high-frequency public transport routes, such as those surrounding Redcliffe Station. This approach would help promote sustainable urban growth and reduce reliance on private cars.

## 9.6 Infrastructure

### 9.6.1 Transport Network

Public Transport

The Airport Train Line runs through the City of Belmont, featuring two stations, Redcliffe Station and Airport Central Station, that connect commuters between High Wycombe and Claremont via the Perth CBD. The Redcliffe Station precinct has been recognised as a suitable location for more intensive residential and mixed-use development. In response, the State Government initiated preparation of an Improvement Plan and Improvement Scheme in March 2023, informed by the City's draft Activity Centre Plan, to guide future subdivision and development in the area.

In addition to rail services, the City is served by several bus routes, including high-frequency options connecting key destinations within the City of Belmont and surrounding areas. Figure 27 illustrates the City's bus network.

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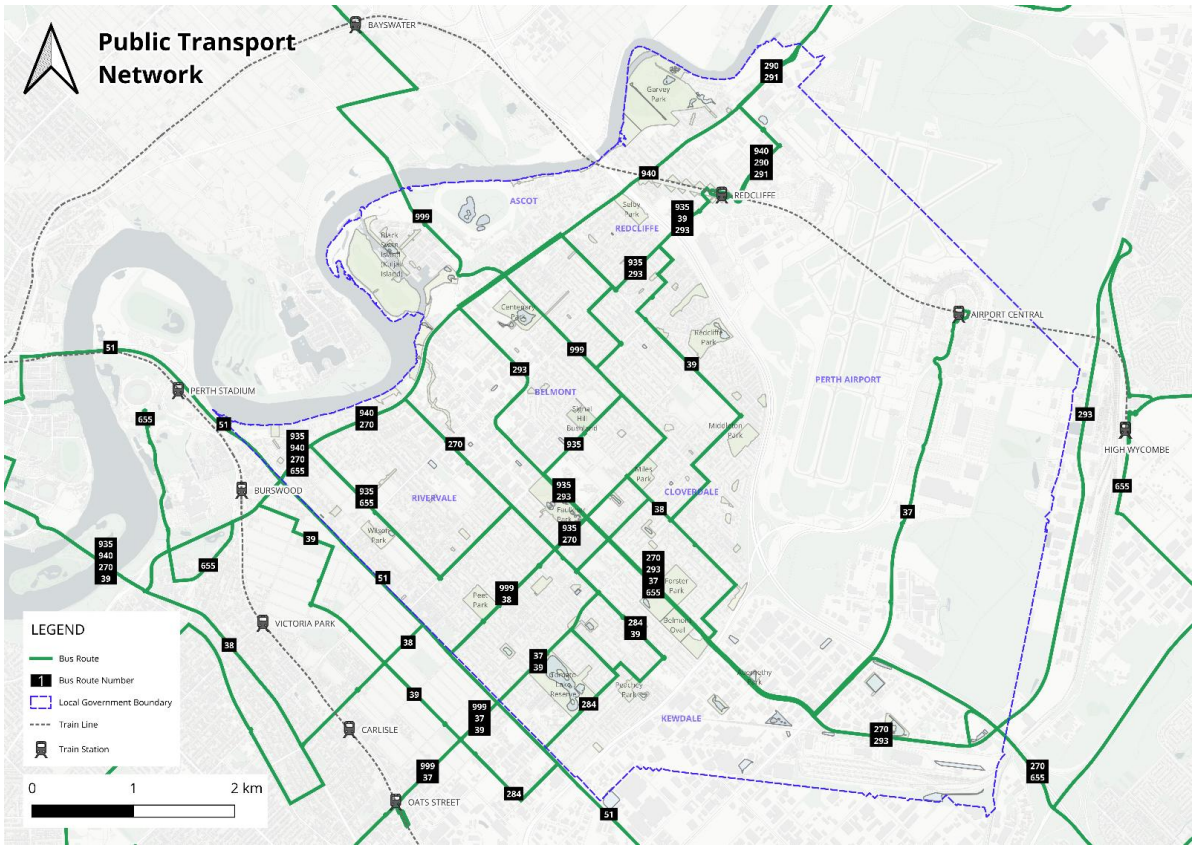



Figure 27: Public Transport Network Map

Great Eastern Highway, which benefits from high-frequency bus routes, is identified as an urban corridor in the *Perth and Peel @ 3.5 million* framework, making it well-suited for mixed-use, residential, and commercial development. To guide growth along this corridor, the City has prepared the Great Eastern Highway Urban Corridor Strategy, which will inform planning instruments and support the corridor's development into a vibrant, integrated urban area.

The City will continue to monitor development throughout the municipality and, where necessary, engage with the Public Transport Authority to assess the adequacy of public transport services.

Road Network

The City of Belmont is largely arranged in a grid pattern, interconnected by primary regional roads such as Graham Farmer Freeway, Great Eastern Highway, Leach Highway, and Tonkin Highway, along with smaller regional roads like Orrong Road, Abernethy Road, Fairbrother Street, Kewdale Road, and Belgravia Street. These roads provide major transport linkages, supporting both local and regional travel but also presenting challenges, including safety concerns for access and egress, congestion, and noise.

As part of preparing a new local planning scheme, the City will continue to minimise direct vehicle access onto primary and other regional roads to enhance road safety and traffic flow.

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The City will also continue to engage with and monitor the progress of the Orrong Road connect project. Through this project, Main Roads is investigating ways to improve safety, reduce congestion and enhance connectivity and liveability for people who travel along or live near Orrong Road.

At the same time, while retaining the functionality of these roads as major transport networks, there is a need to promote alternative transport modes to reduce dependency on private vehicles and improve sustainability.

Regarding traffic noise, an ongoing focus on noise mitigation measures will be important. In this respect, the City will continue to implement *State Planning Policy 5.4 – Road and Rail Noise* where required, ensuring effective noise management during the assessment of development applications.

Parking

For residential development within the City of Belmont, the standards under the Residential Design Codes are currently applied and will continue to be used.

For non-residential development, Table 2 – Car Parking Requirements of Local Planning Scheme No. 15 outlines the standards for various uses. The Department of Planning, Lands and Heritage has recently released the WA Planning Manual – Non-Residential Car Parking Rates in Perth and Peel. This guidance, approved by the WAPC, supports the review of existing non-residential parking rates in these regions and provides minimum and maximum car parking rates that can be applied in the following areas:

- Commercial and mixed-use areas in activity centres and precincts
- Service commercial zones
- Industrial zones, including light industry, general industry, strategic industry, and industrial development

The guidance aims to establish a consistent, State-wide approach to car parking to make it easier for businesses to establish. As part of preparing a new local planning scheme, the City will review its existing parking standards and apply appropriate standards with regard to the WAPC's Planning Manual.

Recent amendments to The Regulations also allow local governments to impose a condition requiring a landowner to make a payment in lieu of meeting minimum on-site parking requirements. This is subject to a payment in lieu of parking plan that sets out the purposes for which the funds will be used. Through the preparation of a new local planning scheme, the City should investigate the appropriateness of preparing a payment in lieu of parking plan for Belmont.

Walking and Cycling

The walking and cycling network within the City is shown in Figure 28 and Figure 29.

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Figure 28: Walking Network

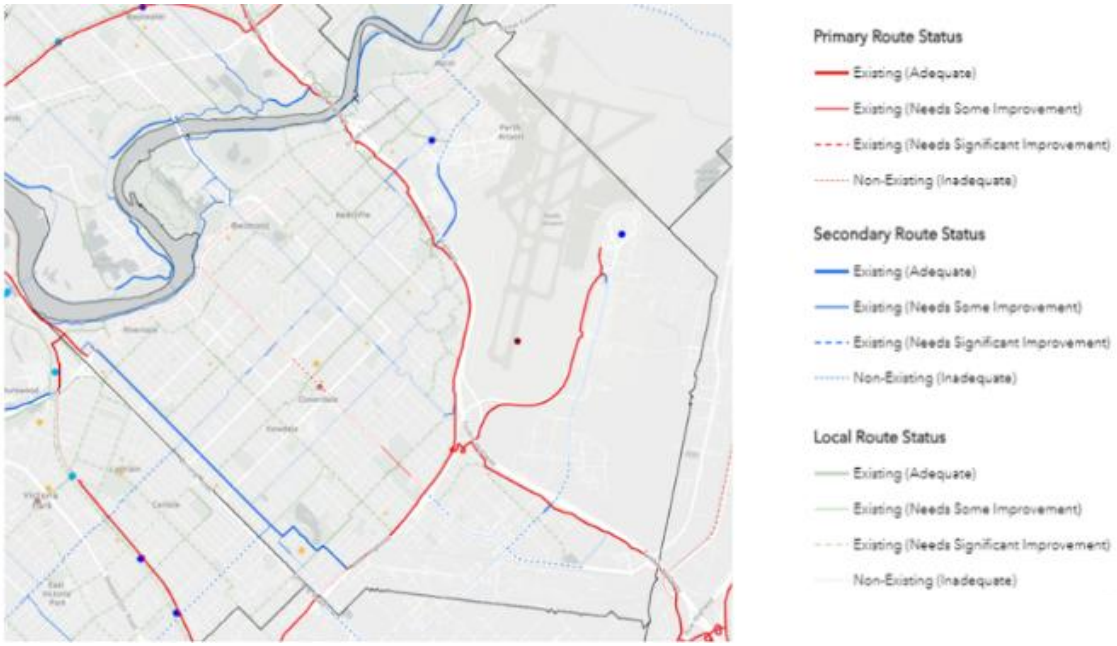



Figure 29: Cycling Network

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This shows an extensive cycling network which includes principle shared paths, local bicycle friendly routes, other shared paths and safe active streets.

Additionally, the Great Eastern Highway Urban Corridor Strategy aims to promote safe, direct and convenient access for pedestrians and cyclists. The Strategy proposes a principle shared path on the northern side of Great Eastern Highway (Figure 30), providing a direct route for pedestrians and cyclists. Currently, Great Eastern Highway only contains on-road cycle lanes from Graham Farmer Freeway to the Tonkin Highway, which are rarely used due to the volume and speed of passing traffic.

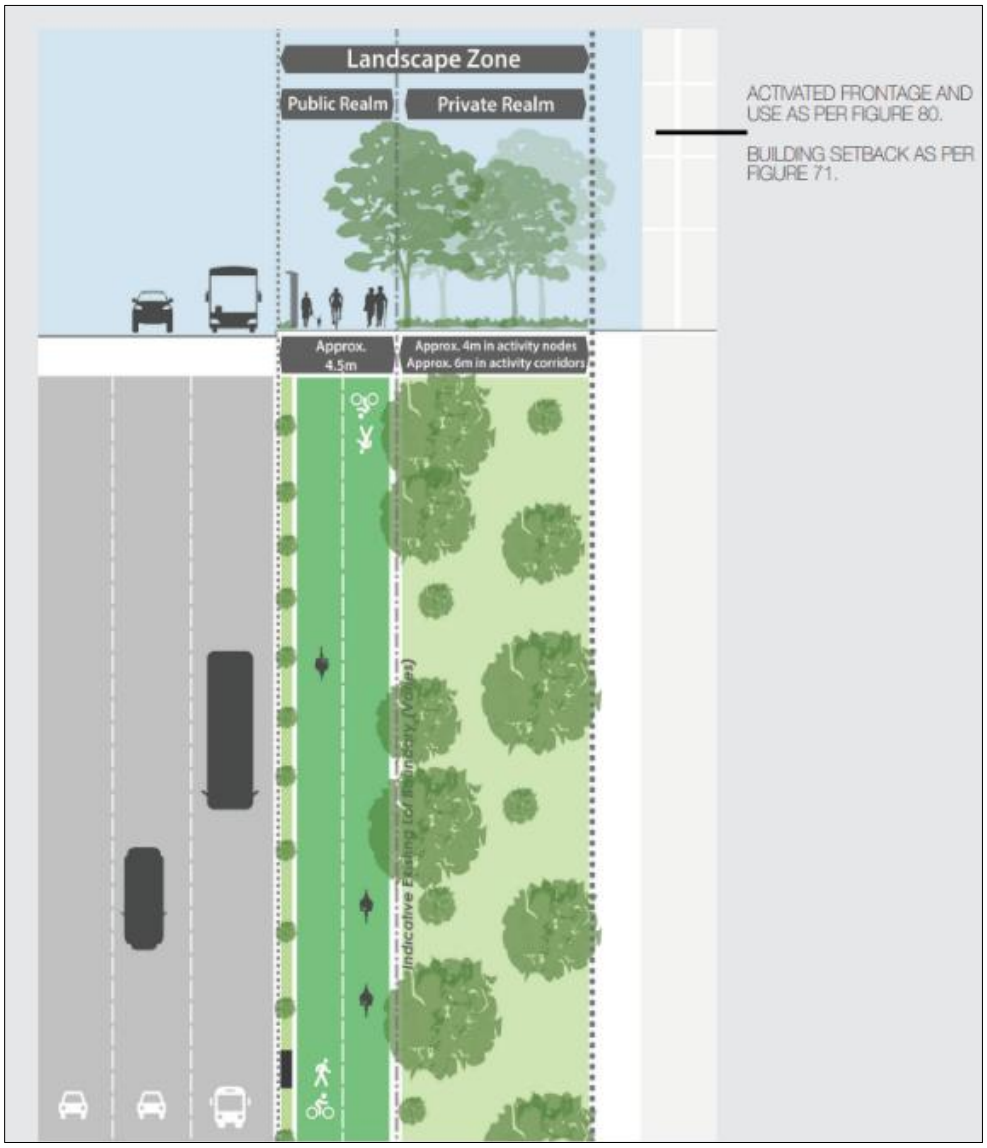



Figure 30: Potential principle shared path

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### 9.6.2 Airports and Aviation

Perth Airport, spanning 2,105 hectares in the City of Belmont, is Western Australia's primary domestic and international airport, playing a vital role in the State's economy. Perth Airport is reserved under the Metropolitan Region Scheme (MRS) as 'Public Purpose – Commonwealth Government.'

While the airport seeks to accommodate a range of uses, including hotels, fast food outlets, car washes, and bulky goods showrooms, it is important that these developments do not interfere with the airport's primary function as Perth's gateway to the world. Therefore, the City should continue to liaise with Perth Airport regarding future airport developments and ensure these are consistent with the Perth Airport Masterplan.

A portion falls under Development Area 6 in Local Planning Scheme No. 15, requiring a structure plan for subdivision or development. The need for this requirement will be reviewed as part of the new local planning scheme, considering recent developments and the State's Improvement Scheme, which does not apply to this area.

Additionally, to protect airspace and flight paths associated with Perth Airport, while minimising the impact of airport operations on communities, the City will investigate and appropriate mechanism or provisions within the new local planning scheme.

### 9.6.3 Telecommunications

The City's current Local Planning Scheme designates telecommunications infrastructure as 'P' (permitted) in all zones and does not provide specific guidance for their design. Recognising the potential amenity impacts that telecommunications infrastructure can have, the City should, through the preparation of a new Local Planning Scheme, investigate the appropriateness of encouraging this use in the industrial areas by designating it as 'P' in those zones. The permissibility in other zones will be further investigated through the preparation of a new local planning scheme. In zones where telecommunications infrastructure is designated as 'P,' the scheme should provide clear guidance on development approval exemptions and ensure alignment with State Planning Policy 5.2 – Telecommunications Infrastructure.

This approach is consistent with SPP 5.2, which advises that local governments should not outright prohibit telecommunications infrastructure across the entire scheme area. By focusing the land use in the industrial zones, the City can manage potential amenity impacts more effectively.

### 9.6.4 Servicing

*Sewerage*

The City of Belmont is predominantly serviced by a reticulated sewerage system, covering most residential and commercial areas. However, there are significant gaps within industrial zones.

In the Kewdale industrial area, large sections remain unsewered, restricting future development. Properties in unsewered areas must rely on onsite septic tanks, which consume substantial land area, limiting effective land utilisation and reducing overall development potential.

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In the Redcliffe Area, most properties are connected to the reticulated sewerage network. However, a portion of land adjacent to Redcliffe Road, is not provided with this infrastructure. In Ascot, land within the Development Area 9 precinct (except for 101 Fauntleroy Avenue) is not serviced by reticulated sewerage. This includes adjacent 'Mixed Use' zoned land fronting Great Eastern Highway. Developers of properties in these unsewered sections are responsible for connecting to the reticulated sewerage system in alignment with State policy.

The City will review the appropriateness of carrying forward clause 4.7.2 provisions relating to sewerage requirements for residential development as part of the preparation of a new local planning scheme.

*Drainage and stormwater management*

The City of Belmont operates a robust drainage network with over 10,219 stormwater pits, 216.38 km of pipes, 42 sumps/ detention basins and 24 pollutant traps valued at approximately $109 million, designed to manage up to 1-in-20-year storm events. However, challenges such as high-water tables, clay soils, and increased impervious surfaces from urbanisation necessitate ongoing upgrades to maintain and enhance its functionality. Upgrades across Belmont, such as retrofitting drainage systems with water sensitive urban design and installing gross pollutant traps, actively improve stormwater quality and reduce pollutants entering the Swan River. Transforming drainage corridors into living streams and converting underutilised land, such as drainage basins, into dual-use spaces for recreation and stormwater management are also key priorities.

*Power*

Most of the City is serviced by above-ground power infrastructure. While this system is functional, it presents challenges in terms of maintenance, streetscape aesthetics, and public safety. A key focus for the City is the undergrounding of power lines in selected areas. This initiative aims to improve streetscape aesthetics, enhance public safety, and reduce the maintenance costs associated with overhead infrastructure In addition, the City is committed to sustainable energy practices. Solar photovoltaic systems have been installed on several City-owned buildings, and retrofitting efforts, such as transitioning to LED lighting continue to reduce emissions and energy consumption.

*Gas*

The City of Belmont is generally serviced by a network of Medium and/or Low pressure reticulated gas pipelines, ensuring a reliable and efficient energy supply for residential, commercial, and industrial areas. Medium-pressure gas mains (70kPa) run along most roads in the Golden Gateway area, while the Perth Airport precinct is supported by a high-pressure gas network operating at 1900kPa to meet its substantial energy demands.

Future improvements to the network will be guided by the demands of redevelopment and urban growth, particularly in key areas such as Golden Gateway and the Redcliffe Station Precinct. These upgrades will ensure the gas infrastructure continues to meet increasing capacity requirements. By coordinating closely with ATCO Gas and other utility providers, the City will ensure the gas network remains robust and adaptable to support future development needs efficiently.

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# Local Housing Strategy

# Part 1

**Acknowledgement of Country**

"The City of Belmont acknowledges the Noongar Whadjuk people as the Traditional Owners of this land and we pay our respects to Elders past, present and emerging. We further acknowledge their cultural heritage, beliefs, connection and relationship with this land which continues today.

We acknowledge all Aboriginal and Torres Strait Islander peoples living within the City of Belmont."

**Alternative Formats**

This document is available on the City of Belmont website and can be requested in alternative formats including electronic format by email, in hard copy both in large and standard print and in other formats as requested.

**Executive Summary**

A Local Housing Strategy guides the development of housing across a local government area and aims to facilitate housing choices that meet the needs of both existing and future residents.

The City adopted its existing Local Housing Strategy in 2011. This Strategy informed the inclusion of various provisions within Local Planning Scheme No. 15 (LPS 15), which have guided residential development and subdivision across the City of Belmont.

There have since been changes in population, housing needs and the economy. This Strategy outlines several aspects that need to be considered when planning for the delivery of future housing for our growing population. These include:

- State Government Infill Dwelling Targets

  Whilst the City has met the State's minimum infill housing targets to date, this is largely due to development within The Springs precinct. It will be important for the City to continue to provide a diverse range of housing in areas close to activity centres, Redcliffe Station and Great Eastern Highway.

- Housing Diversity

  Through a review of future housing needs and demographics, it has become apparent that the City has a large discrepancy between dwelling size and household composition. Through this Strategy, the City aims to facilitate the delivery of a diverse range of dwelling types.

- Transition between development at different densities

  More intensive development is currently provided for adjacent to Great Eastern Highway and surrounding the City's activity centres. To facilitate an appropriate interface to adjacent lower density residential development, this Strategy will investigate appropriate transition areas.

- Sustainability

  Sustainability initiatives have become a key aspect of high-quality developments. This Strategy considers ways in which sustainability initiatives could be encouraged and facilitated within developments across the City.

- Development Provisions

  The City's Local Planning Scheme currently contains various provisions which need to be met to develop. These provisions have meant that several lots subject to higher density codes cannot be developed, particularly those with frontage less than 16m.

  These provisions also pre-date modifications to the Residential Design Codes (R-Codes). Therefore, some of these may be adequately covered by the R-Codes and no longer needed within the local planning scheme.

The Local Housing Strategy is the first step in the process of reviewing subdivision potential and housing opportunities within the City. Any recommendations explored through the Local Housing Strategy will be implemented through a new Local Planning Scheme which will ultimately be approved by the Minister for Planning. The timing of this is dependent on the finalisation of the Local Housing Strategy and overarching Local Planning Strategy.

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# 1 Introduction

The City of Belmont Local Housing Strategy (the Strategy) establishes a strategic framework to guide the City's future housing needs. The Strategy has been formed following a review of the current strategic planning context, demographic and housing trends, and the City's existing statutory planning framework.

This Local Housing Strategy will replace the City's 2011 Local Housing Strategy and has a guidance timeframe of approximately 10 to 15 years after which it is expected to be reviewed.

The City's Local Planning Scheme remains the primary planning instrument for planning and development control.

## 1.1 Structure

The Strategy is presented in two parts as detailed below.

**Part 1**

Part one of the Strategy contains:

- An Introduction;
- A vision, objectives and strategies;
- An overview of the planning and strategic context;
- An analysis of demographic and housing trends;
- An overview and assessment of key housing implications; and
- An overview of the local planning scheme review community engagement.

**Part 2**

Part two of the Strategy focuses on individual areas, containing:

- An analysis of housing within each of the City's suburbs, and cross-suburb focus areas;
- An analysis of City-wide housing initiatives; and
- Accompanying actions.

## 2 Study Area

The City of Belmont covers an area of approximately 40 square kilometres and is located 5.5 kilometres from the Perth Central Business District. The City contains seven suburbs being Ascot, Belmont, Rivervale, Cloverdale, Kewdale, Redcliffe and a portion of South Guilford (**Figure 1**).

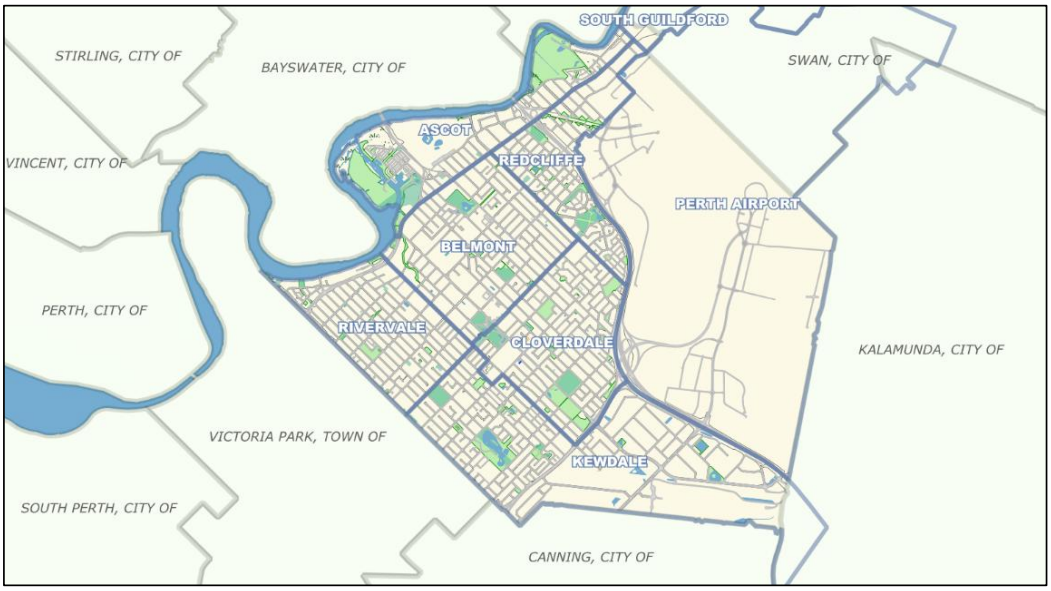



*Figure 1: City of Belmont Local Government Area*

The City of Belmont is bound by the Swan River, Orrong Road, the Kewdale Freight Terminal and Perth Airport (Figure 2).

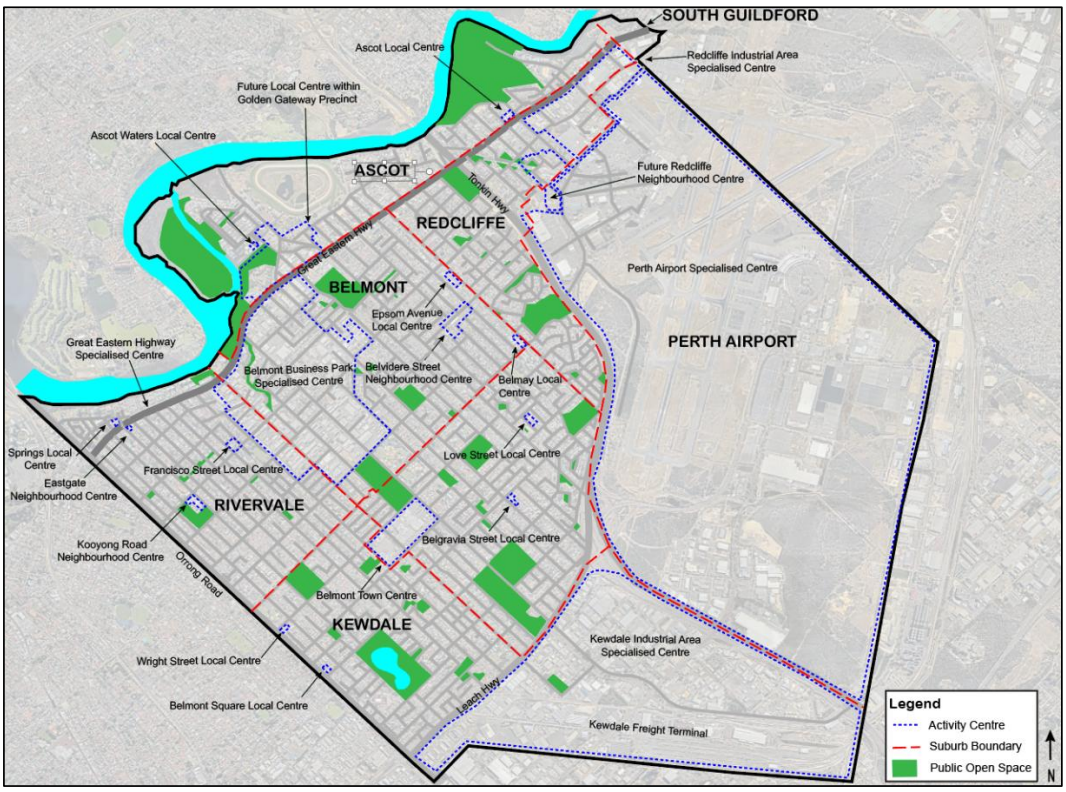


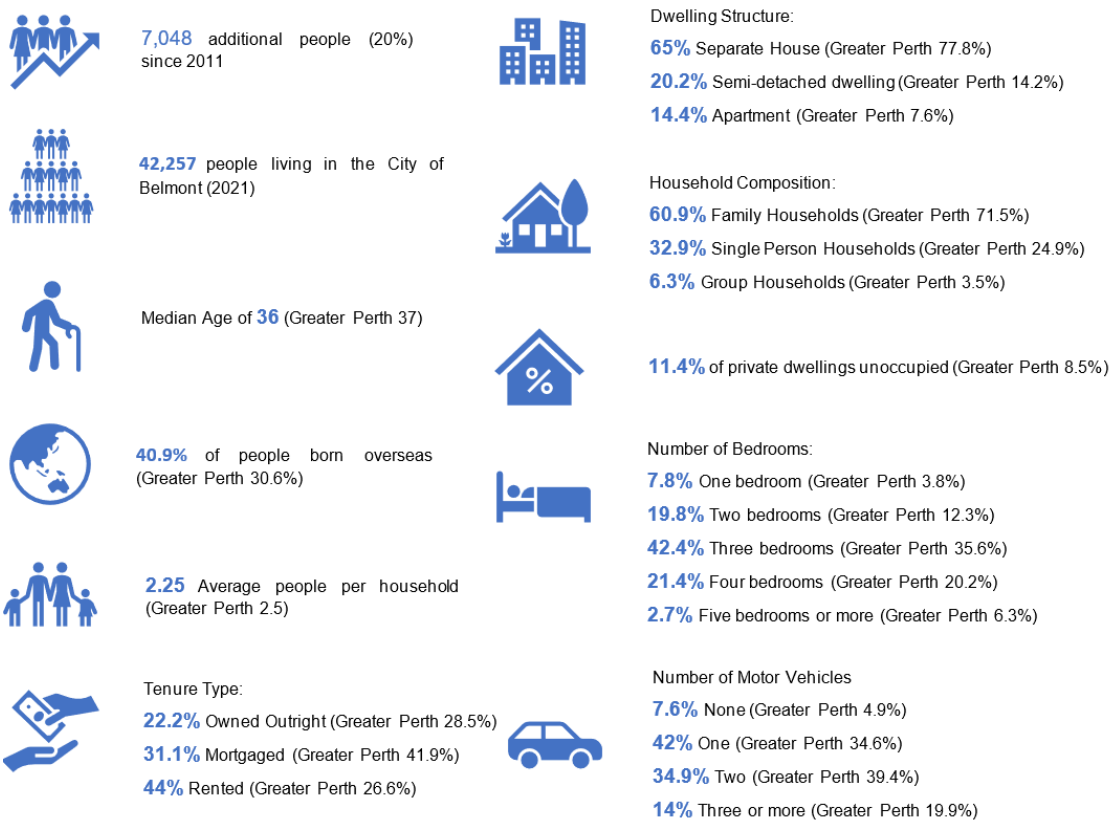

*Figure 2 – City of Belmont Locality Map*

This Strategy will address all land that can accommodate housing within the City of Belmont.

### 2.1 Snapshot

A snapshot of the City's key population and housing statistics is included below. A further review of these statistics is analysed later in this document.

Data to inform the findings of this Strategy have been taken from two primary resources being Informed Decisions (Profile Id and Forecast Id) and the Australian Bureau of Statistics.




*Source: 2021 Census – Australian Bureau of Statistics and Profile id - .id community*

## 3 Vision, Objectives and Strategies

### 3.1 Vision

The City of Belmont will facilitate the creation of diverse, sustainable and functional dwellings which meet the needs of our diverse and growing community, whilst retaining and improving the character, amenity and liveability of established urban areas.

### 3.2 Objectives

The key objectives of the Local Housing Strategy are to:

- Provide a long-term strategic direction for residential development across the City of Belmont.
- Promote a diverse range of housing options that accommodate varying income levels and household types to address the current and future requirements of our diverse and growing population.
- Foster innovative infill development in suitable areas.
- Promote development which respects heritage values and the character of existing neighbourhoods.
- Facilitate and encourage sustainable growth.

The key objectives of the Local Housing Strategy will be achieved through the specific strategies and associated actions as detailed below and included in Part 2 of this Strategy.

### 3.3 Strategies

**Planning Framework**

1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.
2. Protect residential development from inappropriate land uses and conversely protect non-residential land uses from encroachment of residential development.
3. Apply appropriate zonings and density codes to land in close proximity to transport corridors and activity centres.

**Housing Diversity**

4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.
5. Encourage development of underutilised ‘Urban’ zoned land.

6. Balance the delivery of sufficient permanent housing supply with short-term rental accommodation.

**Built Form**

7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.

8. Facilitate the preservation of properties which contain significant heritage values.

9. Facilitate development overlooking public open spaces to provide surveillance and amenity for residents.

**Sustainability**

10. Encourage sustainable design principles to be incorporated into developments.

11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance.

12. Through land use planning and development controls, consider the impact of future development on the environment, including potential offsite environmental impacts.

## 4 Actions and Implementation

### 4.1 Actions

This Strategy has designated a range of actions, aimed at achieving the objectives and strategies listed above. Actions are detailed within Part 2, along with more detailed analysis.

### 4.2 Implementation

Actions within this Local Housing Strategy are intended to guide the future direction of the City's residential development. The majority of these actions will be investigated through the preparation of the City's new local planning scheme.

## 5 Monitoring and Review

Monitoring of the Strategy will be managed through the continued operational reporting of the Corporate Business Plan.

This Strategy will be reviewed periodically to ensure that the objectives, strategies and actions are implemented. A formal review should be undertaken prior to the five-year review period for the City's local planning scheme, as set out by the *Planning and Development (Local Planning Schemes) Regulations 2015* (the Regulations) Regulations.

## 6 Planning and Strategic Context

This Strategy has been prepared having due regard to the principles and objectives contained within a range of State planning documents as outlined in Figure 3 below, in addition to the City's Strategic Community Plan.

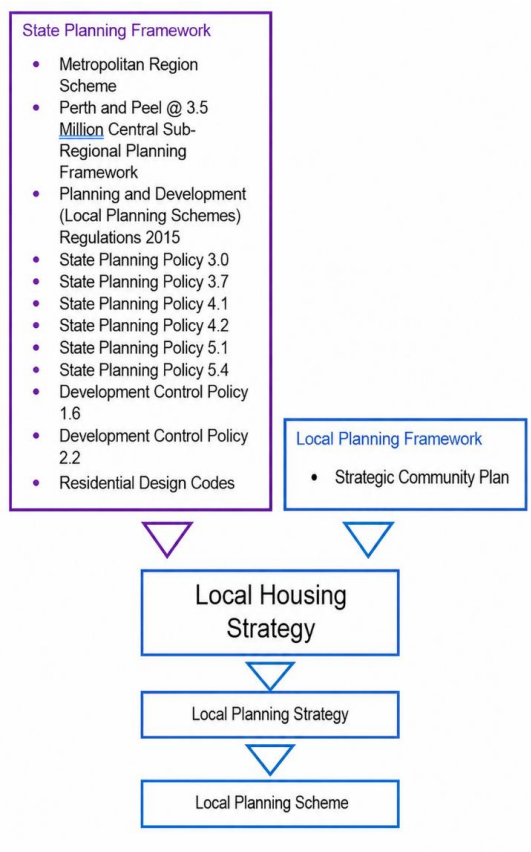



*Figure 3: Planning and Strategic Context*

An overview of these key documents and their relevance to this Local Housing Strategy is provided in the following section.

### 6.1 State Planning Context

#### 6.1.1 Perth and Peel @ 3.5 million: Central Sub-regional Planning Framework

The Perth and Peel @ 3.5 million suite of documents provides guidance on future land use planning and infrastructure provision. The document divides Perth and Peel into four sub-regions. The City of Belmont is located within the Central Sub-Region as can be seen in **Figure 4**.




*Figure 4: Map of the Central Sub Region (Department of Planning, Lands and Heritage, 2024)*

The document aims to facilitate a more consolidated urban form for the Perth and Peel region in order to accommodate projected population growth, as opposed to relying on new greenfield developments. To achieve this, the document contains ten urban consolidation principles, including focusing higher density residential development within and along urban transport corridors, station precincts and activity centres. The document also aims to protect key employment areas (industrial areas) from residential encroachment.

Infill housing targets for each local government area are contained within the document, with Belmont's shown in **Table 1** below. The City's progress towards meeting the targets set by Perth and Peel @ 3.5 Million will be discussed later in this Strategy.

| Local Government | 2011-2016 | 2016-21 | 2021-26 | 2026-31 | Total 2031 | Post 2031 | Total |
|---|---|---|---|---|---|---|---|
| Belmont | 1,860 | 1,410 | 1,560 | 1,270 | 6,100 | 4,310 | 10,410 |

*Table 1: Additional Urban Infill Housing Targets by Local Government (Dwellings)*

Relevance to the City of Belmont:

- The City's Activity Centre Planning Strategy, Great Eastern Highway Urban Corridor Strategy and Golden Gateway Structure Plan, in addition to the State's Redcliffe Station Precinct Improvement Scheme guide and facilitate higher density residential development within and surrounding activity centres, Redcliffe Station and Great Eastern Highway.

### 6.1.2 Metropolitan Region Scheme

The Metropolitan Region Scheme (MRS) is a statutory planning tool that designates zones which provide for various forms of development and reserves for public open space, environmental protection, schools and regional roads. Local government planning is required to align with the broad zones and reserves designated under the MRS.

Relevance to the City of Belmont:

- The City of Belmont is located within the metropolitan area and the new Local Planning Scheme should align with the Metropolitan Region Scheme Map.

### 6.1.3 Planning and Development (Local Planning Schemes) Regulations 2015

The *Planning and Development (Local Planning Schemes) Regulations 2015* (the Regulations) are responsible for governing the way in which local planning strategies and local planning schemes are prepared. There are two Schedules which comprise the Regulations:

Schedule 1 – Model provisions sets out the standard local planning scheme provisions, zones, zone objectives and land use definitions.

Schedule 2 – Deemed provisions sets out the procedures relating to the preparation of planning instruments and assessment of development applications, as well as development approval exemptions.

Relevance to the City of Belmont:

- The City will have regard for the Model Provisions when preparing the new Local Planning Scheme.

### 6.1.4 State Planning Policies

*3.0 Urban Growth and Settlement*

State Planning Policy 3.0 – *Urban Growth and Settlement* (SPP 3.0) sets out considerations and guidelines for the development and growth of Western Australia's urban areas. The objectives of the Policy are broadly as follows:

- Promote sustainable, well-planned settlement patterns across the State;
- Improve the level of amenity, services and infrastructure in established communities;
- Management of urban growth and development in response to social and economic challenges; and
- Promote sustainable development which reduces energy, water and travel demand, whilst ensuring liveability of neighbourhoods, e.g. safe and convenient access to transport, employment and services.

Relevance to the City of Belmont:

- In preparing this Strategy the principles and objectives of State Planning Policy 3.0 have been considered and appropriate actions recommended accordingly.

*3.6 Infrastructure Contributions*

State Planning Policy 3.6 – *Infrastructure Contributions* (SPP 3.6) sets out the principles and considerations that apply to development contributions for infrastructure in new and established urban areas. This Policy is implemented through local planning schemes and improvement schemes alongside subdivision and development proposals. When assessing the appropriateness of infrastructure contributions, decision makers are obligated to contemplate six fundamental principles including; need and nexus, transparency, equity, certainty, consistency, and accountability.

Relevance to the City of Belmont:

- There is currently only one Development Contribution Plan (DCP) in effect within The Springs Special Development Precinct.
- This DCP generally conforms to SPP 3.6 Infrastructure Contributions. However, the DCP will be reviewed as part of the preparation of a new Local Planning Scheme.

*3.7 Planning in Bushfire Prone Areas*

State Planning Policy 3.7 – *Planning in Bushfire Prone Areas* (SPP 3.7) outlines the land use planning principles and bushfire risk mitigation measures to be incorporated into strategic planning documents. The key objectives of the Policy are to avoid increased bushfire threat to people and reduce vulnerability to bushfire.

Relevance to the City of Belmont:

- The City has a number of sites that are designated as bushfire prone by the Department of Fire and Emergency Services Bushfire Prone Mapping.
- Large areas of the Perth Airport Estate, along Tonkin Highway and the Swan River Foreshore are located within the bushfire prone area.
- Development of this land is subject to additional considerations as outlined in SPP 3.7.
- This will be further discussed in section 8.7.1 of this strategy.

*4.1 Industrial Interface*

State Planning Policy 4.1 – *Industrial Interface* (SPP 4.1) provides guidance for the planning of industrial zones and uses. The Policy also provides information regarding the transition between land zoned for industrial purpose and more sensitive land uses. The objectives of the Policy are as follows:

- Ensure that industrial land use impacts are considered throughout the planning process;
- Separate industrial land uses from incompatible land uses in order to protect the operational capacity of industrial areas, and avoid potential impacts on health, amenity and the environment; and
- Plan for the transition between industrial and sensitive land uses.

Relevance to the City of Belmont:

- SPP 4.1 has implications for the City's planning framework in relation to Redcliffe Industrial Area. Portions of this industrial area abut and are in close proximity to residential land.
- The implications of SPP 4.1 will be further discussed in Part 2 of the Strategy.

*4.2 Activity Centres*

State Planning Policy 4.2 – *Activity Centres* (SPP 4.2) provides guidance on the form and function of activity centres across the Perth and Peel region.

A key objective of SPP 4.2, is that activity centres should be a focus for well-designed medium and higher density residential and mixed use development.

The Policy sets out residential density targets per gross urban zone hectare within the walkable catchment, as follows:

- Secondary Centres (i.e. Belmont Town Centre) – 25 dwellings per urban zone hectare within a 400 metre walkable catchment and 40 dwellings per urban zone hectare within 800m-1200m.
- Neighbourhood Centres (e.g. Eastgate Neighbourhood Centre) – 25 dwellings per urban zone hectare within a 200m catchment.
- Local Centres (e.g. Love Street Local Centre) – 25 dwellings per urban zone hectare within a 200m catchment.

Relevance to the City of Belmont:

- There are a number of activity centres within the City of Belmont, which are further discussed in focus areas within Part 2 of the Strategy.
- This Strategy is to be read in conjunction with the Activity Centre Planning Strategy, which sets out the classification and hierarchy of the City's activity centres and makes recommendations on investigating appropriate zoning and density coding's.

*5.1 Land use planning in the vicinity of Perth Airport*

State Planning Policy 5.1 – *Land Use Planning in the Vicinity of Perth Airport* (SPP 5.1) provides a basis for assessing the suitability of land uses near Perth Airport, considering their sensitivity to aircraft noise.

Relevance to the City of Belmont:

- There are areas of land within the City of Belmont which are affected by aircraft noise and building height restrictions. This has implications for this Strategy, particularly regarding zoning, density, permissibility and development requirements. These aspects will be discussed further in Part 2 of this Strategy.

*5.4 Road and Rail noise*

State Planning Policy 5.4 – *Road and Rail Noise* (SPP 5.4) addresses the impact of transport noise on sensitive land uses in the vicinity of key road and rail infrastructure, whilst also ensuring the future

operations of these transport corridors. The Policy establishes noise targets that new developments and new or upgraded roads and railways should meet.

Relevance to the City of Belmont:

- Land within the City of Belmont is affected by traffic noise from the following key roads:
    - Graham Farmer Freeway/Orrong Road
    - Great Eastern Highway
    - Tonkin Highway
    - Leach Highway
    - Abernethy Road/Fairbrother Street/Belgravia Street
    - Redcliffe Station and associated train line
    - Kewdale Freight Railway
- The principles and objectives of SPP 5.4 and the implications for land affected by transport noise are considered further in Part 2 of this Strategy.

6.1.5 – Planning Codes

*Residential Design Codes Volume 1 and Volume 2*

The Residential Design Codes Volume 1 and Volume 2 (R-Codes) establish the framework for regulating residential development across Western Australia

Relevance to the City of Belmont:

- Residential development across the City is guided by the R-Codes. The relationship of the local planning framework with the current R-Codes will be discussed within Part 2 of the Strategy.

6.1.6 Development Control Policies

*1.6 – Planning to Support Transit Use and Transit Orientated Development*

Development Control Policy 1.6 (DC1.6) aims to address the growing need for sustainable transportation alternatives to private vehicles. The Policy defines Transit-Oriented Development (TOD) as a concept that focuses on the accessibility and use of transit facilities in relation to a specific "threshold" for walking. The threshold for rail stations, transit interchanges, or major bus transfer stations or terminals is set at 10-15 minutes of walking or an 800m distance, while the threshold for bus routes with multiple high-frequency services of 15 minutes or less during peak periods is set at 5-7 minutes of walking or a 400m distance.

DC1.6 outlines the importance of TOD in improving community accessibility to essential services, employment opportunities, and recreational facilities. Local governments are encouraged to prioritise efficient public transport services and enhance transit corridors by creating places that are both destinations and points of departure. The Policy advocates for higher-density residential development and mixed-use TOD precincts. Overall, DC1.6 seeks to promote sustainable transportation alternatives and support the development of liveable, accessible, and vibrant communities.

Relevance to the City of Belmont:

- This Strategy has regard to DC 1.6. Accordingly, the City has and will continue to facilitate higher density development in locations that are well serviced by public transport, such as along Great Eastern Highway and surrounding Redcliffe Train Station.

### 6.2 Local Framework

#### 6.2.1 City of Belmont Strategic Community Plan 2024-2034

The City of Belmont Strategic Community Plan (SCP) for 2024-2034 was developed through a wide array of community consultation.

The community consultation also resulted in the development of five overarching key performance areas. A summary of these is included below.

People

People covers all aspects of community health and wellbeing, from youth and senior services, to access and inclusion, sport and recreation, culture and the arts, community safety, responsible pet ownership, and volunteering.

Planet

Planet covers all aspects of the environment and sustainability, from the river foreshore and nature reserves to waste and energy management, water conservation, tree planting, and ranger services.

Place

Place covers the built form, from urban planning and building services, to housing, streetscapes, roads, footpaths, parks, playgrounds, community buildings, toilets, parking and transport.

Prosperity

Prosperity covers all aspects of economic development, place activation, business support services, education and life-long learning, and library services.

Performance

Performance covers all aspects of leadership and governance, from financial sustainability, risk management, human resources and fleet management, to community engagement, communications and customer service.

Relevance to the Local Housing Strategy:

With a comprehensive vision for Belmont, and five overarching key performance areas, this document provides guidance to addressing the needs of the community. These principles have been considered in the preparation of this Local Housing Strategy.

7 Population and Housing

## 7.1 Population Characteristics

### 7.1.1 Current Population

As of 2021, 42,257 people lived in the City of Belmont (ABS 2021). Census data from the Australian Bureau of Statistics shows an increase of 7,048 persons from 2011 to 2021 in the City of Belmont. Rates of growth were relatively steady reaching a peak in 2012, then noticeably slowing in 2013 through to 2018. The population increased noticeably in 2019 before reducing again in 2021 (**Figure 5)**.

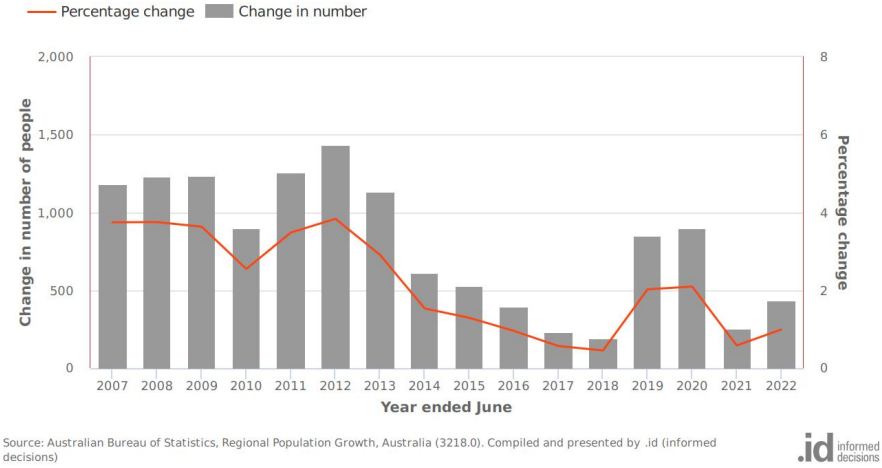



*Figure 5: Changes in Population Since 2007*

The greatest increase in population between 2016 and 2021 occurred in Rivervale (see **Figure 6** below) predominantly due to subdivision and development of 'The Springs' in accordance with 'The Springs Structure Plan' and Local Planning Policy No. 7.

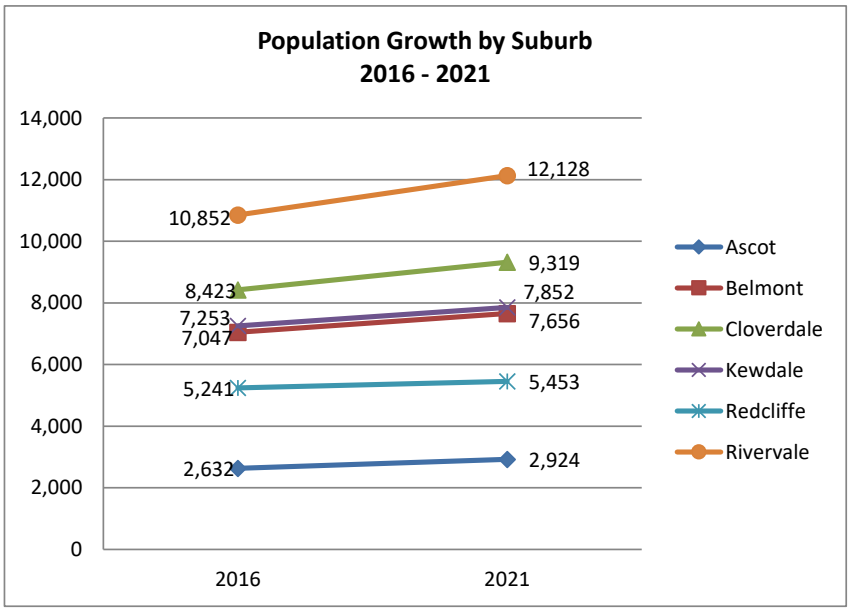
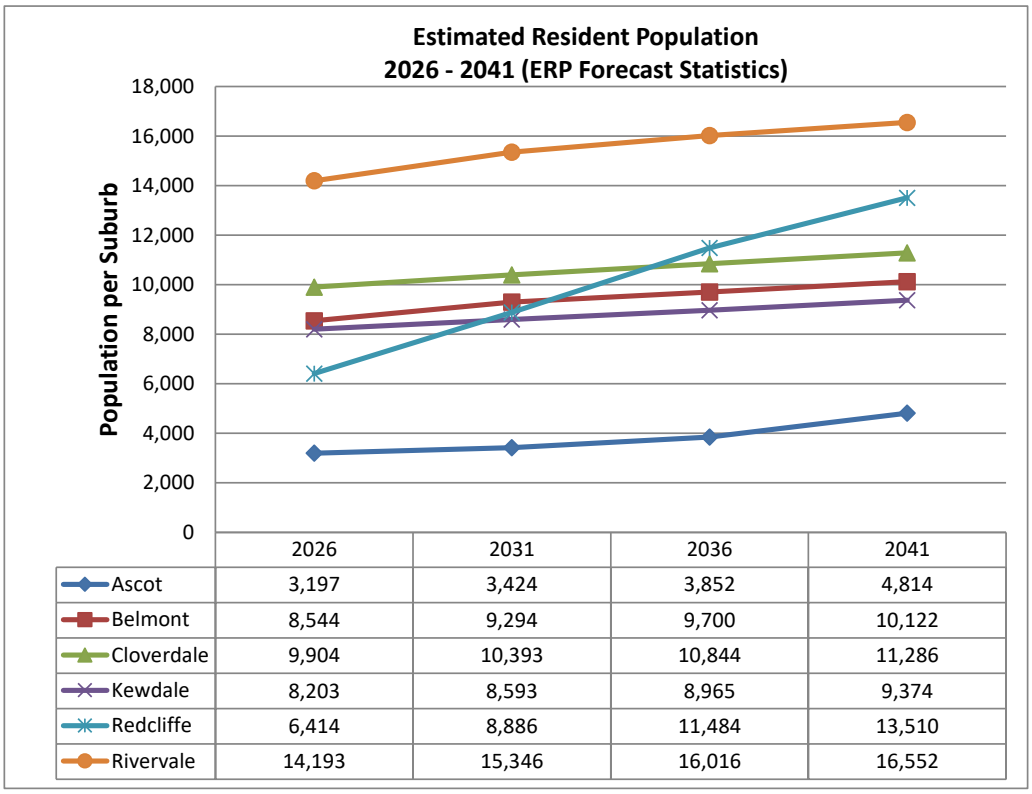



*Figure 6: Population Growth by Suburb 2016-2021*

### 7.1.2 Future Projections

Forecasts indicate that between 2026 and 2041, the City's population will increase by 16,203 persons (31.9% growth), at an average annual change of 2.1%. It is anticipated that Rivervale will continue to be the most populated suburb, however significant growth will occur within Redcliffe as shown in **Figure 7** below. This growth is likely to occur as a result of development within the Development Area 6 (Redcliffe Station) Precinct.




| | 2026 | 2031 | 2036 | 2041 |
|---|---|---|---|---|
| Ascot | 3,197 | 3,424 | 3,852 | 4,814 |
| Belmont | 8,544 | 9,294 | 9,700 | 10,122 |
| Cloverdale | 9,904 | 10,393 | 10,844 | 11,286 |
| Kewdale | 8,203 | 8,593 | 8,965 | 9,374 |
| Redcliffe | 6,414 | 8,886 | 11,484 | 13,510 |
| Rivervale | 14,193 | 15,346 | 16,016 | 16,552 |

*Figure 7: Population Forecasts by Suburb 2026-2041*

### 7.1.3 Age Structure

The age structure of an area provides key insights into the level of demand for housing, services and facilities within an area.

According to the Australian Bureau of Statistics, the City of Belmont exhibits a slightly lower median age of 36 in comparison to the Perth metropolitan area's median age of 37.

Figure 8 compares service age groups within the City of Belmont compared to Greater Perth. This shows that there was a lower proportion of people in the younger age groups (0 to 24 years) as well as a lower proportion of people in the older age groups (50+ years).

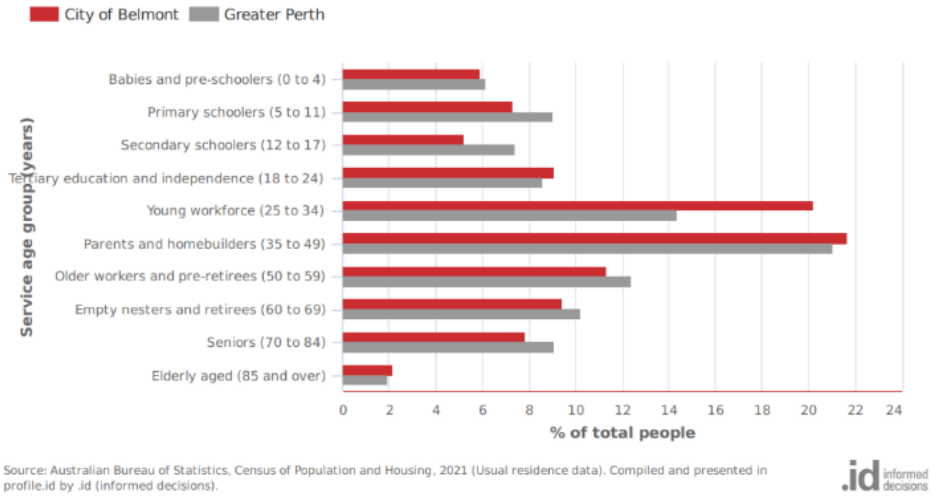



*Figure 8: Age Structure – Service Age Groups 2021*

The biggest differences were that the City of Belmont had:

- A smaller percentage of 'Secondary schoolers' (5.2% compared to 7.4%)
- A smaller percentage of 'Primary schoolers' (7.3% compared to 9.0%)
- A smaller percentage of 'Older workers & pre-retirees' (11.4% compared to 12.4%)
- A larger percentage of 'Young workforce' (20.2% compared to 14.4%)
- A larger percentage of 'Elderly' (2.1% compared to 1.9%).

From 2011 to 2021, the largest changes in age structure were in the following service age groups as visualised in **Figure 9**:

- Young workforce (25 to 34) +1,850 people
- Parents and homebuilders (35 to 49) +1,745 people
- Empty nesters and retirees (60 to 69) +1,041 people

While growth was experienced between 2011 and 2021 in all of the service age groups, it is worth noting that Belmont has experienced a decrease in the proportion of Babies and pre-schoolers (0 to 4 years), secondary schoolers (12 to 17), tertiary education and independence (18 to 24) and seniors (70 to 84) while all other service age groups have increased. However, since 2016 Belmont has experienced a 276 person increase in seniors. This indicates that the population is ageing overtime.

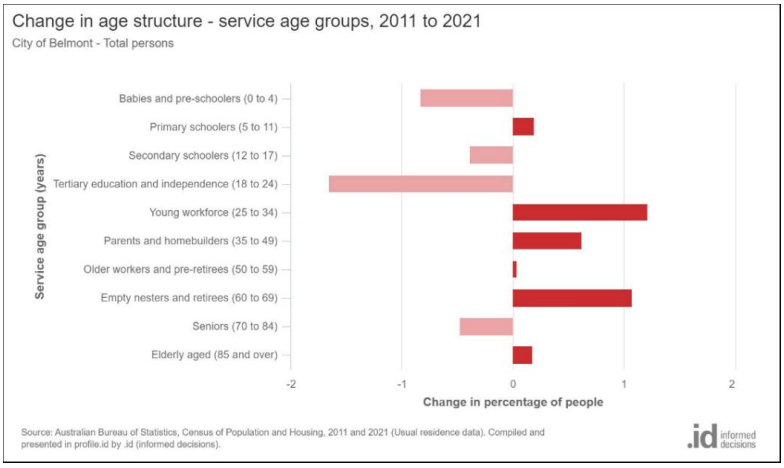



*Figure 9: Change in Age Structure – Service Age Groups – 2011 to 2021*

The age structure forecasts for the City of Belmont between 2021 and 2031 indicate a 28.3% increase in population under working age, a 41.4% increase in population of retirement age, and a 19% increase in population of working age. This suggests that overtime Belmont's population will experience ageing. The City's planning framework needs to respond to this trend by considering the needs of an older population.

### 7.1.4 Migration Patterns

Since 2016, the City of Belmont has seen a net migration loss of 398 people. The age-specific net migration graph below (Figure 10) identifies what age ranges had the largest increase or decrease in migration. The 18-24 age group had the largest increase with an additional 815 people, while the 5-11 age group and 35-44 had the largest decrease with -477 and -714 respectively.

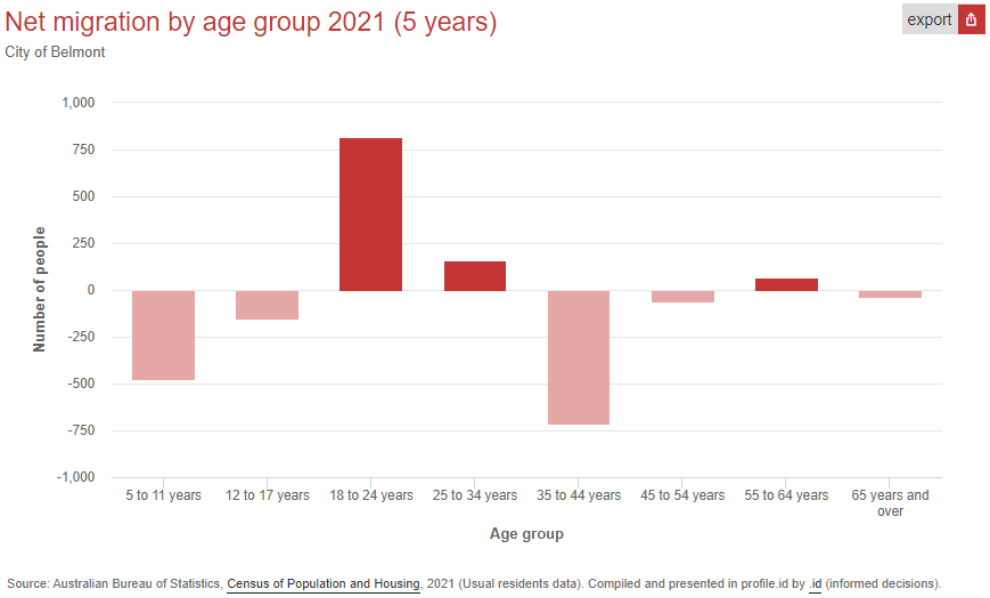



Figure 10: Net migration by age group 2016-2021

This data shows that a large percentage of migrants into Belmont are young adults, whilst families with children are migrating out of Belmont. Belmont's proximity to Perth CBD, employment and entertainment facilities may be attractive for young adults. Families with younger children may be seeking to purchase their first home and may be attracted to areas with cheaper land values.

Figure 11 shows the migration flows within the City of Belmont between 2016-2021. This shows that the largest demographic entering the City was from overseas (1,823), and the highest internal migration being from Victoria Park (365). There were also large amounts of people who moved from South Perth, Perth, Kalgoorlie-Boulder and Greater Geraldton. Those leaving the City of Belmont most commonly moved to Swan, Kalamunda, Gosnells or Armadale.

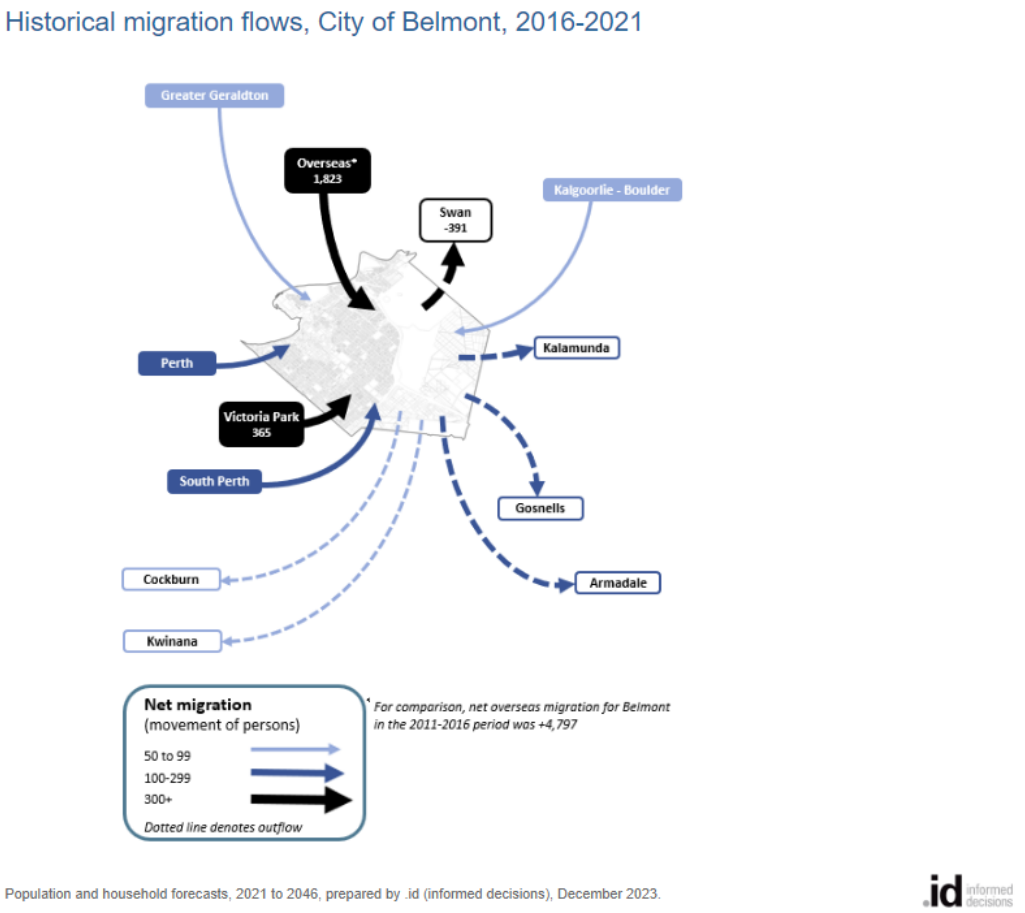



Figure 11: Migration flows in the City of Belmont between 2016-2021

It should be noted that the 2021 census was undertaken during the pandemic, therefore it is suggested that border restrictions halted overseas migration for 15 months prior and may have had large impacts on this data. For comparison, net overseas migration for Belmont in the 2011-2016 period was +4,797, and in the 2016-2021 period had dropped to +1,823.

### 7.2 Population Characteristics: Key Points

- The City of Belmont's population was 42,257 in 2021, and is forecasted to reach 50,451 by 2031, with an annual average growth of 2.1%.
- The population distribution across service age groups shows a higher proportion of young workforce and elderly compared to Greater Perth, forecasted to have an increased ageing population over time.
- In terms of migration, young adults are the largest demographic entering the City, and the 35–44-year age group is the largest demographic leaving the City.
- Rivervale has experienced a substantial population increase in recent years, driven by subdivision and development within The Springs.
- Significant growth is anticipated in Redcliffe due to future development proposed around Redcliffe Station.
- There is an ongoing need for a diverse range of housing, which is essential for providing family homes, offering low maintenance options for younger people and the ageing population, and providing affordable housing.

### 7.3 Household Characteristics

#### 7.3.1 Family Structure

The household and family structure reveals the City's demographic and residential demands, and provides insight into the dwelling diversity required.

The City has a larger proportion of lone person and group households compared to Greater Perth (Figure 12). Most notably, the proportion of lone person households was 31.1% compared to 24.0% in Greater Perth. The City also has a much lower proportion of couples with children (22.4%) compared to Greater Perth (32%).

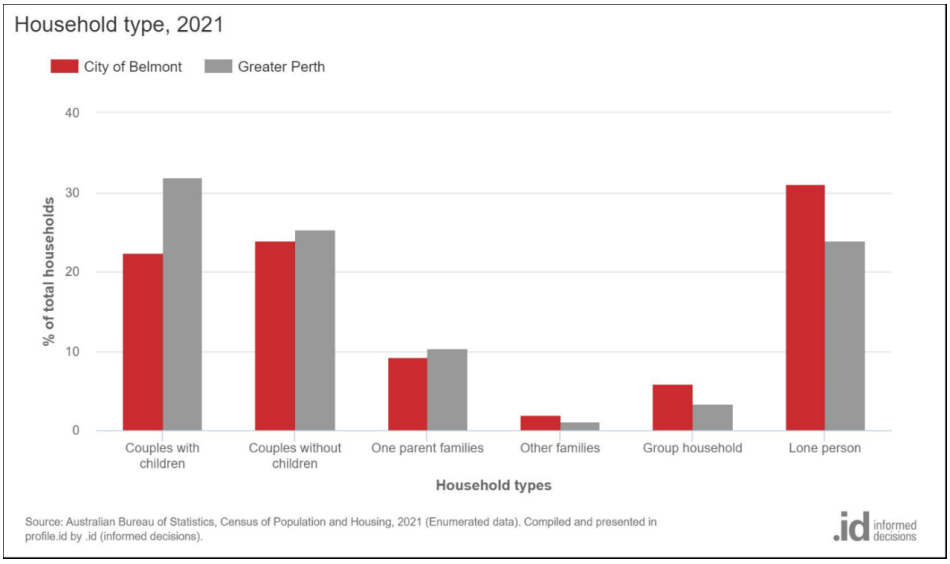



*Figure 12: Household Type 2021*

The largest changes in family/household types in the City of Belmont between 2011 and 2021 were:

- Lone persons (+1,505 households)
- Couples without children (+811 households)
- Couples with children (+695 households)

In terms of percentage however, only lone person households and couples without children saw an increase while couples without children, couples with children, group households, other families, decreased (see **Figure 13**).

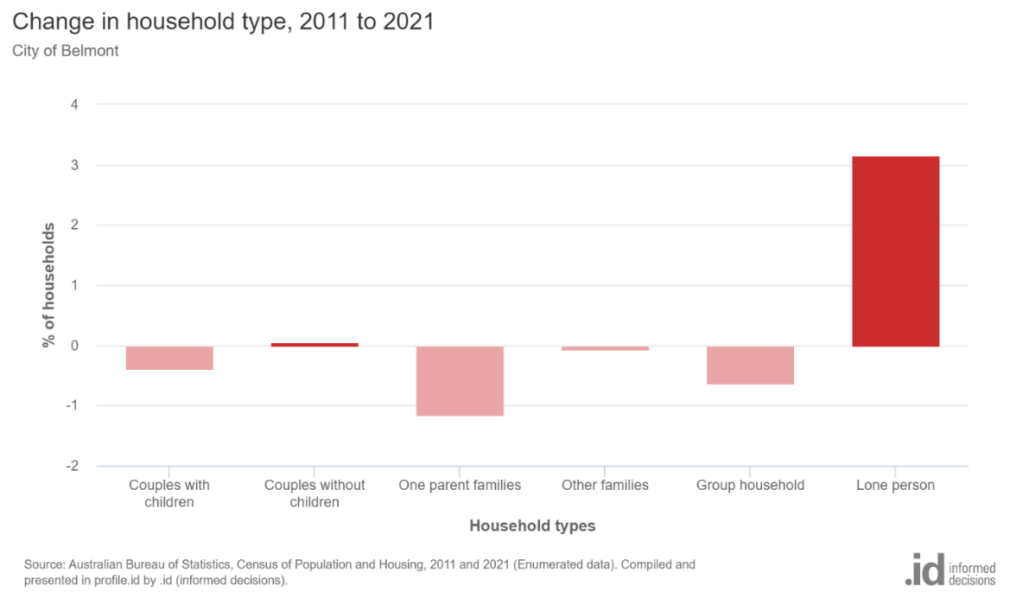



*Figure 13: Change in Household Type 2011 to 2021*

In 2021, lone-person households emerged as the prevailing household type in the City of Belmont. Projections suggest that this trend will persist, with the number of lone-person households expected to rise by 3,461 constituting 34.1% of the total households by 2041 (refer to **Figure 14**).

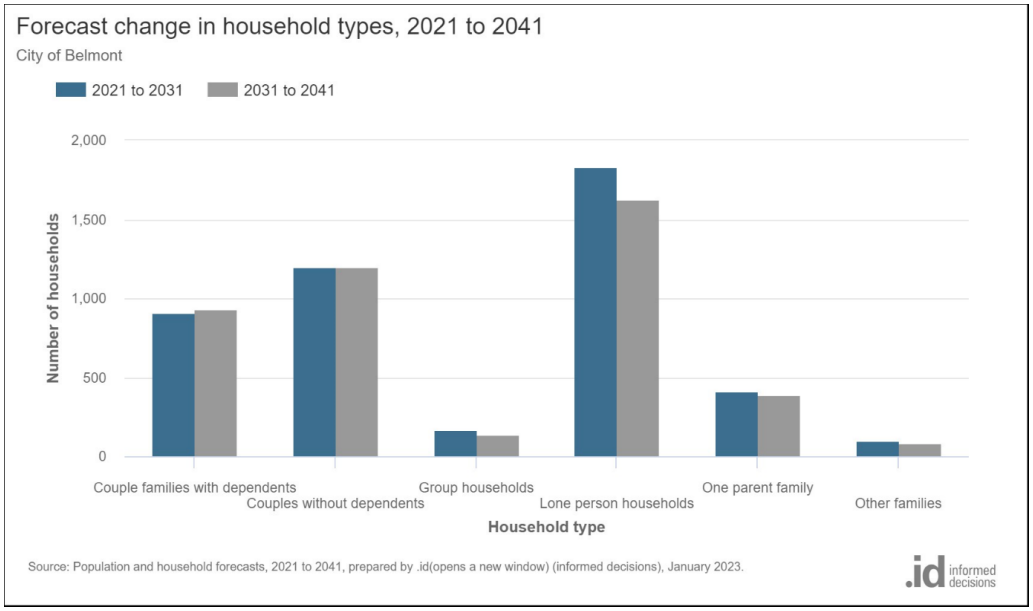



*Figure 14: Forecast Change in Household Types 2021 to 2041*

### 7.3.2 Household Size

Household size typically mirrors the life cycle of families, starting smaller when it is a lone person or couple, and expanding when children are added to the family. This size often decreases again when children have moved out.

The City of Belmont has generally followed Australia's trend of reducing household sizes. 1 person households have increased since 1991, whilst all other household sizes have decreased. Analysis of the number of persons usually resident in a household in the City of Belmont compared with Greater Perth shows that there were a higher proportion of lone person households, and a lower proportion of larger households (those with 4 persons or more) (Figure 15).

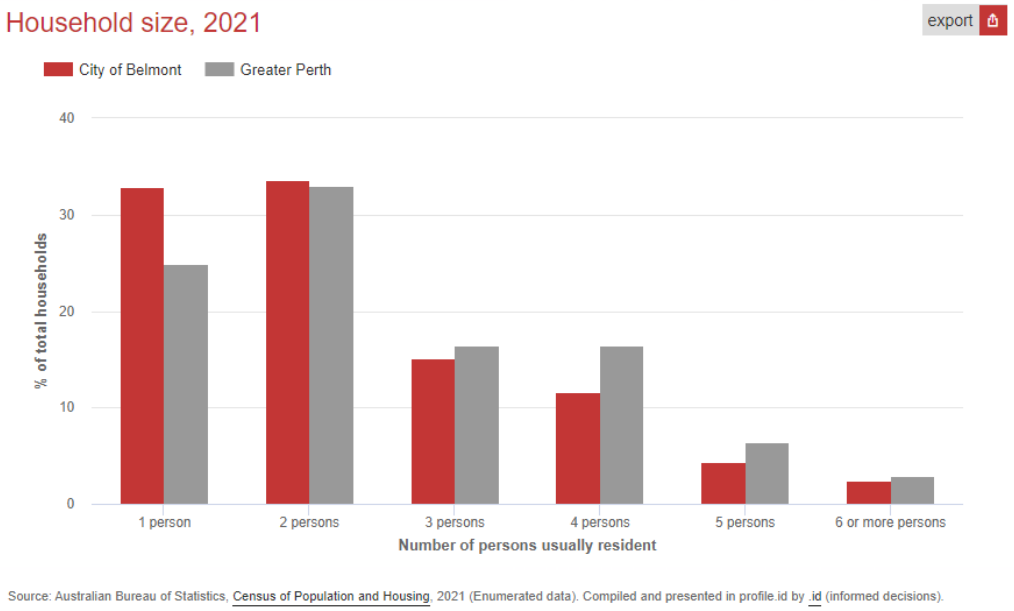



*Figure 15: Household size in the City of Belmont and Greater Perth 2021*

While the percentage of households of 2 or more people are slowly declining as visualised by **Figure 16**, it should be noted that the overall number is still increasing. Since 2011, the City has seen the following changes:

- +1,506 lone persons households.
- +987 two persons households.
- +349 three persons households.
- +361 four persons households.
- +66 five persons households.
- +52 six or more persons households.

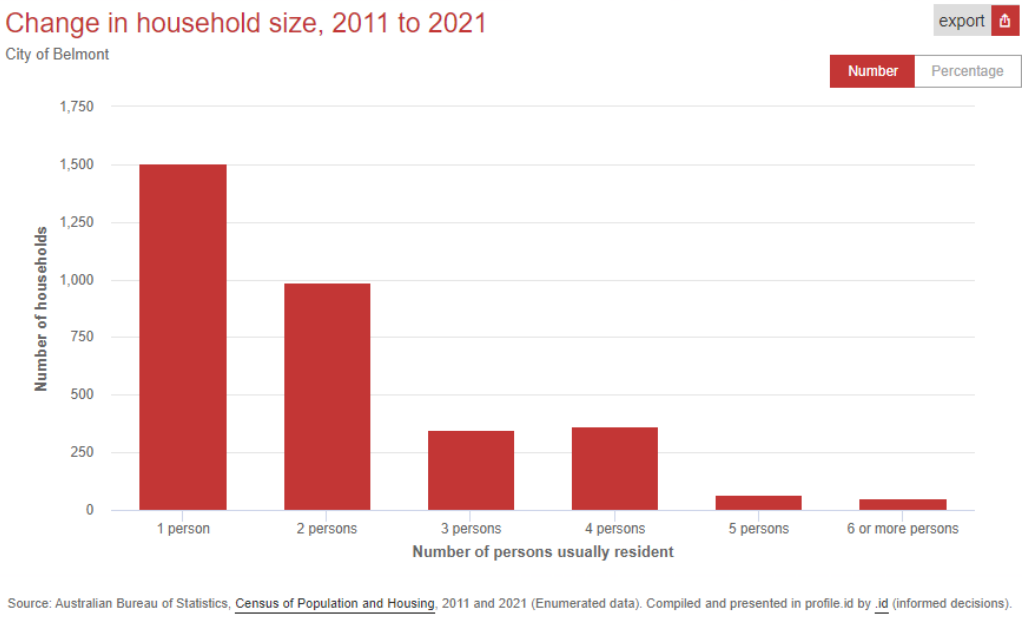



*Figure 16: Change in Household Size 2011 to 2021*

While forecasts indicate that lone person households will experience the largest increase between 2021 and 2031 and account for 33.5% of all households, the average number of persons per household is forecast be 2.21.

### 7.3.3 Type of Dwelling

In 2021 the City of Belmont's housing structure was as follows:

- 65% Separate house (Greater Perth 77.8%)
- 20.3% Semi-detached, row or terrace house, townhouse (Greater Perth 14.2%)
- 14.4% Flat or Apartment (Greater Perth 7.6%).

Although separate houses still comprise the majority of Belmont's housing stock, there has been growth in the number of semi-detached, townhouses and apartment dwellings. Between 2011 and 2021 the largest increase was in the number of semi-detached, townhouses (+1,378), followed by separate houses (+1,075), and flats/apartments (+852). However the proportion/percentage of separate houses reduced between 2011 and 2021 (73% to 65%) while the proportion of semi-detached, townhouses and flats/apartments increased from 15.1% to 20.3% and 11.6% to 14.4% respectively. It is expected that this trend will continue due to the demand for more affordable housing in the form of medium and high-density dwellings.

### 7.3.4 Number of Bedrooms per Dwelling

Analysis of the number of bedrooms per dwelling highlights a significant discrepancy between the prevailing household types and household sizes. At present, and forecast to continue, lone person households constitute the largest proportion of household types despite three or four bedroom homes dominating the housing stock (**Figure 17**). Recent trends suggest a potential shift in this, with

a 7.1% reduction in the number of 3 bedroom dwellings and a 3.2% increase in 1 bedroom houses since 2011.

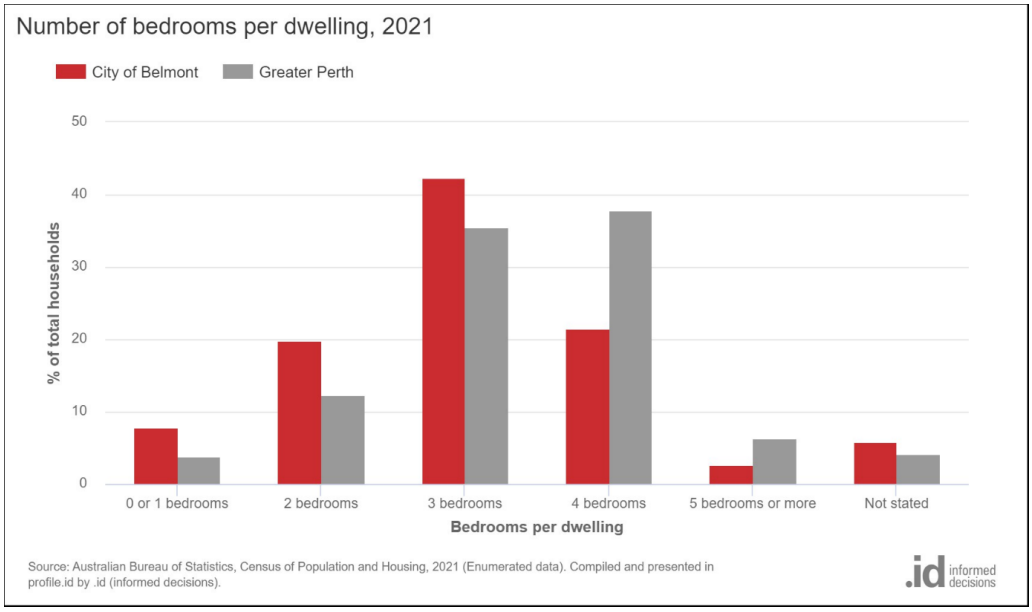



*Figure 17: Number of Bedrooms Per Dwelling 2021*

At the same time, an increase in the proportion of two bedroom, four bedroom, and five bedroom dwellings has been observed (see **Figure 18**). Recognising this, the City should encourage the development of smaller housing typologies to address this discrepancy.

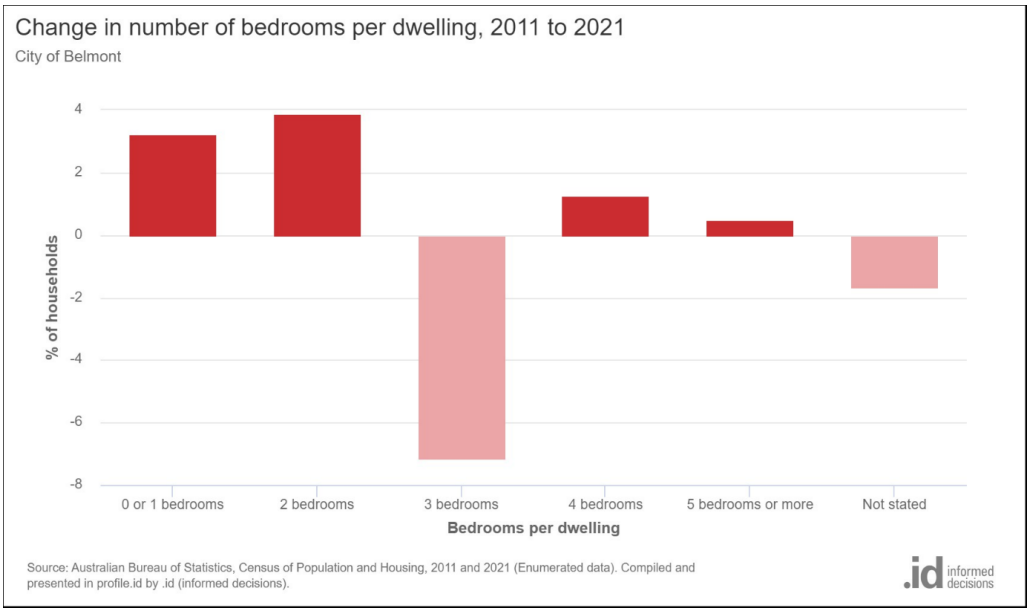



*Figure 18: Change in Number of Bedrooms Per Dwelling 2011 to 2021*

### 7.4 Housing Characteristics Key Points

- The City has a large proportion of 1 or 2 person households, which have significantly increased since 2011 and are forecast to continue increasing.
- The majority of the City's housing stock consists of single houses, followed by townhouses and apartments
- The majority of houses within the City contain three or four bedroom dwellings. Whilst there has been an increase in the number of one and two bedroom dwellings between 2011 and 2021, more of this dwelling typology are needed to meet the needs of the growing lone person household population.

## 8 Key Considerations

### 8.1 Dwelling Targets

Perth and Peel @ 3.5 Million establishes minimum infill housing targets for each local government in the region. These targets aim to increase urban development in appropriate locations and manage population growth efficiently. To respond to these targets, local governments have increased density codes within and surrounding activity centres and in areas with convenient access to public transport. Belmont has followed this approach and concentrated increased densities surrounding activity centres and along Great Eastern Highway and other high frequency public transport routes. This approach seeks to enhance access to amenities and create a more integrated and connected living environment.

The State's dwelling targets required the City of Belmont to provide an additional 1,860 dwellings between 2011-2016 and an additional 1,410 dwellings between 2016 and 2021. The City provided 2,346 and 1,901 dwellings during these periods, exceeding the targets by 486 and 491 dwellings respectively, as shown in Figure 19.

Dwelling forecasts indicate that the City will see an increase of over 6,280 households between 2011 and 2031. This is approximately 180 dwellings higher than the Perth and Peel @ 3.5million targets for this time period and puts the City in a good position to meet the ultimate target of 10,410 dwellings by 2050.

It is expected that this growth will be accommodated in areas such as Development Area 6 (Redcliffe Station Precinct), Golden Gateway, The Springs, and ongoing development within and surrounding the City's activity centres and along transport corridors.

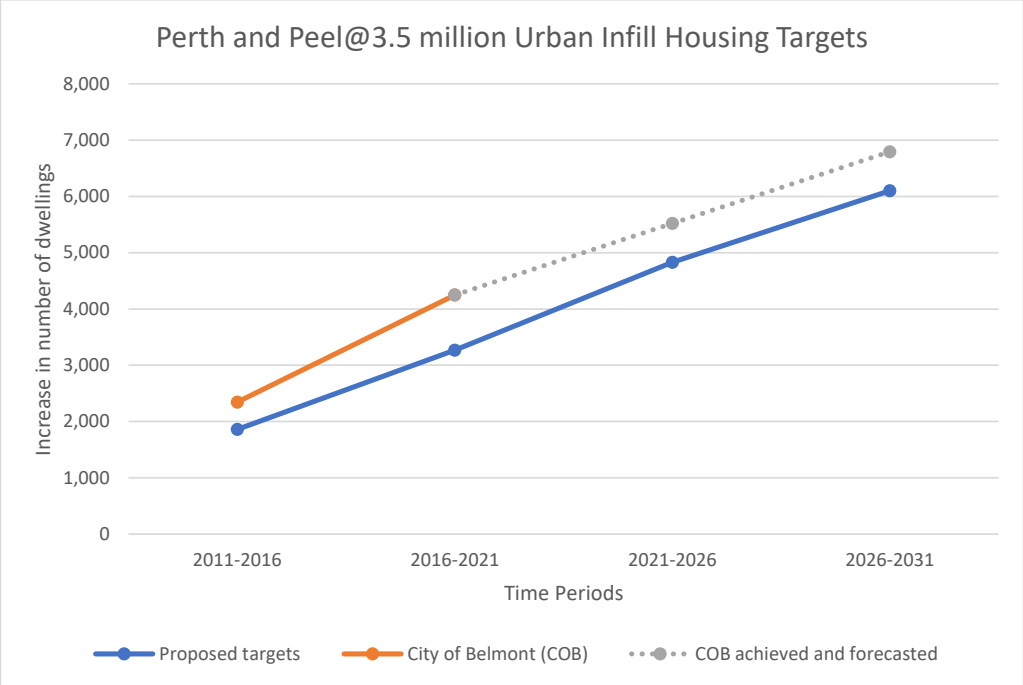



*Figure 19: Perth and Peel@3.5 million Dwelling Targets and Belmont forecasted dwellings*

**8.2 Patterns of Residential Development**

8.2.1 Application of Density Codes

Land within the City of Belmont is subject to various density codes including:

- R20, which is the most prevalent density code within the City of Belmont.
- R12.5 which was historically applied to land which is close to Perth Airport's cross runway.
- R30 which is located in a pocket of Rivervale bound by Knutsford Avenue, Esther Street, Acton Avenue and Campbell Street.
- R40 which is applied to a section of Kewdale bound by Keane Street, Belmont Avenue, Scott Street and Knutsford Avenue.
- R20/50/100 surrounding the Belmont Town Centre. Development of this land is subject to Local Planning Policy No. 1 – Town Centre Density Bonus Requirements.
- R20/40 surrounding local and neighbourhood activity centres and along roads containing high frequency bus routes such as Alexander Road, Kooyong Road and Hardey Road.
- R20/50 within a portion of Belmont located on Hehir Street, Barker Street and Lapage Street. Development within this area is guided by Local Planning Policy No. 4: Belgravia/Barker Streets.
- R20/60 adjacent to a portion of Belgravia Street which is also subject to Local Planning Policy No. 4: Belgravia/Barker Streets.
- R20/60 adjacent to Abernethy Road and Orrong Road. This land is subject to either Local Planning Policy No. 2 Orrong Road or Local Planning Policy No. 3 Abernethy Road. These policies aim to achieve coordinated vehicle access and high-quality development.

There are also areas within the City which are not currently subject to a density code under LPS 15 and are capable of accommodating residential development. These include:

- The Residential and Stables zone, although LPS 15 currently requires land to be developed in accordance with an R10 density code.
- Mixed Use and Commercial zoned land
- The Belgravia Residential Estate – subject to Local Planning Policy 5
- The Springs – subject to Local Planning Policy 7
- Ascot Waters – subject to Local Planning Policy 6
- Inverlcoy Estate – subject to Local Planning Policy 8
- Belvidere Street Neighbourhood Centre – subject to Local Planning Policy 15

The appropriateness of existing density codes and in some cases no density code being applied to land within the City will be further explored through Part 2 of this Strategy.

### 8.2.3 Areas Subject to Future Planning

The Development Area 6 / Redcliffe Station Precinct in Redcliffe and the Golden Gateway Precinct in Ascot (shown in figures 20 and 21 below), have both been identified as areas which are appropriate to accommodate higher residential and mixed-use development. The Golden Gateway precinct is subject to the Golden Gateway Local Structure Plan. The State Government is currently preparing an Improvement Scheme to guide redevelopment within the Redcliffe Station Precinct. This will be informed by the City's draft Redcliffe Station Precinct Activity Centre Plan.

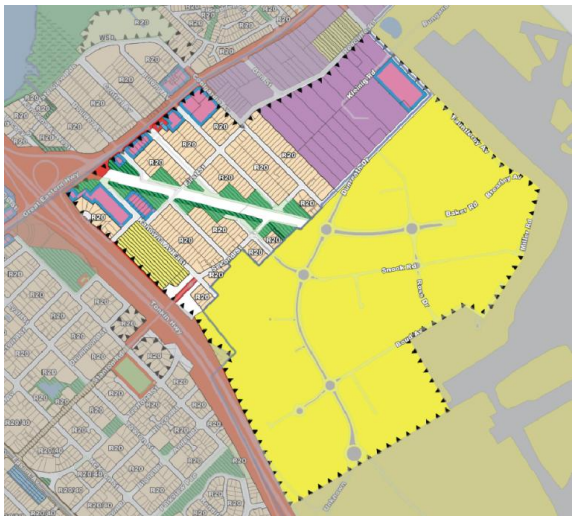


Figure 20: Development Area 6 Area




Figure 21: Golden Gateway Precinct

### 8.2.4 Patterns of infill

There has been a range of development that has occurred across all of the density codes within the City. Within the R20 coded areas, where lots meet the size requirements under the R-Codes development/subdivision has occurred in the following forms:

- Two or three lots in a front to rear arrangement; and
- Two lots side by side.

Within the R20/40, R20/50, R20/60 and R20/50/100 coded areas, there has been an increase in the development of grouped and multiple dwellings. Immediately surrounding the town centre, developments range from 2 to 29 grouped or multiple dwellings. Within other flexible density codes, developments range from having 2 to 34 grouped or multiple dwellings. The average number of dwellings within a multiple dwelling development throughout the City of Belmont is 11 dwellings, with the most common development being 8 multiple dwellings.

The number of lots with existing development potential at both the R20 and flexible density codes is outlined in Tables 3 and 4 below.

These tables have been based on the following assumptions:

- R20 lots are required to achieve a lot size of 855m$^2$ in order to subdivide/develop, in accordance with the Residential Design Codes: Volume 1, and Operational Policy 2.2 – Residential Subdivision.
- The density bonus to R30 for R20 coded corner sites has not been accounted for.
- Flexible density coded sites are required to achieve a site area of 418m$^2$, in accordance with the Residential Design Codes: Volume 1, and Operational Policy 2.2 – Residential Subdivision. They also must have a frontage of 16m in order to subdivide/develop to a higher density unless otherwise specified in a relevant local planning policy.
- Grouped and multiple dwelling sites are included in the calculation of lots with development potential already utilised. This is irrespective of whether they are developed at the maximum density code applicable.
- Lots containing single houses are considered to be sites available for development irrespective of their age, condition, or location within the lot.
- Redcliffe does not include lots within Development Area 6, as this area can't be developed at existing density codes until an Improvement Scheme is developed by the Department of Planning, Lands and Heritage.

Table 3: Infill development per suburb – R20 lots

| Suburb | Residential Lots | R20 Lots | R20 lots with potential for development | R20 lots with potential for development already utilised | Undeveloped R20 lots with development potential |
|---|---|---|---|---|---|
| Ascot | 1,137 | 417 | 65 (15.6%) | 10 (15.4%) | 55 (84.6%) |
| Belmont | 2,334 | 1,221 | 295 (24.1%) | 81 (27.5%) | 214 (72.5%) |
| Cloverdale | 3,036 | 1,736 | 405 (23.3%) | 119 (29.4%) | 286 (70.6%) |
| Kewdale | 2,481 | 1,331 | 320 (24%) | 125 (39.1%) | 195 (60.9%) |
| Redcliffe | 1,668 | 1,461 | 322 (22.1%) | 91 (28.3%) | 231 (71.7%) |
| Rivervale | 2,655 | 1,148 | 212 (18.5%) | 104 (49.1%) | 108 (50.9%) |
| **Total** | 13,311 | 7,314 | 1,619 | 530 | 1,089 |

The following conclusions can be drawn from this table:

- The most prevalent residential coding across the City is R20.
- There has been a steady level of development that has occurred to date on R20 lots in all suburbs.
- Rivervale has the highest percentage of utilised R20 lots with development potential (49.1%), indicating significant development activity has occurred in this suburb.
- City wide, approximately 32.7% of R20 lots with development potential have already been developed to their highest potential.
- There are still 1,089 lots coded R20 across the City which have development potential.

Residential R20 lots which still have development potential, would typically be able to develop into two dwellings/lots, with a maximum of three dwellings/lots off the original parent lot.

Table 4: Infill development per suburb – flexible coded lots

| Suburb | Residential Lots | Flexible Coded Lots | Flexible coded lots with potential for development (above R20) | Flexible coded lots with potential for development (above R20) already utilised | Undeveloped flexible coded lots with development potential above R20 |
|---|---|---|---|---|---|
| Ascot | 1,137 | 7 | 7 (100%) | 0 (0%) | 7 (100%) |
| Belmont | 2,334 | 912 | 480 (52.6%) | 182 (37.9%) | 298 (62.1%) |
| Cloverdale | 3,036 | 1,299 | 689 (53%) | 189 (27.4%) | 500 (72.6%) |
| Kewdale | 2,481 | 996 | 491 (49.2%) | 154 (31.4%) | 337 (68.6%) |
| Redcliffe | 1,668 | 195 | 93 (47.7%) | 53 (57%) | 40 (43%) |
| Rivervale | 2,655 | 1,332 | 556 (41.7%) | 266 (47.8%) | 290 (52.2%) |
| **Total** | 13,311 | 4,741 | 2,316 | 844 | 1,472 |

The following conclusions can be drawn from this table:

- Excluding Ascot, all suburbs have had a steady level of development that has occurred above the R20 density on flexible coded lots.
- Rivervale has had the most lots developed above the R20 density then other suburbs in the City of Belmont.
- Cloverdale has the most flexible coded lots which can develop above the R20 density code.
- Approximately 2,316 flexible coded lots (48.8%) have development potential above R20.
- Only 844 lots have been developed above the R20 density (36.4%). This leaves 1,472 lots (63.5%) with current development potential.

### 8.2.5 Limits to Development

To develop above the base density code in flexible coded areas there are certain criteria that need to be met. This includes having a frontage that is 16m or greater and achieving a 6-metre side setback

between the side boundary and the first wall of the front dwelling. Whilst there are 4,741 flexible coded lots within the City, only 2,316 of these currently have or had development potential due to other lots not meeting these key Scheme requirements. Examples of where these provisions are restricting development are contained in Figures 22 and 23.

Figure 22: Development potential at Kooyong and Fitzroy Road, Rivervale




Figure 23: Development potential at Kelly Street, Cloverdale




**Summary**

- The City of Belmont exhibits substantial potential for infill development across both R20 and flexible density coded lots.
- Approximately 22.1% of all R20 lots achieve a lot size of 855m$^2$ or greater. Of these, approximately 32.7% have already been developed and 67.3% are available for development.

- Approximately 48.9% of all flexible density coded lots achieve a minimum lot frontage of 16m and a minimum lot size of 418m$^2$. Of these lots, approximately 36.4% have already been developed and 63.5% are available for further development.
- If the 16m frontage and 6m side setback provisions were removed from the City's new Local Planning Scheme there would be a significant number of additional lots that could be developed.
- Belmont, Cloverdale and Kewdale present strong opportunities for future development, with a large proportion of undeveloped lots. While not captured by statistics included in the table, there is also a significant level of development expected within the Development Area 6 precinct in Redcliffe.

### 8.3 Housing Affordability

Access to affordable housing is becoming an increasing problem across Australia. According to the WA Housing Strategy 2020 – 2030, since 2000, house prices in Perth have increased more than 200%, with minimum wages only increasing by 92%. Over the same period, rental prices have increased by 135%.

The benchmark for housing costs is typically 30% of income. The Australian Bureau of Statistics (ABS) used this measure in the 2021 Census to assess housing affordability. In evaluating the validity of the 30% benchmark for measuring the affordability of mortgage repayments, the ABS notes that these findings may not consistently indicate financial strain. This is due to considerations such as housing preference or deliberate accelerated repayments. Instead, the ratio approach, commonly utilised by banks to gauge the relationship between a person's income and home price, is considered a more suitable measure.

In terms of the City of Belmont, all suburbs had a higher price-to-income ratio than the metropolitan area for single houses, while for grouped and multiple dwellings, only Rivervale exceeded the metropolitan area (refer to **Table 5** and **Table 6** below).

| | Median suburb household income | Median price (2022 as at Aug) | 10 year growth rate | House price to income ratio | Median rent (Apr-Jun 22) | House rent to income ratio (%) |
|---|---|---|---|---|---|---|
| Ascot | 107,744 | 891,000 | 2.9% | 8.27 | 545 | 26.30 |
| Belmont | 80,964 | 511,000 | 0.8% | 6.31 | 460 | 29.54 |
| Cloverdale | 74,048 | 485,000 | 1.2% | 6.55 | 460 | 32.30 |
| Kewdale | 80,600 | 505,000 | 0.8% | 6.27 | 410 | 26.45 |
| Redcliffe | 81,380 | 483,125 | 1.1% | 5.94 | 480 | 30.67 |
| Rivervale | 75,972 | 617,500 | 1.4% | 8.13 | 465 | 31.83 |
| *Perth Metro* | *96,980* | *541,500* | *1.2%* | *5.58* | *490* | *26.27* |

*Table 5: Median House Prices (2021 Census and REIWA)*

| | Median household income | Median price (2022 as at Aug) | 10 year growth rate | Price to income ratio | Median rent (Apr-Jun 22) | Unit Rent to income ratio (%) |
|---|---|---|---|---|---|---|
| Ascot | 107,744 | 403,000 | 0.2% | 3.74 | 433 | 20.90 |
| Belmont | 80,964 | 370,000 | 1.2% | 4.57 | 423 | 27.17 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cloverdale | 74,048 | 339,500 | -2.0% | 4.58 | 420 | 29.49 |
| Kewdale | 80,600 | 339,717 | 0.1% | 4.21 | 398 | 25.68 |
| Redcliffe | 81,380 | 320,000 | -0.8% | 3.93 | 410 | 26.20 |
| Rivervale | 75,972 | 420,000 | -0.6% | 5.53 | 435 | 29.77 |
| *Perth Metro* | *96,980* | *415,000* | *-0.1%* | *4.28* | *435* | *23.32* |

Source: 2021 census; https://reiwa.com.au/the-wa-market/suburb-rentals-search/

*Table 6: Median Unit Prices (2021 Census and REIWA)*

While the 30% benchmark may not consistently reflect the affordability of mortgage repayments, it is widely acknowledged as a suitable measure for evaluating rent affordability. In the City of Belmont, 62.7% of individuals indicated that their rent payments were equal to or below 30% of their household income, with 26.1% surpassing this threshold and 11.2% remaining undetermined.

Among individual suburbs, Cloverdale, Redcliffe, and Rivervale all exhibited rental costs for houses exceeding 30% of household income. Furthermore, Kewdale, Belmont and Ascot demonstrated a higher rent-to-income percentage in comparison to the metropolitan area. Conversely, for grouped and multiple dwellings, all suburbs fell below the 30% mark of household income, although they were higher than the metropolitan area.

Considering this data, housing affordability poses a challenge within the City of Belmont. Improving this situation necessitates the promotion of housing diversity aimed at accommodating various lifestyles, household compositions, and income levels. Small dwellings like townhouses, apartments and ancillary dwellings tend to be more affordable than larger home and can provide opportunities for people to live in their preferred area.

The City of Belmont should also consider additional cost of living constraints and in doing so concentrate development near public transport, amenities, and employment prospects. This also provides increased opportunities for affordable living within vibrant neighbourhoods characterised by mixed land uses, reduced car dependency, efficient public transport, and increased opportunities for social interaction. Furthermore, the City should promote sustainability initiatives as a way of reducing the cost of living pressures, as detailed in subsequent sections of this Strategy.

### 8.4 Housing Tenure

While the significant number of renters in the City of Belmont (42.2%) compared to the Greater Perth Area (26%) may suggest a home ownership affordability problem, it is more likely that it reflects the preferences of specific household types. For example, the high number of renters may reflect a transient community of young singles or single parent households. Another aspect that may influence this is the City of Belmont's proximity to Perth CBD.

As outlined in Table 6, grouped and multiple dwelling developments are generally more affordable than single houses. Encouraging these types of developments could support homeownership and, over time, reduce the proportion of renters in the City of Belmont. To facilitate homeownership, the City should promote a diverse range of dwellings.

### 8.5 Housing Stock and Household Composition

Whilst the City has seen an increase in the number of 1 or 2 bedroom dwellings, the majority of the City's housing stock is still dominated by separate houses, followed by semi-detached, row or terrace houses/townhouses and flats/apartments.

As shown in figure 24, The City of Belmont has a greater number of 3 and 4 bedroom dwellings than households that have 3 or 4 people usually resident. The largest discrepancy is between 15.1% of households having three residents, and numbers of dwellings with three bedrooms (44.4%). Notably, 7.7% of dwellings are 1 bedroom dwellings, while 32.9% of the population reside in lone-person households. This data shows that the City has a deficit in 1 and 2 bedroom dwellings for the demand, whilst having an oversupply of dwellings with 3 or more bedrooms.

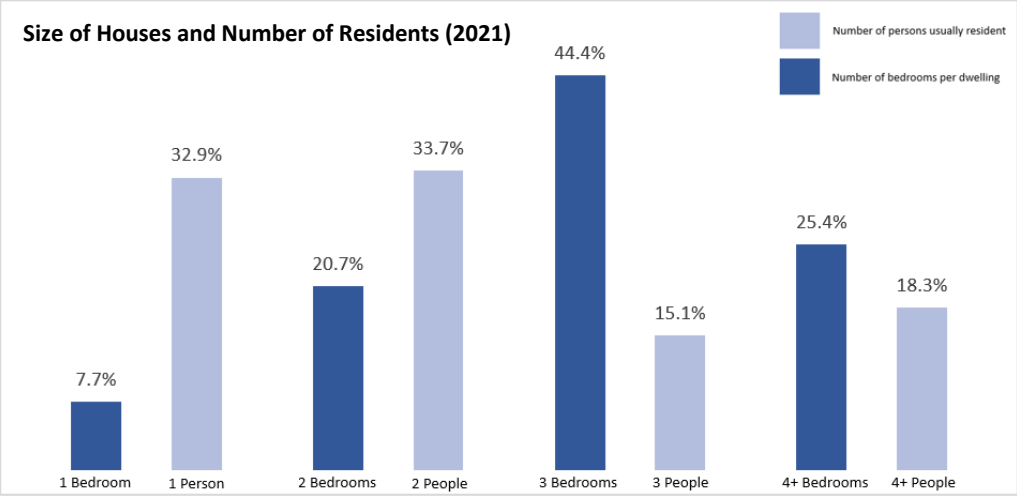



Figure 24: Size of Houses and Number of residents (ABS, 2021)

Given that Belmont's projected population growth will see an increase in lone person households, the City should consider ways in which housing for these demographics can be facilitated through the preparation of a new local planning scheme.

Noting the projected increases in lone person households, Table 2 below calculates that the City would need an additional 30,124 dwellings to cater for the average household size of 1 person.

The table above also provides insights into the number of additional dwellings that need to be constructed by 2031 for other average household sizes, to accommodate the forecasted population of 50,451 people.

| **2031**<br>**Average household size scenarios (persons per household)** | **2031**<br>**Dwellings needed for a population of 50,451** | **2021 - 2031**<br>**Additional dwellings needed** |
|---|---|---|
| 2.3 (average number of people per household in COB, 2021) | 21,935 | 1,608 |
| 2 | 25,225 | 4,898 |
| 1.5 | 33,634 | 13,307 |

| | | |
|---|---|---|
| 1 | 50,451 | 30,124 |

*Table 2: Scenarios of household sizes and number of dwellings*

As shown above, the average number of people per household in the City is currently 2.3. This size household would require an additional 1,608 dwellings to meet the forecasted population of 50,451 by 2031. However, this goes up to 4,898 for an average of 2 people per household and jumps significantly to 30,124 for an average of 1 person per household.

This is a simplified assessment of future housing supply and does not take into account any factors that could affect forecasted population growth.

The City will need to investigate and ensure that adequate housing is provided for both the existing and future community. One strategy will be to continue to facilitate higher density development in the form of apartments and townhouses in key locations as promoted by Perth and Peel@3.5 Million.

The Residential Design Codes – Volume 2 Apartments also requires a mix of dwellings containing various bedroom numbers in developments of 10 or more units. It is considered this will also assist the City in providing a diverse range of housing for the community.

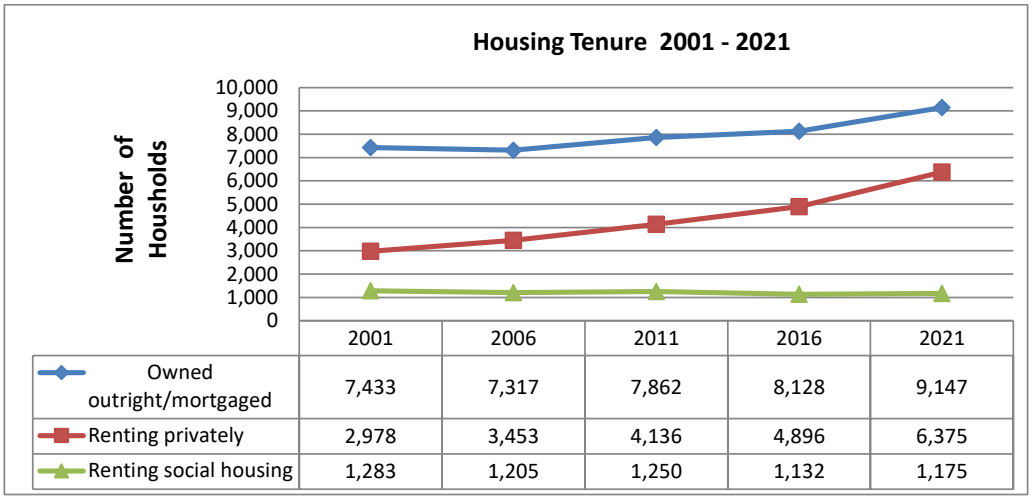
### 8.5.3 Housing for the Aged

Belmont's projected ageing population will see an increased demand for aged care facilities and aged or dependent persons dwellings. Noting this, the City should consider ways in which housing for the aged will be facilitated through the preparation of a new local planning scheme. In doing so the City should have regard to the WAPC Position Statement on Residential Accommodation for Ageing Persons which recommends definitions and land use permissibility in Local Planning Schemes to encourage aged care in a larger range of zones. The Position Statement also emphasises a more strategic approach to delivering aged care accommodation by integrating it within local communities, close to health and community services and adequately serviced by transport networks.

### 8.5.4 Social and Public Housing

In 2021, 6.5% of dwellings within the City of Belmont were being rented for social housing, compared to 2.9% in Greater Perth (.id community).

The total number of dwellings being rented for social housing within the City of Belmont has reduced in the last two decades (1,283 sites in 2001 to 1,175 in 2021) (see **Figure 25**). This is generally as a result of the State Government redeveloping and/or disposing of a number of its sites. However, there was an increase of 43 dwellings between 2016 and 2021.




| | 2001 | 2006 | 2011 | 2016 | 2021 |
|---|---|---|---|---|---|
| Owned outright/mortgaged | 7,433 | 7,317 | 7,862 | 8,128 | 9,147 |
| Renting privately | 2,978 | 3,453 | 4,136 | 4,896 | 6,375 |
| Renting social housing | 1,283 | 1,205 | 1,250 | 1,132 | 1,175 |

*Figure 25: City of Belmont Housing Tenure (.idcommunity)*

As social housing contributes to the diversity and affordability of housing for eligible lower income households, it is an important component of the City's housing stock. To alleviate community concerns regarding the amount of social housing located within the City of Belmont, redistribution and greater integration of the social housing sites across the City should be promoted. The City should also encourage the Department of Communities to redevelop any ageing, derelict or vacant sites.

### 8.6 Housing Occupancy

The 2021 Census found that there were 2,329 vacant private dwellings within the City, equating to 11.4% of total housing stock. Comparatively, this was substantially higher than the Greater Perth average of 8.5%. This percentage is consistent with the 2016 Census. ABS data (2021) showed that Rivervale was one of the 10 suburbs in WA with the highest vacancy rates (one in every six dwellings). This figure could be attributed to Rivervale's new apartment complexes, and residents pursuing fly-in, fly-out careers due to close proximity to Perth Airport. While many of these factors are outside the influence of planning, the City will continue to monitor these statistics.

### 8.7 Sustainability and Environment

#### 8.7.1 Natural Hazards and Disasters

In planning for future housing stock, consideration should be given to extreme weather events associated with climate change. While the exact impact of climate change on the City is not yet known, environmental changes should be monitored and responded to appropriately.

With regard to flooding, only small sections of the City, primarily adjacent to the Swan River are currently identified as being within the 1 in 100-year floodplain (refer to **Figure 26**). To allow the City to ensure that new development in proximity to the Swan River and other waterbodies responds to existing flood risk, it may be appropriate to include this land in a Special Control Area under the new Local Planning Scheme. This should require development in these areas to apply for development approval to allow for flood risks to be assessed.




*Figure 26: Floodway and flood fringe*

The Climate Council of Australia has advised that due to climate change, the frequency and severity of bushfire events is likely to increase. While this is the case, it is noted that only small portions of the City of Belmont are identified as bushfire prone and that the threat of these areas is likely to be relatively low. The City will continue to assess and respond to the threat of bushfires on properties in bushfire prone areas (refer to **Figure 27**). This will include the ongoing requirement for proponents to prepare and implement Bushfire Management Plans and/or Bushfire Attack Level (BAL) Assessments as part of planning and/or building applications. It also may be appropriate to include this land in a Special Control Area under the new Local Planning Scheme, to require development in these areas to apply for development approval to allow bushfire risks to be assessed.

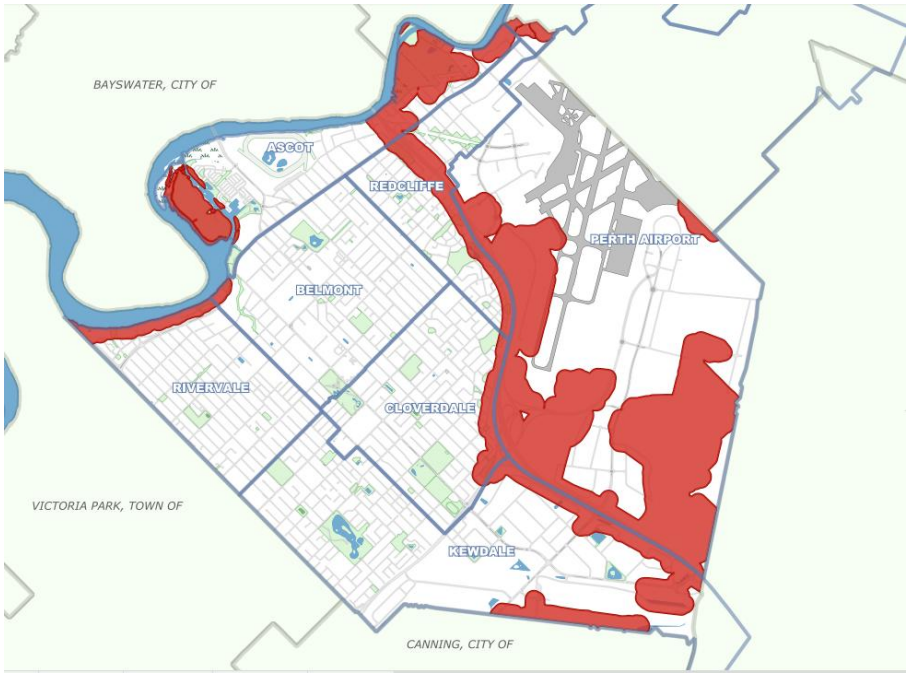



*Figure 27: Bushfire Prone Map (Bushfire Prone Areas Coloured Red)*

8.7.2 Sustainability

Integrating sustainability into urban developments not only mitigates environmental impacts but also alleviates the burden of high living costs by reducing energy usage and water consumption. Therefore, the City should investigate ways of encouraging and facilitating sustainable design outcomes. Further discussion on this is provided in the City Wide section of Part Two.

### 8.8 Built Form and Heritage

The City is dedicated to enhancing the living experience for residents through the delivery of high quality infill development. The introduction of State Planning Policy 7.0 (SPP 7.0) – Design of the Built Environment and City of Belmont Design Review Panel have been important factors in achieving these outcomes.

One of the key principles of SPP 7.0 is 'Context and Character', which encourages buildings to positively contribute to the identity of an area and integrate into its setting. This is particularly important for properties with significant heritage values, as identified in the City's Local Heritage List. Further detail and actions relating to built form and heritage are contained withing Part 2 of this Strategy.

### 8.9 Short-term rental accommodation

According to the Australian Housing and Urban Research Institute, short-term rental accommodation (STRA) land uses have led to decreased rental vacancy rates across Australia. Furthermore, where

STRA uses are not appropriately managed, they have the ability to impact on the amenity of local neighbourhoods

In recent years, the City of Belmont has witnessed a significant increase in such uses, primarily attributed to the success of online booking platforms and the areas proximity to Perth Airport, Perth CBD, Optus Stadium and the Swan River. A review of AirDNA (a platform which tracks STRA data) has revealed a large number of STRA uses which are operating across the City, the majority not having the necessary approvals (Figure 28).

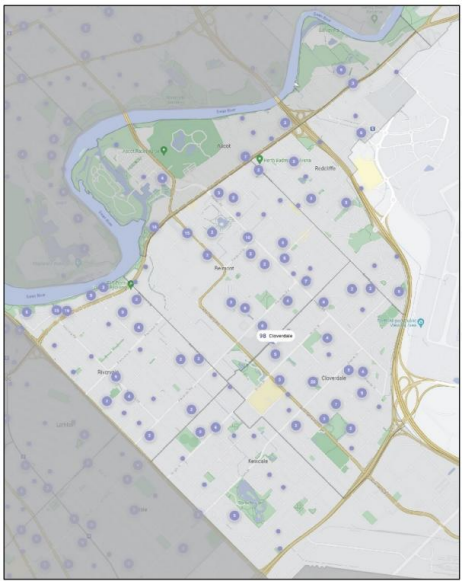


Figure 28: Locations of Short-term Rental Accommodation (AirDNA, 2023)

There is no shortage of accommodation options for visitors in the City of Belmont. In 2018-2019, visitors to the City of Belmont spent 337,510 nights in various forms of tourist accommodation including hotels and motels and in serviced apartments (Tourism WA, 2022). During the same period, there were 385,440 rooms available in the hotels, motels and serviced apartments located along Great Eastern Highway (Tourism WA, 2022). This indicates an excess of more than 47,930 vacant hotel, motel, and serviced apartment rooms, adjacent to Great Eastern Highway during this period. This data doesn't include tourist accommodation which is not located adjacent to Great Eastern Highway or additional tourist accommodation facilities which have since been developed.

The following has been noted about STRA operations in the City of Belmont:

- Erosion of long-term housing stock
- Reduced housing affordability
- Undermining intended residential density outcomes
- Land use conflict
- Operating short-term rental accommodation in areas with a lack of tourist amenities and public transport accessibility.

It is important that STRA impacts are mitigated. The State recently released regulatory measures regarding short-term rental accommodation, including a position statement, associated guidelines and a registration scheme. This states that local planning policies can manage the size, location and potential amenity impacts of short-term rental accommodation. In light of this, the City has reviewed

and incorporated appropriate recommendations into a new Local Planning Policy 19: Short-term Rental Accommodation.

Further information regarding this is provided in part two of this Strategy.

### 8.10 COVID-19

The COVID-19 pandemic has generally changed the way people view and use housing. These changes are expected to have lasting implications for the planning and design of residential developments.

Due to measures aimed at slowing the spread of COVID, the pandemic saw a large portion of the workforce working from home rather than making a daily commute into the office.

The pandemic has also resulted in a renewed focus on accessing locally sourced good and services. People have realised the importance of living in high amenity areas with good access to local services, recreation spaces, and cafes/restaurants. This has also generated an increased interest in apartment developments which are near services and amenities.

The City should continue to facilitate and encourage high quality apartment development and development more broadly in close proximity to high amenity areas such as activity centres and transport corridors.

## 9 Local Planning Scheme Review Community Engagement

To help inform the Strategy, community consultation was undertaken including workshops and surveys with residents.

### 9.1 Workshops

The workshops were designed to identify community values and planning aspirations for the City. This was facilitated through a scenario planning activity which provided for the community to outline their broad conceptual visions for the area down to more specific values regarding street design layouts and housing typologies. There were five resident workshops held for the following precincts illustrated in Figure 29 below:

- West (Rivervale)
- South (Kewdale and Cloverdale)
- East (Cloverdale and Redcliffe)
- Central (Belmont and Redcliffe)
- Riverside (Ascot)

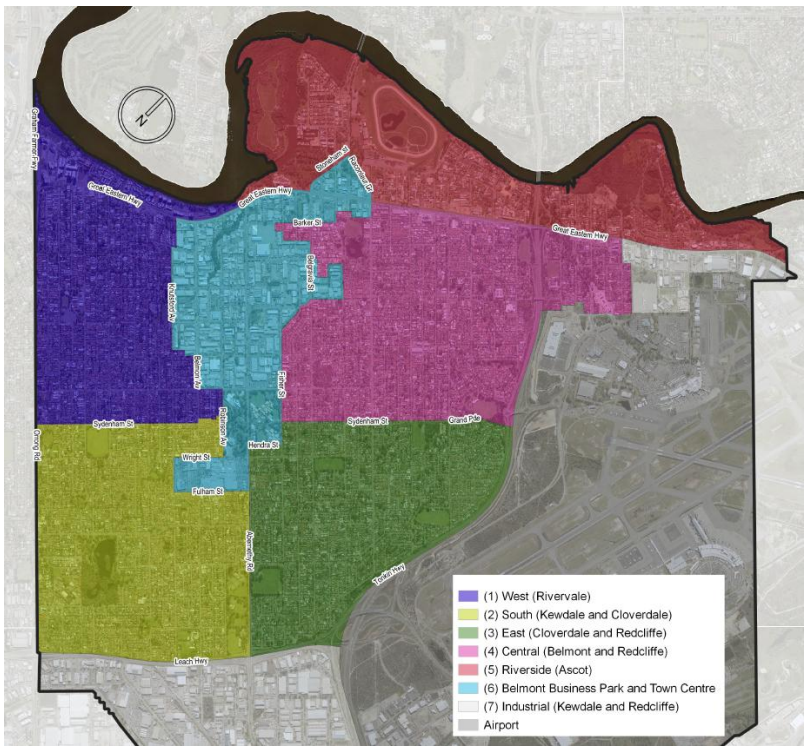



*Figure 29: Workshop Precincts*

Below is a summary of the key community aspirations for each of the identified precincts:

*Riverside Precinct – Ascot*

The community preferred higher density housing typologies for this precinct, including 3 or 4 bedroom houses on a smaller lot, apartments and four dwellings on a lot. Within Ascot Waters, a 3 or 4 bedroom house on a smaller lot was the most preferred housing option. The community residing within the 'Residential and Stables' zone expressed an interest in a more diverse housing typologies within the precinct, particularly three or four dwellings per lot.

*South Precinct – Kewdale & Cloverdale*

The residents of Kewdale and Cloverdale expressed an interest in a variety of housing types ranging from low density 3-bedroom houses with a large garden to higher density housing including three houses on a lot and apartments.

*West Precinct – Rivervale*

The residents of Rivervale favoured a range of single detached dwellings and as a second preference chose development comprising of two to three houses on a lot. The community members also indicated support for the development of apartments on their street and within activity centres.

*East Precinct – Cloverdale & Redcliffe*

The community identified two categories of housing they would consider as their prospective accommodation. The first category includes single detached housing with extensive gardens or an original extended house. The second preferred housing category comprises three dwellings on a lot.

However, the community also supported apartments being located above commercial tenancies within activity centres.

*Central Precinct – Redcliffe & Belmont*

The community chose the three-bedroom original house with a granny flat at the rear as their preferred future accommodation option. Participants also encouraged the development of apartments, particularly above shops along Belvidere Street, along with housing types consisting of two or four dwellings.

**Overall Findings**

Community members identified a desire for good quality and diverse housing. In addition, the provision of apartments integrated with commercial development within neighbourhood and local centres was supported by residents.

### 9.2 Resident Survey

Following the workshops, a survey was prepared to capture additional information in relation to the future planning of housing, shopping areas and public open spaces. The survey was made available to all workshop participants, residents and landowners of the City as well as businesses.

The findings indicated a strong preference for a variety of housing types, with 56% of respondents endorsing this viewpoint. Furthermore, participants emphasised the significance of both housing affordability and diversity, with 80% assigning a rating of three or above (out of 5) for the value of housing diversity and 78% doing the same for housing affordability.

## 10 Conclusion

The Local Housing Strategy has been prepared following a review of the current strategic planning context, demographic and housing trends, community consultation and the City's existing statutory planning framework.

The purpose of this Strategy is to establish a strategic framework to guide the City's current and future housing needs.

Part 2 of the strategy provides an in-depth analysis of the population and housing characteristics across each suburb. These examine development patterns, demographics trends, connectivity, and outline specific actions within key focus areas in each suburb. Within these focus areas, the strategy identifies key considerations and opportunities for housing, and proposes actions to ensure that the Strategy sets the foundation for long-term, sustainable growth and development across the entire City.

# PART 2
# ASCOT

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## Snapshot – Population and Dwellings

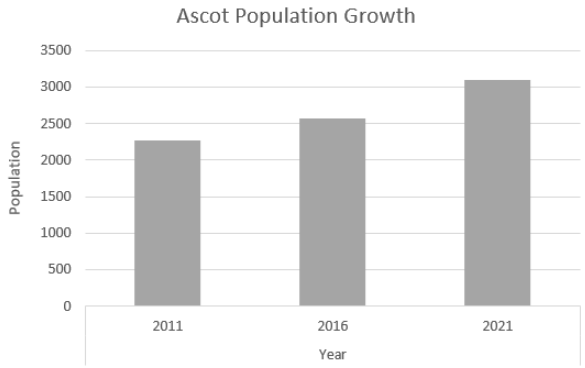
### Current population

3,095 people

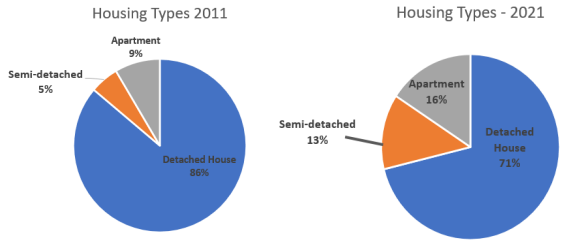
### Current dwellings

1,421

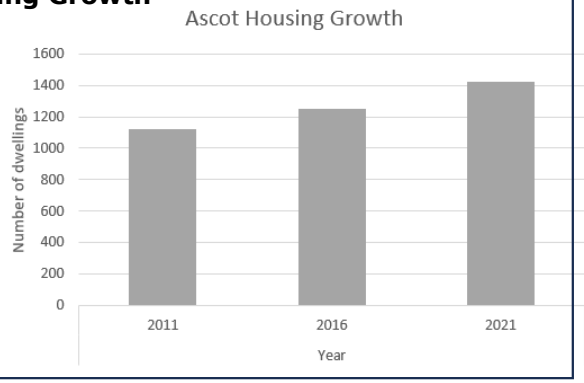
### Population Growth



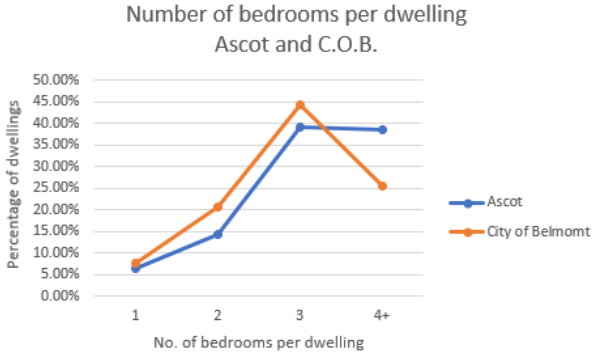

### Change in dwelling types – 2011 & 2021




### Housing Growth




### Bedrooms/dwelling




### People/dwelling

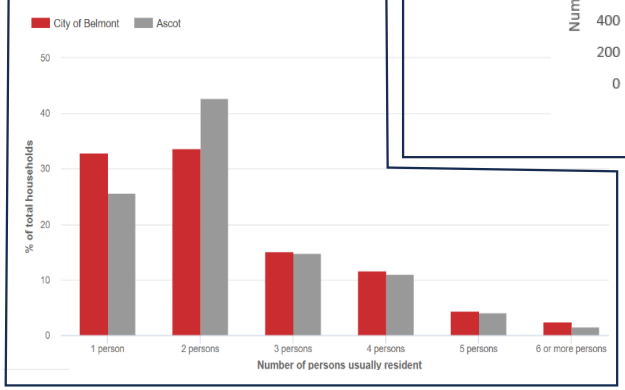



***Table 1: Snapshot (Source: ABS 2024 and .ID Community 2024)***

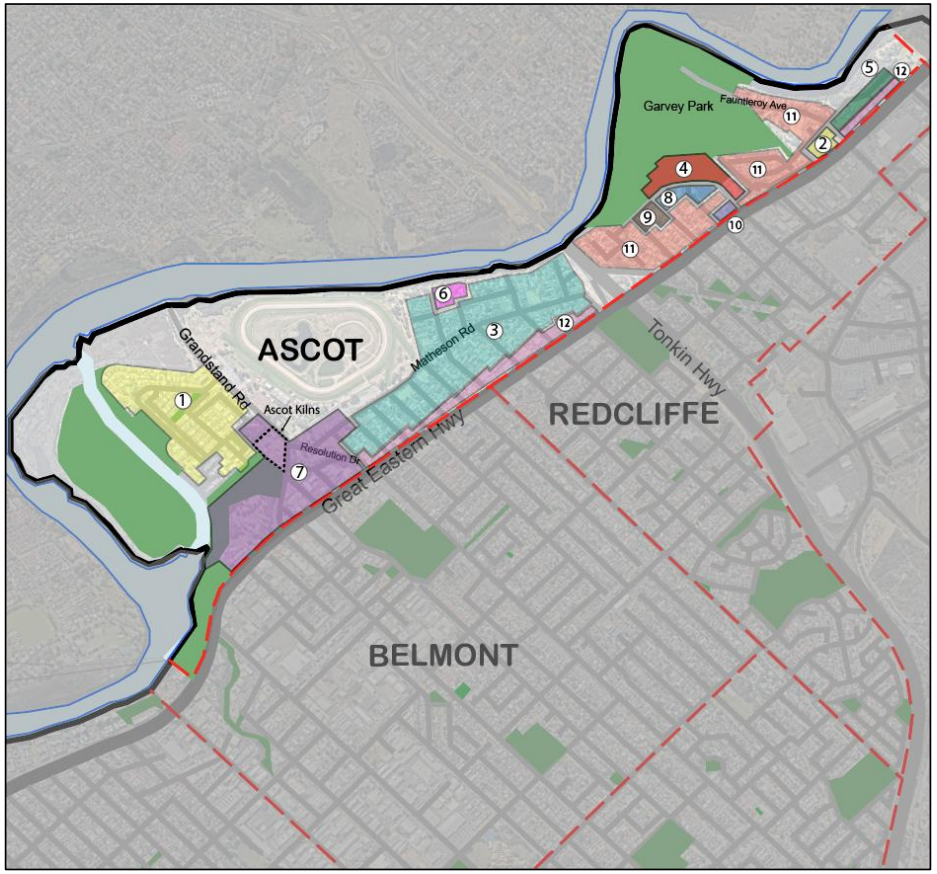
## Ascot Overview

Location and Focus Areas

The suburb of Ascot comprises an area of 3.69 square kilometres and is bound by the Swan River, Great Eastern Highway and land just east of Ivy Street.

There are 12 key focus areas within the suburb of Ascot that will be analysed as part of this Local Housing Strategy. These include:

1. Ascot Waters
2. Invercloy Estate
3. Residential and Stables area
4. Development Area 7
5. Development Area 9
6. Development Area 10
7. Golden Gateway and Ascot Kilns
8. Lot 600 Central Avenue and Lot 601 Coolgardie Avenue
9. Perth Central Caravan Park
10. Ascot Local Centre
11. Eastern Ascot
12. Great Eastern Highway Corridor



Key Features

**Connectivity**

- Road and vehicle access facilitated through Great Eastern Highway, Tonkin Highway, and the Garratt Road bridge.
- Close proximity to Perth Airport domestic terminals T3 and T4.
- Eastern part of the suburb is near Redcliffe Station.
- Access to public transport, including a high frequency route along Great Eastern Highway and the 998/999 Circle route along Grandstand Road
- Public transport routes provide connections to adjacent local government areas, Redcliffe Train Station, and Elizabeth Quay.
- Ascot has extensive bicycle and pedestrian paths, including along the Swan River foreshore and throughout the Ascot Marina and Residential and Stables zone.

**Centres and Services**

- There is one existing activity centre and two planned activity centres within Ascot. These include:
  - Ascot Waters Local Centre (planned).
  - Golden Gateway Local Centre (planned).
  - Ascot Local Centre.
- The Ascot Local Centre is presently specialised, containing office and medical uses as opposed to grocery and other shops typically found within local centres.
- Ascot does not have a primary school within its boundaries, however it benefits from its proximity to Belmont Primary School and Redcliffe Primary School.

**Public Open Space**

- Ascot has the highest proportion of properties within 100m of any public open space (POS), mainly due to its proximity to the Swan River. Despite this, some residential areas are more than 400m away from any public open space, which is the maximum distance that residential lots should be from accessing parks according to Liveable Neighbourhoods.
- The Public Open Space Strategy proposes to investigate acquiring additional land or re-purpose existing property owned by the City. These areas would be used to develop high-quality POS, to increase the number of residential properties which are located within 400m of POS.

**Development Patterns**

- Development in the 'Residential and Stables' and 'Residential' zones mainly occurred in the 1980s and 1990s, with some dating back to the 1960s and earlier.
- Ascot experienced relatively low growth between 2011 and 2021, at approximately 10% compared to the City's average of 26.4%.
- The Ascot Waters 'Special Development Precinct' saw most detached dwellings built by 2010. Apartments at 2 and 16 Marina Drive were built in 2015 and 2020.
- Development in the Invercloy 'Special Development Precinct' happened between 2000 and 2010.
- Ascot currently contains 1,131 residential lots. Of these, 101 lots, based on their size and width, have the capacity for infill development. However, it is important to recognise that not all landowners may choose to pursue further development of their properties.

## Suburb Wide Actions

Suburb wide actions for Ascot have been prepared based on information from the Key Features section, the Focus Area Summary Table, and Appendix 1 – Population and Housing Characteristics. By integrating these sources, actions were developed to facilitate and support the development of future housing within Ascot.

- Encourage a variety of housing options to cater to the evolving needs of the community, especially with Ascot's ageing population, the projected rise in single person households, and the current prevalence of dwellings with four bedrooms or more.
- Through the implementation of the City's Public Open Space Strategy, investigate additional open space amenities along the Swan River foreshore in Ascot to improve access to green space.

- Liaise with the Public Transport Authority to obtain support for extending the bus network throughout the suburb.
- Promote alternative transport modes, such as public transport and active travel, to reduce reliance on private vehicles.

## Focus Areas

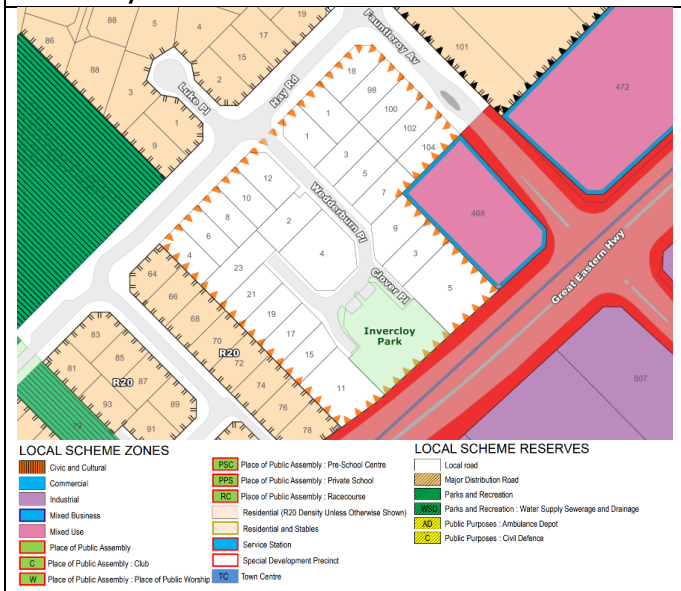
| 1: Ascot Waters | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density coding's to land in close proximity to transport corridors and activity centres.<br>7. Facilitate medium and high-density infill development which is of high-quality design and positively contributes to the streetscape.<br>9. Facilitate development overlooking public open spaces to provide surveillance and amenity for residents.<br>10. Encourage sustainable design principles to be incorporated into single house and low-density dwelling developments.<br><br>**Key considerations and opportunities**<br><br>• The Ascot Waters design guidelines in Local Planning Policy No. 6 – Ascot Waters Special Development Precinct (LPP 6) have facilitated high-quality built form outcomes but reflect dwelling designs from the 1990s and early 2000s, having been prepared over 20 years ago before changes to the Residential Design Codes (R-Codes).<br><br>• Land within Ascot Waters is currently zoned 'Special Development Precinct' which is not a model zone within the *Planning and Development (Local Planning Schemes) Regulations 2015*. There is an opportunity to rezone this area to align with the Regulations.<br><br>• Whilst LPP 6 provides guidance regarding the density coding of land within the precinct, there is currently no density coding applied to the land under the Local Planning Scheme. There is an opportunity to assign density codes to this area through the preparation of a new local planning scheme.<br><br>• The precinct is largely developed, with less than 10 vacant lots remaining.<br><br>• Under Local Planning Scheme No. 15, all development requires approval. Given the precinct has largely been developed with less than 10 vacant lots remaining, there may be an opportunity to normalise this situation. |

| | | |
|---|---|---|
| | | • Whilst the precinct is largely residential in nature, a local centre has been identified along Marina Drive. There is an opportunity to align with the City's Activity Centre Planning Strategy by applying a 'Local Centre' zone to 10 Marina Drive. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning land within the precinct through the preparation of a new local planning scheme, from 'Special Development Precinct' having regard to the following options:<br>a. The Ascot Waters Local Centre located at 10 Marina Drive, Ascot, to 'Local Centre' zone.<br>b. Consider 2 Waterway Crescent and 54 Grandstand Road for a 'Mixed Use' or 'Residential' zoning.<br>c. Consider 2 Marina Drive for a 'Mixed Use' or 'Residential' zoning.<br>d. The wider precinct to 'Residential'. | |
| | **Residential Density**<br>2. Apply density codings to the precinct that have regard to the density and lot configuration outlined in LPP 6, through the preparation of a new local planning scheme (refer to below image). | |



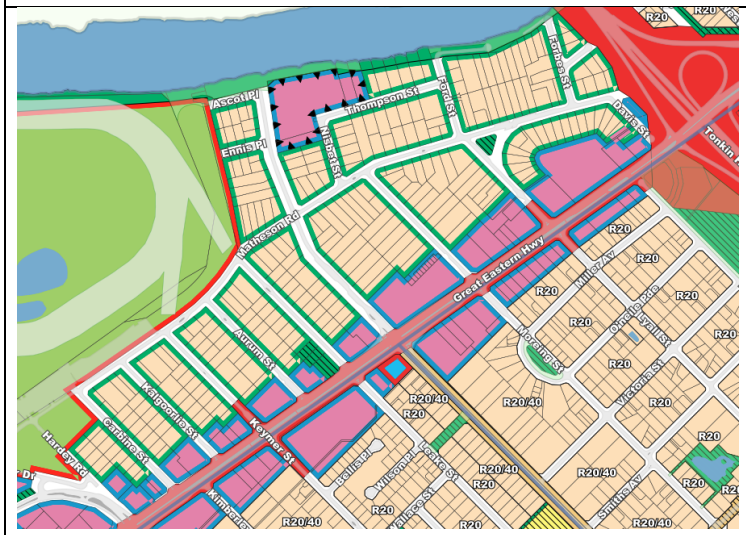

**Built Form**

3. Undertake a review of *Local Planning Policy 6 – Ascot Waters Special Development Precinct* in light of the R-Codes to determine whether the policy provisions are still required.
4. Investigate whether it is necessary to continue to require approval for all development within the precinct. In doing so, the City should consider the need to assess built form outcomes.

| **2: Invercloy Estate** | **Strategies** |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>8. Facilitate the preservation of properties which contain significant heritage values.<br>**Key considerations and opportunities**<br>• Local Planning Policy No.8 – *Invercloy Estate Special Development* Precinct has facilitated high quality built form outcomes which are sympathetic to the State and local heritage listed property at 4 Wedderburn Place.<br>• Whilst the Policy provides guidance regarding the density coding of land within the precinct, there is currently no density coding applied to the land under the Local Planning Scheme. Therefore, there is an opportunity to apply a density code that reflects existing development and lot sizes.<br>• Land is currently zoned 'Special Development Precinct' which is not a model zone within the *Planning and Development (Local Planning Schemes) Regulations 2015*. There is an opportunity to align the future zoning with the Regulations.<br>• Given the precinct has been developed entirely for residential purposes, the need for LPP 8 should be reviewed through the preparation of a new local planning scheme.<br>• Under Local Planning Scheme No. 15, all development within this area requires approval. There is an opportunity to review this situation through the preparation of a new local planning scheme. |

| **Actions:** | |
|---|---|
| | **Zoning**<br>1. Investigate the rezoning of land within the precinct from 'Special Development Precinct' to 'Residential' through the preparation of a new local planning scheme. |
| | **Residential Density**<br>2. Apply density coding's to land within the precinct that reflect the existing development and lot sizes (R20, and R40 for 5 Clover Place) through the preparation of a new local planning scheme. |
| | **Built Form**<br>3. Undertake a review of *Local Planning Policy 8 – Invercloy Estate Special Development Precinct* in light of the R-Codes to determine whether the policy provisions are still required. |

| | |
|---|---|
| | 4. Investigate whether it is necessary to continue to require development approval for all development within the precinct. In doing so, the City should consider the need to assess built form outcomes. |

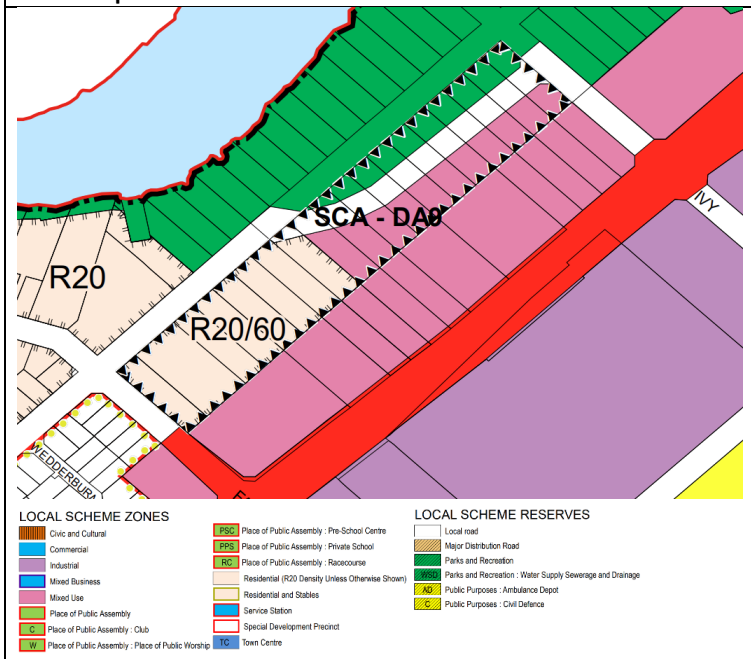
| 3: Residential and Stables area | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in proximity to transport corridors and activity centres.<br>8. Facilitate the preservation of properties which contain significant heritage values.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance.<br>12. Through land use planning and development control, consider the impact of future development on the environment, including potential offsite environmental impacts.<br><br>**Key considerations and opportunities**<br>• The 'Residential and Stables' zone is not a model zone within the *Planning and Development (Local Planning Schemes) Regulations 2015*.<br>• There is no formal density coding applied to the land under Local Planning Scheme No. 15 (LPS 15). However, the Scheme contains a minimum lot size requirement of 1,000m$^2$ per dwelling. Despite this, a significant number of lots are below the 1000m$^2$ requirement. The Scheme also requires open space and setbacks to be in accordance with the R10 density code.<br>• While the area generally contains larger lots, many are deep and narrow. Some lots may have subdivision potential as being more than 2000 sqm in area, however their width would present undesirable development outcomes.<br>• LPS 15 requires that an application for Development Approval for either a stable or a residence must accommodate the potential for both a residence and a minimum of two stables on the lot. The City consistently mandates a 70m² area to be reserved for future stables. This area includes two stables at 28m² each, plus a 14m² tack room, in line with the City's Consolidated Local Law 2020.<br>• The Consolidated Local Law 2020 mandates that stables must be built at least 6 metres from any dwelling on the same property and 20 metres from any dwelling on an adjacent property. Alongside the LPS 15 requirement to designate a future |

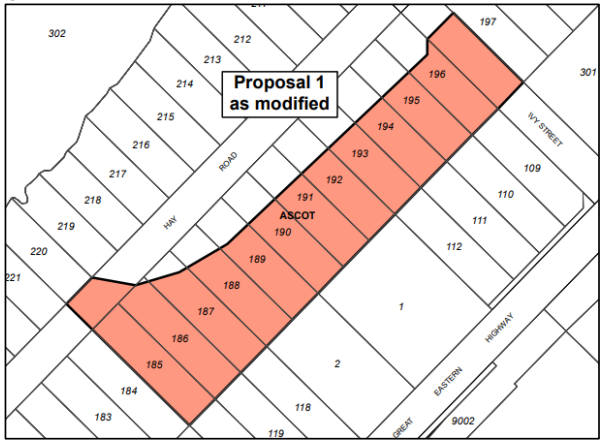
| | |
|---|---|
| | stables area, this often prevents lots smaller than 1,000m$^2$ from meeting these standards. It als<br><br>• Currently, 48.1% of lots which contain a dwelling also contain licenced stables. This number drops to 28.6% for dwellings built after 2001.<br><br>• Of the total of number of lots that contain licenced stables, 46.4% are currently in use with an average of 3.4 horses present.<br><br>• Approximately 22.3% of all 'Residential and Stables' zoned lots contain a stable in use.<br><br>• Changing trends have seen many horse owners/trainers relocate to more rural areas of Perth and regional WA, presumed to be due to rising housing costs in Ascot.<br><br>• There will be an ongoing need to mitigate conflicts between dwellings and equine activities throughout the precinct.<br><br>• The 'Residential and Stables' zone benefits from access to strong transport links including connections to Great Eastern Highway.<br><br>• Perth and Peel @ 3.5 Million encourages high-density mixed use developments adjacent to major urban transport corridors. To ensure an appropriate interface is achieved to development directly abutting Great Eastern Highway, it may be appropriate for a transition area to be established over a portion of the 'Residential and Stables' zone and for a higher density code to be applied.<br><br>• To manage land use conflict, the application of a higher density code would be subject to ongoing monitoring of the locations of lots which contain active stables licences.<br><br>• There are several lots which are partly located within the Swan Canning Development Control Area and require consideration of potential environmental impacts. |

| | |
|---|---|
| | • The development at 1 Davis Street comprises residential dwellings even though the land is zoned 'Mixed Use'. |
| **Actions:** | **Zoning**<br>1. Through the preparation of a new local planning scheme, investigate the appropriateness of rezoning lots directly adjoining the Swan River to 'Residential' with no permissibility for equine related uses, aiming to reduce nutrient and organic matter runoff into the Swan River, aligning with the objectives of the Swan Canning River Protection Strategy.<br>2. Through the preparation of a new local planning scheme, investigate the appropriateness of rezoning 1 Davis Street from Mixed Use to 'Residential' to align with the built form outcome on the site.<br>3. Through the preparation of a new local planning scheme, investigate the appropriateness of the following for the remainder of land:<br>- The appropriateness of applying a 'Residential' zone and an Additional Use area that provide for equine related uses;<br>- The appropriateness of designating a Special Control Area to manage residential and equine related uses, with a provision requiring development approval for all Single Houses;<br>- The appropriateness of retaining the non-model 'Residential and Stables' zone and associated scheme provisions; or<br>- The appropriateness of introducing a 'Special Use' zone that facilitates but does not require the stabling of horses.<br>4. Liaise with Perth Racing regarding their future development aspirations and consider the impact this may have on the future zoning of the precinct. |
| | **Residential Density**<br>5. Investigate the appropriateness of applying an R10 density code to the 'Residential and Stables' precinct through the preparation of a new local planning scheme.<br>6. Monitor the number of active stables within close proximity to Great Eastern Highway. If monitoring uncovers no stables within this area, investigate establishing a transition area by applying an appropriate density code for lots abutting the 'Mixed Use' zone. |
| | **Built Form**<br>7. Review the existing site and development requirements and determine whether any modifications are required for properties currently zoned 'Residential and Stables'. This may include investigating whether or not the requirement for lots to be capable of accommodating stables in the future is retained. |

| 4: Development Area 7 | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>9. Facilitate development overlooking public open spaces to provide surveillance and amenity for residents.<br>10. Encourage sustainable design principles to be incorporated into single house and low-density dwelling developments.<br><br>**Key considerations and opportunities**<br>• The DA7 Structure Plan expired on 19 October 2025.<br>• 85-97 Coolgardie Avenue are zoned Residential R20/40 and are no longer located within the Development Area 7 precinct identified by the Scheme.<br>• Lot 602 (No. 55) Fauntleroy Avenue is identified in the structure plan as being subject to further investigation and planning. This land is owned by the Department of Planning, Lands and Heritage.<br>• A preliminary geotechnical report identified that Lot 602 requires substantial remediation.<br>• The site is located within the flood fringe and designated bushfire prone area.<br>• There is a conservation category wetland on Lot 602.<br>• Lot 602 is burdened by existing sewer and stormwater infrastructure.<br>• A portion of Lot 602 is within 250m of high frequency bus routes on Great Eastern Highway, and within 800m of Redcliffe train station.<br>• Lot 602 is within the 200m catchment of the Ascot Local Centre. |

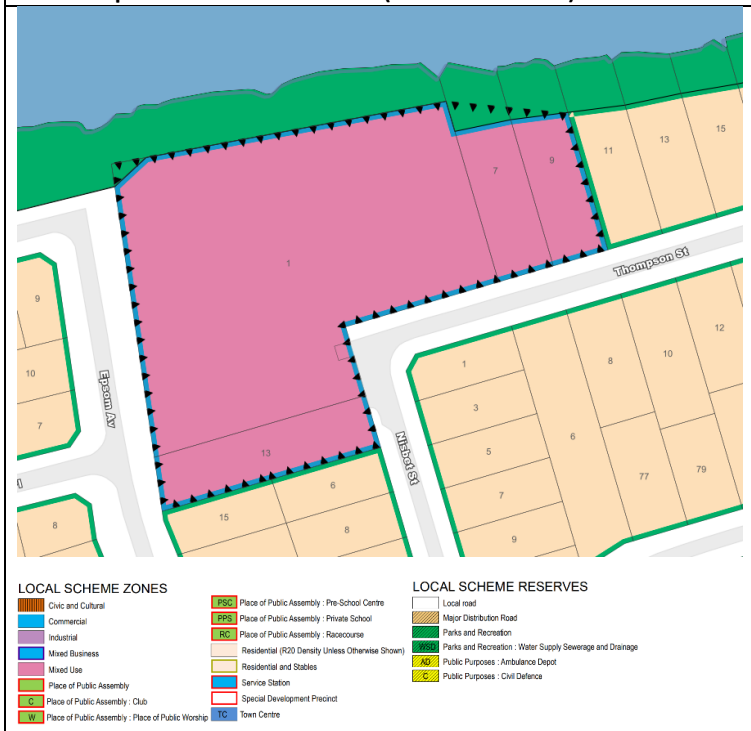
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| | • Given the above, it may be appropriate to identify appropriate requirements within the new local planning scheme for development to address the environmental considerations for Lot 602. |
| **Actions:** | **Zoning, Residential Density and Built Form**<br>1. Through the preparation of a new local planning scheme, identify appropriate requirements for development on Lot 602 (No. 55) Fauntleroy Avenue to address environmental considerations. |

| 5: Development Area 9 | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of a high quality and positively contributes to the streetscape.<br>8. Facilitate the preservation of properties which contain significant heritage values.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance. |
| | **Key considerations and opportunities** |
| | • Land within the Development Area 9 precinct was previously subject to the Development Area 9 Structure Plan. This Structure Plan expired on 19 October 2025.<br>• The Structure Plan identified an R20/60 code over land zoned 'Residential'.<br>• Lots within Development Area 9 abut 'Mixed Use' land fronting Great Eastern Highway. 101 Fauntleroy Avenue to 64 Hay Road are currently assigned a density code of R20/60 under LPS 15<br>• The R20/60 code is considered to act as an appropriate transition to the 'Mixed Use' zone fronting Great Eastern Highway.<br>• Lots northeast of 64 Hay Road were identified as being subject to future investigation and planning by the Development Area 9 Structure Plan. These were previously reserved for 'Parks and Recreation' under the Metropolitan Region Scheme (MRS).<br>• MRS Amendment 1399/57 has transferred Lots 185 to 196 Hay Road and parts of the Ivy Street and Hay Road road reserves from the 'Parks and Recreation' reserve |

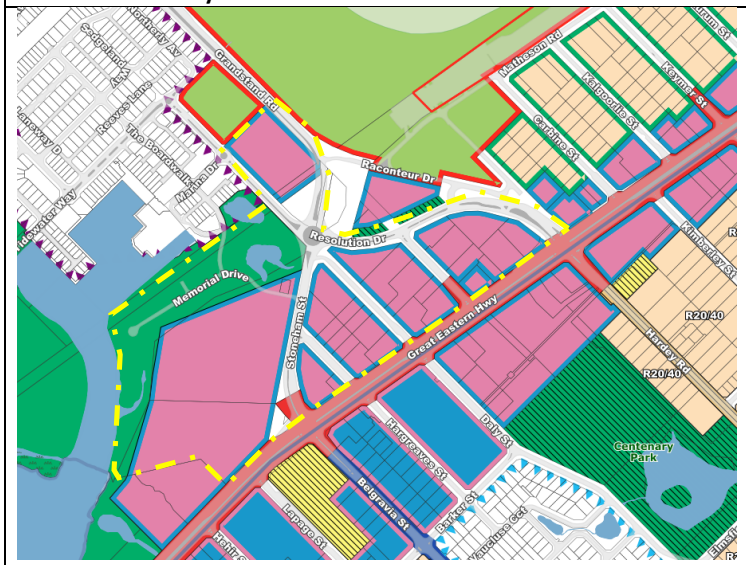
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| | to the 'Urban' zone under the MRS (see image below). The Amendment was gazetted on 14 November 2023.<br><br><br>• The WAPC and Minister also resolved to concurrently amended LPS 15 to transfer parts of the amendment area to the 'Mixed Use' and 'Residential' zones, and to apply a R20/60 density code to the 'Residential' zoned land (see image below). |

<table>
<tr><td></td><td>

<ul><li>Given the above, it may no longer be necessary to require a structure plan for this area.</li></ul></td></tr>
<tr><td>Actions:</td><td>Zoning, Residential Density and Built Form<br>1. Through the preparation of a new local planning scheme, investigate whether a structure plan is required for the Development Area 9 precinct.</td></tr>
</table>

| 6: Development Area 10: Ascot Inn (Swan River Hotel) | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>9. Facilitate development overlooking public open spaces to provide surveillance and amenity for residents.<br>12. Through land use planning and development control, consider the impact of future development on the environment, including potential offsite environmental impacts. |
| | **Key considerations and opportunities** |
| | • Numbers 7 and 9 Thompson Street and 1 and 13 Epsom Avenue are desginated by LPS 15 as being within Development Area 10 (DA 10). The zoning of this land is 'Mixed Use'.<br>• The Swan River Hotel is the primary development in DA 10.<br>• Number 9 Thompson Street has recently been developed for a Single House.<br>• Number 7 Thompson Street and number 13 Epsom Avenue remain largely vacant are suitable for development. An easement is located adjacent to number 15 Epsom Avenue and 6 Nisbet Street to the benefit of the City of Belmont and the public. The current function of this easement is a horse trail.<br>• on 15 May 2025, the Western Australian Planning Commission approved an extension of the approval period for the structure plan for a further 5 years expiring on 19 October 2030.<br>• The structure plan contemplates hotel and serviced apartment land uses, and building height of up to four storeys stepping down to two storeys abutting the neighbouring properties.<br>• The Mixed Use zoning has allowed for development of short-term accommodation land uses in a high amenity area. |

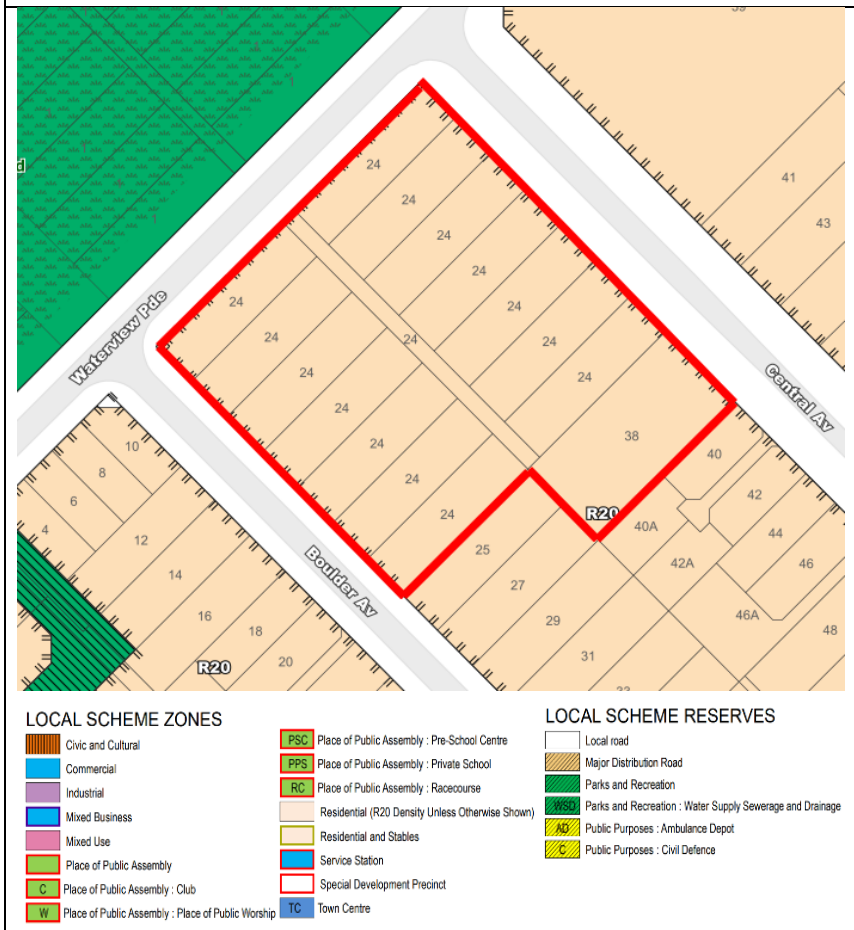
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| | • The existing Mixed Use zoning contains permissibility for light industrial and commercial land uses, many of which would be inappropriate for this site. |
| **Actions:** | **Zoning**<br>1. Investigate the most appropriate zonings for the DA 10 precinct through the preparation of a new local planning scheme. Consider the following approaches:<br>- Retain the 'Mixed Use' zoning, and review zone objectives and land use permissibilities.<br>- Rezone to 'Residential' with Additional Uses of Hotel (P), Restaurant/café (D), and/or other appropriate tourism and hospitality related uses.<br>- Rezone 9 Thompson Street to 'Residential', so as to be reflect the zoning of the eastern adjoining lots as proposed by this Strategy.<br>2. Investigate deleting Special Control Area – Development Area 10 through the preparation of a new local planning scheme and revoking the current DA10 Structure Plan. |
| | **Residential Density**<br>3. Investigate applying an R60 density code to 13 and 1 Epsom Avenue and 7 Thompson Street through the preparation of a new local planning scheme.<br>4. Investigate applying an R10 density code to 9 Thomson Street to reflect the density of the eastern adjoining lots. |
| | **Built Form**<br>5. Investigate appropriate site and development requirements for 13 and 1 Epsom Avenue and 7 Thompson Street with consideration given to the interface between this land and adjacent land through the preparation of a new local planning scheme. |

| 7: Golden Gateway and Ascot Kilns | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br>10. Encourage sustainable design principles to be incorporated into developments.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance. |
| | **Key considerations and opportunities** |
| | • The Golden Gateway precinct, highlighted in yellow on the adjacent plan, presents significant opportunities for mixed-use development. It benefits from public transport access and public open space along the Swan River foreshore and the Belmont Trust Land.<br>• Despite its potential, the precinct faces land assembly issues, site access constraints, and significant fragmentation. Additionally, there are no density codes or height controls in place. To address these challenges and guide future development, the Golden Gateway Local Structure Plan has been prepared.<br>• Most of the precinct is zoned 'Mixed Use'. This area is subject to development controls under a structure plan prepared by the City of Belmont.<br>• Land zoned 'Places of Public Assembly' (Perth Racing land) is part of the precinct but is subject to a separate structure planning process.<br>• The Ascot Kilns Site, within the precinct, contains heritage structures of State significance and is currently owned by the Department of Planning Lands and Heritage. A Local Development Plan (LDP) and design guidelines were prepared in 2017 for mixed-use development adjacent to these heritage structures. However, |

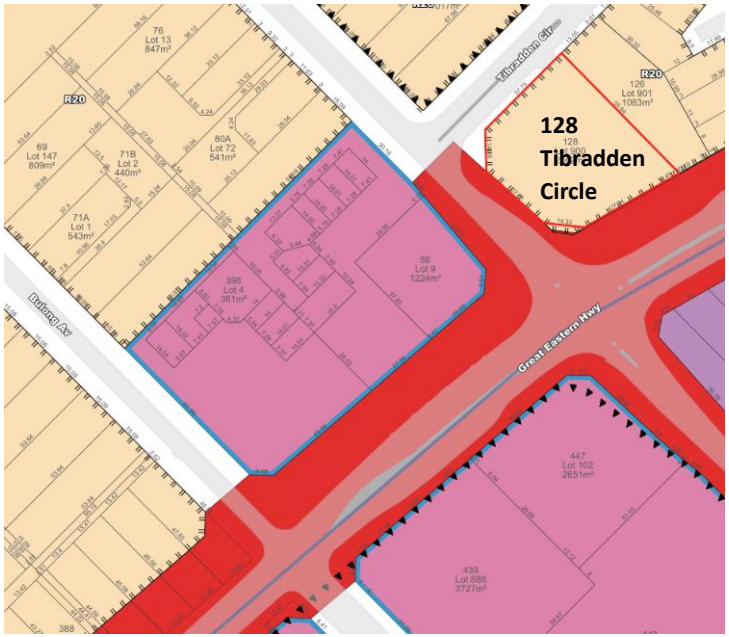
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| | | modifications to the LDP, resolved by the Council, have not yet been progressed by the Department of Planning Lands and Heritage.<br><br>• Although the future of Belmont Trust Land is not guided by the Structure Plan and will undergo a separate planning process, it is included in the precinct due to its recreational function for future residents. The Trust Deeds mandate that Belmont Trust Land is used for recreational purposes for the benefit of the community. |
| **Actions:** | **Zoning, Residential Density and Built Form**<br>1. Progress the Golden Gateway Local Structure Plan and ensure that a new local planning scheme gives statutory effect to the structure plan.<br>2. Advocate with the Department of Planning, Lands and Heritage to progress the Local Development Plan for the Ascot Kilns site. | |

| 8: Lots 600 Central Avenue & Lot 601 Coolgardie Avenue | Strategies |
|---|---|
| <br>LOCAL SCHEME ZONES<br>Civic and Cultural<br>Commercial<br>Industrial<br>Mixed Business<br>Mixed Use<br>Place of Public Assembly<br>C Place of Public Assembly : Club<br>W Place of Public Assembly : Place of Public Worship<br>PSC Place of Public Assembly : Pre-School Centre<br>PPS Place of Public Assembly : Private School<br>RC Place of Public Assembly : Racecourse<br>Residential (R20 Density Unless Otherwise Shown)<br>Residential and Stables<br>Service Station<br>Special Development Precinct<br>TC Town Centre<br>LOCAL SCHEME RESERVES<br>Local road<br>Major Distribution Road<br>Parks and Recreation<br>WSD Parks and Recreation : Water Supply Sewerage and Drainage<br>AD Public Purposes : Ambulance Depot<br>C Public Purposes : Civil Defence | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br>12. Through land use planning and development controls, consider the impact of future development on the environment, including potential offsite environmental impacts.<br><br>**Key considerations and opportunities**<br>• Two large, vacant land holdings which are currently held by the Department of Planning, Lands and Heritage.<br>• Current R20 coding encourages subdivision rather than coordinated development.<br>• Soil conditions and geotechnical stability is currently unknown and will require investigation prior to development or subdivision.<br>• The sites have high amenity, being in close proximity to the Swan River and large regional open space and are located within 800m (10-minute walkable distance) of Redcliffe Station.<br>• The high amenity and proximity to the local centre and public transport routes may support medium density (R25-R40) residential development.<br>• The lots are partially located within the Great Eastern Highway transport noise corridor and are in a bushfire prone area.<br>• The corner lot provision would enable the sites to be subdivided at R30. |

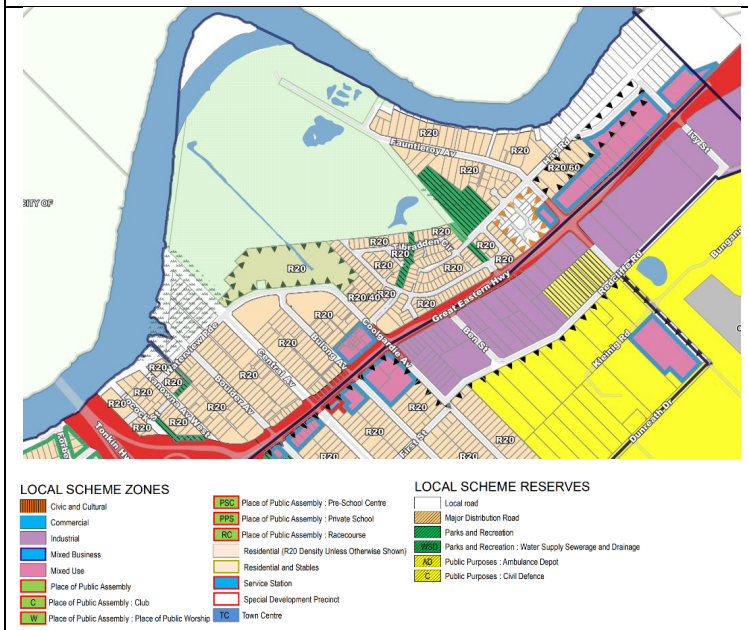
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| | • Subdivision of the sites into vacant lots with no control of built form and vehicle access locations could result in poor amenity outcomes. |
| **Actions:** | **Residential Density**<br>1. Investigate the potential for up-coding Lots 600 & 601 from R20 to R40 through the preparation of a new local planning scheme. |
| | **Built Form**<br>2. Engage with the Department of Planning, Lands and Heritage regarding the development of the land, and investigate whether it is appropriate for further detailed planning to be undertaken for these lots to guide subdivision and development. |

| 9: Perth Central Caravan Park | Strategies |
|---|---|
|  | 6. Balance the delivery of sufficient permanent housing supply with short-term rental accommodation. |
| | **Key considerations and opportunities** |
| | • The caravan park and caretakers' residence have an overall landholding of 13,626 square metres.<br>• Caravan Park is an 'X' use in the Residential zone, and the site has recognised non-conforming use rights.<br>• The lots are partially located within the Tonkin Highway and Great Eastern Highway transport noise corridor.<br>• The flood fringe extends into the site, and it is within a designated bushfire prone area.<br>• The State's strategic planning framework (Planning for Tourism Position Statement) outlines that planning frameworks should preserve caravan parks (however it is unclear if the WAPC's position extends to metropolitan parks).<br>• Non-conforming use provisions in the local planning scheme do present an added planning layer to any proposals to develop the site. The provisions also provide the potential for a change of use to another 'X' use, which could result in an undesirable outcome should the site be redeveloped. |

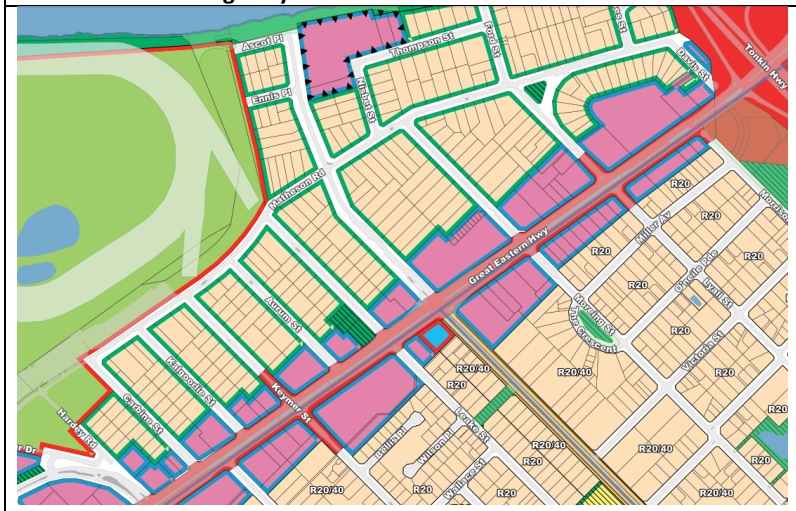
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| **Actions:** | **Zoning**<br>1. Retain the existing zoning and identify Caravan Park as a 'A' Additional Use through the preparation of a new local planning scheme. | |
| | **Built Form**<br>2. Investigate the inclusion of a provision in a new local planning scheme to give statutory weight to R-Codes development standards for the caravan park land use and non-dwelling uses within the 'Residential' zone. | |

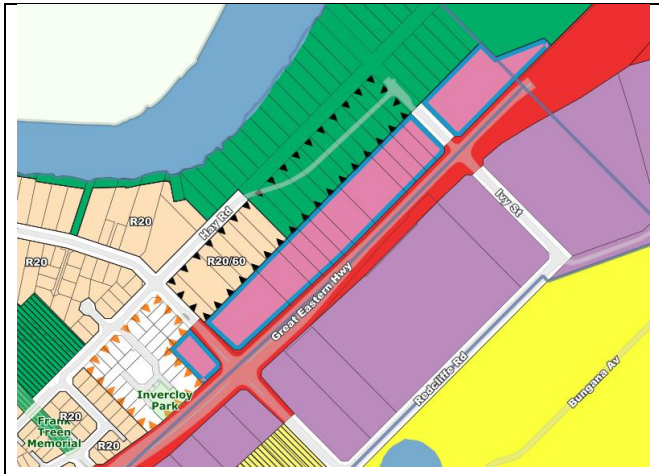
| 10: Ascot Local Centre | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br><br>**Key considerations and opportunities**<br>• The local centre has fragmented ownership due to strata titling, consists of a single storey building with extensive at-grade parking areas, and lacks a density coding under LPS 15.<br>• The local centre is currently zoned Mixed Use, with an additional use of Shop (up to maximum of 300m$^2$ floor area).<br>• The City's Activity Centre Planning Strategy states that an R-AC1 or R-AC0 density code may be appropriate to apply to the centre. State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments designates that an R-AC1 residential density coding is suitable for high density urban centres. With the exception of the side and rear boundary setback provisions, the R-AC1 development requirements are considered appropriate for this Centre. If an R-AC1 density code is applied, the rear and side boundary setback provisions should be amended to achieve an appropriate interface between the centre and the adjoining low scale residential development.<br>• Alternatively, it may be appropriate for Local Planning Policy No. 20 to be updated to include site specific development controls for the centre and for an R-AC0 density code to be applied so that future development is undertaken in accordance with those controls.<br>• Land surrounding the Centre to the north of Great Eastern Highway is predominantly zoned 'Residential' with a density code of R20. |

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| | | • The site on the opposite side of Coolgardie Avenue has been developed for a childcare centre.<br><br>• 128 Tibradden Circle has an additional use over it (A12) which provides for a density bonus up to R40 subject to the development addressing noise attenuation requirements and providing a high standard of design. Noting that development has already been undertaken on this land at the R40 density code, it may be appropriate to apply an R40 density coding through the preparation of a new local planning scheme.<br><br>• The density of lots bound by Great Eastern Highway, Coolgardie Avenue, and Central Avenue is currently R20. This has resulted in 9.15 dwellings per urban-zoned hectare, which is below the 25 dwellings per hectare target outlined in SPP 4.2. In this context, it may be appropriate to apply an R40 density code to the land. This may encourage redevelopment over time, support the function and operation of the activity centre, and assist in meeting the SPP 4.2 target for the centre.<br><br>• The local centre's walkable catchment contains existing greenfield (vacant Coolgardie Avenue lots) and infill (Development Area 6 (DA6) and Development Area 7 (DA7)) development opportunities.<br><br>• On the northern side of Great Eastern Highway, the centre is surrounded by low density dwellings, generally single houses. On the opposite side of GEH, the centre adjoins DA6. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning land within the centre to 'Local Centre' through the preparation of a new local planning scheme. | |
| | **Residential Density**<br>2. Investigate whether it is appropriate to introduce a residential density code of R-ACO or R-AC1 over Ascot Local Centre through the preparation of a new local planning scheme.<br>3. Investigate the appropriateness of applying an R40 density coding to land surrounding the local centre. | |
| | **Built Form**<br>4. Consider specific site and development requirements for the local centre through the preparation of a new local planning scheme. This may Occur by updating Local Planning Policy No. 20. | |

| 11: Eastern Ascot | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>9. Facilitate development overlooking public open spaces to provide surveillance and amenity for residents.<br>**Key considerations and opportunities**<br>• Existing densities and lot sizes provide for some small-scale subdivisions to occur (i.e. one-two lots).<br>• The area has high amenity as it is in close proximity to the Swan River foreshore and significant regional open space.<br>• Some of the area has good access to public transport with high frequency bus services along Great Eastern Highway, and in close proximity to Redcliffe Train Station.<br>• Much of the area is subject to transport noise and bushfire considerations.<br>• Lots along Fauntleroy Avenue are subject to a ‘Parks and Recreation’ reserve for the Swan River foreshore.<br>• Density increases within the area are likely to result in battleaxe subdivisions with smaller lot sizes, which would be an undesirable built form outcome.<br>• There are disused rights-of-way between Kanowna and Coolgardie Avenues with varied landowners and land tenures.<br>• 382-396 Great Eastern Highway are subject to road widening, and all but one lot are owned by Main Roads WA.<br>• 126 Tibradden Circle, formerly part of a larger lot encompassing number 128, is permitted a density bonus up to R40 by an Additional Use under LPS 15. |

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| | • There is a significant surplus of public open space for the suburb. |
| **Actions:** | **Residential Density**<br>1. Investigate upcoding 128 Tibradden Circle from R20 to R40 through the preparation of a new local planning scheme. |
| | **Other**<br>2. Coordinate with the City's internal departments to investigate and resolve the disused rights-of-way between Kanowna Avenue and Coolgardie Avenue. |

| 12: Great Eastern Highway Corridor | Strategies |
|---|---|
| <br>LOCAL SCHEME ZONES<br>Civic and Cultural<br>Commercial<br>Industrial<br>Mixed Business<br>Mixed Use<br>Place of Public Assembly<br>C Place of Public Assembly : Club<br>W Place of Public Assembly : Place of Public Worship<br>PSC Place of Public Assembly : Pre-School Centre<br>PPS Place of Public Assembly : Private School<br>RC Place of Public Assembly : Racecourse<br>Residential (R20 Density Unless Otherwise Shown)<br>Residential and Stables<br>Service Station<br>Special Development Precinct<br>TC Town Centre<br>LOCAL SCHEME RESERVES<br>Local road<br>Major Distribution Road<br>Parks and Recreation<br>WSD Parks and Recreation : Water Supply Sewerage and Drainage<br>AD Public Purposes : Ambulance Depot<br>C Public Purposes : Civil Defence | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance.<br>**Key considerations and opportunities**<br>• Lots along Great Eastern Highway have good accessibility with the corridor providing access to the Perth CBD, Perth Airport, and connections to other major regional roads. The corridor contains a number of high frequency bus routes providing access to the Perth CBD, Perth Airport, Midland, and the Redcliffe Train Station.<br>• The Central Sub-Regional Planning Framework identifies urban corridors that should be the focus for increased residential densities, and the potential to provide a transition area between high density developments and existing low density neighbourhoods.<br>• Currently LPS 15 provides little guidance for residential development in the 'Mixed Use' zone and does not specifically allocate residential density codes. Clause 4.2.3 of LPS 15 requires a residential density code to be assigned having regard to the density code of adjoining properties.<br>• This approach is inconsistent with Perth and Peel @ 3.5 Million which encourages high-density mixed use developments adjacent to major urban transport corridors.<br>• The City has prepared a strategic planning framework for the corridor. The Urban Corridor Strategy identifies several lots as being 'Activity Nodes' and the balance as 'Activity Corridor'. The Strategy envisages active commercial land uses on ground floors, with upper floors containing permanent residential, transient residential, offices and other commercial uses. |




- To support implementation of the Great Eastern Highway Urban Corridor Strategy, Council has adopted Local Planning Policy No. 20. The policy provides built form guidance for proponents and decision makers. Therefore, it may be appropriate to apply an R-AC0 density code to the corridor so that development is undertaken in accordance with the policy.

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| **Actions:** | **Residential Density**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply an R-AC0 density code to the corridor so that future development is undertaken in accordance with the built form controls contained within Local Planning Policy No. 20.<br>2. Monitor stables uses – and then review appropriateness of establishing transition area |

# Appendix 1 - Population and Housing Characteristics

**Population**

In 2021, Ascot had a population of 3,095 people. which represents a population density of 838 people per square kilometre. From 2011 to 2021, Ascot's population increased by 827 people or 36.4%. Forecasts undertaken by Forecast id predict that by 2041 Ascot's population will increase to 4,925 people and have a density of 1,334.7 persons per square kilometre.

**Age Structure**

In 2021, Ascot, when compared to the City of Belmont, exhibited distinct differences in age demographics. Ascot had a lower proportion of people in the younger age groups (under 24) and a higher proportion of people in the older age groups (50+). The largest age group in Ascot was the 60 to 64 year olds, accounting for a significant portion of the population (8.1%), with those aged 64 years and above making up 22%, and those 15 and under comprising 11.8% of the total population (see **Figure 1**).

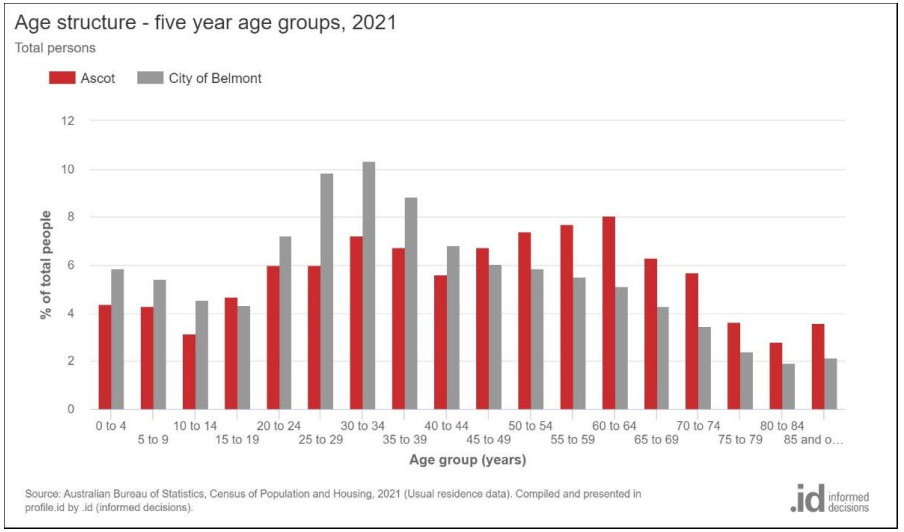



***Figure 1 – Age Structure – Five Year Age Groups (2021) (.id 2024)***

There were several major differences between Ascot and the City of Belmont local government area in terms of age distribution:

- Ascot had a larger percentage of persons aged 60 to 64 (8.1% compared to 5.1% in the City of Belmont).
- Ascot had a larger percentage of persons aged 70 to 74 (5.7% compared to 3.5% in the City of Belmont).
- Ascot had a smaller percentage of persons aged 25 to 29 (6.0% compared to 9.9% in the City of Belmont).
- Ascot had a smaller percentage of persons aged 30 to 34 (7.2% compared to 10.3% in the City of Belmont).

These differences highlight Ascot exhibiting a higher proportion of older individuals and a lower proportion of younger individuals compared to the City as a whole.

Between 2011 and 2021, the largest changes in age structure occurred in the following age groups:

- 70 to 74 (+105 persons)
- 65 to 69 (+94 persons)
- 30 to 34 (+93 persons)
- 85 and over (+89 persons)

It is important to highlight that these increases were primarily observed in the older age groups. One contributing factor to this trend may be the opening of the CraigCare Ascot Waters Aged Care Facility. Forecasts for the period between 2021 and 2031 indicate that the age structure of Ascot will continue to exhibit growth primarily in the older age groups. Specifically, there is projected to be a 45.9% increase in the population of retirement age. The largest increase in persons between 2021 and 2031 is also expected to occur in the age group of 75 to 79 years, with an anticipated 82 individuals, accounting for 5.1% of the total population.

**Family Structure**

In 2021, the dominant household type in Ascot was couples without children, accounting for 33% of all households. Ascot had a comparable proportion of couple families with children to the City of Belmont, but a lower proportion of one-parent families. Specifically, 22.3% of total families in Ascot were couple families with children, while 6.2% were one parent families, compared to 22.4% and 9.3% respectively for the City of Belmont.

Ascot also had a lower percentage of lone person households compared to the City of Belmont, and a higher percentage of couples without children. Lone person households constituted 23.7% of total households in Ascot, whereas in the City of Belmont, they represented 31.1% of households. Conversely, couples without children accounted for 33% of households in Ascot, which was higher than the 23.9% observed in the City of Belmont (refer to **Figure 2**).

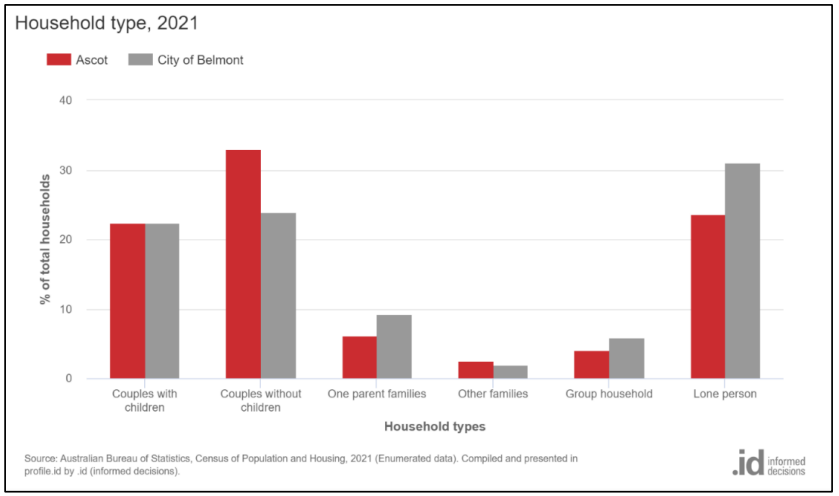



***Figure 2 – Household Type (2021) (.id 2024)***

The largest increases between 2011 and 2021 in Ascot were observed in lone person households (+118 households) and couples without children (+116 households) (refer to **Figure 3**).

Forecasts for the period between 2021 and 2031 indicate that the largest increase will be in couples without children, projected to grow by 117 households and account for 38.2% of all households. The second largest increase will occur in lone person households followed by couple families with children. Forecasts suggest that by 2041, households types in Ascot will increase as follows (refer to **Figure 4**):

- 836 (38%) couples without children (+341 households)
- 614 (27.9%) lone person households (+268 households)
- 464 (21.1%) couples with children (+143 households)
- 121 (5.5%) one parent family (+43 households)
- 101 (4.6%) group households (+341 households)
- 64 (2.9%) other families (+22 households)

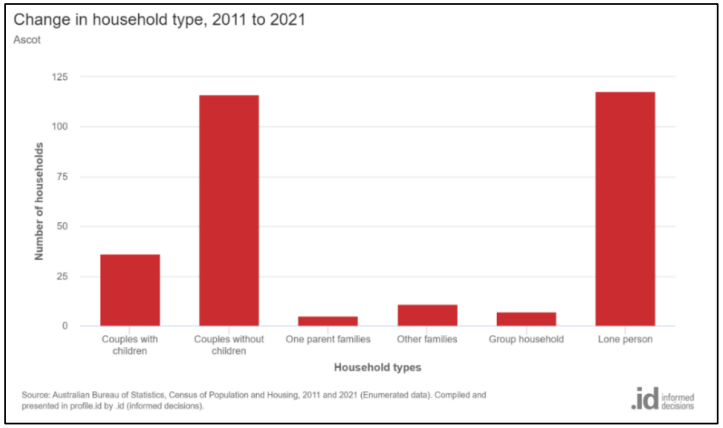



***Figure 3 – Change In Household Type (2011-2021)) (.id 2024)***

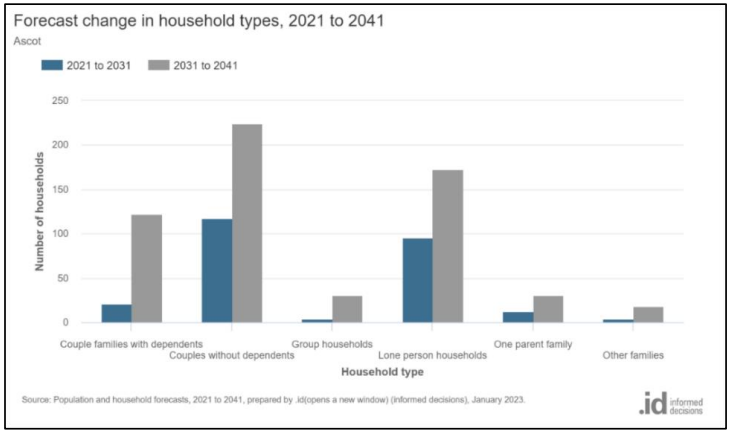



***Figure 4 – Forecast Change in Household Types 2021 to 2041 (.id 2024)***

**Dwelling Structure**

In 2021, Ascot comprised 70.1% separate houses, 12.9% semi-detached/row/terrace house/ townhouses, 15.5% flats or apartments, and 0.8% other dwellings. Between 2011 and 2021, Ascot experienced the greatest growth in flat/apartment and townhouse typologies. As shown in **Table 2**, an additional 109 apartments/flats and additional 105 townhouse style dwellings were delivered in the suburb during this period. However, there were also an additional 92 separate houses constructed between 2011 and 2021.

Dwelling types are similar between Ascot and the City of Belmont local government area, however the largest change was in Ascot having 12.9% of semi-detached/row or terrace house/townhouse dwellings, whilst the City of Belmont had 20.3%.

It is expected that there will continue to be increases in the number of flats/apartments and townhouses delivered within Ascot, as development occurs within precincts such as Golden Gateway.

| **Ascot – Dwellings (Enumerated)** | **2021** | | | **2011** | | | **Change** |
|---|---|---|---|---|---|---|---|
| **Dwelling type** | **Number** | **%** | **City of Belmont %** | **Number** | **%** | **City of Belmont %** | **2011 to 2021** |
| Separate house | 814 | 70.1 | 65 | 722 | 84.6 | 73 | +92 |
| Semi-detached, row or terrace house, townhouse etc. | 150 | 12.9 | 20.3 | 45 | 5.3 | 15.1 | +105 |
| Flat or apartment | 180 | 15.5 | 14.4 | 71 | 8.3 | 11.6 | +109 |
| Other | 9 | 0.8 | 0.1 | 15 | 1.8 | 0.1 | -6 |
| **Total Private Dwellings** | **1,153** | **100.0** | 100.0 | **853** | **100.0** | **100.0** | **+300** |

***Table 2: Dwelling Structure 2011-2021 (ABS 2024)***

**Number of Bedrooms**

In 2021, the number of bedrooms within dwellings in Ascot differed from that in the City of Belmont, with fewer dwellings having 2 bedrooms or less, and a greater number having 4 bedrooms or more. Specifically, within Ascot 20.9% of houses had two bedrooms or less, and 36% had 4 or more, compared to 27.5% and 24.2% for the City of Belmont respectively. The dominant bedroom size was three-bedroom dwellings in Ascot at 42.4%.

As shown in **Figure 5**, the notable differences between the number of bedrooms per dwelling in Ascot and the City of Belmont are as follows:

- Ascot contains a larger percentage of 4 bedroom dwellings (30.7% compared to 21.4%)
- Ascot contains a larger percentage of 5 or more bedroom dwellings (5.3% compared to 2.7%)
- Ascot has a smaller percentage of 2 bedroom dwellings (13.3% compared to 19.8%)
- Ascot has a smaller percentage of 3 bedroom dwellings (37.0% compared to 42.4%)

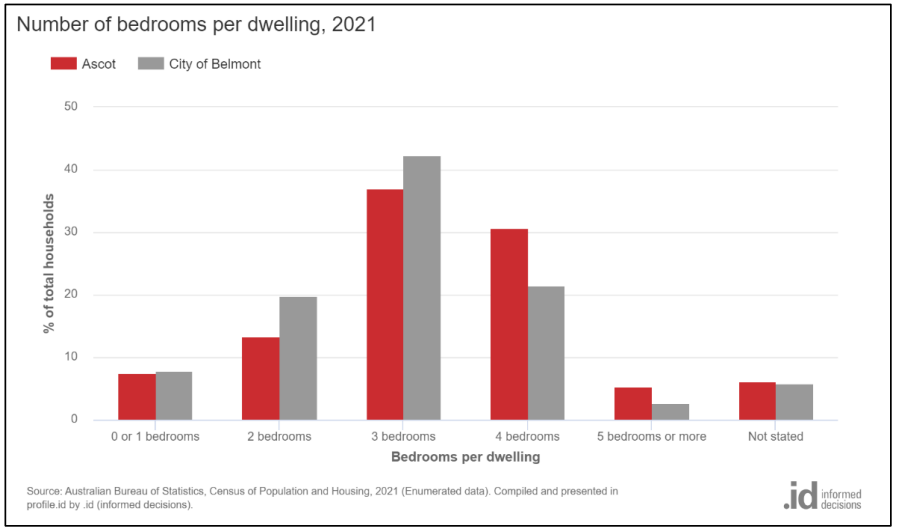



***Figure 5 – Number of bedrooms per dwelling – Ascot and City of Belmont (.id 2024)***

Although the average household size has been and is forecast to continue declining (currently at approximately 2.2 as shown in **Figure 6**), the largest increase in number of bedrooms per dwelling in Ascot between 2011 and 2021 was in four-bedroom dwellings as shown in **Figure 7**.

In addition, lone person households comprised 26% of all households in Ascot despite only 7.6% of households having one bedroom. This indicates a clear discrepancy between the number of bedrooms and the size of households in Ascot.

It is anticipated that this discrepancy will persist, especially considering the projected increases in lone person households. To address this issue, it is important to promote a diverse range of dwelling types, including single bedroom dwellings, within the suburb. This will help cater to the specific housing needs and preferences of Ascot's residents.

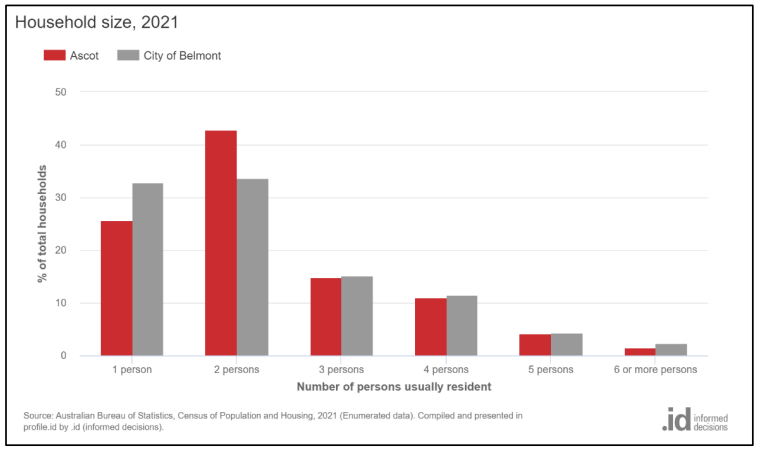



***Figure 6 – Household Size – Ascot and City of Belmont (.id 2024)***

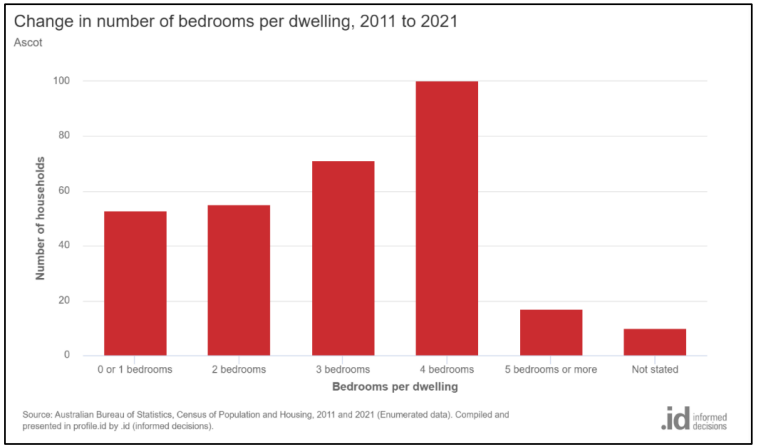



***Figure 7 – Change in number of bedrooms 2011-2021 (.id 2024)***

# PART 2
# Belmont

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## Snapshot – Population and Dwellings

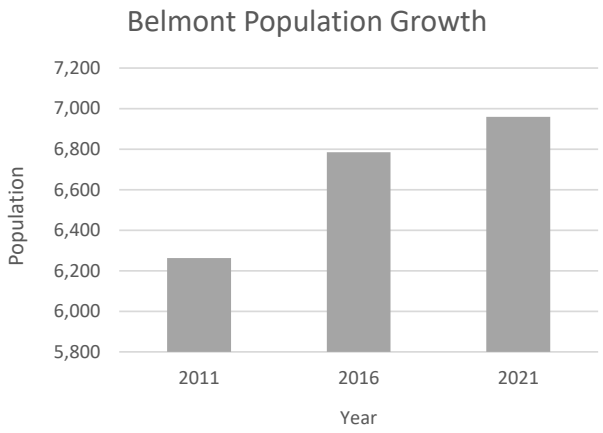
**Current population**

**6,959 people**

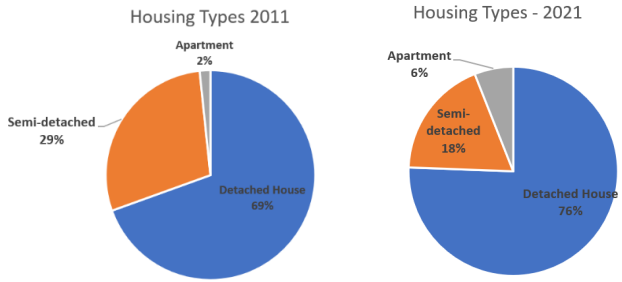
**Current dwellings**

**3,418**

**Population Growth**



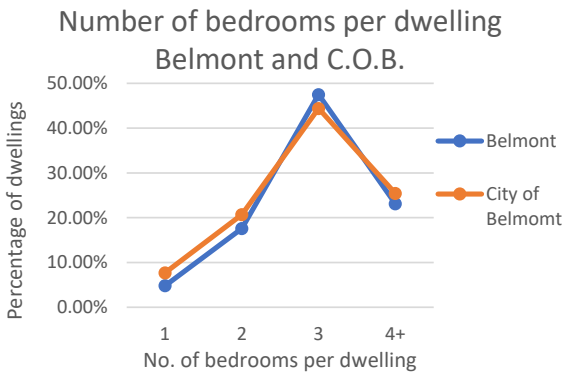

**Change in dwelling types – 2011 & 2021**




**Housing Growth**




**Bedrooms/dwelling**




**People/dwelling**

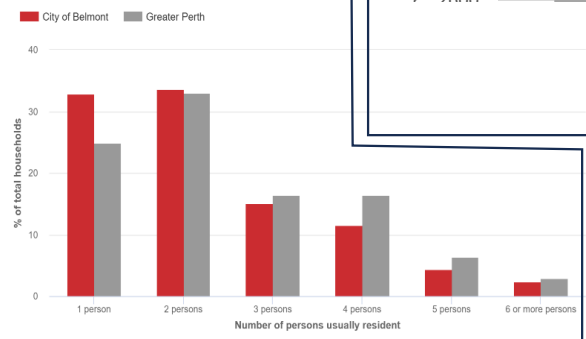



***Table 1: Snapshot (Source: ABS 2024 and .ID Community 2024)***

## Belmont Overview

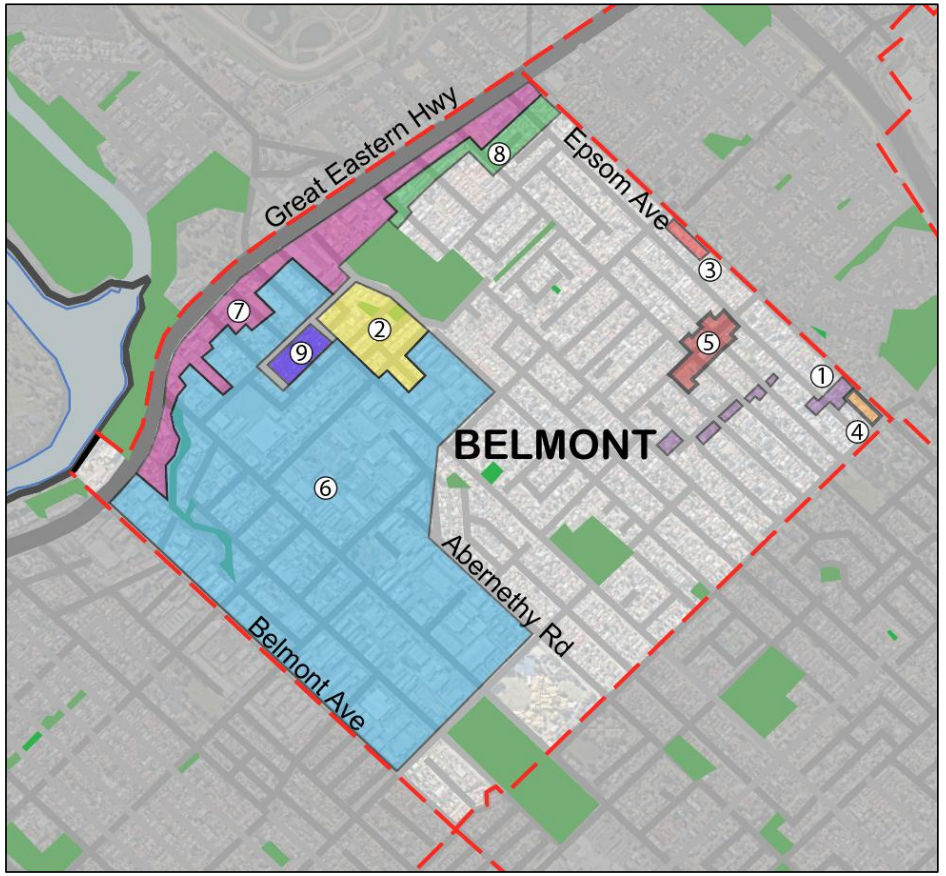
Location and Focus Areas

The suburb of Belmont comprises an area of 4.38 square kilometres and is generally bound by Great Eastern Highway in the north, Epsom Avenue in the east, Sydenham Street in the south and Belmont Avenue in the west.

There are 9 key focus areas within the suburb of Belmont that will be analysed as part of this Local Housing Strategy, These include:

1. Perth Airport Buffer
2. Belgravia Residential Estate
3. Epsom Avenue Local Centre
4. Belmay Local Centre
5. Belvidere Street Neighbourhood Centre
6. Belmont Business Park – Mixed Business Zone
7. Great Eastern Highway Corridor
8. Belmont Corridor Transition Area
9. Belgravia/Barker Streets Policy Area

Land outside of these focus areas will be discussed more broadly in the city-wide section of the Local Housing Strategy or within a specific other suburb.



Key Features

**Connectivity**

- Belmont has road and vehicle access facilitated through Great Eastern Highway and Abernethy Road.
- Good access to public transport including the 998/999 circle route which traverses Hardey Road and Wright Street.
- Public transport routes provide connections to adjacent local government areas, Redcliffe Train Station, and Elizabeth Quay among others.
- Belmont contains extensive bicycle and pedestrian paths. These include shared paths along Belmont Avenue, Abernethy Road and Fairbrother Street. Bicycle routes are also located along Knutsford Avenue, Alexander Road, Daly Street, and Barker Street.

**Centres and Services**

- There are four activity centes within the suburb of Belmont. These include:
  - Epsom Avenue Local Centre
  - Belmay Local Centre
  - Belvidere Street Neighbourhood Centre
  - Belmont Business Park Specialised Centre
- Epsom Avenue Local Centre and Belvidere Street Neighbourhood Centre provide a high level of convenience goods and services.
- Belmay Local Centre currently provides a limited range of goods and services with the sole retail tenancy being a liquor store.
- The Belmont Business Park is a significant employment and activity generator, comprising a wide variety of land uses.
- The Belmont Primary School is located within the suburb and is bound by Great Eastern Highway, Belgravia Street, Barker Street and Lapage Street.

**Public Open Space**

- Belmont has the highest proportion of residential properties (36%) required to travel further than 400m to access any Public Open Space (POS).
- At least 2.3% of residential properties within Belmont are further than 700m from any POS. The City's Public Open Space Strategy proposes investigating opportunities to develop additional POS areas, aiming to increase the number of residential properties located within 400 metres of POS. This could be achieved either by acquiring additional land or repurposing existing property owned by the City.

**Development Patterns**

- Belmont's residential development mainly occurred in the 1980s and 1990s, with smaller amounts from the 1960s-70s and earlier periods.
- The suburb has experienced moderate growth between 2011 and 2021 (approximately 18%, compared to 26.4% for the City of Belmont).
- Belmont currently contains 2,334 residential lots. Of these, 512 lots, based on their size and width, have the capacity for infill development. However, it is important to recognise that not all landowners may choose to pursue further development of their properties.

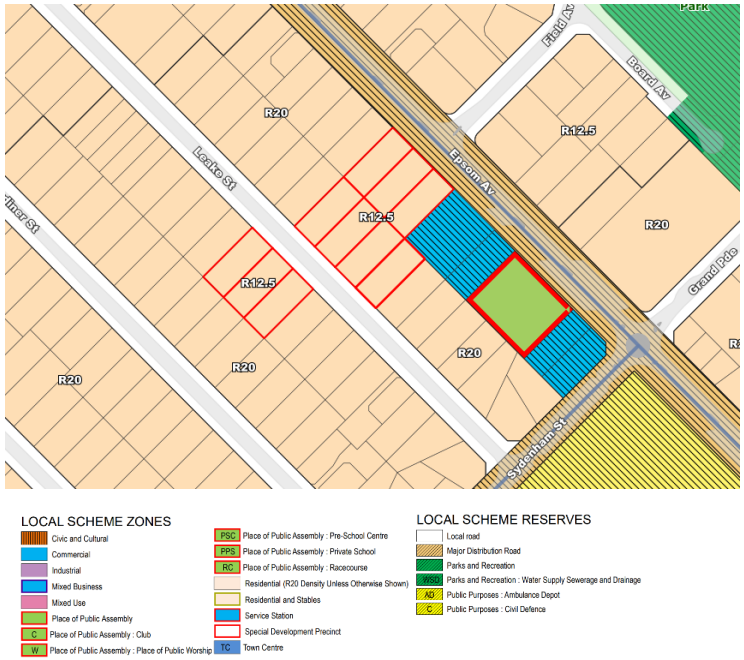
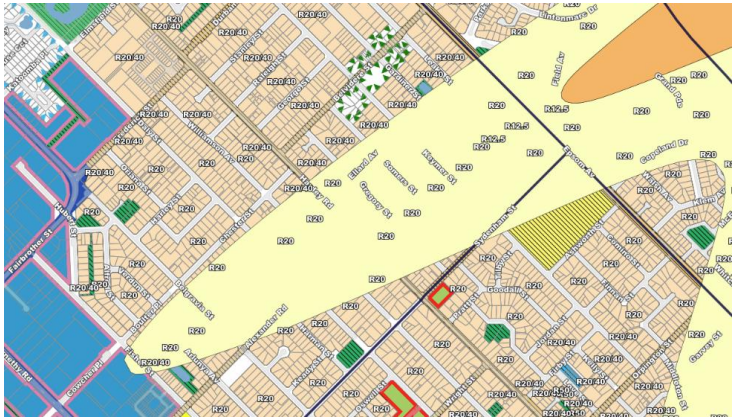
## Suburb Wide Actions

Suburb wide actions for the suburb of Belmont have been prepared based on information from the Key Features section, the Focus Area Summary Table, and Appendix 1 – Population and Housing Characteristics. By integrating these sources, actions were developed to facilitate and support the development of future housing within Belmont.

- Through the implementation of the City's Public Open Space Strategy, investigate additional opportunities for public open space through acquiring additional land or repurposing existing property owned by the City.
- Encourage a variety of housing options to cater to the evolving needs of the community, especially with Belmont's projected rise in single person households, and the current prevalence of dwellings with four bedrooms or more.

- Promote alternative transport modes, such as public transport and active travel, to reduce reliance on private vehicles.

## Focus Areas

| 1: Perth Airport Buffer | Strategies |
|---|---|
|  | 2. Protect residential development from inappropriate land uses and conversely protect non residential land uses from encroachment of residential development.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>**Key Considerations and Opportunities**<br>• A portion of the 20-25 Australian Noise Exposure Forecast (ANEF) Noise Contour associated with Perth Airport is located within the suburb of Belmont. This is shown in Figure 2 below:<br><br>Figure 2<br>• Due to aircraft noise impacts, State Planning Policy 5.1 (SPP 5.1) contains requirements for the development of land within the 20+ ANEF contours. |




LOCAL SCHEME ZONES

- Civic and Cultural
- Commercial
- Industrial
- Mixed Business
- Mixed Use
- Place of Public Assembly
- C — Place of Public Assembly : Club
- W — Place of Public Assembly : Place of Public Worship
- PSC — Place of Public Assembly : Pre-School Centre
- PPS — Place of Public Assembly : Private School
- RC — Place of Public Assembly : Racecourse
- Residential (R20 Density Unless Otherwise Shown)
- Residential and Stables
- Service Station
- Special Development Precinct
- TC — Town Centre

LOCAL SCHEME RESERVES

- Local road
- Major Distribution Road
- Parks and Recreation
- WSD — Parks and Recreation : Water Supply Sewerage and Drainage
- AD — Public Purposes : Ambulance Depot
- C — Public Purposes : Civil Defence

- The Policy specifies that the maximum dwelling density should generally be limited to R20 within the ANEF 20 contour, and R12.5 within the ANEF 25 contour.
- The R20 density code can be increased within the ANEF 20-25 contour where:
  - Land is identified as appropriate for more intensive development through strategic planning instruments such as a regional or sub-regional structure plan;
  - A higher density coding is desirable to facilitate redevelopment or infill development of an existing residential area; and
  - It can be demonstrated that the public benefits of higher density coding outweigh the negative impacts of exposing additional residents to aircraft noise.
- Noise insulation is not mandatory for residential development within the ANEF 20-25 contour.
- While SPP 5.1 requires a notification to be placed on title advising of aircraft noise for lots within the 20-25 ANEF contour, single houses that meet the deemed-to-comply provisions of the Residential Design Codes (R-Codes) are currently exempt from requiring development approval. This prevents notifications being placed on title.
- Local Planning Scheme No. 15 (LPS 15) augments the exemptions set out in Clause 61 of the Deemed Provisions by requiring development approval for single houses within the 25-30 ANEF contour. This allows for a notification to be placed on title. However, this does not capture single houses within the 20-25 ANEF contour.
- The ANEF contours have been reviewed resulting in some properties:
  - Being within an ANEF contour that weren't previously.
  - Being subject to a higher ANEF contour.
  - Being subject to a lower ANEF contour or outside the ANEF contour.
- Belmont contains 10 lots with an R12.5 density code that were previously within the 25-30 ANEF contour. Following a review, these lots are now located within

| | | |
|---|---|---|
| | | the ANEF 20-25 contour. This change presents an opportunity to increase the density code to R20, aligning it with the adjacent land. Although this would not allow for additional subdivision (as all lots are 850m$^2$), it would offer greater development flexibility.<br><br>• There are a number of lots within the street block bordered by Gregory Street, Belvidere Street, Hardey Road and Ellard Avenue that are coded R20 while the rest of the street block is coded R20/40. Through the preparation of the new local planning scheme, it may be appropriate to align the future density code of these lots with the balance of the street block some of which are also subject to the 20-25 ANEF noise contour. |
| **Actions:** | **Zoning**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to establish a Special Control Area with provisions that require lodgement of development applications to support the implementation of SPP 5.1. | |
| | **Residential Density**<br>2. Through the preparation of a new local planning scheme, investigate the appropriateness of:<br>- Upcoding existing R12.5 coded lots at No. 228-232 Epsom Avenue, 202-207 and 209 Leake Street to R20<br>- Upcoding existing R20 lots within the street block bound by Gregory Street, Belvidere Street, Hardey Road and Ellard Avenue to align with the density code of other lots within the block.<br>- Retaining the R20 density code for all other R20 lots previously within the 25-30 ANEF contour. | |

| **2: Belgravia Residential Estate** | **Strategies** |
|---|---|
| | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>7. Facilitate medium and high density infill development which is of high-quality design and positively contributes to the streetscape.<br>9. Facilitate development overlooking public open spaces to provide surveillance and amenity for residents. |
| | **Key Considerations and Opportunities – you haven't really said any opportunities?** |

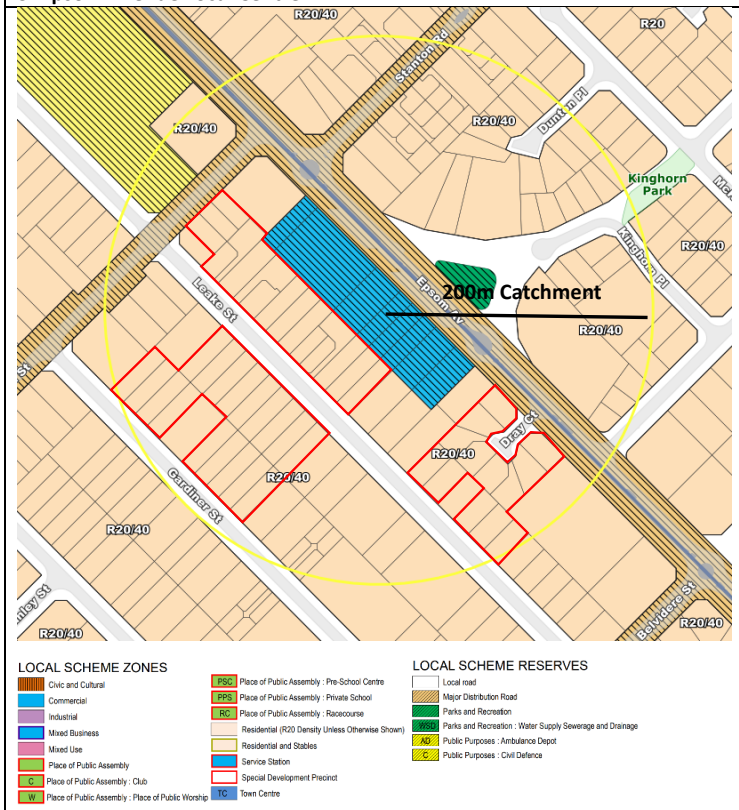



- *Local Planning Policy 5: Belgravia Residential Estate* was prepared in 2003 and adopted under the City's previous Town Planning Scheme No. 14 in 2004. The Policy guided the development of the former Belmont Western Power Depot site.
- Whilst the Policy facilitated high quality development outcomes, it contains many provisions which duplicate requirements of Local Planning Scheme No. 15 and/or State Planning Policy 7.3 Volume 1 (R-Codes). This presents an opportunity to reduce development requirements and streamline the City's planning framework.
- Land within the Belgravia Estate is currently zoned 'Special Development Precinct' which is not a model zone within the *Planning and Development (Local Planning Schemes) Regulations 2015*. There is an opportunity to rezone this land to 'Residential' through the preparation of a new local planning scheme.
- Whilst the Policy provided guidance regarding the density coding of land within the precinct, there is currently no density coding applied to the land under the Local Planning Scheme. There is an opportunity to apply a density code to this land through the preparation of a new local planning scheme.
- Under Local Planning Scheme No. 15, all development requires development approval.
- The precinct contains contemporary dwellings which are in good condition, and there is limited opportunity for redevelopment of existing housing stock at present.
- Due to the proximity of 1A – 1C Katoomba Place to the 'Mixed Business' zone on the opposite side of the road, Local Planning Policy 5 (LPP 5) designates these properties as a 'Mixed Use' area. 1A and 1C have been developed for residential purposes (with Home Occupation or similar), while 1B has been developed as an Office building. There may be an opportunity to regularise this through the preparation of a new local planning scheme. At this stage, applying Additional Uses to these lots is not considered necessary.

| | |
|---|---|
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning the precinct from 'Special Development Precinct' to 'Residential' through the preparation of a new local planning scheme. |

| | |
|---|---|
| | 2. Investigate whether it is necessary to apply an Additional Use of 'Office' to 1A, 1B and 1C Katoomba Place with associated development provisions through the preparation of a new local planning scheme. |
| | **Residential Density**<br>3. Investigate the appropriateness of applying an R30 density coding to land to reflect existing development and lot sizes through the preparation of a new local planning scheme. |
| | **Built Form**<br>4. Undertake a review of *Local Planning Policy 5 – Belgravia Residential Estate* in light of the R-Codes to determine it is still required.<br>5. Investigate whether it is necessary to continue to require approval for all development within the precinct. In doing so, the City should consider the need to assess built form outcomes. |

**3: Epsom Avenue Local Centre**



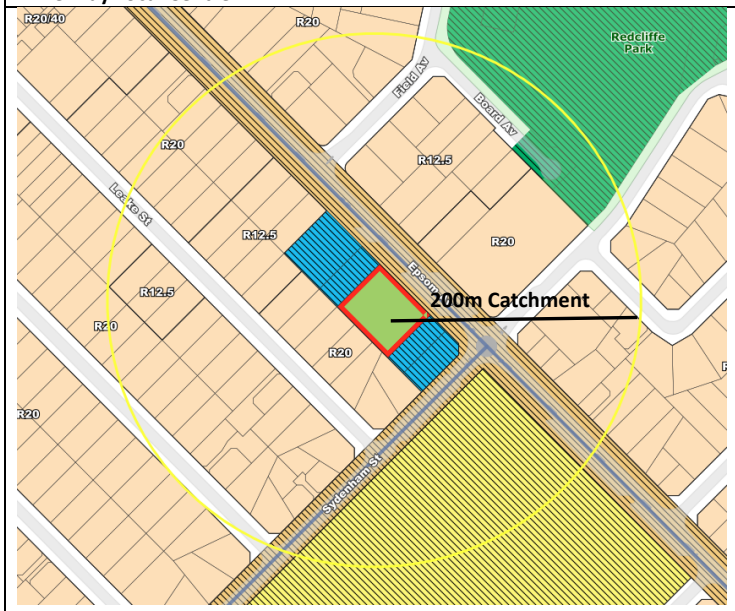

**Strategies**

1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.
3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.
4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.
5. Encourage development of underutilised 'Urban' zoned land.
7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.

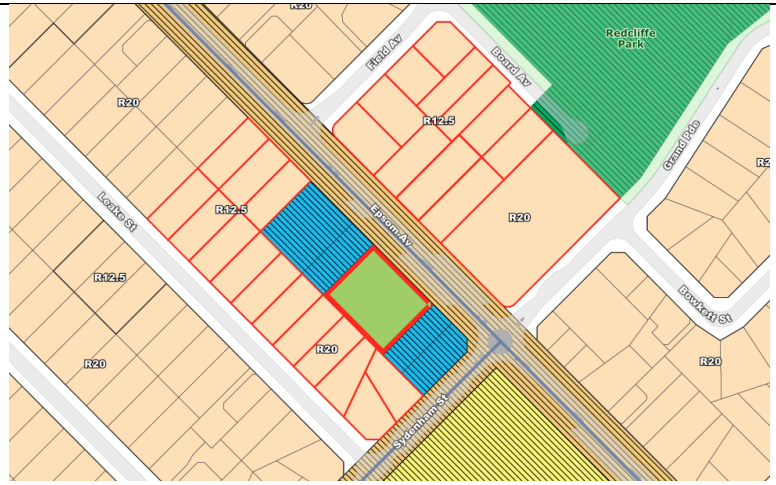
**Key Considerations and Opportunities**

- The centre is identified as a Local Centre within the Activity Centre Planning Strategy (ACPS).
- The local centre offers an opportunity for residential development within and around the centre to support the ongoing viability of commercial uses and provide convenient access to services and amenities.
- The centre does not currently have a density coding under LPS 15. There is an opportunity to apply a density code through the preparation of a new local planning scheme.
- While the current 'Commercial' zoning of the centre aligns with the *Planning and Development (Local Planning Schemes) Regulations 2015,* the Department of Planning Lands and Heritage (DPLH) is seeking to introduce 'Centre', 'Neighbourhood Centre', and 'Local Centre' zones. This presents an opportunity for the future zoning of the local centre to align with these new zones.
- Many buildings within the centre are ageing and in fair condition and may be suitable for redevelopment in the medium to long term. However, land ownership of the centre lots is fragmented, which could impact redevelopment of the centre.
- There may be an opportunity to align with the City's ACPS which states that a residential density code of R60 may be appropriate for the local centre. Development would be limited to a maximum of 3 storeys, a front setback of 2m, and side and rear setbacks of 3m. This scale is considered to integrate well with the

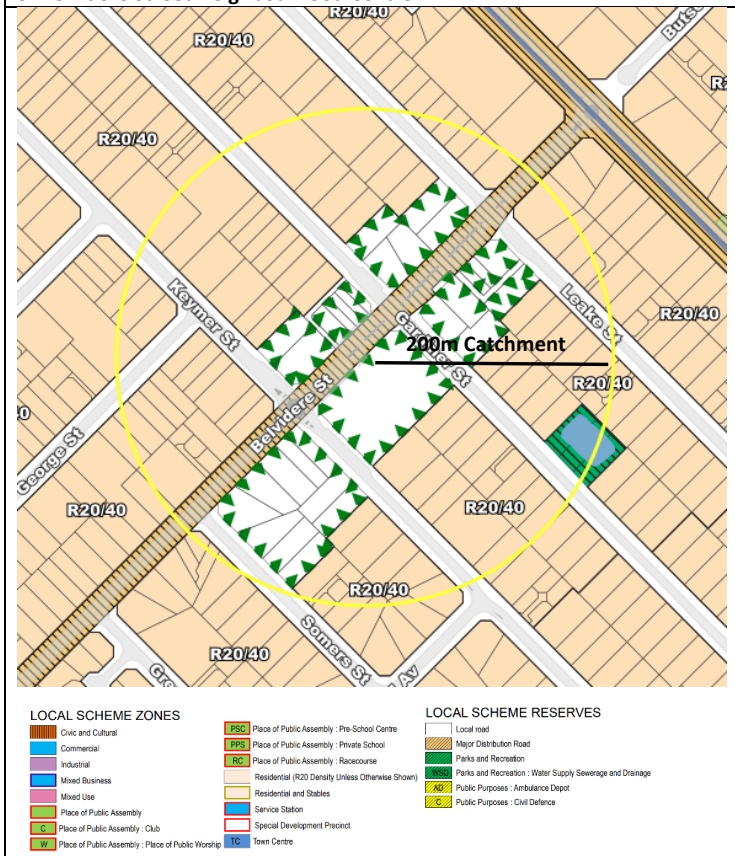
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| | | scale of development that can occur on surrounding land (R40 which can develop to a height of 2 storeys).<br><br>• State Planning Policy 4.2 – Activity Centres (SPP 4.2) sets a residential density target of 25+ dwellings per gross urban zone hectare within the 200 metre catchment of local centres (the 200m catchment is identified in yellow on the plan to the left). A portion of this catchment extends into the suburb of Redcliffe on the opposite side of Epsom Avenue. The local centre has achieved a result of approximately 21.6 dwellings per urban zone hectare within the catchment area.<br><br>• Land within the 200m catchment is coded R20/40. In order to develop above the base R20 density coding, compliance with the provisions of Clause 4.7.3 of LPS 15 must be achieved. One of these provisions is that lots must achieve a minimum frontage of 16m. A number of R20/40 coded lots within the 200m catchment on Leake and Gardiner Streets have frontages less than 16m, generally of approximately 12.27m and 14.27m (outlined in red). This means that in the absence of two lots amalgamating, these lots cannot currently be developed.<br><br>• DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes. This presents an opportunity to apply a uniform R40 density code to land currently zoned R20/40, and to reassess the need for the 16m frontage requirement as part of the new scheme. Adopting a consistent density code and eliminating the frontage requirement could enable the development of additional dwellings within the 200m catchment of the centre, potentially boosting local business revenue through increased population density. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning land within the centre to 'Local Centre' zone through the preparation of a new local planning scheme. | |
| | **Residential Density**<br>2. Investigate the appropriateness of applying an R60 density coding to land within the local centre through the preparation of a new local planning scheme, consistent with the recommendation of the Activity Centre Planning Strategy. | |
| | 3. Through the preparation of a new local planning scheme, investigate the appropriateness of applying an R40 density code to land currently coded R20/40 surrounding the local centre. | |
| | **Built Form**<br>4. Investigate planning controls in a new local planning scheme to prevent residential developments without commercial components within the activity centre and ensure a suitable transition between commercial and residential land uses. This may be in the form of a Local Planning Policy. | |

| 4: Belmay Local Centre | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br><br>**Key Considerations and Opportunities**<br>• The local centre has no designated density coding under LPS 15.<br>• The centre is identified as a Local Centre within the Activity Centre Planning Strategy.<br>• While the current 'Commercial' zoning of the centre aligns with the *Planning and Development (Local Planning Schemes) Regulations 2015,* the Department of Planning Lands and Heritage (DPLH) is seeking to introduce 'Centre', 'Neighbourhood Centre', and 'Local Centre' zones. This presents an opportunity for the future zoning of the local centre to align with these new zones.<br>• Buildings within the local centre are ageing and in fair condition, and may be suitable for redevelopment in the medium to long term.<br>• Currently, the only retail land use is Liquor store, and the activity centre offers limited convenience services to the local community.<br>• There may be an opportunity to align with the City's Activity Centre Planning Strategy which states that a residential density code of R60 may be appropriate for the local centre. Development would be limited to a maximum of 3 storeys, a front setback of 2m, and side and rear setbacks of 3m. These setbacks will provide an appropriate separation to land abutting the Centre and present opportunities for landscaping. The potential scale of development is considered to integrate well with the surrounding residential density codes which facilitate development to a height of two storeys. |

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| | • SPP 4.2 sets a residential density target of 25+ dwellings per gross urban zone hectare within the 200 metre catchment of local centres (the 200m catchment is identified in yellow on the plan to the left). A portion of this catchment extends into the suburb of Redcliffe on the opposite side of Epsom Avenue. The local centre has achieved a result of approximately 7.82 dwellings per urban zone hectare within the catchment area.<br><br>• The local centre and majority of its 200m catchment are located within the 20-25 ANEF contour. State Planning Policy 5.1 specifies that the maximum residential density should generally be limited to R20 within this ANEF contour. However they can be increased where:<br><br>  ○ Land is identified as appropriate for more intensive development through strategic planning instruments such as a regional or sub-regional structure plan;<br>  ○ A higher density coding is desirable to facilitate redevelopment or infill development of an existing residential area; and<br>  ○ It can be demonstrated that the public benefits of higher density coding outweigh the negative impacts of exposing additional residents to aircraft noise.<br><br>• While the local centre does not currently offer convenience goods and services that meet the everyday needs of the community, it may be appropriate to increase density codes (e.g. to R40) immediately adjoining the local centre and on the opposite side of Epsom Avenue as shown by the red outline on the below image. This may be a catalyst for investment and redevelopment within the local centre and act as a transition area from the R60 density code that may be applied to the centre. |

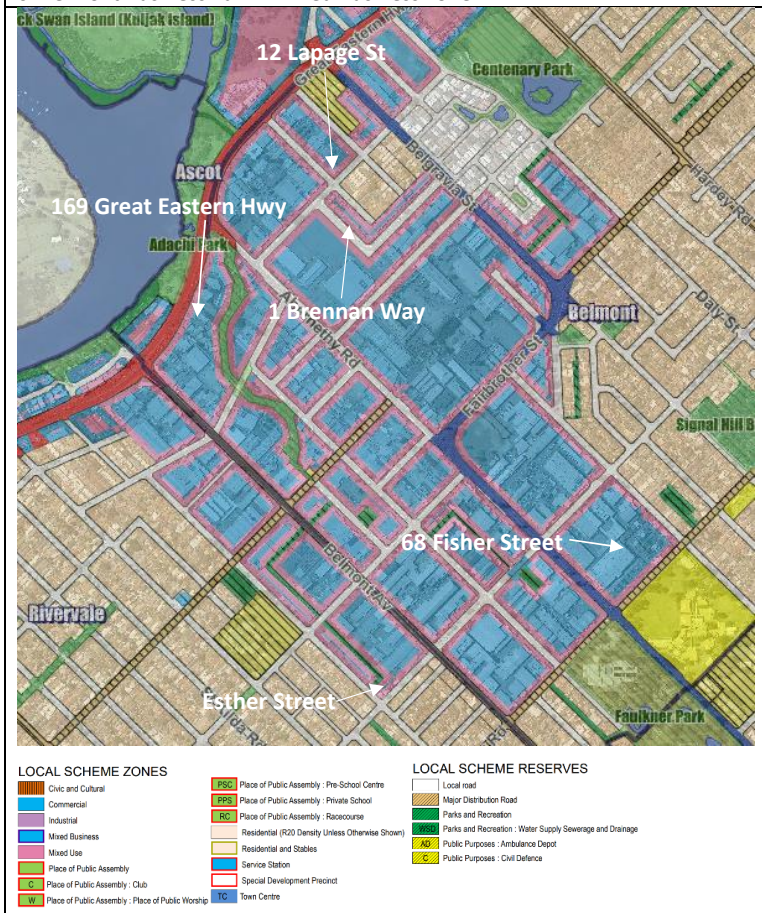
<table>
<tr><td></td><td>

<ul><li>There may be an opportunity to look at further density increases following investment in the local centre aimed at serving the daily needs of the community.</li></ul></td></tr>
<tr><td rowspan="3">Actions:</td><td>Zoning<br>1. Investigate the appropriateness of rezoning land within the centre to ‘Local Centre’ through the preparation of a new local planning scheme.</td></tr>
<tr><td>Residential Density<br>2. Investigate the appropriateness of applying an R60 density coding to land within the local centre under a new local planning scheme consistent with the recommendation of the City’s Activity Centre Planning Strategy.<br>3. Investigate the appropriateness of upcoding lots immediately adjoining the local centre and on the opposite side of Epsom Avenue to R40 through the preparation of a new local planning scheme.</td></tr>
<tr><td>Built Form<br>4. Investigate planning controls in a new local planning scheme to prevent residential developments without commercial components within the activity centre and ensure a suitable transition between commercial and residential land uses. This may be in the form of a Local Planning Policy.</td></tr>
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| 5: Belvidere Street Neighbourhood Centre | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape. |
| | **Key Considerations and Opportunities** |
| | • The centre is identified as a Neighbourhood Centre within the Activity Centre Planning Strategy.<br>• The Neighbourhood Centre offers an opportunity for residential development within and around the centre to support the ongoing viability of commercial uses and provide convenient access to services and amenities.<br>• Development within the precinct is guided by Local Planning Policy No. 15 – Belvidere Main Street Precinct Design Guidelines (LPP 15). This Policy was adopted in May 2016, however since that time there has been considerable changes to the planning framework (e.g. introduction of R-Codes Volume 2) and the local property and retail market.<br>• The current 'Special Development Precinct' zone is not a model zone within the *Planning and Development (Local Planning Schemes) Regulations 2015*.<br>• There is currently no density coding applied to the land, nor does LPP 15 provide clear guidance on desired residential densities or plot ratio.<br>• LPP 15 encourages residential development within the centre above commercial land uses on the ground floor. The Policy currently provides for a maximum building height of 5 storeys within the Centre. |

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| | • Despite the guidance of LPP 15, no residential development has been undertaken in accordance with the Policy. Whilst there is existing low density residential development within the Centre, this was constructed prior to the Policy being introduced for the precinct.<br><br>• Given LPP 15 contains controls tailored to a landowners development aspirations which haven't been realised, it may be appropriate to revoke the policy. An R-AC4 density code could be applied to land within the Centre. Development would be limited to a maximum height of three storeys and a plot ratio of 1.2.<br><br>• To the south-east of the neighbourhood centre, the 20 ANEF (2009) contour previously impacted upon the radius of the R20/40 density codings. A number of lots that are within a walkable catchment to the centre are no longer within the 20 ANEF (2022) contour, and there is an opportunity to recode these lots.<br><br>• SPP 4.2 sets a residential density target of 25+ dwellings per gross urban zone hectare within the 200 metre catchment of centres (the 200m catchment is identified in yellow on the plan to the left). The centre has achieved a result of approximately 21.36 dwellings per urban zone hectare.<br><br>• Many of the buildings within the centre are ageing and may be suitable for redevelopment in the medium to long term.<br><br>• There are also large vacant land parcels and underdeveloped sites within the centre. These sites have the potential to assist in facilitating additional residential development within the centre.<br><br>• Development surrounding the centre predominantly in the form of grouped dwellings has occurred within the last two decades. Land fragmentation and the age and condition of dwellings within the area may generally serve as a barrier to further development above existing densities. However, there remains a large number of lots with development or subdivision potential at existing densities.<br><br>• The City is aware that DPLH are seeking to rationalise flexible density codes through the preparation of new local planning schemes. Therefore, it may be appropriate to |

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| | investigate applying a straight R40 density code to the land currently coded R20/40 and investigate the need for the 16m frontage requirement. |
| **Actions:** | **Zoning**<br>1. Investigate rezoning of the centre to 'Neighbourhood Centre' through the preparation of a new local planning scheme. |
| | **Residential Density**<br>2. Investigate the appropriateness of applying a density code of R-AC0 or R-AC4 to the neighbourhood centre through the preparation of a new local planning scheme, consistent with the recommendation of the Activity Centre Planning Strategy.<br>3. Investigate the appropriateness of existing density code of lots within 400m of the neighbourhood centre. Consider the following:<br>- Upcoding existing R20 lots within the street block bound by Gregory Street, Belvidere Street, Hardey Road and Ellard Avenue to align with the density code of other lots within the block (currently R20/40).<br>- Retaining the R20 density code for all other R20 lots previously within the 25-30 ANEF contour.<br>- Recoding the existing R20/40 lots surrounding the neighbourhood centre to R40 through the preparation of a new local planning scheme. |
| | **Built Form**<br>4. Investigate planning controls in a new local planning scheme to prevent residential developments without commercial components within the activity centre and ensure a suitable transition between commercial and residential land uses. This may be in the form of a Local Planning Policy.<br>5. Consider if any planning controls contained within the design guidelines should or can be incorporated into a new local planning scheme.<br>6. Undertake a review of *Local Planning Policy No 15 – Belvidere Main Street Precinct Design Guidelines*. |
| | **Dwelling Diversity**<br>7. Through the review of LPP 15, engage with local landowners, including the Department of Communities/Development WA, to gauge their intentions for their landholdings. |

| 6: Belmont Business Park – Mixed Business Zone | Strategies |
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|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>2. Protect residential development from inappropriate land uses and conversely protect non-residential uses from encroachment of residential development. |
| | **Key Considerations and Opportunities** |
| | • The current Mixed Business zone is not a standard zone within the Model Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015.*<br>• There is an opportunity to align the future zoning with the Model Provisions by applying a zoning of 'Service Commercial' to the area. This zone is similar to the existing 'Mixed Business' zoning and provides for a range of wholesale businesses, showrooms, trades and services.<br>• The Mixed Business zone area was historically industrial in nature. Since the 1980s, this area has transitioned to comprise more commercial and large format retail activities.<br>• Part of the area was rezoned to Business Enterprise under the City's previous Town Planning Scheme No. 6 (TPS 6), then under TPS 14 the whole area was rezoned to Mixed Use. From the TPS 14 report: '*The clear change away from traditional industrial uses towards mixed commercial activities has increased over the last ten years and the Council is supportive of the transition particularly where it may give rise to the establishment of residential uses.*' The rationale behind this is unclear, however it may be attributed to the City's population decline prior to the 2000s.<br>• Due to uncertainty by landowners and tenants in regard to acceptable land uses under TPS 14, the City of Belmont initiated a Study title the 'Mixed Use Study'. This study was completed in the early 2000s and supported the establishment of the 'Mixed Business' zone. While the study was inconclusive about the necessity for residential uses in the precinct, it noted the mixed public sentiment regarding residential uses in the Business Park. |

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| | • Local Planning Policy No. 10 – Residential Land Uses in the Mixed Business Zone (LPP 10) was prepared to provide guidance on where residential land uses may be considered appropriate in the Mixed Business zone. LPP 10 has a requirement for 'some business use' where residential uses are proposed.<br><br>• There are several residential uses (predominantly grouped dwellings and an aged care facility) within the Mixed Business zone, including several on land zoned Industrial under the Metropolitan Region Scheme (MRS). (68 Fisher, Esther Street, 169 Great Eastern, 1 Brennan, 12 Lapage as shown on the image to the left on the previous page).<br><br>• Residential land uses are 'A' uses in the Mixed Business zone under LPS 15.<br><br>• While the locational criteria of LPP 10 is acknowledged, the permissibility of the use within the zone obligates the City to consider any proposal within that zone, which could result in undesirable locations being proposed. Furthermore, the reliance on a Local Planning Policy as a "due regard" document creates an undesirable situation.<br><br>• There is no residential density coding designated on the scheme map under LPS 15. There is some inconsistency around density as LPP 10 specifies densities that the City will consider, however this conflicts with Clause 4.2.3 of LPS 15 which states the following:<br>*"The Residential Design Codes density applicable to land within the Scheme area is to be determined by reference to the Residential Design Codes density number superimposed on the particular areas contained within the borders shown on the Scheme Map or where such an area abuts another area having a Residential Design Code density, as being contained within the area defined by the centre line of those borders."*<br><br>• While the Belmont Business Park is focused on providing light industrial and business park type uses, the Central Sub-Regional Planning Framework stipulates that existing industrial centres should be preserved and protected from incompatible residential encroachment. |

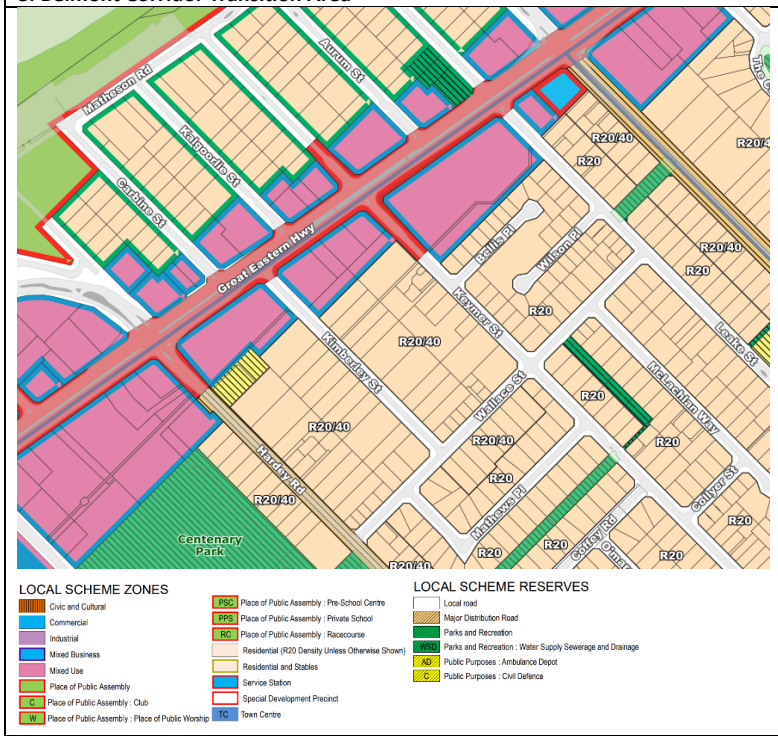
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| | | • As per State Planning Policy 4.1 - Industrial Interface (SPP 4.1), it is also necessary to consider land use conflicts and the interface between industrial facilities and sensitive land uses, i.e. residential development.<br><br>• Considering the early 2000s Mixed Use Study found no need for residential uses in the Business Park, coupled with the State's position on preserving industrial centres it may be appropriate to prevent further residential development in the Mixed Business zone. This also presents an opportunity to align future zoning and land use with the 'Industrial' zoning under the MRS.<br><br>• The Great Eastern Highway urban corridor is intended to provide for a mix of active commercial and residential land uses. The City has prepared the Great Eastern Highway Urban Corridor Strategy to guide development along the corridor. Consistent with the intent of this Strategy, a 'Mixed Use' zone may be more appropriate over the lots directly adjacent to Great Eastern Highway in place of the existing 'Mixed Business' zone. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of applying a 'Service Commercial' zone to the Belmont Business Park through the preparation of a new local planning scheme.<br>2. Investigate changing the permissibility of residential uses from 'A' to 'X' in the existing Mixed Business zone through the preparation of a new local planning scheme. Consider applying Additional Uses for existing residential developments.<br>3. Investigate rezoning the existing 'Mixed Business' zoned lots fronting Great Eastern Highway to 'Mixed Use' through the preparation of a new local planning scheme.<br>4. Review and/or investigate revoking Local Planning Policy No. 10<br>5. Advocate for a Metropolitan Region Scheme Amendment to change the zoning of 68 Fisher Street from 'Industrial' to 'Urban'. | |
| | **Built Form**<br>6. Investigate planning controls to ensure appropriate interface between Mixed Business zoned land and Residential zoned land. | |

| 7: Great Eastern Highway Corridor | Strategies |
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|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>5. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance. |
| | **Key Considerations and opportunities** |
| | • Great Eastern Highway is identified as an Urban Corridor in Perth and Peel @ 3.5 Million. These areas focus on higher density residential development integrated with active uses.<br><br>• In line with this, the City of Belmont has prepared the Great Eastern Highway Urban Corridor Strategy to guide development along the corridor. The Strategy presents the Belmont section of Great Eastern Highway as an 'Activity Corridor' envisioning active, commercial land uses on ground floors, with upper floors accommodating residential and additional commercial uses.<br><br>• To support implementation of the Great Eastern Highway Urban Corridor Strategy, Council has adopted Local Planning Policy No. 20. The policy provides built form guidance for proponents and decision makers. Therefore, it may be appropriate to apply an R-AC0 density code to the corridor so that development is undertaken in accordance with the policy.<br><br>• Lots along Great Eastern Highway offer accessibility via both private motor vehicles and public transport. The corridor connects to the Perth CBD, Perth Airport, and other major regional roads. It also includes a high-frequency bus route providing access to the Perth CBD, Airport, Midland, and the Redcliffe Train Station. |

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| | • All lots are subject to transport noise considerations, and so future development will be assessed against State Planning Policy 5.4 – Road and Rail Noise (SPP 5.4).<br><br>• The majority of lots are zoned 'Mixed Use' and 'Mixed Business', generally featuring wide and/or deep configurations, providing potential for more substantial built forms.<br><br>• The current 'Mixed Use' zone objective under LPS 15 allows for certain industrial activities, which is viewed as being inconsistent with the desired outcomes of the draft Corridor Strategy. There is an opportunity to review these objectives through the preparation of a new local planning scheme.<br><br>• There is an opportunity for alignment with the City's ACPS which includes an action to investigate the appropriateness of rezoning the 'Mixed Business' zoned lots fronting Great Eastern Highway to 'Mixed Use'. This change may align better with the intended mix of active commercial and residential uses as promoted by Perth and Peel @ 3.5 Million.<br><br>• Currently, LPS 15 offers limited guidance on residential development within the 'Mixed Use' zone and does not specifically assign residential density codes.<br><br>• Clause 4.2.3 of LPS 15 requires residential density codes to be assigned based on adjoining properties codes, which is inconsistent with the Central Sub-Regional Planning Framework, where codes of R60 or higher are seen as suitable for urban corridors.<br><br>• Development viability requires careful consideration along Great Eastern Highway, presenting an opportunity to provide viable densities and built form controls. Additionally, there is potential to supply housing that addresses the need for increased dwelling diversity, particularly smaller dwelling types within the City of Belmont. Accordingly, the Great Eastern Highway Urban Corridor Strategy envisions heights of up to 10 storeys and a plot ratio of 3.0 between Epsom Avenue and Hardey Road, and up to 15 storeys with a plot |

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| | ratio of 5.0 for the remainder of the corridor. To support this development, applying an R-AC0 density code may be appropriate for the corridor. |
| **Actions:** | **Zoning**<br>1. Through the preparation of a new local planning scheme, review the 'Mixed Use' zone objectives to ensure that the statutory planning framework allows for the desired mix of commercial and residential land uses.<br>2. Investigate rezoning 'Mixed Business' zoned lots within the urban corridor to 'Mixed Use'. |
| | **Residential Density**<br>3. Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply an R-AC0 density code to the corridor so that future development is undertaken in accordance with the built form controls contained within Local Planning Policy No. 20. |
| | **Built Form**<br>4. Consider the need for additional specific site and development requirements for the Mixed Use zoned lots under the new local planning scheme, e.g. building height, plot ratio, rear setbacks abutting residential zoned land. |

**8: Belmont Corridor Transition Area**




**Strategies**

1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.
3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.
7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.
11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance.

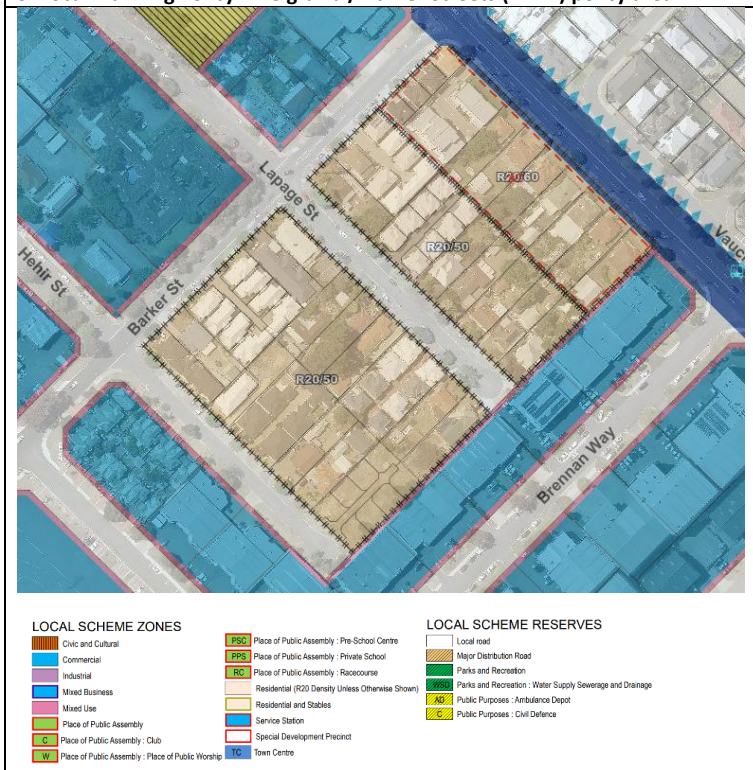
**Key Considerations and opportunities**

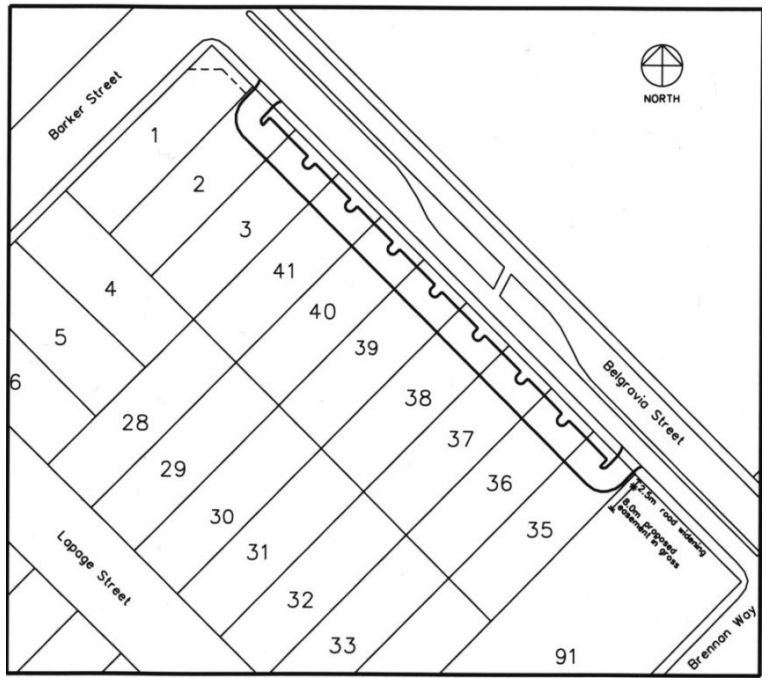
- Land near the urban corridor presents an opportunity for increased residential densities to support corridor uses and create a suitable transition. This aligns with the Central Sub-Regional Planning Framework.
- Establishing a transition area is also consistent with the City's Great Eastern Highway Urban Corridor Strategy, which highlights areas that may accommodate additional residential development.
- In the short term, land fragmentation and the age and condition of existing dwellings in the transition area may hinder development beyond current densities.
- Densities ranging from R40 to R160 could be appropriate. The extent of the transition area and corresponding density code will be further explored through the development of a new local planning scheme.

**Actions:**

**Residential Density**

1. Through the preparation of a new local planning scheme, identify an appropriate transition area from Great Eastern Highway and investigate suitable density codes.

| 9: Local Planning Policy 4 Belgravia / Barker Streets (LPP 4) policy area | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>7. Facilitate medium and high density infill development which is of high quality and positively contributes to the streetscape. |
| | **Key Considerations and Opportunities** |
| | • Belgravia Street is an 'Other Regional Road' and serves as a connection between the Belmont Town Centre, Mixed Business Zone, Great Eastern Highway and the Garratt Road Bridge.<br><br>• Lots fronting Belgravia Street present opportunities for development subject to considerations such as road widening and transport noise (State Planning Policy 5.4 – Road and Rail Noise).<br><br>• *Local Planning Policy 4 Belgravia / Barker Streets* was prepared in 2002 to guide redevelopment of the area. The Policy considers the need to limit the number of access points to onto Belgravia Street and the desire for high quality development.<br><br>• For lots fronting Belgravia Street (Precinct 1) the following must be achieved in order to develop:<br>○ *"Any land affected by the Belgravia Street road widening having been ceded;*<br>○ *A minimum lot size of 1,400m$^2$;*<br>○ *The removal of existing dwellings;*<br>○ *The achievement of a high standard of development through establishing an individual identity for each dwelling, imaginative layout, variation in building design and the use of complementary colours and materials; and*<br>○ *With the exception of high quality terrace style developments, any development should comply with all aspects of Clause 5.7.3 of Local Planning Scheme No. 15.*<br>○ *Where terrace style developments are proposed, variations to any of the above standards will be considered in terms of their likely impact on the amenity of future residents and adjoining landowners."*<br><br>• Seven of the original 10 lots within Precinct 1 still contain their original dwellings and have not been developed at the higher density. These dwellings may be suitable for redevelopment. |

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| | • The combination of required road widening, and the easement proposed by the adopted Vehicle Access Plan (see below image) results in a significant portion of these lots being undevelopable.<br><br><br>• LPS 15 permits the Additional Uses of Consulting Rooms, Office, Showroom, and Studio for 56 Barker Street and 34-48 Belgravia Street (outlined in red on the plan to the left on the previous page). LPP 4 requires the following to be achieved for Additional Uses:<br>○ *"Any land affected by the Belgravia Street road widening having been ceded;*<br>○ *A minimum lot size of 1,400m2* |

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| | ○ *The removal of existing dwellings and the production of a design customised for the new proposed use(s);*<br>○ *Mixed use buildings incorporating residential dwellings shall consist of a vertical layering of landuses (e.g. office ground floor, residence above) and separate front doors being provided to the commercial and residential components."*<br><br>• LPP 4 also contains provisions that guide the standard of development, parking provision, signage and fencing of developments within Precinct 1.<br><br>• For R20/50 coded lots (Precinct 2), the following must be achieved to develop above the base density code:<br>○ *"A minimum lot size of 1,500m2 or a minimum 30 metre frontage to a gazetted constructed road;*<br>○ *The removal of existing dwellings;*<br>○ *The design having regard for the nature of existing abutting landuses;*<br>○ *The achievement of a high standard of development through establishing an individual identity for each dwelling, imaginative layout, variation in building design and the use of complementary colours and materials;*<br>○ *With the exception of high quality terrace style developments, any development should comply with all aspects of Clause 5.7.3 of Local Planning Scheme No. 15."*<br><br>• Extensive development has occurred within Precinct 2 however there remains a number of lots with development potential.<br><br>• While there are isolated lots that would not be able to achieve compliance with the required minimum site area or frontage requirements, the City looks at proposals on a case-by-case basis.<br><br>• The City is aware that DPLH are seeking to rationalise flexible density codes through the preparation of new local planning schemes. There may be opportunity to apply straight density codes to the precinct through the preparation of a new local planning scheme. |
| **Actions:** | **Zoning and Built Form** |

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| | 1. Undertake a holistic review of the local planning framework (LPS 15, LPP 4 and Vehicle Access Plans (VAPs)) relating to the Belgravia Street Corridor to determine the most appropriate approach for redevelopment of remaining lots within this precinct. Consider:<br>○ The need for VAPs, or identification of alternative methods to consolidate access for future development.<br>○ The need and/or appropriateness of existing Additional Uses.<br>○ The suitability and effectiveness of local planning policy provisions. |
| | **Residential Density**<br>2. Investigate the appropriateness of applying straight density codes through the preparation of a new local planning scheme. |

# Appendix 1 - Population and Housing Characteristics

**Population**

The 2021 residential population for the City of Belmont was 42,257, which represents a population density of 1,062 persons per square kilometre. The 2021 Census data revealed the suburb of Belmont had a population of 6,959 people. From 2011 to 2021, Belmont's population increased by 696 people or 11.1%. Forecasts undertaken by Forecast id predict that by 2041 Belmont's population will increase to 11,161 people and have a density of 2,546 persons per square km.

**Age Structure**

The suburb of Belmont and the City of Belmont had similar age structures with both having a median age of 36 years, increasing from 34 in 2011. Despite similarities, the suburb of Belmont had a lower proportion of people in the younger age groups (0 to 17 years) and a lower proportion of people in the older age groups (50+ years) compared to the City of Belmont (see **Figure 1**). The percentage of the population between 0 and 17 years of age is 17.7%, and 29.8% were aged 50 years and over. This is compared to 18.4% and 30.7% respectively for the City of Belmont. Belmont also had a large percentage of 'Parents and Homebuilders' (35 to 49 years) at 22.6% compared to 21.7% for the City of Belmont.

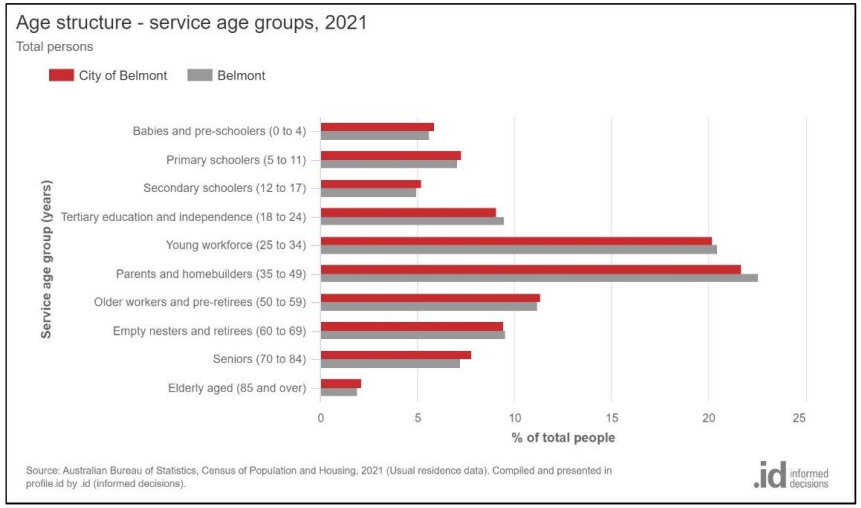



***Figure 1 – Age Structure – Service Age Groups (2021) (.id 2024)***

Forecasts indicate that by 2031 there will be large increases in the 40 to 44 year age bracket (+170) and large increases in the 60 + age brackets (+726). However, the largest increase between 2021 and 2031 will occur in those aged 25 to 29 accounting for an additional 206 persons (see **Figure 2**). The dominant age structure for persons in the suburb will also change from the 35 to 49 year age bracket which accounted for 22.6% of the total persons in 2021, to the 25 to 29 year age bracket which will grow by 388 and account for 9.9% of the population by 2041.

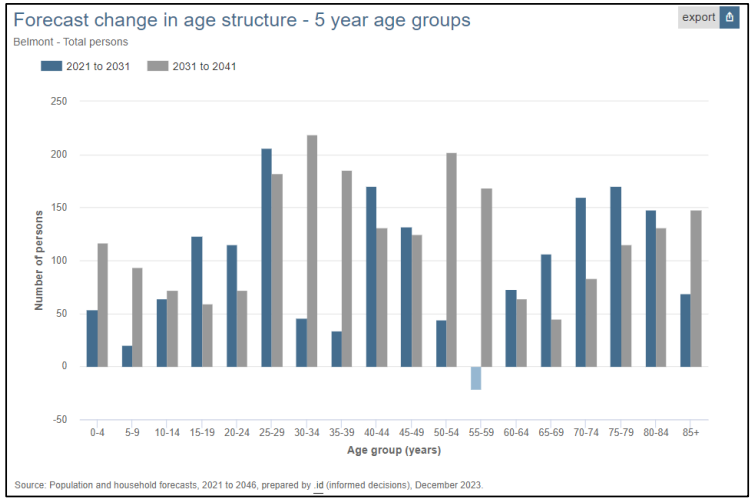



***Figure 2 – Forecasted Change in Age Structure (2021) (.id 2024)***

**Family Structure**

In 2021 the dominant household type in Belmont was lone person households comprising 32% of all households. This was followed by couples with children, one parent families, group households, and other families (see **Figure 3**).

In comparing Belmont, the suburb, with the City of Belmont local government area, there are minimal discrepancies in household types. However, several small differences were identified:

- Higher proportion of lone person households (32% compared to 31.1% for the City of Belmont)
- Lower proportion of couples without children (23.3% compared to 23.9% for the City of Belmont)
- Lower proportion of couples with children (20.7% compared to 22.4% for the City of Belmont)
- Higher proportion of group households (6.5% compared to 5.9% for the City of Belmont)

The largest changes between 2011 and 2021 occurred in the number of lone person households (+197 households) and in the number of households with children (+105 households). Forecasts undertaken by Forecast Id predict that lone person households will remain the dominant household type and account for 37% of all households. By 2041, forecasts indicate that Belmont's household types will be as follows as visualised by **Figure 4**:

- 1,654 (37%) lone person households (+519)
- 1,131 (25.3%) Couples without children (+278 households)
- 918 (20.5%) couples with children (+193 households)
- 380 (8.5%) one parent family (+86 households)
- 266 (5.9%) group households (+43 households)
- 124 (2.8%) other families (+21 households)

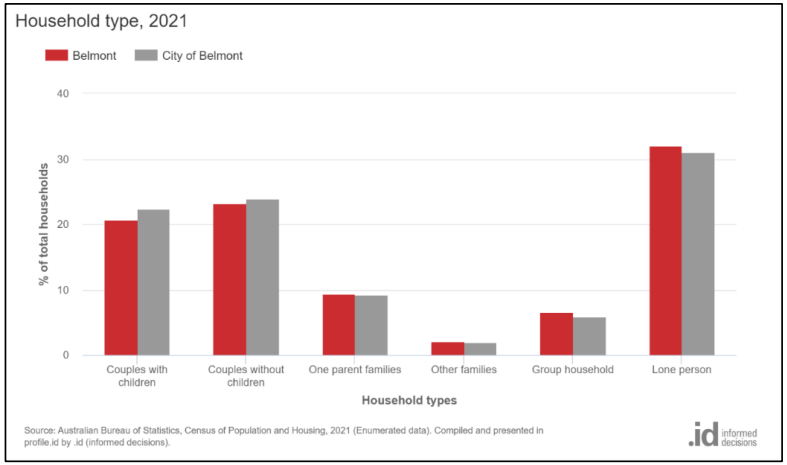



***Figure 3 – Household Type (2021) (.id 2024)***

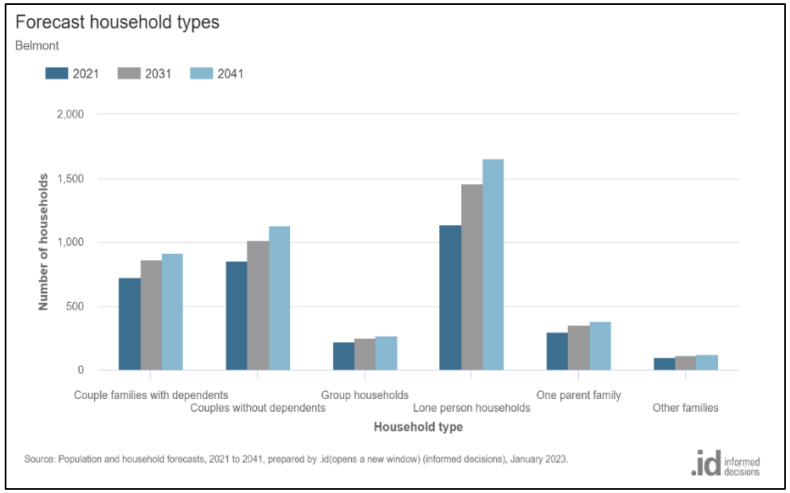



***Figure 4 – Forecast Change in Household Types (.id 2024)***

**Dwelling Structure**

In 2021 the types of dwellings in Belmont compared to the City of Belmont revealed some notable differences. As shown in **Table 2**, 75.4% of all occupied dwellings in Belmont in 2021 were separate houses, 18.4% semi-detached/row/terrace house/ townhouses, and 6% flats or apartments. Between 2011 and 2021, Belmont experienced the largest increase in separate house typologies. As shown in Table 1, an additional 472 separate houses were delivered in the suburb during this period. However, there was also a reduction in 174 semi-detached/row/terrace house/townhouses.

The following are significant differences between dwelling types in 2021 between the suburb of Belmont and the City of Belmont local government area:

- The City of Belmont has 65% of separate house dwellings, compared to Belmont's 75.4%.
- The City of Belmont has 14.4% of flat or apartments, compared to Belmont's 6%.

It is expected that Belmont will see an increase in the number of flats and apartments between 2021 and 2041, anticipated to occur along Great Eastern Highway and within activity centres.

| **Belmont - Dwellings (Enumerated)** | **2021** | | | **2011** | | | **Change** |
|---|---|---|---|---|---|---|---|
| **Dwelling type** | **Number** | **%** | **City of Belmont %** | **Number** | **%** | **City of Belmont %** | **2011 to 2021** |
| Separate house | 2,156 | 75.4 | 65 | 1,684 | 69.0 | 73 | +472 |
| Semi-detached, row or terrace house, townhouse etc. | 525 | 18.4 | 20.3 | 699 | 28.7 | 15.1 | -174 |
| Flat or apartment | 171 | 6.0 | 14.4 | 40 | 1.6 | 11.6 | +131 |
| Other | 0 | 0.0 | 0.1 | 0 | 0.0 | 0.1 | 0 |
| **Total Private Dwellings** | **2,852** | **100.0** | **100.0** | **2,423** | **100.0** | **100.0** | **+429** |

***Table 2: Dwelling Structure 2011-2021 (ABS 2024)***

**Number of Bedrooms**

In 2021 Belmont, when compared to the City of Belmont, had a lower proportion of dwellings with 2 bedrooms or less, and a similar proportion of dwellings with 4 or more bedrooms. There are 22.4% of dwellings with two bedrooms or less, and 21.4% had 4 or more, compared with 27.5% and 24.2% for the City of Belmont respectively. As visualised by **Figure 5**, the notable differences between the number of bedrooms per dwelling in Belmont and the City of Belmont are as follows:

- The City of Belmont has a smaller percentage of 3 bedroom dwellings (42.2% compared to 47.5%)
- Belmont (suburb) has a smaller percentage of 0 or 1 bedroom dwellings (4.8% compared to 7.8%)
- Belmont (suburb) has a smaller percentage of 2 bedroom dwellings (17.6% compared to 19.8%)

As shown in **Figure 6**, the largest increase in number of bedrooms between 2011 to 2021 has been in 4 bedroom dwellings (+199 households). However, as shown in **Figure 7**, the largest increase in household size between 2011 to 2021 has been in 1 person households (+206 households). In addition, only 4.8% of all households had 0 to 1 bedrooms despite 34% of all households being lone person households. Therefore, there is a clear discrepancy between the size of dwellings within Belmont and the number of people residing in them. To address this issue, it is important to promote diversity in dwelling types, including single bedroom dwellings, within the suburb. This will help cater to the specific housing needs of Belmont's residents.

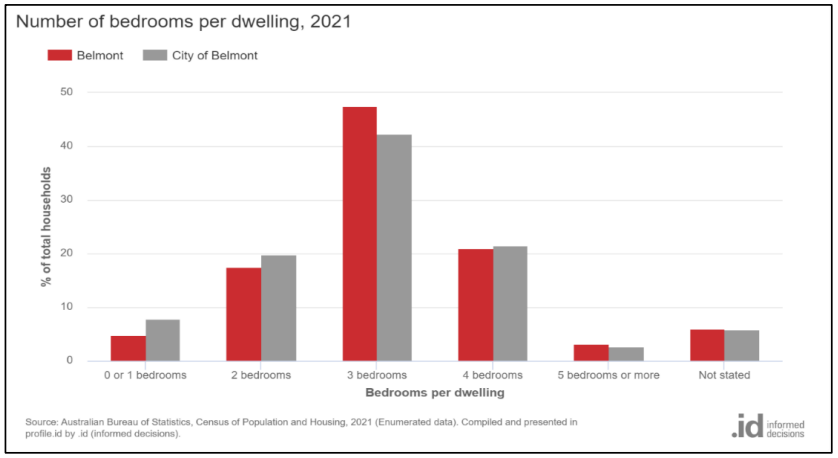



***Figure 5 – Number of bedrooms per dwelling – Belmont and City of Belmont (.id 2024)***

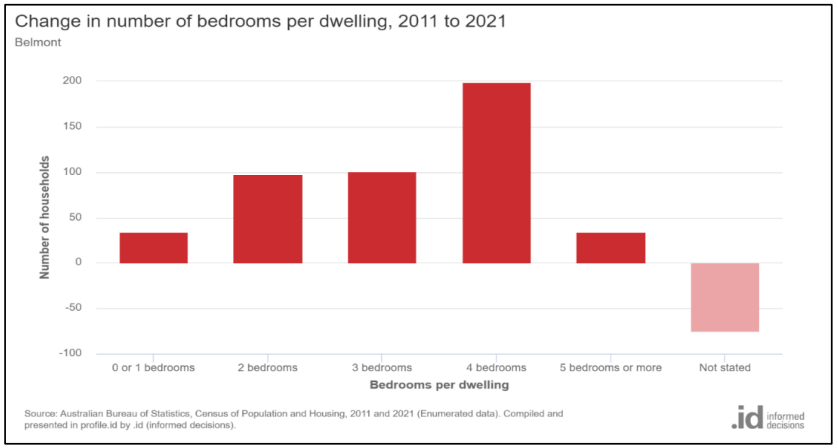



***Figure 6 – Change in number of bedrooms per dwelling 2011 to 2021 (.id 2024)***

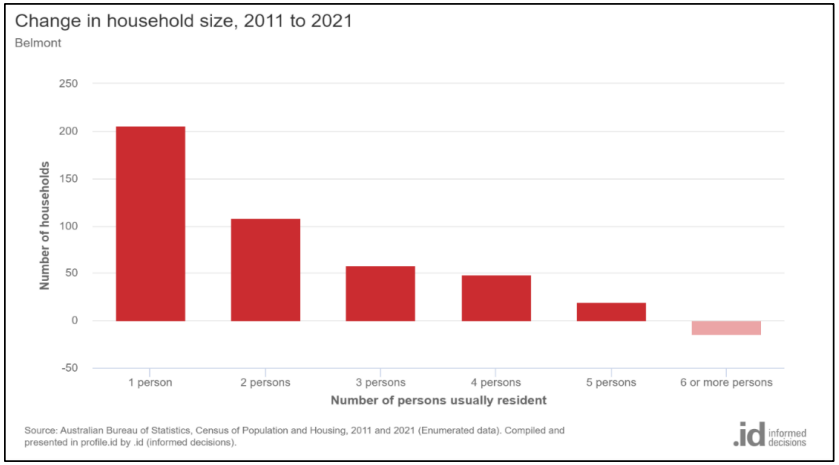



***Figure 7 – Change in Household Size 2011 to 2021 (.id 2024)***

# PART 2
# City Wide

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## Overview

This section of the Local Housing Strategy will analyse and provide direction on various housing matters across the City of Belmont specifically relating to the following:

- Local Planning Policies
- Flexible density codes and associated criteria
- R20 coded lots which are 450m$^2$ or less in area
- R20 coded corner lots and subdivision
- Clause 4.2.3 - Land not Currently Assigned a Density Code
- Short term rental accommodation
- Special purpose dwellings
- Environmentally sustainable design
- Heritage

Through a review of these matters and the formulation of associated actions, it is intended that this section of the Local Housing Strategy will guide the direction of the future planning framework. This guidance aims to facilitate the provision of housing that effectively addresses community requirements while remaining congruent with contemporary planning principles.

## Local Planning Policies

Overview

- The City of Belmont has prepared a number of Local Planning Policies to guide residential development under Local Planning Scheme No.15 (LPS 15) as outlined in Table 1.
- Some of these Policies have been reviewed within various sections of this Strategy. A further detailed review will be undertaken through the preparation of a new local planning scheme.
- Several policies modify the deemed-to-comply requirements of the R-Codes. If retained in the City's new planning framework, these variations will require WAPC approval.

Action

- Review the City's Local Planning Policies through the preparation of a new local planning scheme, rescinding or amending existing policies and preparing new ones as required to guide residential development.

| No. | Local Planning Policy | Local Planning Policy Summary |
|---|---|---|
| 1. | Performance Criteria – Town Centre Density Bonus Requirements | Contains criteria for the assessment of development proposed in excess of R50 and up to a maximum density of R100, within the Belmont Town Centre precinct. The criteria aim to achieve high quality development outcomes. |
| 2. | Orrong Road | Contains criteria to guide development abutting Orrong Road and adjacent land. The Policy aims to achieve high quality development outcomes and limit direct vehicular access to Orrong Road. |
| 3. | Abernethy Road (Gabriel to Dempsey Streets) Policy Area | Contains criteria to guide development abutting Abernethy Road and adjacent land. The Policy aims to achieve high quality development outcomes and minimise direct vehicular access to Abernethy Road. |
| 4. | Belgravia/Barker Streets Policy Area | Contains provisions to guide the development of land generally bound by Barker Street, Belgravia Street, Hehir Street and 'Mixed Business' zoned properties in Belmont. The Policy encourages the amalgamation of lots to achieve high quality development outcomes and the minimisation of vehicular access to Belgravia Street. |
| 5. | Belgravia Residential Estate Policy | Contains provisions to guide development and facilitate in achieving high quality built form outcomes within the Belgravia Estate. |
| 6. | Ascot Waters Special Development Precinct Policy | Contains provisions to guide development and facilitate in achieving high quality built form outcomes within the Ascot Waters Estate. |
| 7. | The Springs Policy Area | Contains provisions and guidelines that aim to guide and control development within The Springs Precinct. |
| 8. | Invercloy Estate (Nulsen Haven) Special Development Precinct Policy | Contains provisions that aim to facilitate a high standard of development, which complements the presence and cultural significance of the 'Invercloy' building. |
| 10. | Residential Landuses in the 'Mixed Business' Zone | Identifies appropriate locations and development standards for residential land uses within the 'Mixed Business' zone. |
| 13. | Vehicle Access for Residential Development | Provides controls on vehicular access to residential development with an aim to reduce the number of vehicle crossovers. |
| 14. | Development Area 6 (DA6) Vision | Articulates the City of Belmont and Perth Airport Pty Ltd's vision for Development Area 6. |
| 15. | Belvidere Main Street Precinct Design Guidelines | Contains design guidelines that aim to facilitate high quality development outcomes within the Belvidere Main Street Precinct. |

| No. | Local Planning Policy | Local Planning Policy Summary |
|---|---|---|
| 19. | Short Term Accommodation | Provides guidance and standards for establishing and operating short-term accommodation in the City of Belmont, ensuring it does not impact the character and amenity of residential areas while safeguarding their primary purpose of residential areas in providing affordable, long-term housing. |
| 20. | Great Eastern Highway Urban Corridor | Sets out the standards and objectives the City will use to assess development applications for land adjacent to Great Eastern Highway. These standards align with the Great Eastern Highway Urban Corridor Strategy. |
| 21 | Tree Development Exemption and Assessment Policy | Sets out the circumstances in which tree damaging activity is exempt from the requirement to obtain development approval. It also provides guidance for the assessment of applications proposing tree damaging activity, having regard to the matters outlined in Schedule 2, Part 9, Clause 67(2)(p) of the *Planning and Development (Local Planning Schemes) Regulations 2015*. |
| 22 | Design Review Panel | Specifies which proposals should be referred to the Design Review Panel, the matters to be considered by the Panel and its operation. |

*Table 1 - City of Belmont Local Planning Policies*

## Flexible Density Codes and Criteria

Overview and Context

- LPS 15 contains flexible density codes in proximity to high frequency routes, the Belmont Town Centre, and local shopping centres.
- Within the flexible coded areas, a base coding of R20 applies. A higher code may be supported at Council's discretion, subject to the associated criteria being met.
- The flexible density coded areas and their associated criteria aim to facilitate a high standard of residential development. These standards were introduced into LPS 15 in 2011, prior to the Residential Design Codes being updated to contain provisions which facilitate improved design, sustainability and landscaping outcomes.
- Many of the provisions effectively vary the deemed-to-comply provisions of the R-Codes. As a result, there needs to be extremely strong justification for their retention. Given this, it is likely that DPLH and WAPC will require significant justification to support the continuation of these provisions.
- A detailed analysis of the criteria applicable to flexible density coded lots is included below:

Existing Situation and Assessment

**Clause 4.7.3**

- Clause 4.7.3 of LPS 15 contains 13 provisions that need to be met in order for development to be considered above the base R20 density code up to R50. An analysis of these provisions follows:

a) *The frontage of the lot is not less than 16 metres.*

- This provision was based on the premise that a 10m-wide lot could accommodate a functional development while meeting other criteria (e.g. 6m side setback). It aimed to encourage the amalgamation of narrow lots, promoting shared access and enabling better-shaped development sites.
- This provision is inconsistent with the R-Codes which only includes minimum frontage requirements for development at the R25 code and lower.
- This provision effectively precludes subdivision in areas where it may be appropriate. On well-located streets, most lots that meet the 16m frontage requirement have already been subdivided, limiting further opportunities for infill development.
- Removing the minimum frontage requirement is considered appropriate as the R-Codes provide sufficient standards to guide built form outcomes, including garage width, access width, landscaping, minimum dwelling sizes and street surveillance.

b) *Any existing building or development which, in the opinion of the local government, is of low quality and incapable of being upgraded to a standard commensurate with new development is demolished.*

- The intent of this clause is to improve the visual amenity of neighbourhoods by encouraging demolition of existing dwellings which are low quality or incapable of being upgraded.
- Clause 5.2.6 C6 of the R-Codes states the following:

  *"where an existing dwelling is retained as part of a grouped dwelling development, the appearance of the retained dwelling is upgraded externally to an equivalent maintenance standard*

*of the new (or the rest of) the development."*

- This requirement does not apply to subdivisions and is limited to grouped dwellings, excluding single houses.
- It may be appropriate to modify and expand this provision through a new Local Planning Scheme to require that where an existing dwelling is retained as part of subdivision or development, its appearance is upgraded to the satisfaction of the City of Belmont. This will be further investigated through the preparation of a new local planning scheme.

c) *Development comprising of two or more dwellings in a front to rear arrangement achieves a minimum side setback of 6 metres between the side wall of the first dwelling fronting the public street and the side boundary of the parent lot.*

- The 6m side setback is intended to allow space for a paved driveway with landscaping on both sides and to facilitate surveillance between rear dwellings and the street. However, in practice, this provision may not necessarily achieve that outcome, as it can result in excessive driveway width dominating the setback, with minimal landscaping.
- This requirement has also hindered the retention of existing dwellings that could otherwise comply with the R-Codes.
- As the R-Codes set minimum driveway widths and include street surveillance provisions – ensuring dwellings address the street with clearly defined entry points and at least one major habitable room opening facing the street or accessway, it may not be appropriate to include this provision within a new local planning scheme.

d) *Rear dwellings are designed so that significant sections of the front elevations have an outlook to, and are visible from the street.*

- The intention behind this clause was to improve the appearance of grouped dwellings constructed in a front to rear arrangement by avoiding situations where the view from the street is into blank fencing, carports or garage doors. It was also intended to increase passive surveillance.
- As mentioned in point c), the R-Codes already requires at least one major opening from a habitable room of the dwelling to face the street and approach to the dwelling. Therefore it is not considered necessary for this provision to be retained.

e) *A minimum of 50% of the total number of dwellings in the development are two storey where the density exceeds R30.*

- This requirement was included within LPS 15 with the intention of:
  - creating greater open space on the ground with increased amenity between units;
  - ensuring living areas are commensurate with family needs;
  - achieving better informal surveillance on the street;
  - producing greater variation in streetscape through changes in height and design; and
  - Generally producing a higher standard of development.
- It is likely that this provision has contributed to Belmont having a higher proportion of two or more storey dwellings than Greater Perth. In 2021, 59% of all dwellings in Belmont were one storey, and 41% were two or more storeys, compared to 72% and 28%, respectively, for Greater Perth.
- Given recent updates to the R-Codes, including requirements for primary garden areas, tree planting, landscaping, and minimum living area sizes, it is not considered necessary for this provision to be retained. Furthermore, the updated R-Codes now provide greater variety in dwelling types, supporting housing diversity.

f) *Solid external or internal fencing is not permitted where, in the opinion of the local government, views from the dwellings to the public street will be limited.*

- The intent of this clause is to improve the streetscape and passive surveillance between the dwelling and the street.
- The R-Codes provides adequate guidance for front fences to ensure that passive surveillance between the dwellings and the street occurs.
- While the R-Codes doesn't include specific requirements for internal fencing, there is a requirement for dwellings to maintain surveillance to the street.
- Therefore, it is not considered necessary for this provision to be retained.

g) *Dwellings located on the front portion of a lot, or where there is more than one street frontage, are orientated and designed to address all public street(s).*

- The purpose of this clause is to enhance the quality of streetscapes and optimise opportunities for passive surveillance in areas with more than one street.
- Currently the R-Codes do not mandate that a building addresses both street frontages in cases where there are two streets. At times this has resulted in suboptimal outcomes where fencing dominates streetscapes.
- Consequently, it may be appropriate to seek for a similar clause to be included in a new local planning scheme. The clause could require that buildings on corner sites address both adjacent streets and that any fencing is designed to be visually permeable, except where the site abuts a major distributor road or a local distributor road.

h) *Dwellings located adjacent to public open space, right of ways, pedestrian access ways and those other public spaces are orientated and designed to provide views and surveillance of those public areas; and*

- The intent behind this clause is to maximise passive surveillance over public open space, right of ways, pedestrian access ways and other public spaces.
- The R-Codes do not include specific requirements addressing this.
- Therefore, it may be appropriate to retain this clause within a new local planning scheme in order to maximise the safety benefits of passive surveillance.

i) *Solar design principles are incorporated in the design and orientation of each dwelling.*

- This clause aims to improve the liveability of dwellings and reduce reliance on conventional heating and cooling methods by gaining maximum benefit from the climate.
- Recent revisions to Volume 1 of the R-Codes has increased emphasis on solar access and ventilation especially for single houses R50 and above, grouped dwellings in areas coded R30 and above, and multiple dwellings in areas coded R30 to R60. These forms of development would be captured by this clause as they would exceed the base code.
- Volume 2 of the R-Codes also requires consideration to solar access and natural ventilation.
- Therefore, it is not considered necessary for this provision to be retained.

j) *Carports and garages visible from the street are incorporated into the dwelling design so that they are not the dominant feature of the appearance of the dwelling and the streetscape.*

- This clause aims to ensure that dwellings face the street and are not dominated by carports and garages. This enhances the street's visual appeal and maximises opportunities for passive surveillance.
- While this clause is based on best practice planning, adequate guidance is provided by the R-Codes, which limits a garage to occupy 50% of the frontage at the setback line, increasing to 60% in certain circumstances.
- Additionally, the R-Coes require the street elevation of the dwelling to address the street with clearly definable entry points.
- Therefore, it is not considered necessary for this provision to be retained.

k) *Development on corner lots or lots with more than one street frontage, have vehicle access provided from the street with lesser traffic.*

- The intent of this clause is to ensure safe vehicle access by directing it from the less busy street.
- The R-Codes adequately address vehicular access by requiring it from the lowest available street in the hierarchy.
- Therefore, it is not considered necessary for this provision to be retained.

l) *The number of crossovers for any development is minimised, having regard to the relevant local planning policy.*

- Through the preparation of LPS 15, a number of benefits of reducing the number of crossovers were identified. These include:
  - Contributes to attractive streetscapes;
  - Enhances vehicle safety;
  - Minimises the potential impacts on the root systems of street trees;
  - Allows for additional space for informal vehicle parking and bin collection; and
  - Minimises impacts on verge infrastructure.
- It is considered that the overall results of this clause and the application of LPP 13 have been positive.
- To ensure that development has regard to LPP 13 and other policies that control vehicle access, it may be appropriate to retain this clause through the preparation of a new scheme. This may require approval from the WAPC as LPP 13 varies deemed to comply requirements of the R-Codes.

m) *Dwellings that are orientated in a side by side configuration comply with the vehicle access requirements contained within the relevant local planning policy.*

- This clause seeks to minimise the number of vehicle crossovers particularly for lots with a frontage less than 24 metres.
- The content and intent of this clause is already addressed within clause l) and so it is somewhat superfluous.

**Clause 4.7.4**

- Clause 4.7.4 states the following:
  *"The local government may vary the requirement that single storey dwellings are permitted only up to an R30 density where not less than one-third of the dwellings are to be used by aged or dependent persons."*
  This clause was introduced into LPS 15 following public consultation, where the community identified a need to actively promote housing for aged and dependent persons.

- As Clause 4.7.3(e) is unlikely to be included in the new Local Planning Scheme, this clause is also expected to be removed.
- Further discussion on aged and dependent persons dwellings and single bedroom dwellings is included in subsequent sections of this Strategy.

**Clause 4.7.5**

- Clause 4.7.5 states the following:
  *"no density bonus for Aged or Dependent Persons Dwellings or Single Bedroom Dwellings, which is in addition to the increased density from the minimum site area being reduced by up to one-third, shall be granted on any land within any of the flexible coded areas depicted on the Scheme Map with the exception of the Town Centre Precinct. Any such additional bonus within the Town Centre Precinct shall be subject to compliance with the performance-based criteria contained in the relevant local planning policy."*
- This clause was included in LPS 15 to prevent developers from leveraging the upper code to obtain an additional one-third site area reduction for Aged or Dependent Persons Dwellings or Single Bedroom Dwellings, except within the Town Centre Precinct, where access to amenities and public transport supports higher-density living.
- Such a situation has the potential to result in the maximum density code being exceeded.
- This approach was not considered appropriate for an area with a base density code of R20.
- As DPLH is encouraging the rationalisation of flexible density codes, and the City will investigate the application of single density codes, this clause is unlikely to be included within a new local planning scheme.

**Clause 4.7.6**

- Clause 4.7.6 states the following:
  *"In dealing with development applications involving or contemplating development of land within any of the flexible coded areas other than those with a maximum density of R50 depicted on the Scheme Map, the base R20 code shall apply to any dwelling but may, at the discretion of the local government, be increased to a higher code up to a maximum specified provided:*

  *a) Compliance with the requirements of clause 4.7.3 above.*
  *b) In the opinion of the local government there is a high degree of compliance with the performance based criteria contained in the relevant local planning policy."*

- DPLH has provided advice that alignment with standard single density codes is the State's preferred approach, and that flexible density codes will not be permitted. Therefore, the City will investigate the application of single density codes. Consequently, it is expected that this clause will not be included within a new local planning scheme.
- A review of the provisions of LPP 1 is included in the following sections of this strategy.

**Clause 4.7.7**

- Clause 4.7.7 states the following:
  *"In dealing with subdivision of land within any of the flexible coded areas depicted on the Scheme Map, the local government may support subdivision provided:*

*a) (i) a maximum density of R30 is not exceeded; and*
*(ii) the application for subdivision approval demonstrates that development on the subdivided lots is capable of compliance with the requirements of Clause 4.7.3 where applicable;*

or

*b) Development on the land has been constructed to plate height in accordance with a Development Approval granted by the local government, and the subdivision is consistent with the Development Approval."*

- This clause ensures that subdivision is only permitted where the resulting lots can accommodate compliant development. If the density does not exceed R30, compliance with Clause 4.7.3 must be demonstrated at the subdivision stage. For higher densities, subdivision is only permitted once development has been constructed to plate height in accordance with an approved development application.
- This approach ensures the design outcomes required by Clause 4.7.3 are addressed before subdivision or can be met during development post-subdivision.
- Given the requirements of Clause 4.7.3 are generally not anticipated to be carried forward, Clause 4.7.7 may also not be required. This will be further investigated through the preparation of the new local planning scheme.

**Local Planning Policy No. 1 – Town Centre Density Bonus Requirements**

- Local Panning Policy No. 1 – Town Centre Density Bonus Requirements (LPP 1) applies to developments in excess of R50 up to a maximum of R100 within the City's R20/50/100 area.
- LPP 1 is applied through Clause 4.7.6 of LPS 15 which requires developments exceeding R50 to comply with the flexible density code provisions contained within Clause 4.7.3 and the criteria contained in LPP 1.
- LPP 1 has six objectives which in summary aim to achieve high quality development outcomes, streetscapes and living environments.
- LPP 1 requires points one through to seven of the policy statement to be complied with. These points and an evaluation of them has been included below:

It is necessary to preface the analysis below by noting that Volume 2 of the R-Codes was introduced in 2019, significantly improving the approach to apartment-type developments by placing a stronger emphasis on design quality, diversity, and liveability. Additionally, the 2024 R-Code amendments introduced changes for medium-density development, further aligning state planning controls with contemporary design and sustainability principles.

Point 1

- Aged/Dependent Person's or Single Bedroom Dwellings are to be provided as follows:

- *"A minimum of two dwellings being either Aged/Dependent Person's dwellings or Single Bedroom dwellings (i.e. a minimum of two dwellings of this form of housing for example – one Aged Person's dwellings and one Single Bedroom dwelling, or two Aged Person's Dwellings, or two Single Bedroom dwellings) in a development where the total number of units proposed is a maximum of 10 dwellings.*
- *A minimum of four dwellings being either Aged/Dependent Person's dwellings or Single Bedroom dwellings (i.e. a minimum of four dwellings of this form of housing, for example – two Single Bedroom dwelling, or four Aged Person's Dwellings or four Single Bedroom dwellings) in a development where the total number of units proposed is 11 to a maximum of 20 dwellings.*
- *A minimum of six dwellings being either Aged/Dependent Person's dwellings or Single Bedroom dwellings (i.e. a minimum of size dwellings of this form of housing, for example – three Aged Person's dwelling and three Single Bedroom dwelling, or six Aged Person's Dwellings, or six Bedroom dwellings) in a development where the total number of units proposed is 21 to a maximum of 30 dwellings."*

- The above provisions do not require aged or dependent persons or single bedroom dwellings to be provided for developments that exceed 30 dwellings.
- Volume 2 of the R-Codes incorporates requirements on dwelling diversity and universal design. For example, it requires 20% of all dwellings across a range of dwelling sizes to meet silver level requirements or 5% to meet platinum level. Additionally, in the absence of a local planning instrument with specific targets, developments with more than 10 dwellings are to include at least 20% of the apartments with differing bedroom numbers.
- Therefore, it is not considered necessary for this clause to be carried forward into the City's new planning framework.

Point 2

- Point 2 requires the higher standard and quality of development in accordance with the requirements of Clause 4.7.3 of LPS 15.
- This point is no longer required, as Clause 4.7.3 is unlikely to be included in the new local planning scheme.
- It is noted that all multiple dwelling developments are also reviewed by the City's Design Review Panel and against State Planning Policy 7.0.

Point 3

- Point 3 requires the development to not overshadow adjacent properties by more than 50% as at midday 21 June.
- It is noted that the R-Codes adequately deals with overshadowing and solar access for adjoining properties by prescribing maximum overshadowing percentages as follows:
  - R25 and lower – 25% of the adjoining site.
  - R30-40 – 35% of the adjoining site area.
  - R50-60 – 50% of the adjoining site area.
  - R80 or higher – Nil
- Therefore, it is not considered necessary for this clause to be carried forward into the City's new planning framework, as it varies from the standard Deemed-to-Comply provisions of the R-Codes with limited justification for a local variation.

Point 4

- Point 4 requires the development to be orientated to provide maximum direct winter sunlight and ventilation to the development, whilst maintaining privacy in accordance with the

R-Codes.

- It is considered that the R-Codes adequate deals with visual privacy by ensuring the orientation and design of buildings, windows and balconies minimises overlooking.
- The R-Codes also includes provisions for solar access by ensuring adequately solar access for neighbouring properties and optimising the orientation of dwellings to maximise solar and daylight access. It also includes provisions for natural ventilation and energy efficiency.
- Therefore, it is not considered necessary for this clause to be carried forward into the City's new planning framework.

Point 5

- Point 5 states the following:
  *"the development provides exceptional urban design standards and built form that will enhance the desired streetscape. The design will incorporate high quality building materials, architectural detailing and complementary colour schemes. Other amenity features should include pedestrian paths, lighting with communal driveways and common areas, provision of resident facilities with communal open space (e.g. BBQ, gazebo, seating, pool etc)."*
- It is noted that Volume 2 of the R-Codes includes requirements for communal open spaces that enhance resident amenity and offer opportunities for landscaping.
- In addition, the City has established a Design Review Panel that offers independent expert insights into significant development proposals and major projects. The panel's purpose is to attain high quality design outcomes for the City by providing constructive feedback and guiding the formulation, assessment, and decisions related to development proposals.

- Therefore, it is not considered necessary for this clause to be carried forward into the City's new planning framework.

Point 6

- Point 6 requires the provision of features within the development that provide a direct benefit to the residents, streetscape and/or wider community.
- Features include rooftop gardens, public or street art, public seating and courtyards, or other features to be considered at the discretion of Council.
- This requirement has predominantly been fulfilled through the integration of architectural elements aimed at elevating the streetscape.
- It is acknowledged that certain public art installations have fallen below the standard and value typically mandated by Local Planning Policy No. 11 (LPP 11). Consequently, it is considered appropriate to only endorse public art when it aligns with the threshold and requirements outlined in LPP 11.
- Regarding features such as rooftop gardens, public seating and courtyards, Volume 2 of the R-Codes is deemed sufficient in requiring communal open spaces that enhance resident amenity and offer opportunities for landscaping, tree protection, and the establishment of deep soil areas.
- Therefore, it is not considered necessary for this clause to be carried forward into the City's new planning framework.

Point 7

- Point 7 requires a demonstrable commitment to a high standard of energy efficiency and sustainable design.
- It is considered that the R-Codes now adequately guides developments to achieve sustainable development outcomes

through provisions that guide solar and daylight access, natural ventilation, landscape design, adaptive reuse, energy efficiency and water management and conservation.

- As also discussed in following sections of this Strategy, the City will prepare a sustainable development guide to provide guidance to developers and investigate measures to incentivise sustainability outcomes.
- Therefore, it is not considered necessary for this clause to be carried forward into the City's new planning framework.

Actions

- Through the preparation of a new Local Planning Scheme, consider whether any criteria currently applied to flexible density-coded sites should be incorporated into the Scheme.
- Through the preparation of a new local planning scheme, consider the appropriateness of rescinding Local Planning Policy No. 1.

## R20 Coded Lots of 450m$^2$ or Less

Overview and Context

- Clause 4.3.2 (1) of LPS 15 provides for Residential R20 lots which are 450m$^2$ or less in area to have a minimum front setback of 2 metres, an average of 4 metres, and a minimum 45% open space.
- This clause was included within LPS 15 to improve built form outcomes for smaller lots by providing a larger area available for a backyard.
- The R20 provisions still apply for the most part (e.g. outdoor living areas and boundary walls) to ensure that development is consistent with the surrounding context.

Existing Situation and Assessment

- Clause 4.3.2 (1) has generally led to positive outcomes. In particular, it has resulted in larger backyards than would have been achieved at standard R20 requirements. Therefore, it may be appropriate to retain this clause through the preparation of a new local planning scheme.
- There have been cases where application of this clause in dual coded areas has resulted in inconsistent outcomes depending on the sequence of subdivision and development applications. For example, development on a vacant R30 lot created through subdivision would typically be assessed against the R20 code except for the front setback and open space. However, if a development application for grouped dwellings is lodged and subdivision occurs post construction, both applications would be assessed against the R30 code.
- It is likely that these inconsistencies will be resolved if flexible density coded sites are removed through the preparation of a new local planning scheme.

Action

- Through the preparation of a new local planning scheme, investigate whether it is appropriate to retain Clause 4.3.2(1).

## R20 Coded Corner Lot Subdivisions

Overview and Context

- LPS 15 allows R20-coded corner lots with two road frontages to be developed at R30 (Clause 4.3.2(2)).
- This is however contingent upon the demolition of existing structures that are of low quality or poorly sited and the new lots being of a regular shape.
- Clause 4.3.2 (3) does not permit the R30 density bonus being used if lots are amalgamated to attempt to achieve a larger site area.

Existing Situation and Assessment

- The application of Clause 4.3.2 (2) results in positive outcomes by encouraging dwellings that address both streets, leading to improved surveillance outcomes.
- LPS 15 does not permit multiple dwellings on corner lot sites utilising the R30 density bonus.
- This restriction was introduced through Scheme Amendment No. 4 in response to a number of successful State Administrative Tribunal (SAT) appeals that allowed multiple dwellings on corner lots at the R30 density bonus.
- At the time, development standards for multiple dwellings were required to adhere to the provisions included in Part 5 of the R-Codes (design elements for multiple dwellings in areas coded less than R30) and the provisions of Table 1.
- Table 1 of the R-Codes did not specify any site requirements for multiple dwellings at the R30 code. Accordingly, development applications for multiple dwellings at the R30 density were assessed against Part 6 of the R-Codes (design elements for multiple dwellings in areas coded R30 or greater) which prescribed a plot ratio of 0.5 rather than a minimum dwelling site area. This had the impact of permitting a greater number of dwellings per lot.
- Since gazettal of Scheme Amendment No. 4, the R-Codes have been amended to include minimum site criteria for multiple dwellings in areas coded less than R40. Importantly, an average lot size per dwelling of 300m$^2$ has been introduced for the R30 code.

Actions

- Through the preparation of a new local planning scheme, investigate whether it is appropriate to retain the ability for R20 corner lots to achieve an R30 density bonus.
- Through the preparation of a new local planning scheme, consider if it is still necessary to restrict multiple dwellings on corner lots utilising the R30 density bonus.

## Clause 4.2.3 - Land Not Currently Assigned a Density Code

Overview and Context

- Some land within the City is not assigned a density code under LPS 15 but can still accommodate residential development.
- This includes 'Mixed Use' zoned properties within the scheme area.
- Clause 4.2.3 applies to such properties as follows:

  *"The Residential Design Codes density applicable to land within the Scheme area is to be determined by reference to the Residential Design Codes density number superimposed on the particular areas contained within the borders shown on the Scheme Map or where such an area abuts another area having a Residential Design Code density, as being contained within the area defined by the centre line of those borders."*

- The effect of the above is that the density of land not currently assigned a density code is to be determined based on the code of adjoining properties.

Existing Situation and Assessment

- Clause 4.2.3 has rarely been applied, as Clause 4.5 – Variations to Site and Development Standards and Requirements provides for variations.
- In many cases, applying the density code of adjoining sites is not appropriate. For example, 'Mixed Use' properties fronting Great Eastern Highway, in line with strategic planning documents such as Perth and Peel @ 3.5 Million, should support higher-density development than the adjoining 'Residential' zoned properties.
- Given this, Clause 4.2.3 may not be suitable for inclusion in a new Local Planning Scheme.
- Instead, applying density codes to currently uncoded land that can accommodate residential development may be more appropriate.

Actions

- Through the preparation of a new local planning scheme, investigate and apply appropriate density codes for land that can accommodate residential development that does not currently have an allocated density code.

## Short Term Rental Accommodation

Overview and Context

- Short Term Rental Accommodation (STRA) refers to holiday homes, units, or apartments which can be booked for a limited amount of time per year through booking platforms such as AirBnB.
- In recent years, the City of Belmont has witnessed a significant increase in STRA uses, primarily attributed to the success of online booking platforms and the areas proximity to Perth Airport, Perth CBD, Optus Stadium and the Swan River.
- As detailed in Part One of this Strategy, the Australian Housing and Urban Research Institute has identified that short-term rental accommodation (STRA) land uses contribute to decreased rental vacancy rates across Australia.
- When not properly managed, STRA uses can negatively impact the amenity of local neighbourhoods, affecting residents' quality of life.
- Effective management of STRA land uses is crucial to maintain sufficient availability of long term housing that is also affordability.
- The State Government recently released regulatory measures including a position statement, associated guidelines and a registration scheme.
- The Position Statement provides guidance about the appropriate locations and management of STRA uses and stipulates that local governments should consider impacts on long term housing supply and outlines the following key considerations for locating STRA uses outside of 'Tourism' zones:
  - Proximity to tourist amenity and attractions; and
  - Accessibility to public transport; and
  - Locations to minimise adverse interface issues and amenity impacts.
- The Position Statement also indicates that appropriate planning mechanisms can be introduced into the local planning framework to achieve desired tourism and STRA outcomes. Local planning policies are one such mechanism to inform land use and development control.

Existing Situation and Assessment

- Recognising the importance of effective management of STRA uses, research was undertaken to inform the preparation of a STRA Local Planning Policy.
- The following general observations were made about STRA uses within the City of Belmont:
  - There is currently no shortage of accommodation options for visitors in the City of Belmont.
  - STRA uses have eroded the City's long-term housing stock
  - STRA uses have contributed to a lack of affordability.
  - STRA uses are undermining the intended residential density outcomes of the City's flexible density coded areas which seek to increase the number of long term residents.
  - STRA uses have resulted in land use conflicts.
  - STRA uses are largely operating in areas with a lack of tourist amenities or suitable public transport opportunities.

- A STRA Local Planning Policy was prepared and adopted by Council at the 25 July 2024 Ordinary Council Meeting. The Policy states that STRA uses will generally only be supported within 400m of a high frequency public transport stop on Great Eastern Highway and an existing tourist accommodation use.
- The Policy also sets out instances in which STRA uses will not be supported as follows:
  - Applications within multiple dwelling complexes proposing ad hoc STRA uses.
  - Within grouped dwellings on a lot size of less than 350m$^2$.
  - On flexible residential density coded sites which have been developed above the base density code.
  - In the 'Residential and Stables' zone.
  - Within 400m of a school.
- The above criteria aims to minimise the amenity impact of STRA uses and preserve the City's residential areas for long term housing opportunities.

<u>Actions</u>

- Continue to implement Local Planning Policy No. 19 – Short Term Rental Accommodation.

## Special Purpose Dwellings

Overview and Context

- The Residential Design Codes allows for the development of special purpose dwellings, such as ancillary dwellings, aged or dependent persons dwellings, single bedroom dwellings, accessible dwellings, small dwellings and residential buildings.
- Special purpose dwellings offer potential solutions for affordable, smaller, and accessible housing, catering to diverse household needs.

Existing Situation and Assessment

**Ancillary Dwellings**

- An ancillary dwelling is a small, self-contained dwelling on the same site as a single house, grouped dwelling or multiple dwelling.
- Ancillary dwellings can contribute to housing supply, offering an affordable option for renters or those downsizing within their community.
- Recent planning reforms and the introduction of the updated Residential Design Codes has removed the minimum lot size requirement for an ancillary dwelling to be built. They are also now capable of approval on grouped and multiple dwelling sites.
- The deemed to comply provisions of the Residential Design Codes limits the size of ancillary dwellings to 70m$^2$.
- The City of Belmont considers ancillary dwellings up to 100m$^2$ subject to lodgement of a development application. However, this is not an adopted Council Position and is only contained within an information sheet not a planning instrument such as the Local Planning Scheme or a Local Planning Policy.
- This position should be carefully considered in light of the changes to the R-Codes through the preparation of a new local planning scheme to ensure proposals aren't classified as 'ancillary dwelling' when it is more appropriate for them to be classified 'grouped dwelling'.

**Aged/Dependent Persons Dwellings and Accessible Dwellings**

- Belmont is anticipated to see a 41.4% increase in its retirement age population between 2021 and 2031. As this continues, the demand for aged persons dwellings will increase.
- The City's current definition of 'Nursing Home' is inconsistent with the Model Provisions of the Regulations. Therefore, the City should align land use definitions with the Model Provisions and the DPLH's Position Statement – Residential Accommodation for Ageing persons through the preparation of a new local planning scheme.
- The City currently utilises provisions from Local Planning Scheme No. 15, Local Planning Policy No. 1 and the R-Codes in assessing proposals for aged/dependent persons dwellings and accessible dwellings.
- Existing scheme provisions within LPS 15 (Clause 4.7.4 and 4.7.5) allow variations to double storey requirements where aged or dependent persons dwellings are developed. It also restricts density bonuses for aged or dependent persons dwellings except surrounding the Belmont Town Centre. A discussion of these

provisions is included in previous sections.

- LPP 1 requires aged/dependent persons or single bedroom dwellings to be provided at different rates. As discussed in previous sections, these requirements are no longer required because Volume 2 of the R-Codes incorporates suitable requirements on dwelling diversity and universal design. For example, it requires 20% of all dwellings across a range of dwelling sizes to meet silver level requirements or 5% to meet platinum level.
- The R-Codes also offers incentives for aged, dependent and accessible dwellings through various site area concessions.
- To facilitate this form of development, the City should investigate applying higher densities within 200m of activity centres and high frequency public transport stops.

**Single Bedroom Dwellings**

- Belmont has a higher proportion of lone-person households compared to Greater Perth, creating demand for single-bedroom dwellings.
- LPS 15 (Clause 4.7.4 and 4.7.5) allows variations to double-storey requirements for single-bedroom dwellings and limits density bonuses to areas surrounding the Belmont Town Centre. These provisions are discussed in previous sections.
- Part B of Volume 1 of the R-Codes does not mandate a minimum number of single-bedroom dwellings but allows a one-third reduction in minimum and average lot sizes for sites coded R25 and below.
- Under Part C of the R-Codes, single-bedroom dwellings can be treated as small dwellings in areas coded R50 and above (discussed in the next section) or as standard dwellings without site area concessions.

- LPP 1 includes requirements for aged or dependent persons' dwellings or single-bedroom dwellings. However, these are no longer necessary as Volume 2 of the R-Codes includes dwelling mix requirements. Where there is no local housing strategy, developments with more than 10 dwellings must include at least 20% of apartments with differing bedroom numbers. This aligns with the objective of providing a range of dwelling types, sizes, and configurations to cater for diverse household needs and changing demographics.
- To facilitate this form of development, the City should apply higher densities within 200m of activity centres and high frequency public transport stops.

**Small Dwellings**

- Small dwellings provide an alternative approach to meeting different housing needs, including providing for more affordable options.
- They differ to single bedroom dwellings because there is no limitation on the number of bedrooms.
- For sites created for small dwellings, the explanatory guidelines of the R-Codes suggests appropriate measures (such as a Section 70A notification) be applied to limit development to a small dwelling.
- The R-Codes limits small dwellings to 70m$^2$ for single houses and grouped dwellings and 60m$^2$ for multiple dwellings.
- To encourage their development, the R-Codes provides for site area concessions. In areas coded R30 to R40, a small dwelling constructed in accordance with Part B of Volume 1 of the R-Codes can have a reduced minimum and average site area of up to 35% provided that:

- For single houses and grouped dwellings, no site is less than 100m2; and
- For development or subdivision of 4 or more dwellings or sites, the site area reduction is limited to a maximum of 50% of the total number of dwellings or sites.

- In area coded R50 and above, a small dwelling constructed in accordance with Part C can have a reduced minimum and average site area of up to 35%.
- Having reviewed the R-Code provisions relating to small dwellings, it may be appropriate to augment the R-Code provisions to apply the site area concessions more broadly. Currently, the concessions only relate to single houses R30 and above (noting that Part B of the R-Codes doesn't apply to grouped dwellings or multiple dwellings above R25) and grouped and multiple dwellings above R50.

**Shared Living – Residential Building and Community Home**

- Within the City of Belmont, there is increasing trend in shared living arrangements, reflected in the recent increase in proposals for 'Residential Buildings' with six or more bedrooms, often incorporating design elements such as ensuites and kitchenettes in each room.
- There are also concerns that the R-Codes are currently silent on provisions for these types of developments, particularly regarding the density of occupants. Without clear guidance, these developments can effectively subvert intended density controls, resulting in higher-density living arrangements with inadequate living quarters, poor-quality communal spaces, and reduced amenity outcomes.
- These proposals pose challenges, such as parking requirements and unique designs that differ from typical single houses.
- There has also been a rise in proposals for 'Community Homes,' which provide accommodation for individuals who are physically or intellectually handicapped or socially disadvantaged.
- 'Community Home' is not a defined use under the Model Provisions. An appropriate land use definition and permissibility should be further considered through the preparation of a new local planning scheme.
- Due to the unique nature of 'Residential Buildings' and 'Community Homes' the current local planning framework and R-Codes do not provide clear guidance for assessing proposals.
- To address this, the City may need to consider a local planning policy to guide decision-making.

<u>Actions</u>

- Through the preparation of a new local planning scheme, apply appropriate densities and zonings that facilitate aged and dependent persons dwellings and single bedroom dwellings particularly within proximity to activity centres and high frequency public transport opportunities.
- Identify and explore opportunities to align land uses in the current local planning scheme with the Model Provisions through the preparation of a new Local Planning Scheme.
- Through the preparation of a new local planning scheme, investigate whether it is appropriate to prepare a local planning policy to guide the development of special purpose dwellings.
- Through the preparation of a new local planning scheme, investigate whether it is appropriate to augment provisions of the R-Codes to encourage development of special purpose dwellings.

## Environmentally Sustainable Design

Overview and Context

- As mentioned in Part One of this Strategy, it is important that while planning for the City's future housing stock, consideration is given to environmentally sustainable design.
- Integrating sustainability into urban developments not only mitigates environmental impacts but also alleviates the burden of high living costs by reducing energy usage and water consumption.

Existing Situation and Assessment

- Currently, the City's Local Planning Scheme mandates the incorporation of solar design principles in the design and orientation of dwellings proposed above the base density code.
- Several Local Planning Policies further support sustainability, addressing key areas such as energy efficiency, renewable materials, solar access, water management, vegetation, and green roof design.
- As part of the development of a new Local Planning Scheme, it may be appropriate to explore opportunities to enhance sustainable design outcomes. This could include investigating the potential for development incentives when certain sustainability criteria are met or when significant trees are retained.
- Consistent with the City's Environment Strategy, it may also be appropriate to consider the introduction of a policy or guidance that encourages the incorporation of sustainability measures in both residential and commercial development.
- It is also appropriate to continue supporting higher-density development within and around activity centres, particularly in areas near high-frequency public transport routes, such as those surrounding Redcliffe Station. This approach would help promote sustainable urban growth and reduce reliance on private cars.

Actions

- Investigate introducing a sustainable development guide to encourage environmentally conscious development outcomes.
- Through the preparation of a new local planning scheme, investigate ways of incentivising sustainable design outcomes.

## Heritage

Overview and Context

- Heritage is an important cultural asset which can relate to landmarks, private homes, government or institutional buildings, infrastructure, parks and landscapes or land use patterns.
- Heritage places help share history and contributes to the character and identity of an area.
- The *Planning and Development (Local Planning Schemes) Regulations 2015* requires the City to establish and maintain a Heritage List.

Existing Situation and Assessment

- At the June 2023 Ordinary Council Meeting, Council adopted the City's new Local Heritage Survey and Heritage List.
- The City of Belmont contains a wide range of historical places with:
  - 91 places on the Local Heritage Survey;
  - 30 places on the Local Heritage List;
  - 10 Registered Aboriginal Heritage Sites; and
  - 6 places listed on the State Register of Heritage Places.
- The Heritage Survey is a comprehensive record of places that hold cultural heritage value to the City of Belmont. It doesn't impose any limitation on development.
- The Heritage List contains places which have the highest cultural heritage significance and have been assigned a management Category 1 or 2. Inclusion on the Heritage List means that prior to any development occurring on these properties, a development application is required to be submitted to the City for assessment. In assessing the application, the City must have regard to the heritage values of the property.
- In some cases, changes in zoning and density codes can inadvertently encourage the demolition of buildings with heritage significance. Therefore, future zoning and density codes for properties with heritage value should consider the Heritage Survey and Heritage List. For example, the future zoning and density code for the 'Residential and Stables' area should take into account:
  - The precinct has value as a rare surviving example of a suburban area that has retained a significant number of actively-used stables integrated into the urban subdivisions.
  - Evidence in the built environment of a long association with the horse racing industry and the Ascot Racecourse.
  - It has social value to the community for the ongoing provision of horse racing at the Ascot Racecourse.
  - It has social value for its association with the individuals and families who are significant in the history of the local area and/or the racing profession.
- In addition to the City's Heritage List, the City has prepared Local Planning Policy No. 8 – Invercloy Estate Special Development Precinct (LPP 8) to facilitate high quality built form outcomes which are sympathetic to the heritage listed property at 4 Wedderburn Place.
- As detailed in the Ascot section of this Strategy, the City will undertake a review of LPP 8 in light of the R-Codes to determine whether policy provisions are still required.

Actions

- In preparing a new local planning scheme, review existing density codes and zones with consideration for the heritage significance of places.

# PART 2
# Cloverdale

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## Snapshot – Population and Dwellings

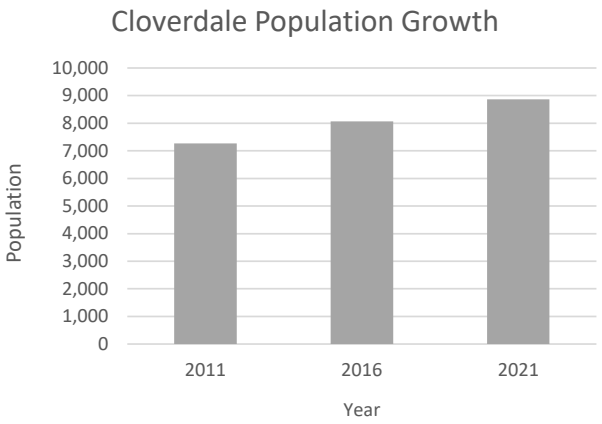
### Current population

**8,864 people**

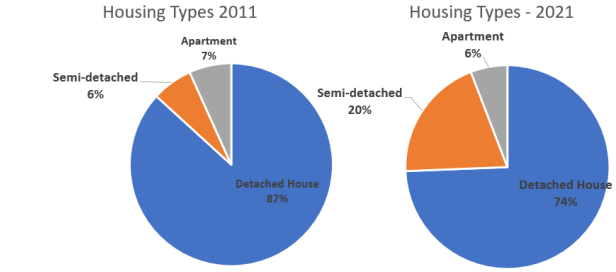
### Current dwellings

**4,053**

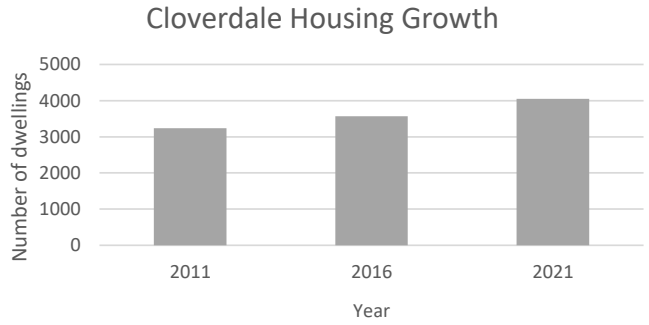
### Population Growth



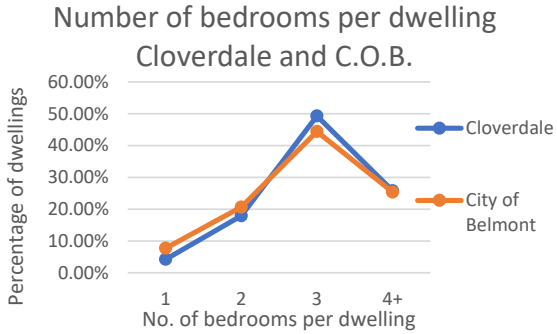

### Change in dwelling types – 2011 & 2021




### Housing Growth




### Bedrooms/dwelling




### People/dwelling

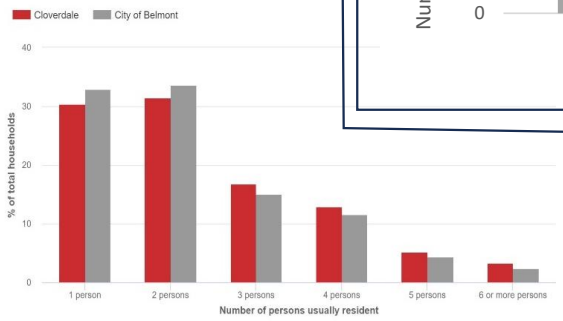



***Table 1: Snapshot (Source: ABS 2024 and .ID Community 2024)***

## Cloverdale Overview

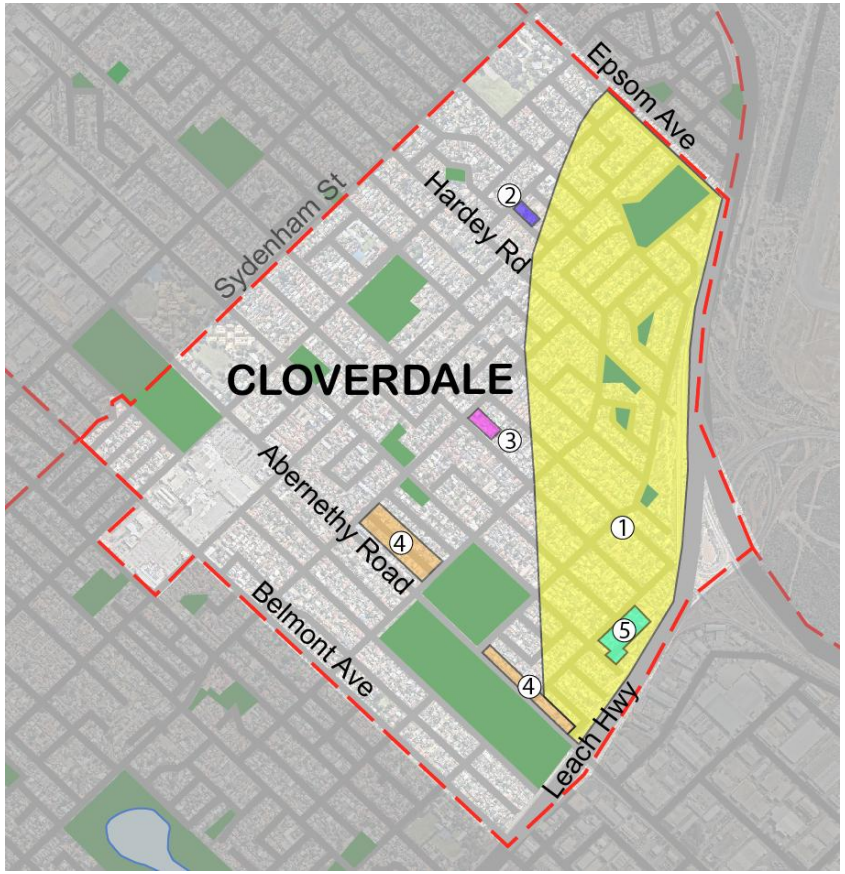
Location and Focus Areas

The suburb of Cloverdale comprises an area of 3.94 square kilometres and is generally bound by Belmont Avenue to the south-west, Leach/Tonkin Highway to the east, Epsom Avenue to the north-east and Wright Street/Sydenham Street to the west.

There are 5 key focus areas within the suburb of Cloverdale that will be analysed as part of this Local Housing Strategy. These include:

1. Land subject to aircraft noise from Perth Airport
2. Love Street Local Centre
3. Belgravia Street Local Centre
4. Land adjacent to Abernethy Road and subject to Local Planning Policy No. 3
5. Development Area 3

Land outside of these focus areas will be more broadly discussed in the City wide section of the Local Housing Strategy.



Key Features

**Connectivity**

- Cloverdale is well serviced by major roads including Abernethy Road, Leach Highway and Tonkin Highway.
- The suburb is also provided with road and vehicle access to surrounding suburbs via Wright Street, Hardey Road, Gabriel Street, and Epsom Avenue.
- Cloverdale is serviced by bus routes 37, 38, 39, 270, 284, 293 and the circle routes 998 and 999. These routes provide connections to Redcliffe Station and Elizabeth Quay bus station amongst others.
- Cloverdale contains walking and cycling infrastructure, with several streets identified as local bicycle friendly routes. Wright Street, sections of Belmont Avenue, Belgravia Street and Gabriel Street also contain bicycle lanes for cyclists.

**Centres and Services**

- There are three activity centres within the suburb of Cloverdale that provide residents and the broader community with access to convenience goods and services. These include:
  - Belmont Town Centre (further details included in the Belmont Town Centre Section)
  - Belgravia Street Local Centre
  - Love Street Local Centre
- The Belmont Hub and the City of Belmont administration offices.
- The suburb also contains the Belmay Primary School and Cloverdale Primary School.

**Public Open Space**

- Cloverdale benefits from good access to Public Open Space (POS). More than 90% of the suburb is situated within a 400m radius of a park.
- The suburb contains an abundance of sporting spaces.
- Cloverdale also contains two of the City's three District Open Spaces being Forster Park and the land at 400 Abernethy Road.

**Development Patterns**

- Development in Cloverdale's residential areas primarily occurred during the 1970s and 1980s. Some traces of development date back to the 1950s and 1960s, with a smaller amount predating the 1950s era.
- The suburb has experienced moderate growth between 2011 and 2021 (approximately 15% compared to 26.4% for the City of Belmont).
- There is a portion of land surrounding the Belmont Town Centre coded R20/50/100. A number of higher density developments have occurred in this area under Local Planning Policy No. 1 – Performance Criteria - Town Centre Density Bonus Requirements (LPP 1).
- Cloverdale currently contains 3036 residential lots. Of these, 786 lots, based on their size and width, have the capacity for infill development. However, it is important to recognise that not all landowners may choose to pursue further development of their properties.

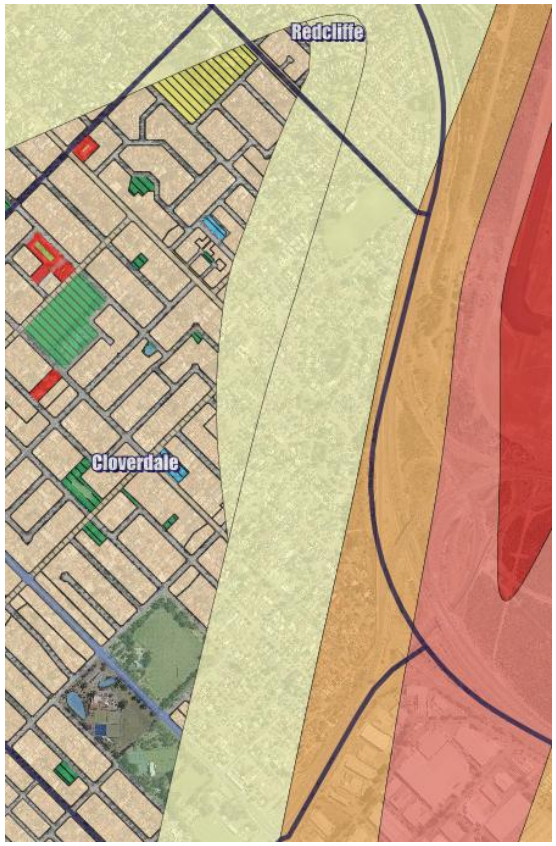
## Suburb Wide Actions

Suburb wide actions for the suburb of Cloverdale have been prepared based on information from the Key Features section, the Focus Area Summary Table, and Appendix 1 – Population and Housing Characteristics. By integrating these sources, actions were developed to facilitate and support the development of future housing within Cloverdale.

- Encourage a variety of housing options to cater to the evolving needs of the community, especially with Cloverdale's projected rise in single person households, and the current prevalence of dwellings with three bedrooms or more.
- Continue to support higher density development in appropriate locations such as surrounding activity centres and along high frequency bus routes.

- Promote alternative transport modes, such as public transport and active travel, to reduce reliance on private vehicles.

## Focus Areas

| 1: Perth Airport Noise Buffer | Strategies |
|---|---|
|  | 2. Protect residential development from inappropriate land uses and conversely protect non-residential land uses from encroachment of residential development.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>**Key Considerations and Opportunities**<br>• Portions of Cloverdale are impacted by aircraft noise. The primary measure of aircraft noise used in Australia is the Australian Noise Exposure Forecast (ANEF) system.<br>• State Planning Policy 5.1 – Land Use Planning In The Vicinity Of Perth Airport (SPP 5.1) contains requirements for the development of land within the 20+ ANEF contours, which are those properties most susceptible to adverse aircraft noise impacts.<br>• The Policy specifies that the maximum dwelling density should generally be limited to R20 within the ANEF 20-25 contour, and R12.5 in areas above ANEF 25.<br>• The R20 density code can be exceeded within the ANEF 20-25 contour where:<br>o Land is identified as appropriate for more intensive development through strategic planning instruments such as a regional or sub-regional structure plan;<br>o A higher density coding is desirable to facilitate redevelopment or infill development of an existing residential area; and<br>o It can be demonstrated that the public benefits of higher density coding outweigh the negative impacts of exposing additional residents to aircraft noise.<br>• The R12.5 density code can be exceeded in areas above ANEF 25 where: |




- A higher density is necessary to facilitate redevelopment or infill development of an existing residential area;
- Land is identified as appropriate for more intensive development through strategic planning instruments such as a regional or sub-regional structure plan;
- It can be demonstrated that the public benefits of higher density coding outweigh the negative impacts of exposing additional residents to aircraft noise; and
- A higher density would facilitate the concurrent provision of noise insulation in accordance with the indoor design sound levels prescribed in AS2021.

- In areas subject to noise exposure levels above 30 ANEF, the permissible density of residential development should generally not be increased above R12.5.

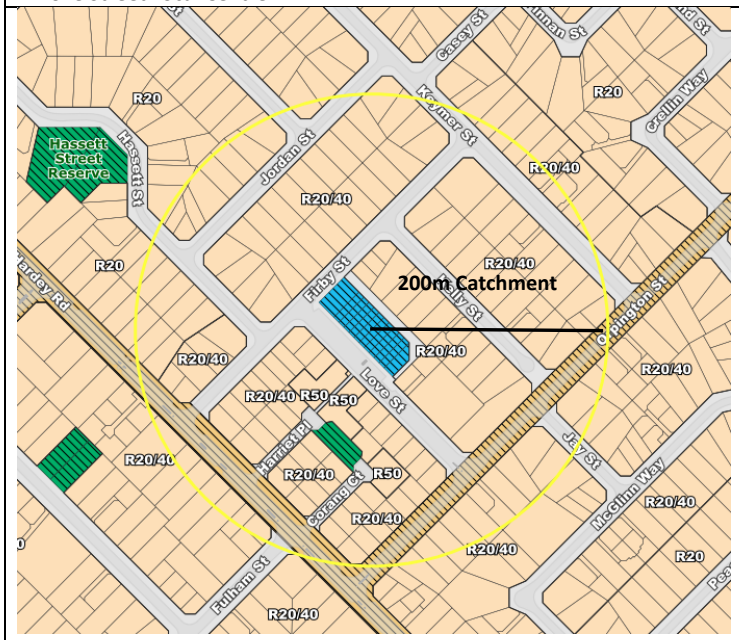
- Noise insulation is not mandatory for residential development within the ANEF 20-25 contour, but is required in areas above 25 ANEF.

- While SPP 5.1 requires a notification to be placed on title advising of aircraft noise for lots within the 20-25 ANEF contour, single houses that meet the deemed-to-comply provisions of the Residential Design Codes (R-Codes) are currently exempt from requiring development approval. This prevents notifications being placed on title.

- Local Planning Scheme No. 15 (LPS 15) augments the exemptions set out in Clause 61 of the Deemed Provisions by requiring development approval for single houses within the 25-30 ANEF contour. This allows for a notification to be placed on Title. However, this does not capture single houses within the 20-25 ANEF contour.

- The ANEF contours have been reviewed resulting in some properties:
  - Being within an ANEF contour that weren't previously.
  - Being subject to a higher ANEF contour.
  - Being subject to a lower ANEF contour or outside the ANEF contour.

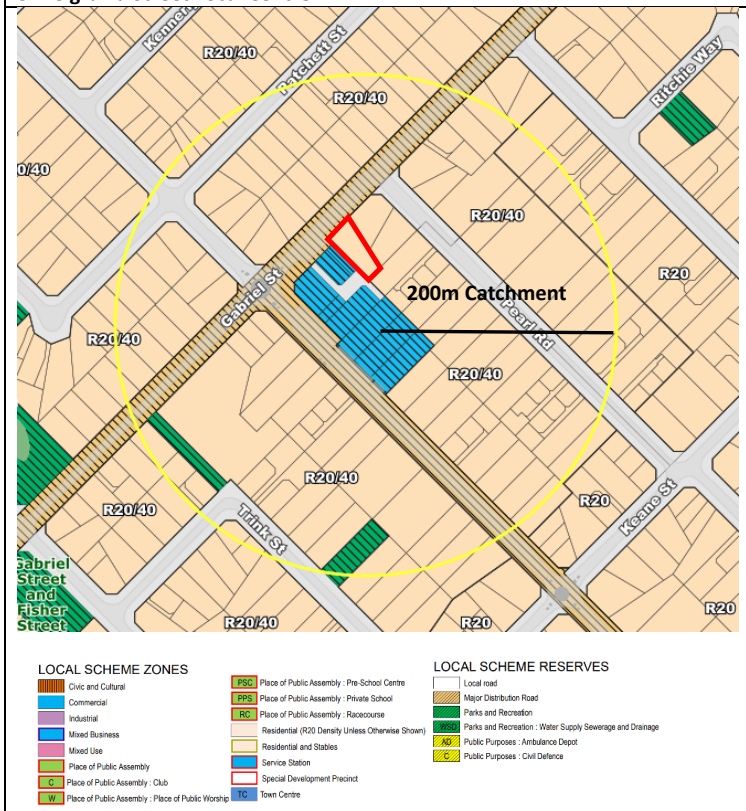
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| | | • Cloverdale has several lots in its eastern portion within the 25-30 ANEF contour, currently zoned R20. Although there are some lots with subdivision potential, the majority cannot be further developed. At subdivision stage, a notification would be placed on the Title of these lots. In addition, the City can require the installation of noise insulation measures in these new dwellings.<br><br>• Cloverdale also contains several blocks coded R20/40 within the 20-25 ANEF contour. This is due to their proximity to activity centres and previously being located outside of this contour. Allowing higher density development of this land aligns with SPP 5.1, as the Central Sub-regional Planning Framework identifies activity centres as suitable for higher densities. Additionally, this coding is facilitating infill development. |
| **Actions:** | **Zoning**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to establish a Special Control Area with provisions that require lodgement of development applications to support the implementation of SPP 5.1. | |
| | **Residential Density**<br>2. Through the preparation of a new local planning scheme, investigate whether it is appropriate to retain the R20 density code for lots within the 20-25 and 25-30 ANEF noise contours.<br>3. Through the preparation of a new local planning scheme, investigate whether it is appropriate to retain a density code higher than R20 for land within the 20-25 ANEF noise contour. | |

| 2: Love Street Local Centre | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which response to discrepancies between dwelling size and household composition.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br><br>**Key Considerations and Opportunities**<br>• The centre is identified as a Local Centre within the Activity Centre Planning Strategy.<br>• The local centre offers an opportunity for residential development within and around the centre to support the ongoing viability of commercial uses, provide convenient access to services and amenities, and increase housing diversity.<br>• The centre does not currently have a density coding under LPS 15. There is an opportunity to apply a density code through the preparation of a new local planning scheme.<br>• While the current 'Commercial' zoning of the centre aligns with the *Planning and Development (Local Planning Schemes) Regulations 2015,* the Department of Planning Lands and Heritage (DPLH) is seeking to introduce 'Centre', 'Neighbourhood Centre', and 'Local Centre' zones. This presents an opportunity for the future zoning of the local centre to align with these new zones.<br>• While ownership of the local centre is fragmented, the main street style configuration is intact, and all lots have access to a rear right-of-way. Buildings are in fair condition; however, these may be suitable for redevelopment in the longer term.<br>• There is an opportunity to align with the City's Activity Centre Planning Strategy which states that a residential density code of R60 may be appropriate for the local centre. Development would be limited to a maximum of 3 storeys, a front setback of 2m, and side and rear setbacks of 3m. This scale is considered to integrate well with |

| | | |
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| | | the R50 development on the opposite side of Love Street and the surrounding R20/40 coded land which can be developed to a height of 2 storeys.<br><br>• State Planning Policy 4.2 – Activity Centres (SPP 4.2) sets a residential density target of 25+ dwellings per gross urban zone hectare within the 200m catchment of local centres (yellow outline identifies 200m catchment). The local centre has achieved a result of approximately 15.43 dwellings per urban zone hectare.<br><br>• The 2011 Local Housing Strategy aimed to increase densities near activity centres but also sought to maintain low density codes around schools. As a result, while land immediately surrounding the centre is coded R50 and R20/40, some areas within the walkable catchment remain coded R20 due to their proximity to Belmay Primary School and Notre Dame Catholic Primary School.<br><br>• The above approach has the potential to inadvertently homogenise residential development near schools. It should be noted that increasing density codes does not exclude families or require development at the highest density. Families vary in size, type, and housing preferences, with some not needing or wanting an R20 single house.<br><br>• Whilst the residential area surrounding the local centre does not meet the desired number of dwellings within the walkable catchment, there remains approximately 63 lots with development potential at current densities. If all these are developed with an additional two dwellings, a density of 25.4 dwellings per urban zoned hectare could be achieved within the 200m catchment. Therefore, it may not be necessary for densities of existing R20 lots to be increased at this stage.<br><br>• DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes, creating an opportunity for the application of straight density codes to this area. |
| **Actions:** | **Zoning**<br>1. Investigate the rezoning of the centre to 'Local Centre' through the preparation of a new local planning scheme. | |
| | **Residential Density**<br>2. Investigate applying an R60 density code to the local centre through the preparation of a new local planning scheme.<br>3. Investigate whether it is appropriate to apply an R40 density code to existing R20/40 lots surrounding the local centre. | |
| | **Built Form** | |

| | |
|---|---|
| | 4. Investigate planning controls in a new local planning scheme to prevent residential developments without commercial components within the activity centre and ensure a suitable transition between commercial and residential land uses. This may be in the form of a Local Planning Policy. |

**3: Belgravia Street Local Centre**




**Strategies**

1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.
3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.
4. Facilitate ongoing housing choice for the existing and future community which response to discrepancies between dwelling size and household composition.
7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.

**Key Considerations and Opportunities**

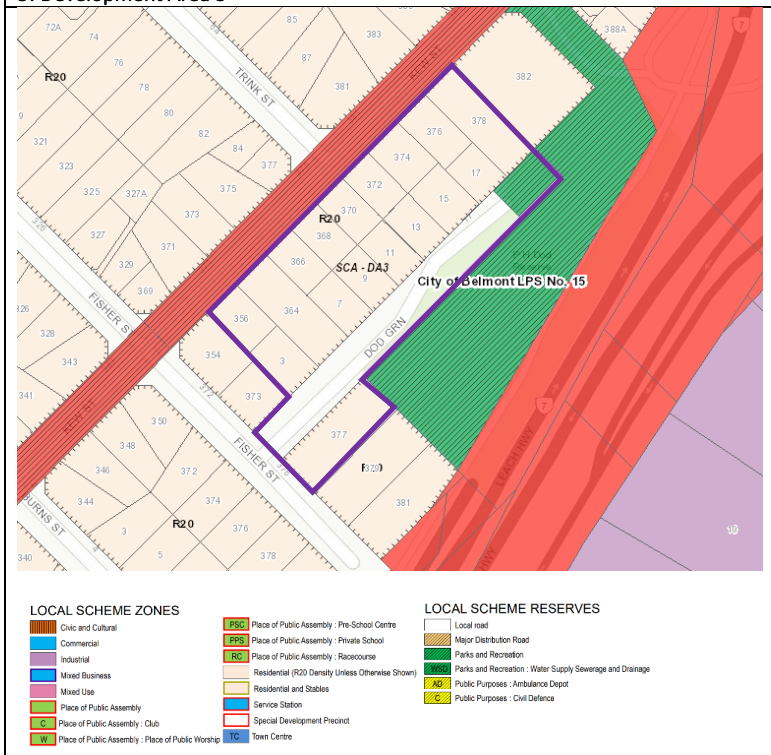
- The centre is identified as a Local Centre within the Activity Centre Planning Strategy.
- The local centre offers an opportunity for residential development within and around the centre to support the ongoing viability of commercial uses, provide convenient access to services and amenities, and increase housing diversity.
- The centre does not currently have a density coding under LPS 15. There is an opportunity to apply a density code through the preparation of a new local planning scheme.
- While the current 'Commercial' zoning of the centre aligns with the *Planning and Development (Local Planning Schemes) Regulations 2015,* the Department of Planning Lands and Heritage (DPLH) is seeking to introduce 'Centre', 'Neighbourhood Centre', and 'Local Centre' zones. This presents an opportunity for the future zoning of the local centre to align with these new zones.
- Although buildings within the centre are generally in fair condition, the poor streetscape presentation and lack of activation due to roller shutters presents an opportunity for streetscape improvements.
- 178 Gabriel Street (outlined red on the image to the left), which abuts the local centre, has been developed for a medical centre and is a non-conforming use.

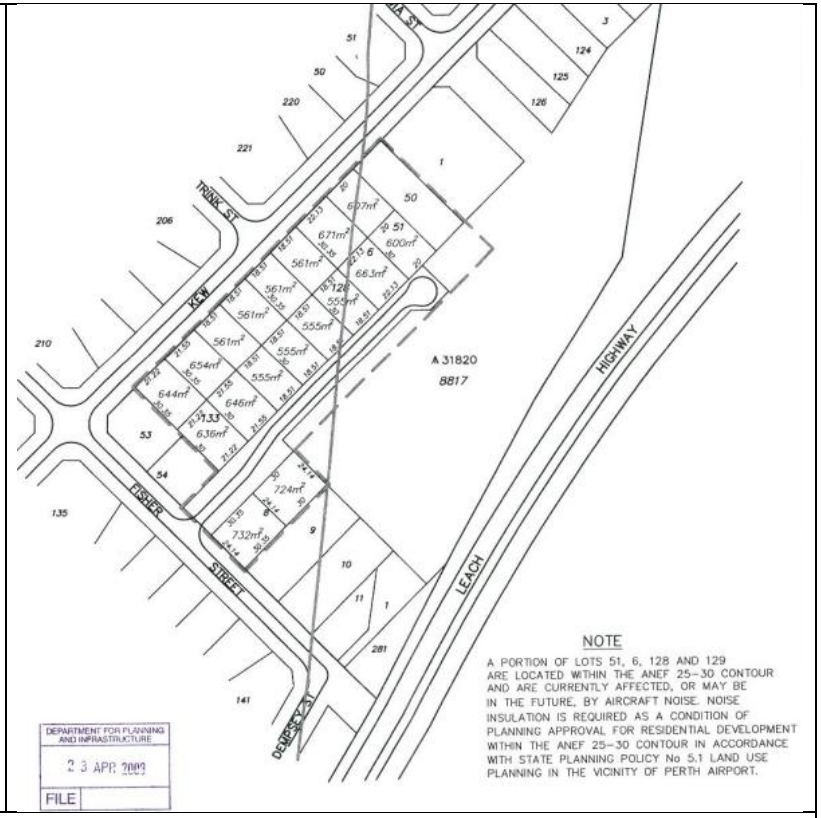
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| | | • Ownership of the centre is fragmented, but rear vehicle access for multiple lots is possible, offering the opportunity for improved built form outcomes if redeveloped.<br>• The City's Activity Centre Planning Strategy suggests an R60 residential density may be appropriate for the centre, with development up to 3 storeys and setbacks designed to integrate with surrounding R40 density areas that allow for 2 storey buildings.<br>• SPP 4.2 sets a residential density target of 25+ dwellings per gross urban zone hectare within 200m of local centres. The local centre has achieved a result of approximately 21.12 dwellings per urban zone hectare.<br>• There remains several lots that are underdeveloped at current densities and which have frontages of greater than 16m within the 200m catchment (yellow outline identifies 200m catchment). Many of these lots contain dwellings which are aging and so there is an opportunity for these to be replaced in the medium to long term.<br>• A number of lots between Gabriel, Belgravia, and Patchett Streets have frontages of less than 16m (mostly 15.49m) meaning they cannot be developed above the base density code. Many of the lots contain 1960s era dwellings that are in fair condition.<br>• DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes, creating an opportunity for the application of straight density codes to this area. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning the centre to 'Local Centre' through the preparation of a new local planning scheme. | |
| | **Residential Density**<br>2. Investigate applying a density coding of R60 to the local centre through the preparation of a new local planning scheme. | |
| | 3. Investigate whether it is appropriate to apply an R40 density code to existing R20/40 lots surrounding the local centre. | |
| | **Built Form**<br>4. Investigate planning controls in a new local planning scheme to prevent residential developments without commercial components within the activity centre and ensure a suitable transition between commercial and residential land uses. This may be in the form of a Local Planning Policy. | |

| 4: Abernethy Road and Local Planning Policy No. 3 – Abernethy Road (Gabriel Street to Dempsey Street) (LPP 3) | **Strategies** |
|---|---|
| <br>LOCAL SCHEME ZONES<br>Civic and Cultural<br>Commercial<br>Industrial<br>Mixed Business<br>Mixed Use<br>Place of Public Assembly<br>C Place of Public Assembly : Club<br>W Place of Public Assembly : Place of Public Worship<br>PSC Place of Public Assembly : Pre-School Centre<br>PPS Place of Public Assembly : Private School<br>RC Place of Public Assembly : Racecourse<br>Residential (R20 Density Unless Otherwise Shown)<br>Residential and Stables<br>Service Station<br>Special Development Precinct<br>TC Town Centre<br>LOCAL SCHEME RESERVES<br>Local road<br>Major Distribution Road<br>Parks and Recreation<br>WSD Parks and Recreation : Water Supply Sewerage and Drainage<br>AD Public Purposes : Ambulance Depot<br>C Public Purposes : Civil Defence | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br><br>**Key Considerations and opportunities**<br>• Abernethy Road is identified as an 'Other Regional Road' under the care and control of DPLH.<br>• Based on Main Roads WA (MRWA) traffic counts, Abernethy Road averages 32,577 vehicles per day on weekdays on the section between Leach Highway and Kew Street.<br>• Lots fronting Abernethy Road are subject to transport noise considerations.<br>• Clause 4.7.1 of LPS 15 states that where residential land abuts a regional road reserve, vehicular access to the road will not be permitted for residential development other than for a single house, unless a vehicular access plan has been approved.<br>• Land generally adjacent to Abernethy Road is coded R20/60.<br>• Local Planning Policy No. 3 – *Abernethy Road (Gabriel Street to Dempsey Street)* (LPP 3) was formulated considering the extent of traffic utilising Abernethy Road, the need to limit the number of access points to the road, and the desire for high quality development.<br>• LPP 3 requires that for any development other than a single residence, a public easement in gross must be provided to facilitate shared vehicular access |

| | |
|---|---|
| | between lots. This is depicted in the Vehicle Access Plan which proposes an 8m wide easement along Abernethy Road.<br><br>• LPP 3 includes design guidelines for dwellings and fencing. In addition, the Policy requires a minimum lot size of 1,300 square meters in order for development to be considered above R20.<br><br>• These development requirements have ultimately led to minimal development. Only two developments at a code greater than R20 have occurred at 393-395 Abernethy Road and at 6 Tighe Street, 324 Kew Street and 475 and 477 Abernethy Road.<br><br>• Various R20 developments have incorporated cross access easements, although these are currently sporadic. Future development presents an opportunity to connect these easements over time.<br><br>• The requirement for public access easements and the 1,300 square metre minimum lot size minimises direct vehicle access points on Abernethy Road, offering opportunities to consolidate crossovers for improved traffic management and safety. These provisions could remain in a local planning policy or be integrated into a new Local Planning Scheme to ensure consistency.<br><br>• LPP 3 has not been reviewed since the R-Codes were amended. If LPP 3 is retained, there is an opportunity to update it to be consistent with the R-Code requirements.<br><br>• DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes, creating an opportunity for the application of straight density codes to this area. |
| **Actions:** | **Zoning and Built Form**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to retain or repeal LPP 3.<br>2. Through the preparation of a new local planning scheme, investigate whether it is appropriate to include additional site and development requirements that require all development excluding single houses to achieve a minimum lot size of 1,300m$^2$ and to provide a public easement in gross to promote shared vehicular access between lots in accordance with an adopted Vehicle Access Plan. |
| | **Residential Density** |

| | |
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| | 3. Through the preparation of a new local planning scheme, investigate the appropriateness of applying an R60 density code to existing R20/60 lots fronting Abernethy Road. |

| 5: Development Area 3 | **Strategies** |
|---|---|
|  | 2. Facilitate the delivery of a contemporary planning framework which meets the needs of the community. |
| | **Key Considerations and Opportunities** |
| | • Land abutting Dod Reserve and fronting Kew Street is identified as Development Area 3 by LPS 15 (outlined purpose on the plan to the left).<br>• Originally, TPS 14 required a Structure Plan to guide subdivision and development in this area. This same requirement was incorporated into LPS 15.<br>• In 2008, the Western Australian Planning Commission adopted a Structure Plan for this land (included overleaf). The Structure Plan has since expired.<br>• Key features of the Structure Plan included:<br>○ A road reserve on a portion of Dod Reserve and the original 51 Kew Street and Lot 8 Fisher Street.<br>○ R20 lots with sizes ranging from 555m² to 846m².<br>○ Retention of existing dwellings.<br>• All but one lot has been subdivided and developed in accordance with the Structure Plan.<br>• The R-Codes provide appropriate standards for developing the remaining lot. |




| | |
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| **Actions:** | **Zoning Built Form and Residential Density**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to remove the requirement for a structure plan over the land currently designated as Development Area 3 by LPS 15. |

# Appendix 1 - Population and Housing Characteristics

**Population**

The 2021 Census data revealed Cloverdale had a population of 8,864 people. From 2011 to 2021, Cloverdale's population increased by 1,592 persons or 21.8%. Forecasts undertaken by Forecast id predict that by 2041 Cloverdale's population will increase to 11,151 people and have a density of 2,830 persons per square km.

**Age Structure**

A comparison between Cloverdale and the City of Belmont in 2021 reveals that Cloverdale had a higher proportion of people in the younger age groups (under 24) and a lower proportion of people in the older age groups (60-84). The largest age group in Cloverdale was the 35 to 49 year age bracket, accounting for 21% of the population. This was consistent with the City of Belmont's dominant age group in 2021(refer to **Figure 1**).

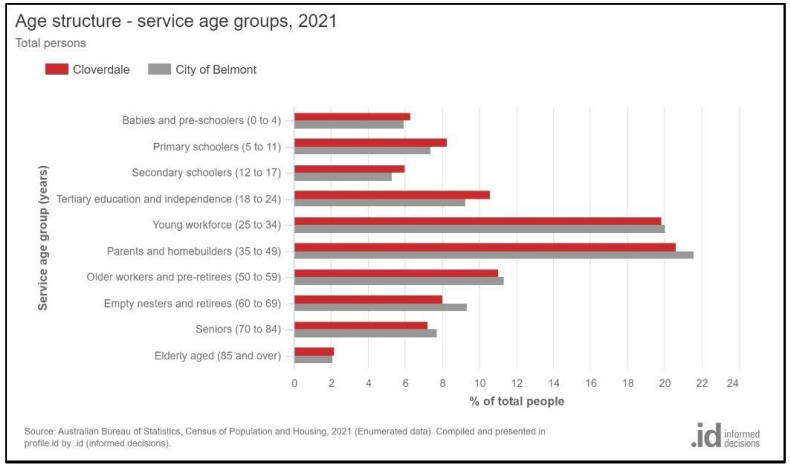



***Figure 1 – Age Structure – Service Age Groups (2021) (.id 2024)***

Forecasts indicate that by 2031 there will be a 6.2% increase in populations up to 14 years of age, a 18.5% increase in those of retirement age (65+), and a 11% increase in population of working age (15-64). The largest increase between 2021 and 2031 is anticipated to occur in those aged 60 to 64, accounting for an additional 212 persons (see **Figure 2**). The dominant age structure for persons in the suburb is also anticipated to change from the 30 to 34 year age bracket which accounted for 10.7% of the total persons in 2021, to the 25 to 29 year age bracket which is anticipated to grow by 116 and account for 9.5% of the population by 2041.

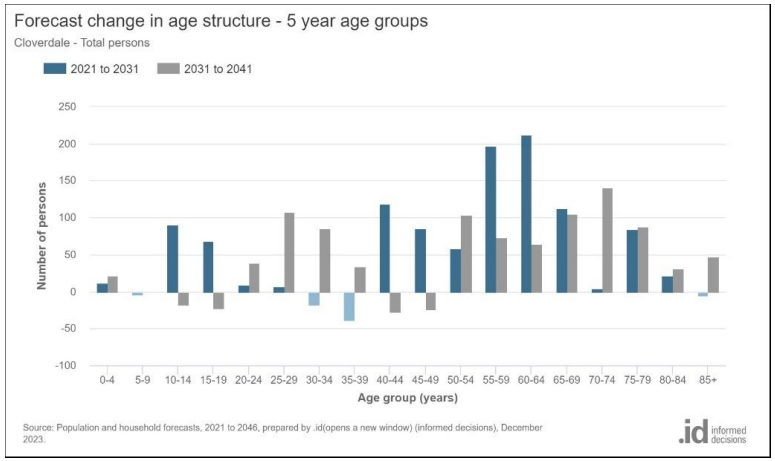



***Figure 2 – Forecasted Change in Age Structure (2021) (.id 2024)***

**Family Structure**

When comparing the household types in Cloverdale to the City of Belmont in 2021, the analysis reveals relatively similar structures. The key differences were:

- The proportion of couples with children in Cloverdale was 24.6%, higher than the 22.4% observed in the City of Belmont.
- Cloverdale had a higher proportion of one-parent families at 11.7%, compared to 9.3% in the City of Belmont.
- The proportion of couples without children was lower in Cloverdale at 21.4%, compared to 23.9% in the City of Belmont.
- Cloverdale had a smaller proportion of lone persons at 28.6%, compared to 31.1% in the City of Belmont.

The dominant household type is currently and is forecast to continue to be lone person households (**Figure 3** and **Figure 4**). These forecasts also follow the trend noticed between 2011 and 2021 which saw the greatest increase in the number of lone person households (+257), followed by couples with children (+176), and couples without children (+75).

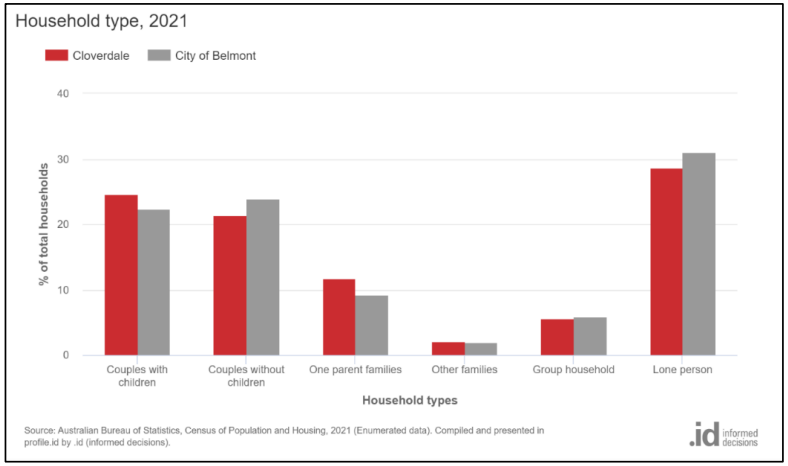



***Figure 3 – Household Type (2021) (.id 2024)***

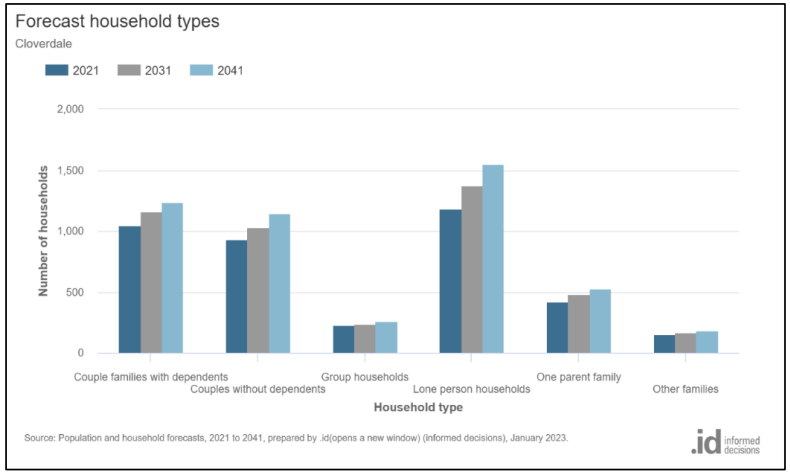



***Figure 4 – Forecast Change in Household Types (.id 2024)***

**Dwelling Structure**

In 2021 the types of dwellings in Cloverdale compared to the City of Belmont revealed some notable differences. In Cloverdale, 73.9% of all occupied dwellings were separate houses, while semi-detached, row or terrace house, townhouses etc accounted for 19.7% and flats or apartments 5.8%. In comparison, the City of Belmont housing stock comprised 65% separate houses, 20.3 % semi detached, row or terrace house, townhouses etc, and a higher proportion of flats or apartments at 14.4% (refer to **Table 2**). These figures indicate that Cloverdale had a higher percentage of separate houses, a similar proportion of semi-detached, row or terrace house, townhouses, and a lower percentage of flat or apartments compared to Belmont.

Examining the changes in dwellings types in Cloverdale between 2011 and 2021, the following trends emerge:

- Separate House (+74 dwellings)
- Semi-detached, row or terrace house, townhouse etc (+487 dwellings)
- Flat or apartment (+8 dwellings)

The growth in the number of semi-detached, row or terrace houses, townhouses indicates a shift toward denser housing options. This trend is expected to continue over the next decade, addressing housing affordability challenges and increasing housing diversity.

| **Cloverdale – Occupied Dwellings (Enumerated)** | **2021** | | | **2011** | | | **Change** |
|---|---|---|---|---|---|---|---|
| **Dwelling type** | **Number** | **%** | **City of Belmont %** | **Number** | **%** | **City of Belmont %** | **2011 to 2021** |
| Separate house | 2,513 | 73.9 | 65 | 2,439 | 86.8 | 73 | +74 |
| Semi-detached, row or terrace house, townhouse etc. | 669 | 19.7 | 20.3 | 182 | 6.5 | 15.1 | +487 |
| Flat or apartment | 197 | 5.8 | 14.4 | 189 | 6.7 | 11.6 | +8 |
| Other | 11 | 0.3 | 0.1 | 0 | 0.0 | 0.1 | 11 |
| **Total Private Dwellings (Occupied)** | **3,390** | **100.0** | **100.0** | **2,810** | **100.0** | **100.0** | **+580** |

***Table 2: Occupied Dwelling Structure 2011-2021 (ABS 2024)***

**Number of Bedrooms**

A comparative analysis of bedroom numbers between Cloverdale and the City of Belmont in 2021 reveals that Cloverdale had a smaller proportion of 1 and 2 bedroom dwellings and a greater portion of 3 bedroom dwellings (see **Figure 5**). The proportion of dwellings with 4 or more bedrooms was similar between Cloverdale and the City of Belmont. Specifically, 21.1% of households in Cloverdale resided in dwellings with 2 bedrooms or less, while for the City of Belmont, the corresponding percentage was higher at 27.5%. In terms of dwellings with 3 bedrooms, Cloverdale contained 46% while 42% were located across the wider City of Belmont area.

While Cloverdale currently has a lower proportion of dwellings with 2 bedrooms or less compared to the City of Belmont, an examination of the trends between 2011 and 2021 reveals that the increase in dwellings with 2 bedrooms or less was higher than the increase in dwellings with four bedrooms or more (see **Figure 6**). This may reflect the biggest change in household size between 2011 and 2021 which was lone person households.

Despite the above, there is still a disparity between the proportion of households consisting of only one person, which is currently 30% (see **Figure 7**) and the availability of single bedroom dwellings, which makes up 4.2% of the housing stock. It is anticipated that this discrepancy will continue, especially considering the projected substantial increase in lone person households. To address this issue, it is important to promote a diverse range of dwelling types, including single bedroom dwellings, within the suburb including single bedroom dwellings. This will help cater to the specific housing needs of Cloverdale's residents.

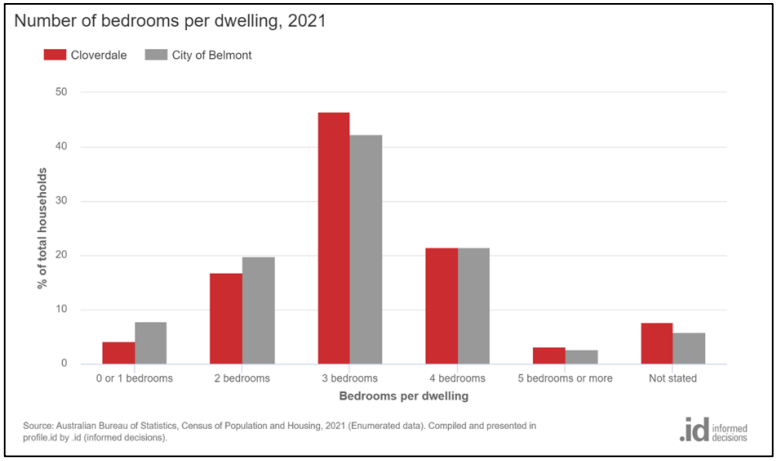



***Figure 5 – Number of bedrooms per dwelling – Belmont and City of Belmont (.id 2024)***

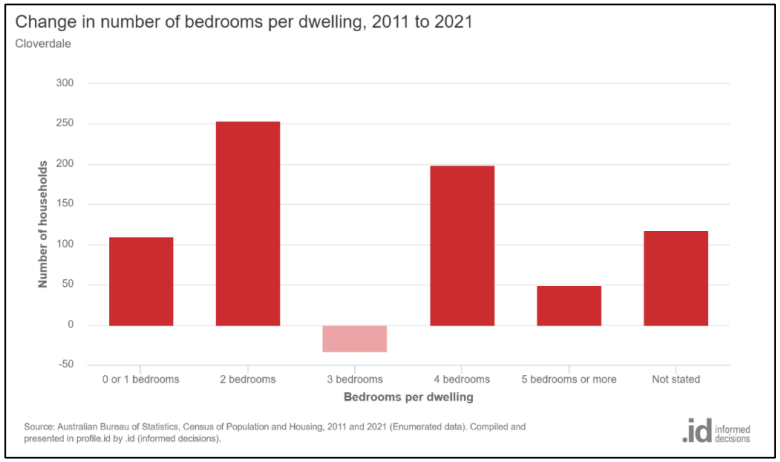



***Figure 6 – Change in number of bedrooms per dwelling 2011 to 2021 (.id 2024)***

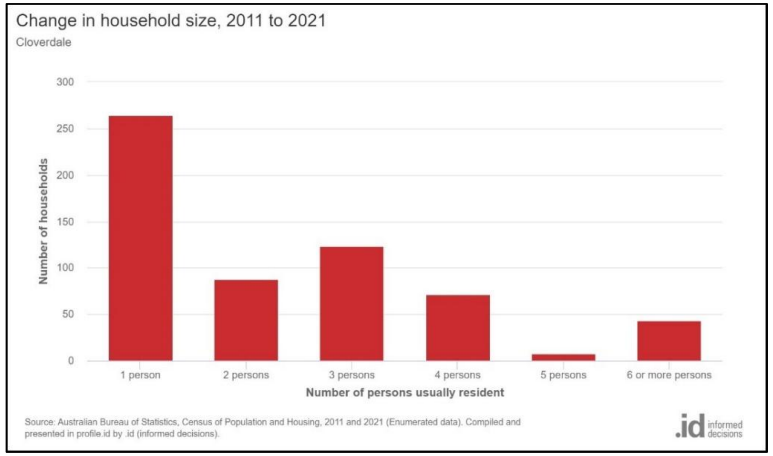



***Figure 7 – Change in Household Size 2011 to 2021 (.id 2024)***

# PART 2
# KEWDALE

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## Snapshot – Population and Dwellings

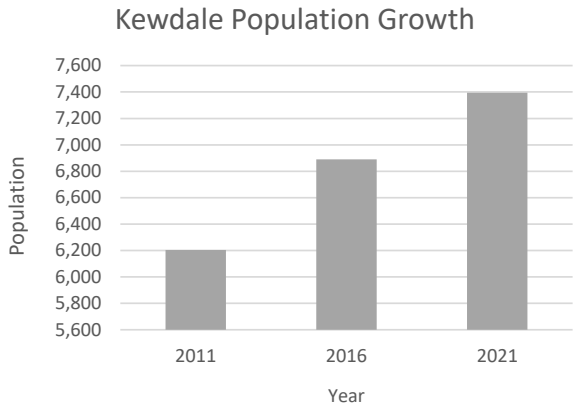
### Current population

**7,397 people**

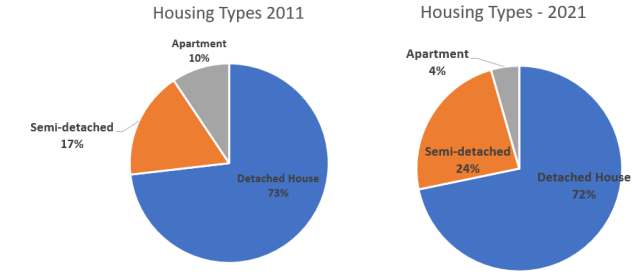
### Current dwellings

**3,282**

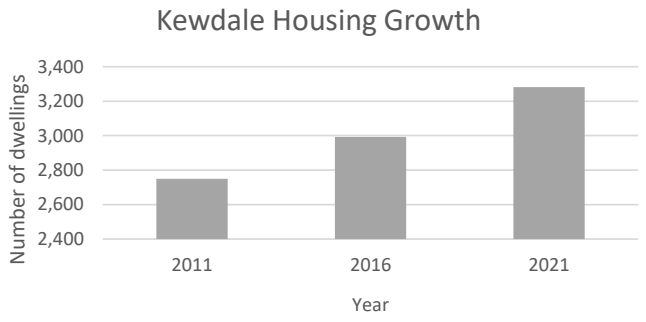
### Population Growth



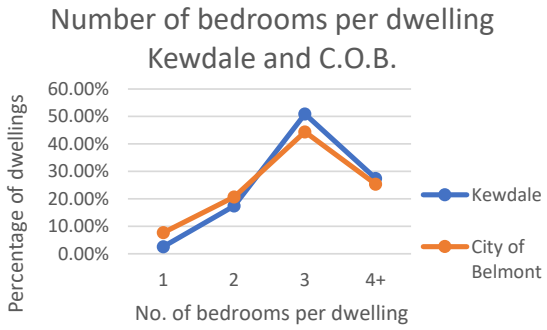

### Change in dwelling types – 2011 & 2021




### Housing Growth




### Bedrooms/dwelling




### People/dwelling

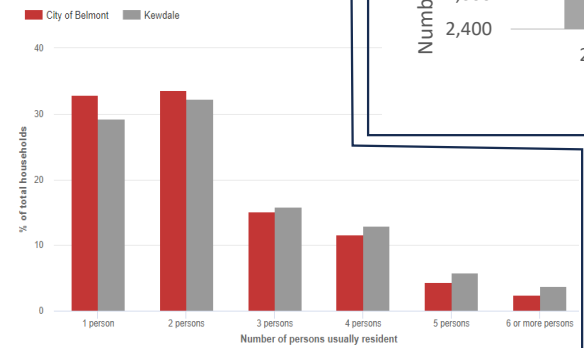



***Table 1: Snapshot (Source: ABS 2024 and .ID Community 2024)***

## Kewdale Overview

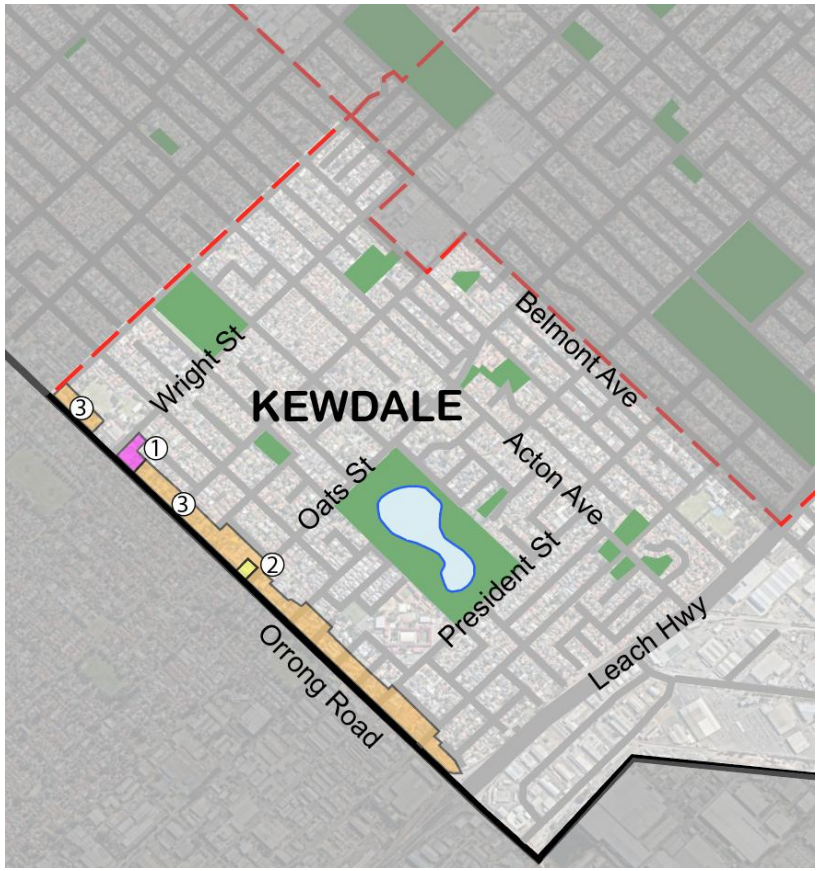
Location and Focus Areas

The suburb of Kewdale comprises an area of 7.71 square kilometres and is bound by Orrong Road, Sydenham Street, Belmont Avenue, Knutsford Avenue, Leach Highway, Tonkin Highway and the Kewdale Freight Terminal.

There are 3 key focus areas within the suburb of Kewdale that will be analysed as part of this Local Housing Strategy. These include:

1. Wright Street Local Centre
2. Belmont Square Local Centre
3. Orrong Road Corridor subject to Local Planning Policy No. 2

Land outside of these focus areas will be discussed more broadly in the city-wide section of the Local Housing Strategy or within a specific other suburb.



Key Features

**Connectivity**

- Kewdale is well serviced by major transport routes such as Orrong Road and Leach Highway.
- Oats Street, Gabriel Street, Wright Street, Acton Avenue and President Street provide connections to surrounding suburbs.
- Kewdale is serviced by several bus routes including routes 38, 39, 284 which provide connections to adjacent local government areas, Redcliffe Station and key locations such as Perth CBD. The high frequency circle route 998/999 also services the suburb and provides connections to various suburbs around Perth.
- Kewdale has several bicycle routes and lanes, though they are not located in all residential areas. The suburb features a high-quality principal shared path along Leach Highway, with streets like Surrey Road designed to be safe for active transportation.

**Centres and Services**

- There are three activity centres within Kewdale. These include:
    - Belmont Square Local Centre.
    - Wright Street Local Centre.
    - Kewdale Industrial Area (specialised centre)
- The Australian Islamic College is located adjacent to Tomato Lake Reserve. Students travel from surrounding local government areas to attend this school.
- The suburb also contains Carlisle and Kewdale Primary Schools.

**Public Open Space**

- Kewdale contains approximately 50 hectares of public open space, making it the suburb with the second largest amount of public open space in the City.
- These public open spaces are also highly accessible to residents, with more than 95% of dwellings being within 400m of a park.

**Development Patterns**

- Development in Kewdale's residential areas primarily took place in the 1960s and 1970s, with additional significant development occurring in the 1980s and 1990s.
- Kewdale saw a relatively low level of growth between 2011 and 2021 at 12% compared to 26.4% for the City of Belmont.
- Kewdale is predominantly characterised by single houses and a large number of older grouped dwelling developments (duplexes and villas).
- Renewal of the area is ongoing with the development of grouped and multiple dwellings. This development is predominantly occurring within:
    - R20/40 and R20/60 areas along Wright Street, Oats Street and Orrong Road
    - On the former Kewdale High School site.
    - Corner lots
    - Historically larger lots
- Kewdale currently contains 3,432 residential lots. Of these, 536 lots, based on their size and width, have the capacity for infill development. However, it is important to recognise that not all landowners may choose to pursue further development of their properties.

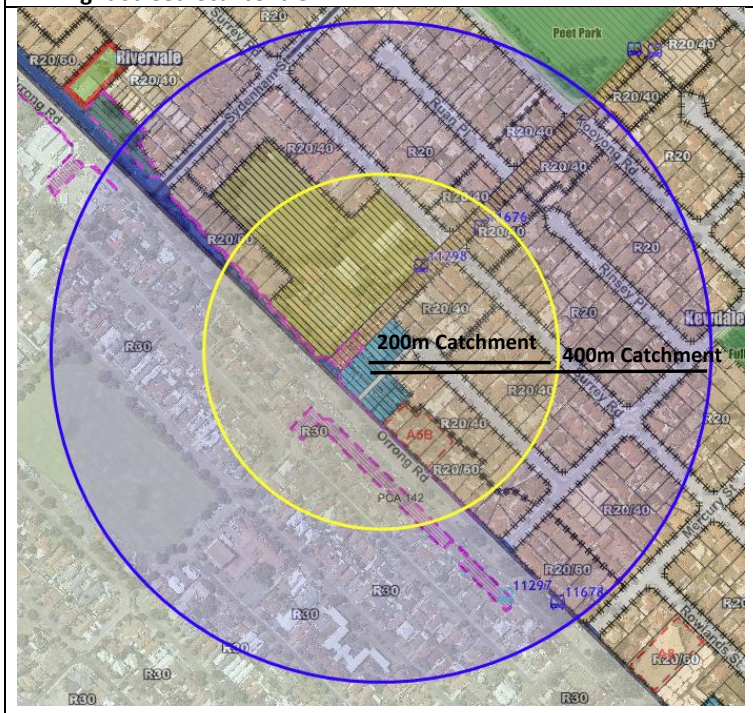
## Suburb Wide Actions

Suburb wide actions for Kewdale have been prepared based on information from the Key Features section, the Focus Area Summary Table, and Appendix 1 – Population and Housing Characteristics. By integrating these sources, actions were developed to facilitate and support the development of future housing within Kewdale.

- Encourage a variety of housing options to cater to the evolving needs of the community, especially in light of Kewdale's growing younger population, and projected increase in the ageing population.
- Encourage and support higher density development in appropriate locations, such as in close proximity to activity centres and high frequency bus routes.

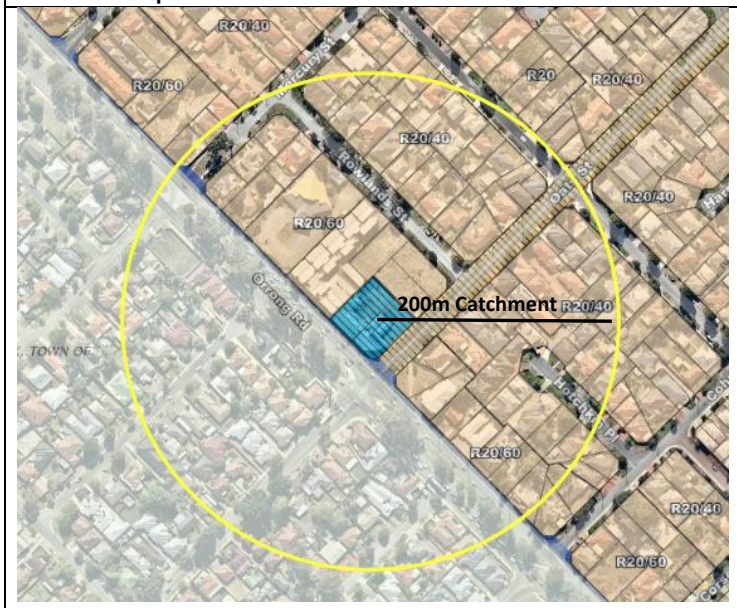
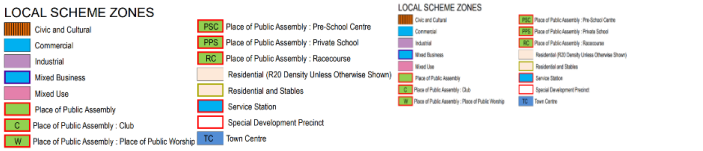
- Promote alternative transport modes, such as public transport and active travel, to reduce reliance on private vehicles.

## Focus Areas

| 1: Wright Street local centre | Strategies |
|---|---|
| <br> | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high density infill development which is of high quality and positively contributes to the streetscape. |
| | **Key Considerations and Opportunities** |
| | • The centre is identified as a Local Centre within the Activity Centre Planning Strategy.<br>• The local centre offers an opportunity for residential development within and around the centre to support the ongoing viability of commercial uses, provide convenient access to services and amenities, and increase housing diversity.<br>• The centre does not currently have a density coding under LPS 15. There is an opportunity to apply a density code through the preparation of a new local planning scheme.<br>• While the 'Commercial' zoning of the centre is currently consistent with the *Planning and Development (Local Planning Schemes) Regulations 2015*, Department of Planning, Lands and Heritage (DPLH) are planning to introduce 'Centre', 'Neighbourhood Centre', and 'Local Centre' zones. This presents an opportunity for the future zoning of the local centre to align with these new zones.<br>• The centre abuts Orrong Road, which is under Main Roads WA control. Planning Control Area 142 partly extends into the lots abutting Orrong Road (shaded pink in the map to the left). The purpose of the Planning Control Area is to protect land required for the future upgrade of Orrong Road. |

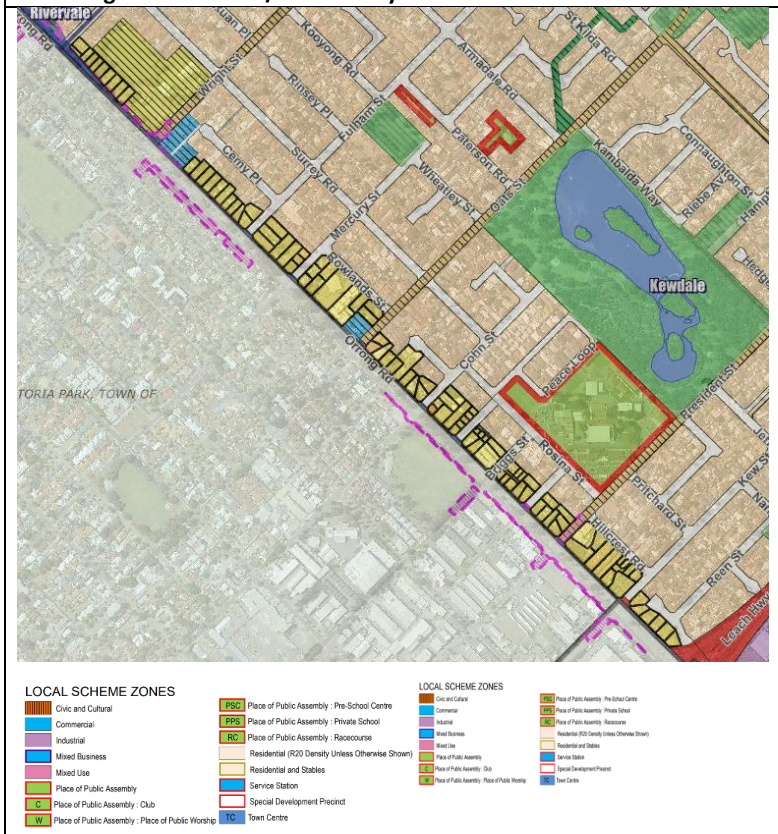
| | |
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| | • Existing buildings fronting Wright Street contain expanses of at-grade car parking. Each lot has rear access to a 6m wide public right-of-way accessed from Orrong Road. While ownership of the centre is fragmented, a number of landowners hold more than one lot. The centre has redevelopment potential within the medium to long term.<br><br>• 289-295 Orrong Road are currently used for residential purposes. These lots are subject to Additional Use 5b which provides for the uses of 'Consulting Rooms', 'Restaurant', 'Medical Centre', 'Office', 'Serviced Apartments', 'Showroom' (where no single tenancy exceeds 200m$^2$ NLA) and 'Studio'.<br><br>• The Retail Needs Assessment (RNA) prepared to inform the Activity Centre Planning Strategy, suggests shop/retail floorspace within the Wright Street Local Centre should only be increased by a small amount (25m$^2$) until further development occurs. Given there is capacity for the additional floorspace to be accommodated within the existing boundaries of the Wright Street local centre, it may be appropriate to remove Additional Use 5b from 289-295 Orrong Road.<br><br>• There is an opportunity to align with the City's Activity Centre Planning Strategy by applying a residential density code of R60 to the local centre. Development would be limited to a maximum of 3 storey's, a front setback of 2m, and side and rear setbacks of 3m. This code is consistent with the maximum density code already applied to land along Orrong Road.<br><br>• State Planning Policy 4.2 – Activity Centres (SPP 4.2) sets a residential density target of 25+ dwellings per gross urban zone hectare within the 200 metre catchment of local centres (outlined in yellow). The local centre has achieved a result of approximately 12.13 dwellings per urban zone hectare.<br><br>• The 2011 Local Housing Strategy aimed to increase residential densities near activity centres while maintaining low density codes around schools. It included an initiative to upcode land to R20/40 within a 400m walkable distance from the local centre and along the Wright Street high frequency bus route, connecting to the town centre. However, some lots within the walkable catchment were retained as R20. |

| | | |
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| | | • This approach has the potential to unintentionally create homogeneity in residential development near schools. It's important to recognise that increasing residential density codes doesn't exclude families or require development at maximum density. Families vary in size, type, and housing preferences, with some not needing or preferring a traditional R20 single house.<br><br>• There are several dual coded lots with frontages greater than 16 metres that are underdeveloped. The number of remaining lots is insufficient to meet the target of 25+ dwellings per gross urban hectare.<br><br>• A large portion of the centre's walkable catchment extends beyond the local government boundary into Carlisle within the Town of Victoria Park. There is limited subdivision potential (approximately 12 development opportunities) within this area at the existing density code (R30). Therefore, it is not anticipated that Carlisle will contribute to achieving the local centre's dwelling target.<br><br>• DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes, creating an opportunity for the application of straight density codes to this area. |
| **Actions:** | **Zoning**<br>1. Investigate rezoning of the centre to 'Local Centre' zone through the preparation of a new local planning scheme.<br>2. Through the preparation of a new local planning scheme, investigate whether it is appropriate to remove or retain Additional Use 5b from 289-295 Orrong Road. | |
| | **Residential Density**<br>3. Investigate the appropriateness of applying an R60 density coding to the local centre under a new local planning scheme.<br>4. Investigate whether it is appropriate to apply an R40 density code to existing R20/40 lots surrounding the local centre.<br>5. Through the preparation of a new local planning scheme, investigate the appropriateness of increasing the density code of R20 lots within 200m of the local centre to R40. | |
| | **Built Form**<br>6. Investigate planning controls in a new local planning scheme to prevent residential developments without commercial components within the activity centre and ensure a suitable transition between commercial and residential land uses. This may be in the form of a Local Planning Policy. | |

| 2: Belmont Square local centre | Strategies |
|---|---|
| <br> | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high density infill development which is of high quality and positively contributes to the streetscape. |
| | **Key Considerations and Opportunities** |
| | • The centre is identified as a Local Centre within the Activity Centre Planning Strategy.<br>• The centre does not currently have a density coding under LPS 15. There is an opportunity to apply a density code through the preparation of a new local planning scheme.<br>• While the 'Commercial' zoning of the centre is currently consistent with *the Planning and Development (Local Planning Schemes) Regulations 2015*, DPLH are planning to introduce 'Centre', 'Neighbourhood Centre', and 'Local Centre' zones. This presents an opportunity for the future zoning of the local centre to align with these new zones.<br>• The centre contains a sporting goods store, pool supplies store, and pizza shop. Currently, the centre does not offer the services and amenities to effectively function as a local centre for the community. The buildings, constructed in the 1990s, are unlikely to be redeveloped in the short term.<br>• 347 and 351 Orrong Road and 2 Oats Street are subject to the Additional Uses of Consulting Rooms, Medical Centre, Office, Serviced Apartments, Showroom, and Studio. 347 Orrong Road, owned by the Western Australian Planning Commission, falls within Planning Control Area 142, designated for future upgrades to Orrong Road, prohibiting any development on this land.<br>• The City's Activity Centre Planning Strategy states that a residential density code of R60 may be appropriate for the local centre. Development would be limited to a |

| | | |
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| | | maximum of 3 storeys, a front setback of 2m, and side and rear setbacks of 3m. This density code is consistent with the maximum density coding already applied to land along Orrong Road.<br><br>• SPP 4.2 sets a residential density target of 25+ dwellings per gross urban zone hectare within the 200 metre catchment of local centres (outlined in yellow). The local centre has achieved a result of approximately 18.49 dwellings per urban zone hectare. This will be increased to approximately 19.53 dwellings following construction of the approved grouped dwellings on the corner of Oats Street and Rowlands Street.<br><br>• There remains a number of dual coded lots with development potential at current densities and which have frontages of greater than 16m within the 200m catchment. These offer potential for redevelopment.<br><br>• A large portion of the centre's walkable catchment extends beyond the local government boundary into Carlisle within the Town of Victoria Park. Land in this area is zoned Residential and has a density code of R30. The area is experiencing redevelopment and may accommodate additional dwellings within the walkable catchment. There are approximately 20 lots capable of further subdivision and development.<br><br>• At existing densities, the centre is capable of achieving the 25+ dwelling target in the long-term.<br><br>• DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes, creating an opportunity for the application of straight density codes to this area. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning the centre to 'Local Centre' zone through the preparation of a new local planning scheme.<br>2. Through the preparation of a new local planning scheme, investigate whether it is appropriate to remove or retain the additional uses from 347 and 351 Orrong Road and 2 Oats Street. | |
| | **Residential Density**<br>3. Investigate the appropriateness of applying a density coding of R60 to the centre under a new local planning scheme.<br>4. Investigate whether it is appropriate to apply an R40 density code to existing R20/40 lots surrounding the local centre. | |
| | **Built Form** | |

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| | 5. Investigate planning controls in a new local planning scheme to prevent residential developments without commercial components within the activity centre and ensure a suitable transition between commercial and residential land uses. This may be in the form of a Local Planning Policy. |

| 3: Orrong Road Corridor/LPP 2 Policy Area | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high density infill development which is of high quality and positively contributes to the streetscape. |
| | **Key Considerations and Opportunities** |
| | • Orrong Road is identified as an 'Other Regional Road' and is under the care and control of Main Roads WA (MRWA). MRWA are currently investigating improvements to Orrong Road to improve safety, reduce congestion, enhance connectivity and improve liveability for people who travel along or live near this road. This project is an opportunity for the City to engage with MRWA to ensure that existing and future development along the corridor is carefully considered.<br>• Based on MRWA traffic counts, Orrong Road averages between 47,000-55,000 vehicles per day on weekdays through Kewdale/Carlisle.<br>• Lots fronting and in proximity (approximately 300m) to Orrong Road are subject to transport noise considerations.<br>• Clause 4.7.1 of LPS 15 states that where residential land abuts a regional road reserve, vehicular access to the road will not be permitted for residential development other than for a single house, unless a vehicular access plan has been approved.<br>• Land generally adjacent to Orrong Road is coded R20/60.<br>• Local Planning Policy No.2 - Orrong Road (LPP 2) was formulated considering the extent of traffic utilising Orrong Road, the need to limit the number of access points to the road, and the desire for high quality development. |

| | |
|---|---|
| | • The Policy also states that within the R20/60 area, Council will only support subdivision up to a density of R30 where a comprehensive subdivision plan addressing all access issues has been adopted for the redevelopment of a street block. In all other instances, subdivision above a base density of R20 is not supported.<br><br>• For development above R40 within the R20/60 area, a minimum lot size of 2,000$m^2$ is required.<br><br>• The R20/60 coding and provisions of LPP 2 have partially resulted in the removal of ageing dwellings and vehicle access points and the introduction of right of way easements. However, only 12 vehicle access plans have been prepared and there are still many lots which remain undeveloped and have direct access to Orrong Road.<br><br>• The requirement for public access easements and the 2,000 square metre minimum lot size minimise direct vehicle access points on Orrong Road and promote the use of consolidated crossovers for improved traffic management and safety. These could remain in a local planning policy or be included in a new Local Planning Scheme as additional site and development requirements.<br><br>• LPP 2 has not been reviewed since the Residential Design Codes have been amended.<br><br>• Lots on Maikai Place are coded R20/60 abutting Orrong Road, and R20/40 on the opposite side of the street (including 10-12 Reen Street) so as to provide an transition to the adjoining R20 lots. It appears that prior to LPS 15, these lots had been coded R20/40.<br><br>• It is however noted that these lots are not within proximity to any high frequency bus routes, are more than 800m from the closest activity centre, and Orrong Road is not a designated urban corridor under the Central Sub-Regional Planning Framework. The lots do not currently require Orrong Road for vehicle access, and the planning objective for the R20/60 coding (to encourage redevelopment to consolidate access points) is not relevant. |

| | |
|---|---|
| | • DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes, creating an opportunity for the application of straight density codes to this area. |
| **Actions:** | **Zoning and Built Form**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to retain or repeal LPP 2.<br>2. Through the preparation of a new local planning scheme, investigate whether it is appropriate to include additional site and development requirements that require all development excluding single houses to achieve a minimum lot size and to provide a public easement in gross to promote shared vehicular access between lots in accordance with an adopted Vehicle Access Plan.<br>3. Through the review of the Orrong Road planning framework, engage with relevant stakeholders, i.e. MRWA and prominent landowners, as to their aspirations for the corridor and their land. |
| | **Residential Density**<br>4. Investigate the appropriateness of the existing R20/60 and R20/40 codings of lots fronting Maikai Place and consider if these lots should be down-coded through the preparation of a new local planning scheme.<br>5. Investigate whether it is appropriate to apply an R60 code to existing R20/60 coded properties along the corridor. |

# Appendix 1 - Population and Housing Characteristics

**Population**

The 2021 Census data revealed Kewdale had a population of 7,397 people. From 2011 to 2021, Kewdale's population increased by 1,207 persons or 19.4%. Forecasts undertaken by Forecast id predict that by 2041, Kewdale's population will increase to 8,803 people and have a density of 1,239.8 persons per square km.

**Age Structure**

A comparison between Kewdale and the City of Belmont in 2021 reveals that Kewdale had a higher proportion of people in the younger age groups (0 to 15 years) and a similar proportion of people in the older age groups (65+ years). In Kewdale the 30 to 34 year age bracket accounted for the largest amount of the population at 9.2%. This is consistent with the dominate age group for the City of Belmont (refer to **Figure 1**).

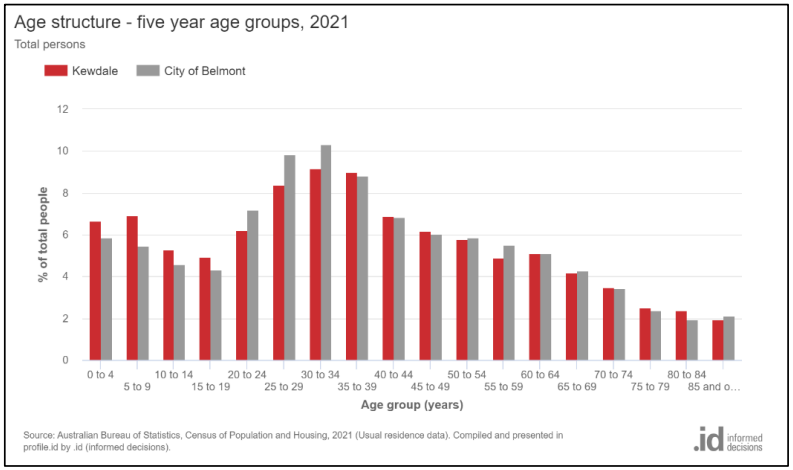



***Figure 1 – Age Structure – Five Year Age Groups (2021) (.id 2024)***

Between 2011 and 2021, the largest changes in age structure occurred in the following age groups:

- 35 to 39 (+198 persons)
- 30 to 34 (+150 persons)
- 5 to 9 (+138 persons)
- 25 to 29 (+122 persons)

These changes indicate significant growth in the younger age groups. However, according to forecasts undertaken by Forecast Id, the largest increase in persons between 2021 and 2031 is forecast to be in people 85 and over, which is expected to increase by 142 persons and account for 3.5% of the population (refer to **Figure 2**). Notwithstanding this, majority of the population are expected to remain within the 30-34 age bracket.

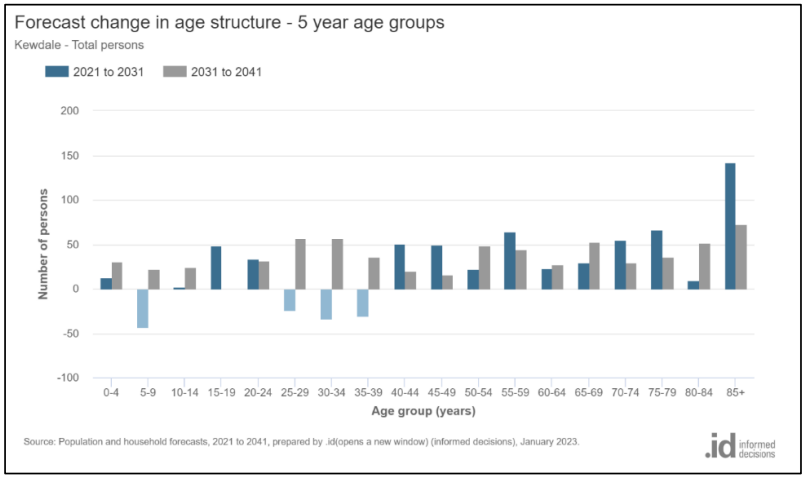



***Figure 2 – Forecasted change in Age Structure – Five Year Age Groups (2021-2041) (.id 2024)***

**Family Structure**

When comparing the household types in Kewdale to the City of Belmont in 2021, the analysis reveals the following:

- The proportion of couple families with children was 27.7%, higher than the 22.4% in the City of Belmont.
- The proportion of one parent families is 10.1%, higher than the 9.3% in the City of Belmont.
- Kewdale has a lower proportion of lone person households (28.1%), compared to the 31.1% in the City of Belmont.
- Similarly, the proportion of couples without children was 22.9% compared to the 23.9% observed in the City of Belmont (refer to **Figure 3**).

Analysing changes between 2011 and 2021 (refer to **Figure 4**), the largest increases in Kewdale were:

- Couples with children (+146 households)
- Lone persons (+129 households)
- Couples without children (+95 households)

This is set to change between 2021 and 2041 given the largest increase in forecast is to be in the lone person households (refer to **Figure 5**).

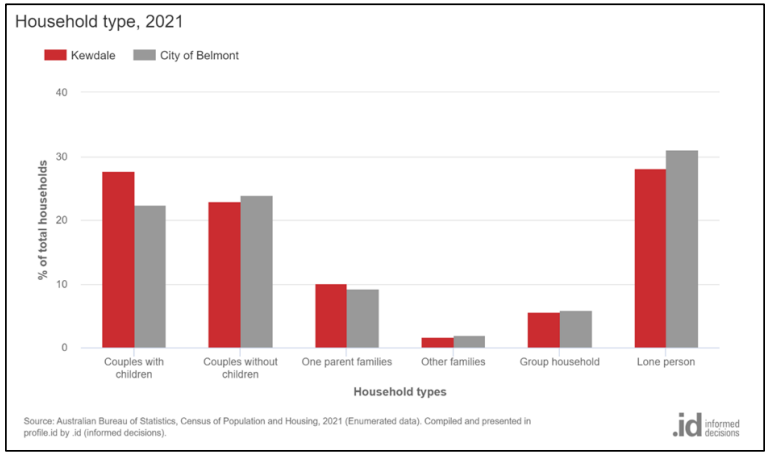



***Figure 3 – Household Type (2021) (.id 2024)***

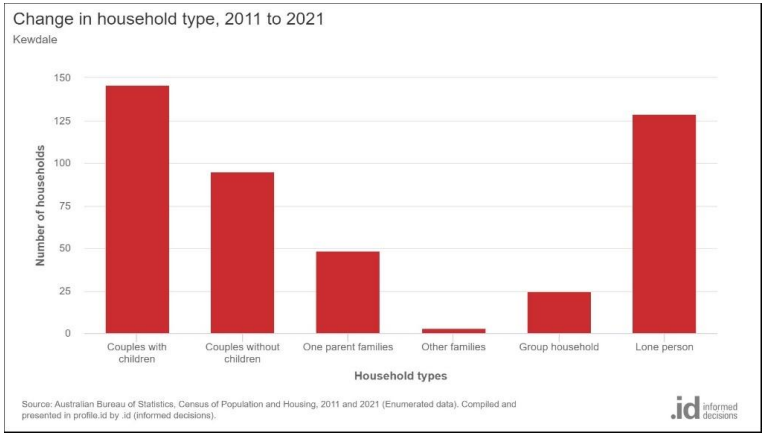



***Figure 4 – Change in Household Type (2011 - 2021) (.id 2024)***

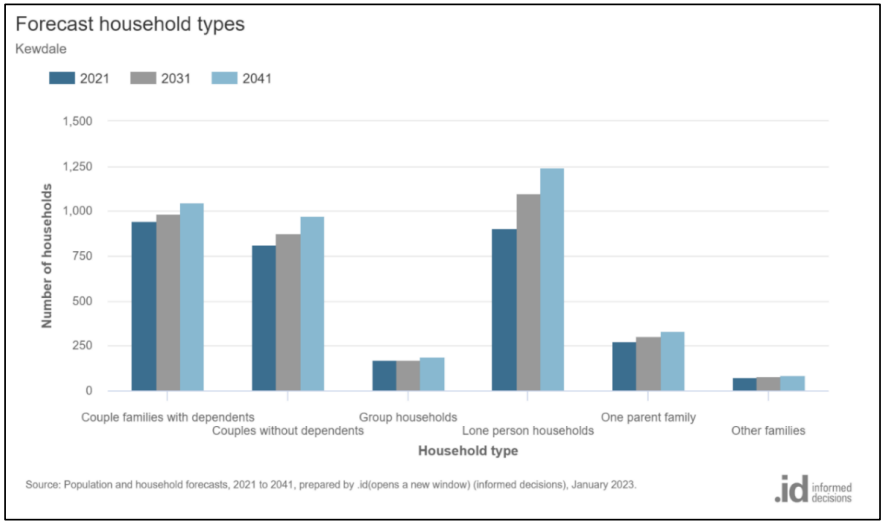



***Figure 5 – Forecast household types (.id 2024)***

**Dwelling Structure**

In 2021, the types of dwellings in Kewdale compared to the City of Belmont revealed some notable differences. In Kewdale, 71.7% of all occupied dwellings were separate houses, 23.8% were semi-detached/row/terrace house/ townhouses, and 4.4% were flats or apartments. In comparison, the City of Belmont housing stock comprised of 65% separate houses, 20.3 % semi-detached, row or terrace house, townhouses, and a higher proportion of flats or apartments at 14.4% (refer to **Table 2**). These figures indicate that Kewdale had a higher percentage of separate houses and semi-detached, row or terrace house, townhouses but a much lower percentage of flats or apartments than the City of Belmont.

Between 2011 and 2021, Kewdale experienced the greatest growth in separate house typologies. As shown in Table 1, an additional 280 separate house were delivered in the suburb during this period. There was also an increase in the number of semi-detached/row/terrace house/townhouses, however, a reduction in the number of flats or apartments.

It is anticipated that with the realisation of opportunities for flat/apartment developments particularly along Orrong Road and in proximity to activity centres, the number of semi-detached/row/terrace house/townhouses, flats and apartments will also increase.

| **Kewdale - Dwellings (Enumerated)** | **2021** | | | **2011** | | | **Change** |
|---|---|---|---|---|---|---|---|
| **Dwelling type** | **Number** | **%** | **City of Belmont %** | **Number** | **%** | **City of Belmont %** | **2011 to 2021** |
| Separate house | 2,052 | 71.7 | 65 | 1,770 | 73.2 | 73 | +280 |
| Semi-detached, row or terrace house, townhouse etc. | 681 | 23.8 | 20.3 | 421 | 17.4 | 15.1 | +260 |
| Flat or apartment | 127 | 4.4 | 14.4 | 228 | 9.4 | 11.6 | -101 |
| Other | 0 | 0.0 | 0.1 | 0 | 0.0 | 0.1 | 0 |
| **Total Private Occupied Dwellings** | **2,860** | **100.0** | **100.0** | **2,419** | **100.0** | **100.0** | **+439** |

***Table 2 – Occupied Dwelling Structure (ABS 2024)***

**Number of Bedrooms**

A comparative analysis of bedroom numbers between Kewdale and the City of Belmont in 2021 reveals notable differences. In Kewdale, 19.8% of dwellings had two bedrooms or less, compared to a higher 27.5% in the City of Belmont. More notably, there were 49.1% of three-bedroom dwellings, compared to the City's 42.2%. Conversely, 26.4% of dwellings in Kewdale had four or more bedrooms, which is slightly higher than the 24.2% observed in the City of Belmont. Additionally, Kewdale had a lower proportion of one bedroom or no bedroom dwellings at 2.8%, compared to 7.8% in the City of Belmont (refer to **Figure 6**).

Between 2011 and 2021, Kewdale saw a higher growth rate for dwellings with two bedrooms or less, indicating a shift towards reduced bedroom numbers. The increase in two bedrooms dwellings (+158) exceeded that of three bedroom dwellings (+106) (refer to **Figure 7**).

Despite this trend, there remains a significant disparity between the proportion of lone-person households, which is currently 29% (refer to **Figure 8**), and the availability of single-bedroom dwellings, which constitute just 2.8% of the housing stock.

It is anticipated that this discrepancy will persist, especially considering the projected significant increase in lone person households. To address this issue, it is important to promote a diverse range of dwelling types, including single bedroom dwellings, within the suburb. This will help cater to the specific housing needs and preferences of Kewdale's residents.

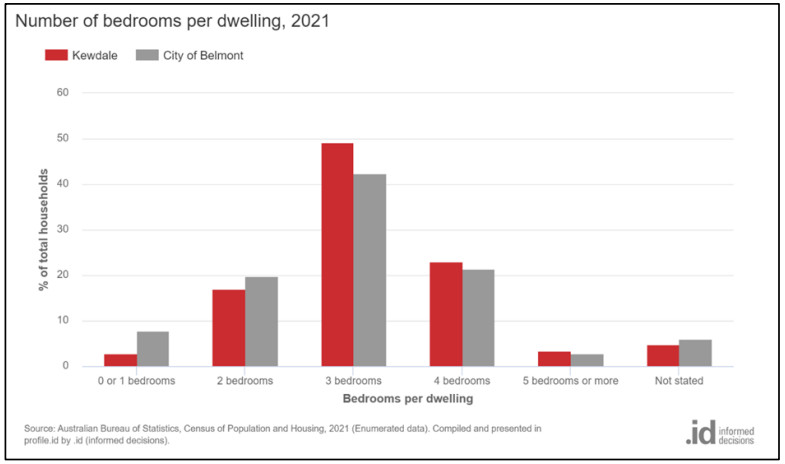



***Figure 6 – Number of bedrooms per dwelling – Kewdale and City of Belmont (.id 2024)***

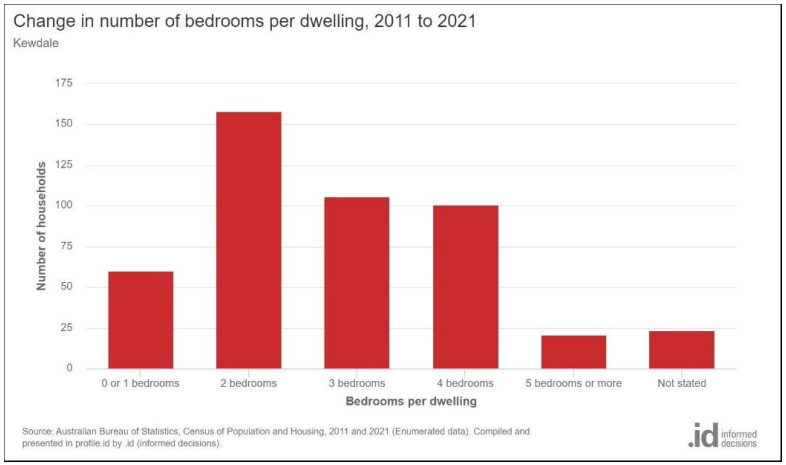



***Figure 7 – Change in number of bedrooms 2011-2021 (.id 2024)***

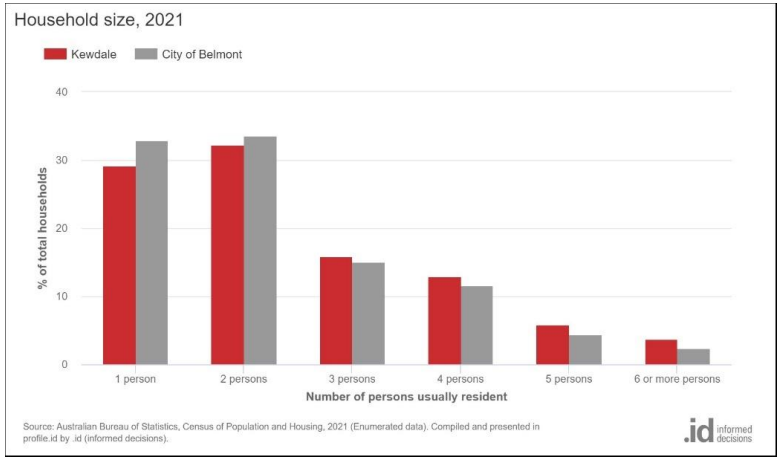



***Figure 8 – Household Size – Kewdale and City of Belmont (.id 2024)***

# PART 2
# REDCLIFFE

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## Snapshot – Population and Dwellings

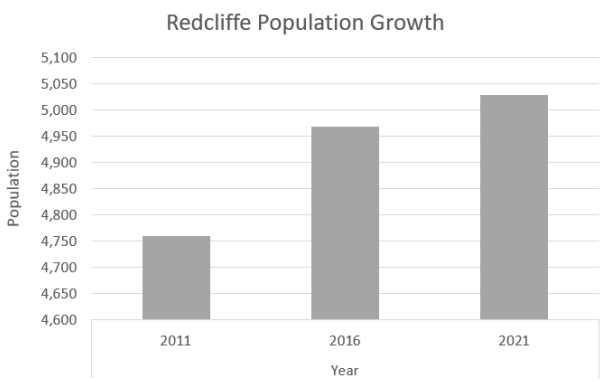
### Current population

5,030 people

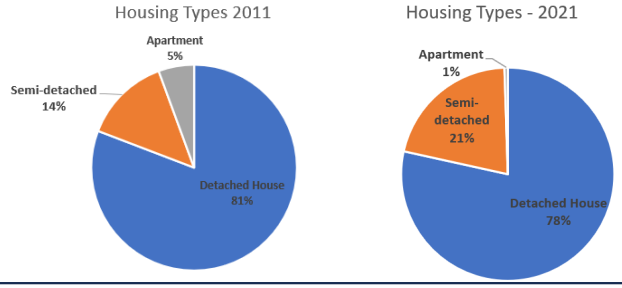
### Current dwellings

2,165

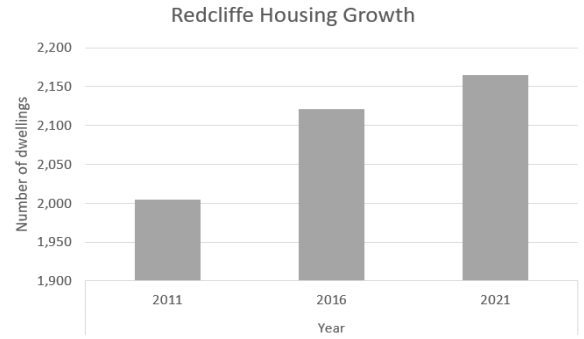
### Population Growth



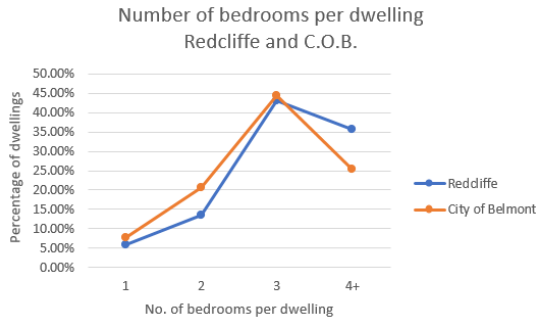

### Change in dwelling types – 2011 & 2021




### Housing Growth




### Bedrooms/dwelling




### People/dwelling

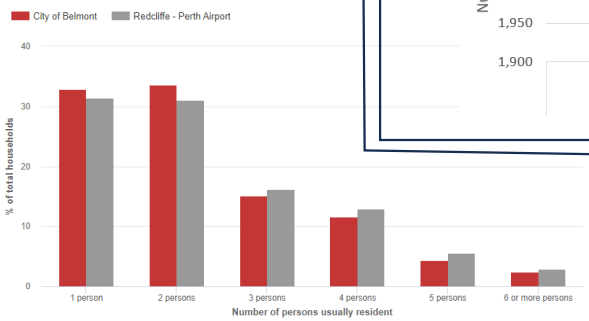



***Table 1: Snapshot (Source: ABS 2024 and .ID Community 2024)***

## Redcliffe Overview

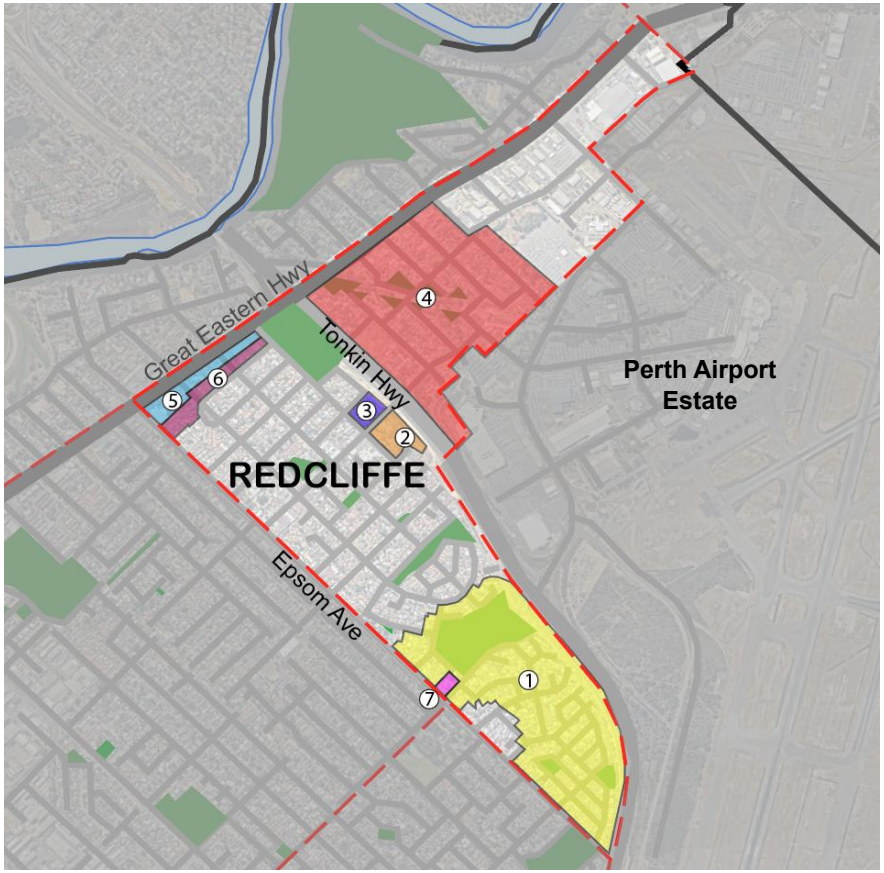
Location and Focus Areas

The suburb of Redcliffe covers an area of approximately 4.2 square kilometres. It is generally bound by Great Eastern Highway to the north, Epsom Avenue to the west, Tonkin Highway and the Perth Airport Estate to the south-east.

There are 7 key focus areas within the suburb of Redcliffe that will be analysed as part of this Local Housing Strategy. These include:

1. Land subject to aircraft noise from Perth Airport
2. Development Area 4
3. Development Area 5
4. Development Area 6
5. Great Eastern Highway Corridor
6. Great Eastern Highway Transition
7. 1 Grand Parade

Land outside of these focus areas will be more broadly discussed in the City wide section of the Local Housing Strategy.



Key Features

**Connectivity**

- Redcliffe benefits from connections to Tonkin Highway and Great Eastern Highway.
- Redcliffe benefits from good access to public transport, and is serviced by bus routes 39, 290, 291, 292, 293 and the 935 and the Redcliffe Train Station.
- Walking paths are located throughout the suburb. There is also several bicycle friendly streets and a shared path along Tonkin Highway and Dunreath Drive.

**Centres and Services**

- There are three activity centres located within Redcliffe:
  - Redcliffe Station Neighbourhood Centre (partly located within the Perth Airport Estate)
  - Redcliffe Industrial Area Specialised Centre
  - Part of Perth Airport Specialised Centre
- Perth Airport and the Redcliffe Industrial Area both provide employment opportunities for residents within the suburb.
- While outside of the suburb, Redcliffe benefits from its proximity to the Epsom Avenue Local Centre, Belmay Local Centre and Belvidere Street Neighbourhood Centre.

**Public Open Space**

- Properties in the suburb benefit from excellent access to public open space, as more than 90% of the suburb is situated within a 400m radius of a park.

**Development Patterns**

- The bulk of development within Redcliffe occurred during the 1980s and 1990s with some properties dating back to the 1960s and 1970s and a smaller portion predating the 1960s. This development predominantly comprised single houses.
- The suburb has experienced a relatively low level of growth between 2011 and 2021 (8.0% compared to approximately 26.4% for the City of Belmont).
- There are opportunities for additional housing within Redcliffe, particularly surrounding Redcliffe Station. The State Government is currently preparing an Improvement Scheme to guide future development in the precinct.
- Regarding the balance of the suburb, there are a total of 1,668 residential lots. Of these, 271 lots, based on their size and width, have the capacity for infill development. However, it is important to recognise that not all landowners may choose to pursue further development of their properties.

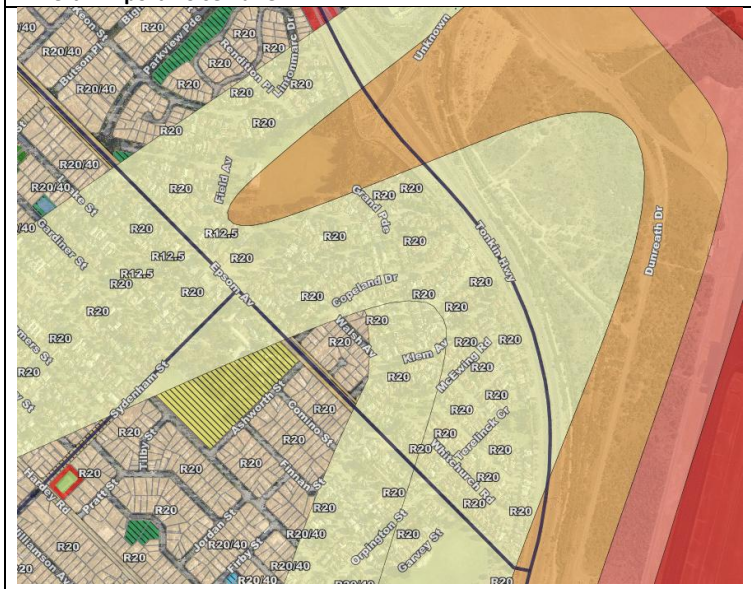
## Suburb Wide Actions

Suburb wide actions for Redcliffe have been prepared based on information from the Key Features section, the Focus Area Summary Table, and Appendix 1 – Population and Housing Characteristics. By integrating these sources, actions were developed to facilitate and support the development of future housing within the suburb.

- Encourage a variety of housing options to cater to the evolving needs of the community, especially with Redcliffe's projected rise in single person households.
- Promote alternative transport modes, such as public transport and active travel, to reduce reliance on private vehicles.

- Continue to monitor population increases within the suburb to determine the suitability of public open space provision.

## Focus Areas

| 1: Perth Airport Noise Buffer | Strategies |
|---|---|
|  | 2. Protect residential development from inappropriate land uses and conversely protect non-residential land uses from encroachment of residential development.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres,<br>5. Encourage development of underutilised 'Urban' zoned land.<br>**Key Considerations and Opportunities**<br>• Portions of Redcliffe are impacted by aircraft noise. The primary measure of aircraft noise used in Australia is the Australian Noise Exposure Forecast (ANEF) system. This system is used to delineate what type of development can take place around airports.<br>• State Planning Policy 5.1 – Land use planning in the vicinity of Perth Airport (SPP 5.1) contains requirements for the development of land within the 20+ ANEF contours, which are those properties most susceptible to aircraft noise impacts.<br>• The Policy specifies that the maximum dwelling density should generally be limited to R20 within the ANEF 20 contour, and R12.5 within the ANEF 25 contour.<br>• The R20 density code can be exceeded within the ANEF 20-25 contour where:<br>○ Land is identified as appropriate for more intensive development through strategic planning instruments such as a regional or sub-regional structure plan;<br>○ A higher density coding is desirable to facilitate redevelopment or infill development of an existing residential area; and<br>○ It can be demonstrated that the public benefits of higher density coding outweigh the negative impacts of exposing additional residents to aircraft noise.<br>• The R12.5 density code can be exceeded in areas above ANEF 25 where:<br>○ A higher density is necessary to facilitate redevelopment or infill development of an existing residential area; |

| | |
|---|---|
| | ○ Land is identified as appropriate for more intensive development through strategic planning instruments such as a regional or sub-regional structure plan;<br>○ It can be demonstrated that the public benefits of higher density coding outweigh the negative impacts of exposing additional residents to aircraft noise; and<br>○ A higher density would facilitate the concurrent provision of noise insulation in accordance with the indoor design sound levels prescribed in AS2021.<br><br>• In areas subject to noise exposure levels above 30 ANEF, the permissible density of residential development should generally not be increased above R12.5.<br><br>• Noise insulation is not mandatory for residential development within the ANEF 20-25 contour but is required in areas above 25 ANEF.<br><br>• While SPP 5.1 requires a notification to be placed on title advising of aircraft noise for lots within the 20-25 ANEF contour, single houses that meet the deemed-to-comply provisions of the Residential Design Codes (R-Codes) are currently exempt from requiring development approval. This prevents notifications being placed on title.<br><br>• Local Planning Scheme No. 15 (LPS 15) augments the exemptions set out in Clause 61 of the Deemed Provisions by requiring development approval for single houses within the 25-30 ANEF contour. This allows for a notification to be placed on title. However, this does not capture single houses within the 20-25 ANEF contour.<br><br>• The ANEF contours have been reviewed resulting in some properties:<br>○ Being within an ANEF contour that weren't previously.<br>○ Being subject to a higher ANEF contour.<br>○ Being subject to a lower ANEF contour or outside the ANEF contour.<br><br>• Redcliffe contains 10 lots with a density code of R12.5 which are no longer located within the 25 ANEF contour. Although several of these dwellings are |

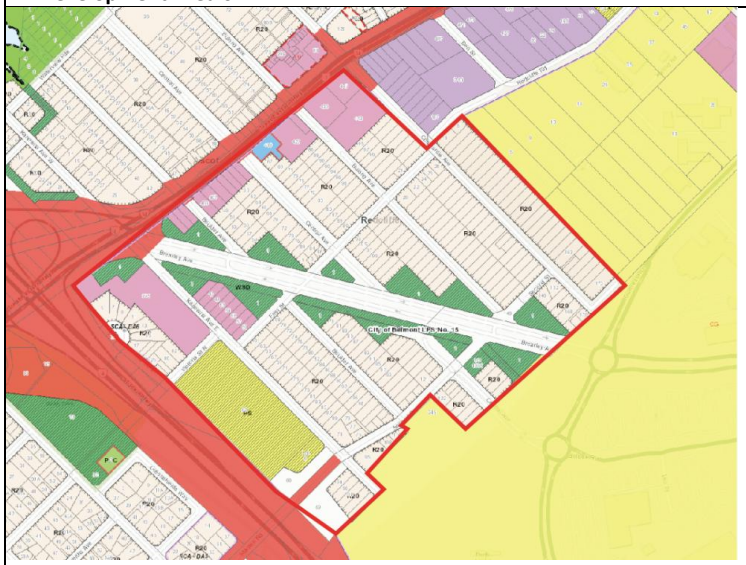
| | | |
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| | | recent builds and/or are in good condition, upcoding these lots may be appropriate as they are in proximity to Belmay Local Centre.<br><br>• Redcliffe contains a number of lots with R20 density codings located within the 25 ANEF contour. These generally do not have subdivision potential and there is limited risk with maintaining the R20 density. |
| **Actions:** | **Zoning**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to establish a Special Control Area with provisions that require lodgement of development applications for single dwellings within the 20-25 ANEF contour, to support the implementation of SPP 5.1. | |
| | **Residential Density**<br>2. Through the preparation of a new local planning scheme investigate whether it is appropriate to upcode the existing R12.5 lots bound by Epsom Avenue, Grand Parade, Board Avenue and Field Avenue to R40. | |

| 2: Development Area 4 | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high density infill development which is of high quality and positively contributes to the streetscape. |
| | **Key Considerations and Opportunities** |
| | • Lots outlined in yellow on the plan to the left are designated by LPS 15 as being located within a Special Control Area – Development Area 4 (DA 4).<br>• LPS 15 requires a structure plan to be prepared to guide subdivision and development and for not less than 75% of the area to be developed for the purpose of single houses. Given the proximity of the area to Redcliffe Train Station, there may be an opportunity to delete this requirement and provide for the construction of higher density development.<br>• The Department of Communities previously investigated the preparation of a structure plan in 2018. To date no plan has been approved for this land.<br>• The land abuts Stanton Road which is a primary regional road reserve. Clause 4.7.1 of LPS 15 states that where residential land abuts a regional road reserve, vehicular access to that road shall not be permitted for residential development other than for a single house. This is unless a vehicular access plan has been approved.<br>• It may be appropriate to identify additional site and development requirements within the new local planning scheme that requires coordination of vehicle access and tree retention.<br>• The WA Land Authority is the majority landowner of the precinct, owning all but four lots (65, 67, 68 and 71 Morrison Street). |

| | | |
|---|---|---|
| | | • The four privately owned lots are held by individual landowners. Three contain houses constructed in the 1950s-60s (65, 67 and 68 Morrison Street). The fourth, corner lot is vacant (71 Morrison St).<br><br>• Future planning/development will need to address bushfire and noise considerations.<br><br>• Changes to the Primary Regional Road Reservation have resulted in land outside the Special Control Area and 10 and 12 Ryans Court no longer being zoned. There is an opportunity to apply an appropriate zone and density code to this land as part of the preparation of a new local planning scheme. |
| **Actions:** | **Zoning**<br>1. Engage with Development WA to understand their development intentions.<br>2. Through the preparation of a new local planning scheme, investigate an appropriate zone for the unzoned land between Morrison Street and the Stanton Road and Tonkin Highway Primary Regional Road reserves.<br>3. Through the preparation of a new local planning scheme, investigate additional site and development requirements within the new local planning scheme that require coordination of vehicle access and tree retention. | |
| | **Built Form**<br>4. Through the preparation of a new local planning scheme, investigate the appropriateness of retaining the existing scheme provision requiring 75% of land to be developed for single houses. | |
| | **Residential Density**<br>5. Through the preparation of a new local planning scheme, investigate the appropriateness of retaining the R20 density coding for the area.<br>6. Through the preparation of a new local planning scheme investigate whether it is appropriate to apply an R20 density code to the unzoned land between Morrison Street and the Stanton Road and Tonkin Highway Primary Regional Road Reserves (this includes 10 & 12 Ryans Court). | |

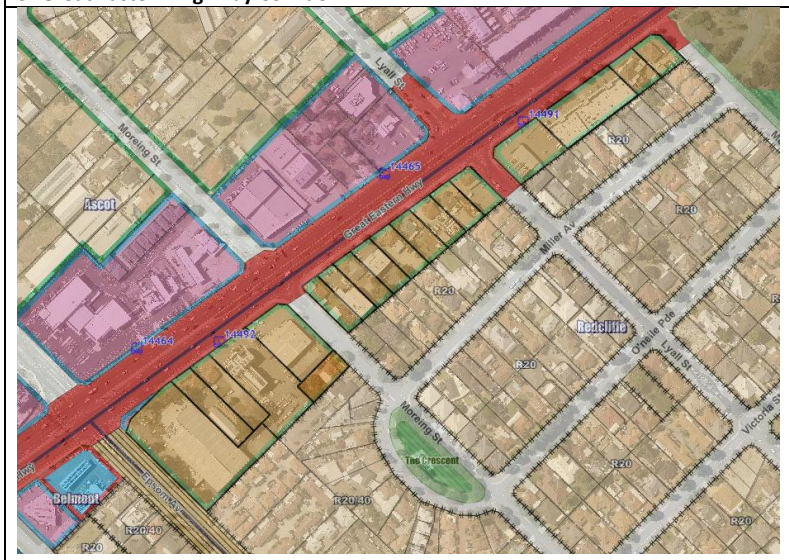
| 3: Development Area 5 | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high density infill development which is of high quality and positively contributes to the streetscape. |
| | **Key Considerations and Opportunities** |
| | • Lots outlined in yellow on the plan to the left are designated by LPS 15 as being located within a Special Control Area – Development Area 5 (DA 5).<br>• LPS 15 requires a structure plan to be prepared to guide residential subdivision and development.<br>• A structure plan prepared by the City in 2008 proposed a density increase from R20 to R25. This also proposed a central access area to facilitate the removal of vehicle access points from Stanton Road. The structure plan was not adopted by Council.<br>• The WA Land Authority owns two lots within the precinct (14 Greenshields Way and 67 Stanton Road). On the 8th of October 2024, the WAPC granted approval for 8 single bedroom dwellings for social housing (public works).<br>• All other lots are in private ownership and contain dwellings constructed in the 1960s. The age of these dwellings may present an opportunity for redevelopment.<br>• The land abuts Stanton Road which is a primary regional road reserve. Clause 4.7.1 of LPS 15 also states that where residential land abuts a regional road reserve, vehicular access to that road shall not be permitted for residential development other than for a single house. This is unless a vehicular access plan has been approved.<br>• The precinct is within 800m of the Redcliffe Station and the Redcliffe Neighbourhood Centre. This may present an opportunity to apply a density code greater than R20 or R25 to this land. |

| | | |
|---|---|---|
| | | • Future planning/development will need to address bushfire and noise considerations.<br><br>• It may be appropriate to identify additional site and development requirements within the new local planning scheme that requires coordination of vehicle access and tree retention. |
| **Actions:** | **Zoning**<br>1. Through the preparation of a new local planning scheme, investigate additional site and development requirements within the new local planning scheme that require coordination of vehicle access and tree retention. | |
| | **Residential Density**<br>2. Through the preparation of a new local planning scheme, investigate the appropriateness of retaining the R20 density coding for the area. | |

| 4: Development Area 6 | Strategies |
|---|---|
| <br> | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high density infill development which is of high quality and positively contributes to the streetscape.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance.<br>**Key Considerations and Opportunities**<br>• LPS 15 requires a structure plan to be prepared for the Development Area 6 (DA 6) precinct (outlined in red in the image to the left) to guide subdivision and development.<br>• In response to Redcliffe Station being opened within the precinct, the City prepared a draft Activity Centre Plan (ACP). It was anticipated this draft Plan would result in 2,800 and 4,000 dwellings with an estimated population between 6,000 and 8,500 people.<br>• At 23 March 2021 Ordinary Council Meeting, Council resolved to adopt the ACP and supporting scheme amendment for advertising.<br>• Before the City could advertise, consent from the Western Australian Planning Commission (WAPC) was required. The WAPC would not grant consent for advertising until infrastructure funding matters were resolved, as this would have implications for the Development Contribution Plan.<br>• A key aspect of the draft ACP related to the vision to transform the Southern Main Drain into an urban stream in a parkland setting. The proposed urban stream was intended to be the focal point of the precinct and continue to serve the practical function of conveying regional stormwater from Kalamunda to the Swan River. |

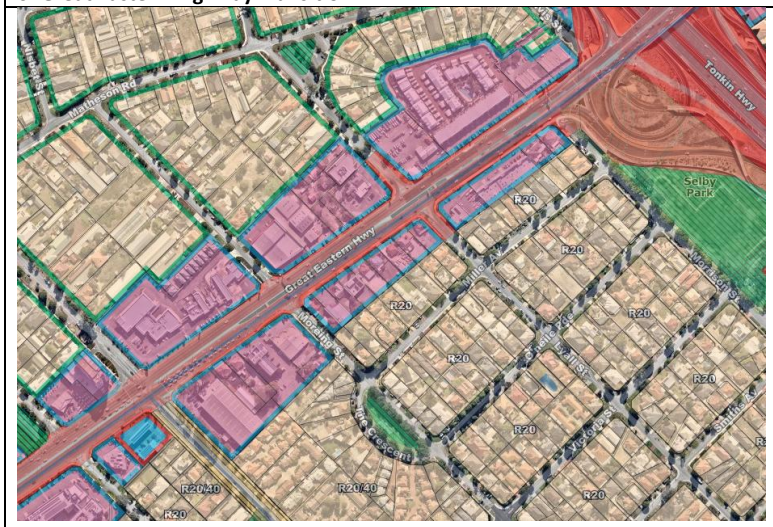
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| | • As the Southern Main Drain is regional infrastructure and therefore the responsibility of the State Government, it was not considered appropriate for the City to expend municipal funds toward its upgrade.<br><br>• The State Government offered to contribute to the funding of the upgrade, however this would only provide for clearing, revegetation and re-fencing. Therefore, at the 26 April 2022 Ordinary Council Meeting, Council resolved to write to the State Government to express concerns with the funding commitment and seek further funding from the State. Council also resolved to write to the State Government requesting that Development WA progress the future planning for the precinct.<br><br>• The State Government has now taken over the future planning of the area and has prepared an Improvement Plan (Improvement Plan No. 45). The objectives of Improvement Plan No. 45 are:<br>○ To plan for the establishment of contemporary transit oriented development that includes an appropriate mix of uses;<br>○ To provide for a range of non-residential uses in appropriate locations and which include retail and commercial uses to support the convenience and employment needs of the local community;<br>○ To provide the community with employment opportunities and equitable access to goods and services;<br>○ To provide public open space for local amenity and recreational needs of the community;<br>○ To achieve high quality built form and public place design;<br>○ To provide for a diverse range of housing to meet the needs of the community;<br>○ To manage interface between future development and future development within the adjacent Perth Airport;<br>○ To facilitate co-ordinated infrastructure planning and delivery; and<br>○ To facilitate land use activities that can respond to the planned development of the scheme area over time.<br><br>• Department of Planning, Lands and Heritage (DPLH) are in the process of preparing an Improvement Scheme for the area to guide future subdivision and development |

| | |
|---|---|
| | in accordance with the above objectives. DPLH will be using the draft ACP to inform the Improvement Scheme. |
| **Actions:** | **Zoning, Residential Density and Built Form**<br>1. Continue to engage with the Department of Planning, Lands and Heritage through the preparation of the Improvement Scheme, and advocate for the delivery of high quality, mixed use transit oriented development. |

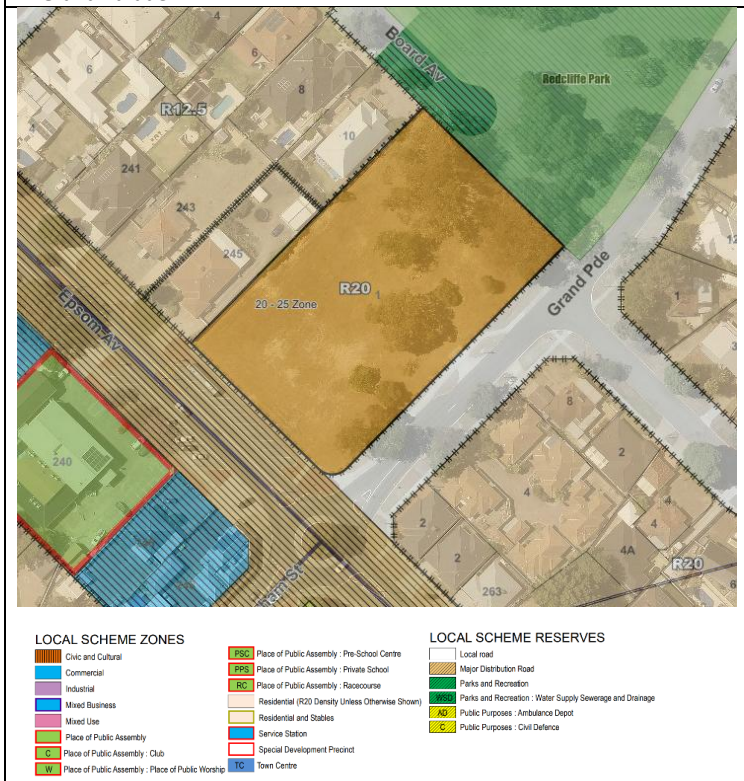
| 5: Great Eastern Highway Corridor | Strategies |
|---|---|
| <br>LOCAL SCHEME ZONES<br>Civic and Cultural<br>Commercial<br>Industrial<br>Mixed Business<br>Mixed Use<br>Place of Public Assembly<br>C Place of Public Assembly : Club<br>W Place of Public Assembly : Place of Public Worship<br>PSC Place of Public Assembly : Pre-School Centre<br>PPS Place of Public Assembly : Private School<br>RC Place of Public Assembly : Racecourse<br>Residential (R20 Density Unless Otherwise Shown)<br>Residential and Stables<br>Service Station<br>Special Development Precinct<br>TC Town Centre<br>LOCAL SCHEME RESERVES<br>Local road<br>Major Distribution Road<br>Parks and Recreation<br>PRWS Parks and Recreation : Water Supply Sewerage and Drainage<br>AD Public Purposes : Ambulance Depot<br>PC Public Purposes : Civil Defence | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance.<br><br>**Key Considerations and opportunities**<br>• Great Eastern Highway is identified as an Urban Corridor under Perth and Peel @ 3.5 Million. The focus for these areas is for higher density residential integrated with active uses.<br>• Consistent with the above, the City of Belmont has prepared the Great Eastern Highway Urban Corridor Strategy to guide development along the corridor.<br>• The Strategy identifies the Redcliffe section of Great Eastern Highway as an 'Activity Corridor' and envisages active, commercial land uses on ground floors, with upper floors containing residential and other commercial uses.<br>• To support implementation of the Great Eastern Highway Urban Corridor Strategy, Council has adopted Local Planning Policy No. 20. The policy provides built form guidance for proponents and decision makers.<br>• There is an opportunity for development along Great Eastern Highway that benefits from good accessibility by both private motor vehicle and public transport. The corridor provides access to the Perth CBD, Perth Airport, and connections to other major regional roads. The corridor also contains a high frequency bus route providing access to the Perth CBD, Airport,and the Redcliffe Train Station. |

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| | • All lots are subject transport noise considerations. Future development will be considered against State Planning Policy 5.4 – Road and Rail Noise (SPP 5.4).<br><br>• Lots abutting the corridor are currently zoned 'Mixed Use' and between Morrison and Moreing Streets, are generally narrow and/or shallow. Between Moreing Street and Epsom Avenue, lots are larger and may allow for a more substantial built form.<br><br>• The Mixed Use zone objective within LPS 15 currently provides for appropriate industrial activities to occur within this zone. It is considered that this is contrary to the outcomes the draft Corridor Strategy is seeking to achieve.<br><br>• The Mixed Use zone generally adjoins low density (R20-40) residential development to the rear.<br><br>• Currently LPS 15 provides little guidance for residential development in the 'Mixed Use' zone and does not specifically allocate residential density codes. However, in considering development, LPS 15 requires a residential density code to be assigned having regard to the density code of adjoining properties. This approach is inconsistent with the Central Sub-Regional Planning Framework which states that codes of R60 or higher are appropriate for urban corridors.<br><br>• There is an opportunity to align with the City's Great Eastern Highway Urban Corridor Strategy and Local Planning Policy No. 20, which contemplates this portion of the activity corridor having development up to 10 storeys and a plot ratio of 3.0. To enable this, it may be appropriate to apply an R-AC0 density code to the corridor so that development is undertaken in accordance with the policy. |
| **Actions:** | **Zoning**<br>1. Through the preparation of a new local planning scheme, investigate the appropriateness of retaining the Mixed Use zone along Great Eastern Highway. |

| | |
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| | 2. Through the preparation of a new local planning scheme, review the 'Mixed Use' zone objectives to ensure that the statutory planning framework allows for the desired mix of commercial and residential land uses. |
| | **Residential Density**<br>3. Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply an R-AC0 density code to the corridor so that future development is undertaken in accordance with the built form controls contained within Local Planning Policy No. 20. |
| | **Built Form**<br>4. Consider the need for additional specific site and development requirements for the Mixed Use zoned lots under the new local planning scheme, e.g. building height, plot ratio, rear setbacks abutting residential zoned land. |

| 6: Great Eastern Highway Transition | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance.<br><br>**Key Considerations and opportunities**<br>• The Central Sub-regional Planning Framework identifies land close to urban corridors as appropriate locations for increased residential densities.<br>• Residential zoned lots to the rear of the Mixed Use zone between Morrison and Moreing Streets are coded R20. All lots have or had an area in excess of 900m$^2$ and all but two have now been subdivided or redeveloped.<br>• Residential zoned lots between Moreing Street and Epsom Avenue are currently coded R20/40. This has resulted in some lots being developed for grouped dwellings.<br>• In the short-term, land fragmentation and the age and condition of dwellings within the transition area would serve as a barrier to further development above existing densities. Despite this, there is an opportunity to apply appropriate density codes to this land to facilitate an appropriate transition of development from Great Eastern Highway.<br>• Densities of R40-R160 may be suitable. The extent of the transition area and associated density code will be further investigated through the preparation of a new local planning scheme. |

| Actions: | Residential Density |
|---|---|
| | 1. Through the preparation of a new local planning scheme, identify an appropriate transition area from Great Eastern Highway and investigate suitable density codes. |

| 7: Grand Parade | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high density infill development which is of high quality and positively contributes to the streetscape.<br>**Key Considerations and Opportunities**<br>• 1 Grand Parade is currently owned by the City. It was formerly occupied by a childcare centre, which was demolished in 2011. The site has been vacant since.<br>• The site contains a number of mature trees, which Council previously expressed a desire to retain.<br>• There is a 2 metre wide drainage easement along the full length of the south-east lot boundary.<br>• The current planning framework allows for development of up to 20 dwellings on the site. Alternatively, the zoning would allow for development of an aged care facility, or a new childcare premises.<br>• At this stage, the preparation of a Local Development Plan or Structure Plan is not considered necessary to coordinate development. However, this should be further investigated through the preparation of a new local planning scheme.<br>• The site is located within the ANEF 20 contour. SPP 5.1 specifies that the densities should generally be limited to R20. However, this can be increased where land is close to activity centres.<br>• It may be appropriate to increase the density to R40 through the preparation of a new local planning scheme given its proximity to Belmay local centre. |

| | |
|---|---|
| **Actions:** | **Zoning, Residential Density & Built Form**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply an R40 density code to the site.<br>2. Through the preparation of a new local planning scheme, investigate whether it is appropriate to require a Local Structure Plan or Local Development Plan to guide future subdivision and development.<br>3. While preparing a new local planning scheme, seek to further understand the City's long term intentions for the site. |

# Appendix 1 - Population and Housing Characteristics

**Population**

The 2021 Census data revealed Redcliffe had a population of 5,030 people. From 2011 to 2021, Redcliffe's population increased by only 271 persons or 5.7%. Forecasts undertaken by Forecast Id predict that by 2041 Redcliffe's population will increase to 13,645 (+159.6%).

**Age Structure**

A comparison between Redcliffe and the City of Belmont in 2021 reveals that Redcliffe had a higher proportion of people in the younger age groups (0 to 17 years) as well as a higher proportion of people in the 85 and over age groups (refer to **Figure 1**).

Overall, 20.9% of the population was aged between 0 and 17, and 21.8% were aged 60 years and over, compared with 18.6% and 19.2% respectively for the City of Belmont. The largest age group in Redcliffe was those aged 35 to 39 accounting for 8.1% of the population compared to the City of Belmont which was those aged 30 – 34, accounting for 10.3%.

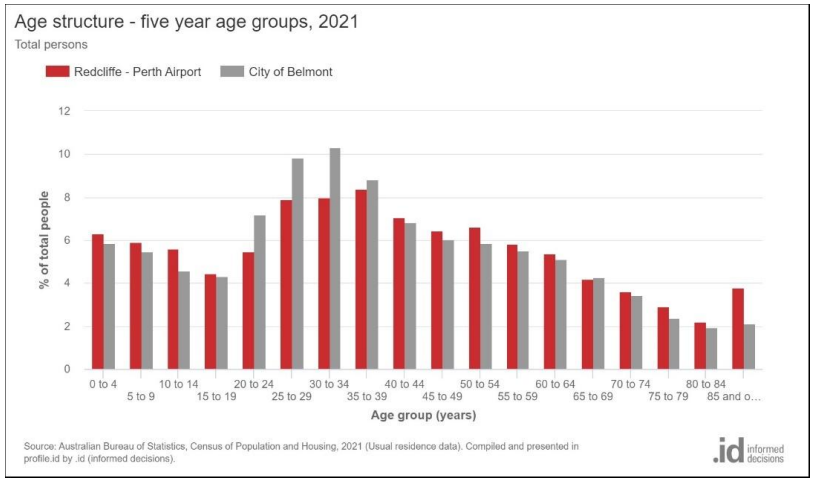



***Figure 1 –Age Structure – Five year Age Groups (2021) (.id 2024)***

The most significant changes in age structure between 2011 and 2021 occurred in the following age groups (refer to **Figure 2**):

- 60 to 64 (+84 persons)
- 30 to 34 (-83 persons)
- 20 to 24 (-70 persons)
- 65 to 69 (+55 persons)

While growth across the entire suburb has been limited, the changes indicate an ageing population. However, forecasts undertaken by Forecast Id predict that this situation will change between 2021 and 2041. The largest increase in persons is expected to be in the 20 to 34 year age bracket accounting for 8.9% of all persons (refer to **Figure 3**).

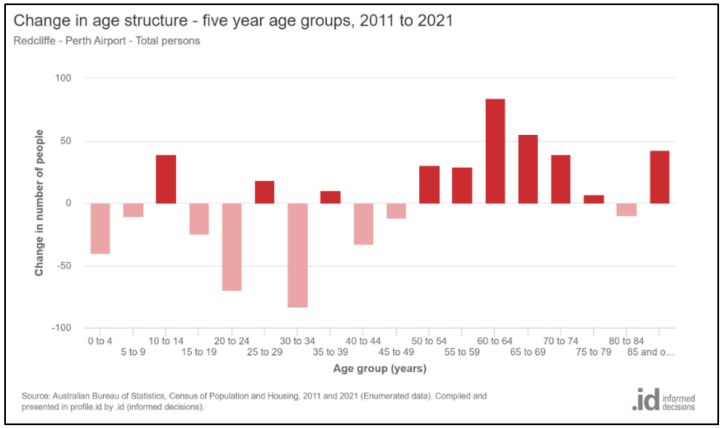



***Figure 2 –Change in Age Structure – Five year Age Groups (2021) (.id 2024)***

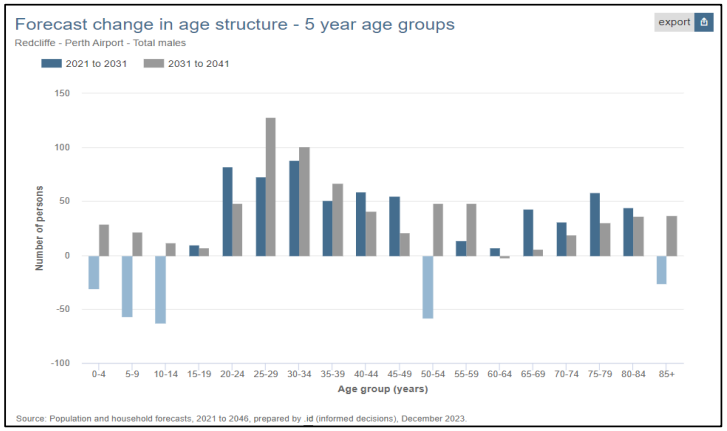



***Figure 3 –Forecast change in Age Structure – Five year Age Groups (2021) (.id 2024)***

**Family Structure**

When comparing household types in Redcliffe to the City of Belmont in 2021, the analysis reveals some notable differences. The key differences were:

- Couples with children (25.6% compared to the City of Belmont's 22.4%)
- One-parent families (11.6% compared to the City of Belmont's 9.3%)

In Redcliffe, there is a lower proportion of lone person households and couples without children compared to the City of Belmont. Lone person households constitute 29.2% of the total compared with 31.1% for the City of Belmont. Additionally, couples without children represent 21.7% of households, compared to 23.9% in the City of Belmont (refer to **Figure 4**).

Despite the above, lone person households continue to be the dominant household type in Redcliffe followed by couples without children and then couples with children. Forecasts undertaken by Forecast Id indicate that this will continue to be the case as demonstrated in **Figure 5**.

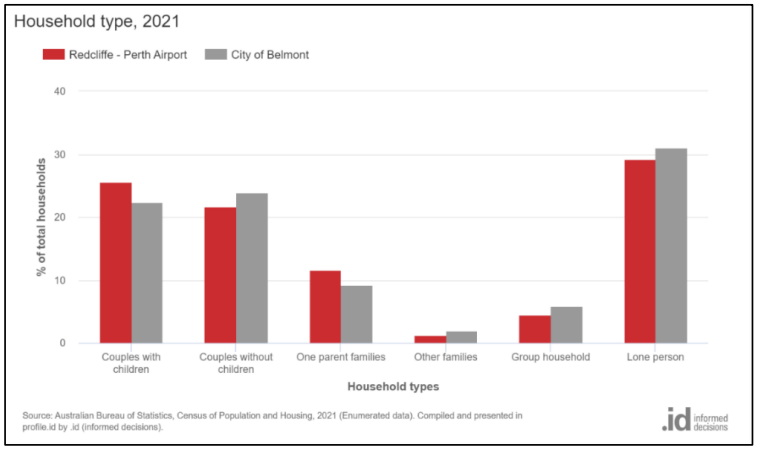



***Figure 4 – Household Type (2021) (.id 2024)***

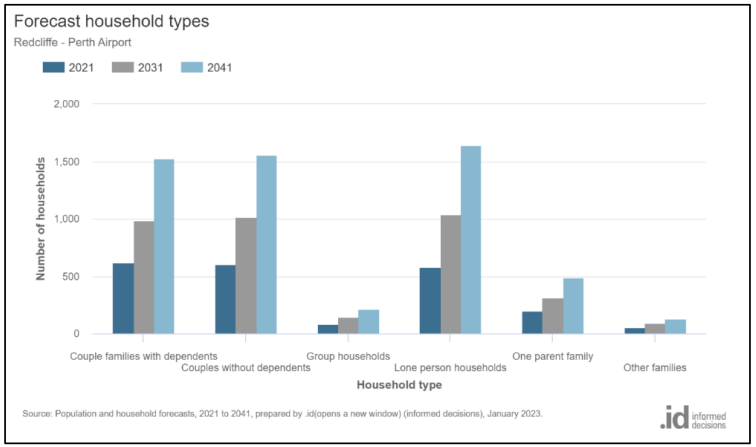



***Figure 5 – Forecast Change in Household Type (2021) (.id 2024)***

Analysing changes between 2011 and 2021, the largest increases in Redcliffe were observed in the number of lone person households followed by couples without children and then couples with children. One parent families, group households and other families all declined (refer to **Figure 6**).

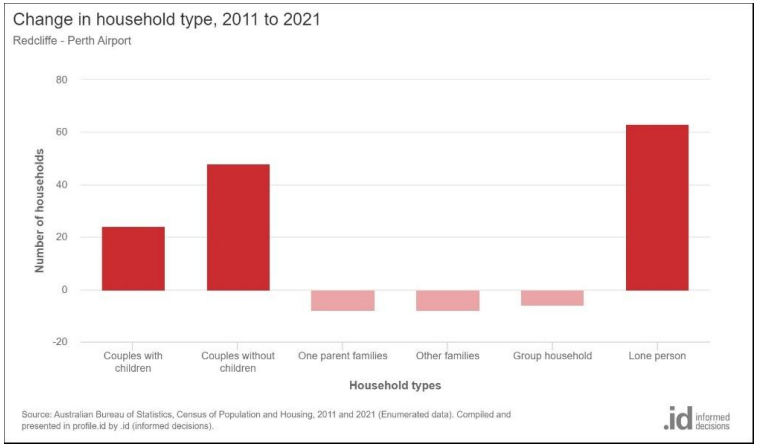



***Figure 6 – Change In Household Type (2011-2021)) (.id 2024)***

**Dwelling Structure**

In 2021 the types of dwellings in Redcliffe compared to the City of Belmont revealed some notable differences. In Redcliffe, 78.3% of all occupied dwellings were separate houses, 21% were semi-detached, row or terrace house, townhouse dwellings, and 0.5% were flats or apartments (refer to **Table 2**). In comparison, the City of Belmont comprised 65% separate houses, 20.3% semi-detached, row or terrace house, townhouses, and 14.4% flats or apartments. These figures indicate that Redcliffe currently has a much lower scale of development than the City of Belmont.

Between 2011 and 2021, Redcliffe experienced the following changes in dwelling structure:

- Separate house (+108 dwellings)
- Semi detached, row or terrace house, townhouse (+158 dwellings)
- Flat or Apartment (-87 dwellings)

While the suburb has a limited number of flats or apartments, it is expected that this situation will change as development occurs around Redcliffe Station.

| **Redcliffe-Occupied Dwellings (Enumerated)** | **2021** | | | **2011** | | | **Change** |
|---|---|---|---|---|---|---|---|
| **Dwelling type** | **Number** | **%** | **City of Belmont %** | **Number** | **%** | **City of Belmont %** | **2011 to 2021** |
| Separate house | 1,495 | 78.3% | 65 | 1,387 | 80.8 | 73 | +108 |
| Semi-detached, row or terrace house, townhouse | 391 | 21% | 20.3 | 233 | 13.6 | 15.1 | +158 |
| Flat or apartment | 10 | 0.5% | 14.4 | 97 | 5.6 | 11.6 | -87 |
| Other | 0 | 0.0 | 0.1 | 0 | 0.0 | 0.1 | 0 |
| **Total Private Dwellings** | **1,896** | **100.0** | **100.0** | **1,717** | **100.0** | **100.0** | **+179** |

***Table 2 – Occupied Dwelling Structure (ABS 2024)***

**Number of Bedrooms**

A comparative analysis of bedroom numbers for Redcliffe and the City of Belmont in 2021 reveals that Redcliffe had a smaller proportion of dwellings with two bedrooms or less, and a higher proportion of dwellings with four or more bedrooms. More specifically, 19% of households in Redcliffe resided in dwellings with two bedrooms or less, while the City of Belmont was higher at 27.5%. In terms of 4 or more bedrooms, 33.7% of Redcliffe households resided in dwellings with 4 or more bedrooms compared to 24.2% for the City of Belmont (refer to **Figure 7**).

When examining trends between 2011 and 2021, the largest increase occurred in the number of dwellings with four bedrooms (refer to **Figure 8**). This is despite the largest increase in household type during this period being lone person households followed by couples without children. The dominant household size within the suburb is also currently single person households (refer to **Figure 9**) which highlights a significant disparity between the number of bedrooms and the size of households in Redcliffe.

It is anticipated that this discrepancy will persist, especially considering the projected increase in lone person households. To address this issue, it is important to promote a diverse range of dwelling types, including single bedrooms dwellings within the suburb. This will help cater to the specific housing needs and demands of Redcliffe's residents.

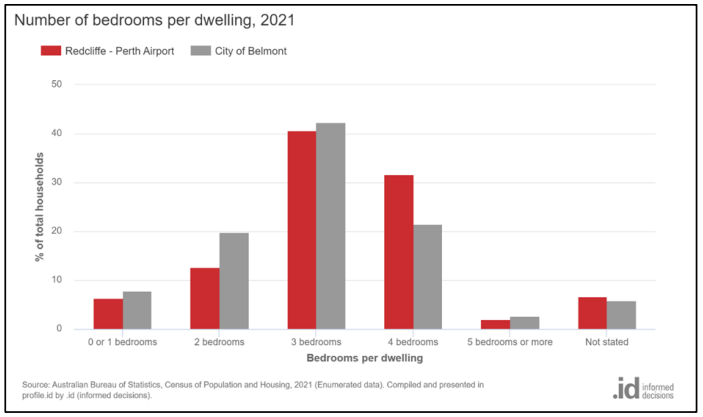



***Figure 7 – Number of bedrooms per dwelling – Redcliffe and City of Belmont (.id 2024)***

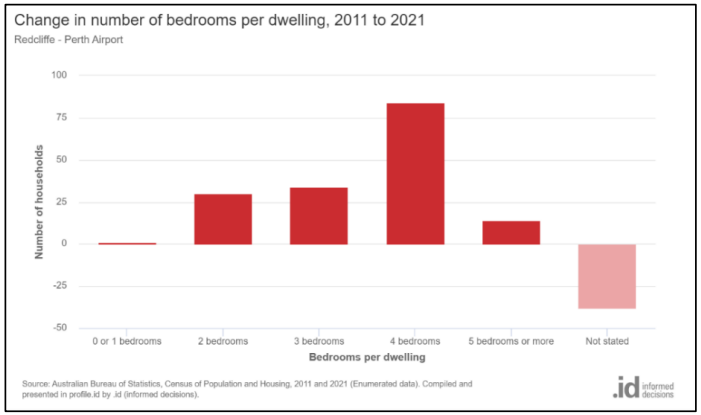



***Figure 8 – Change in number of bedrooms 2011-2021 (.id 2024)***

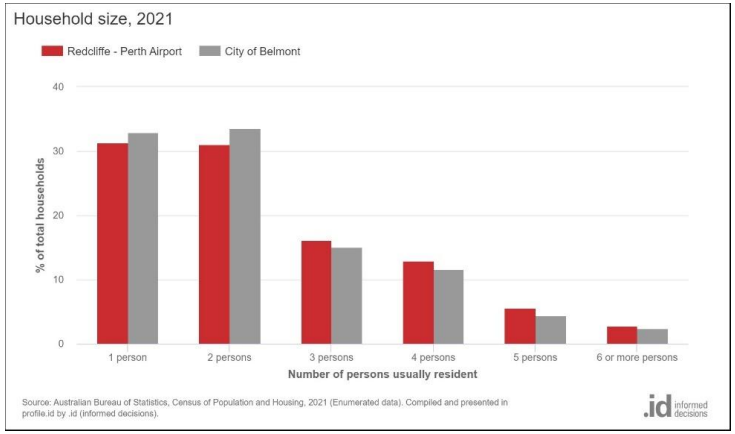



***Figure 9 – Household Size – Redcliffe and City of Belmont (.id 2024)***

# PART 2
# RIVERVALE

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## Snapshot – Population and Dwellings

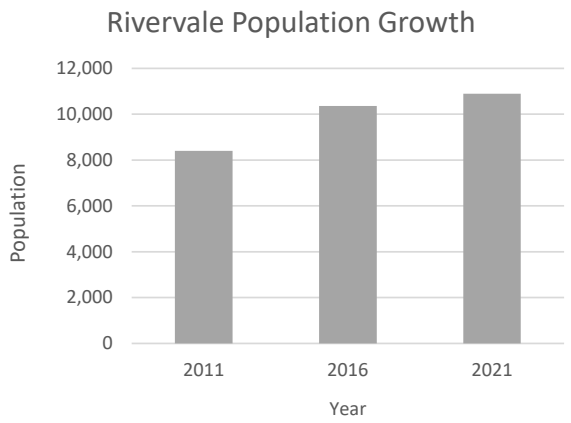
### Current population

10,897

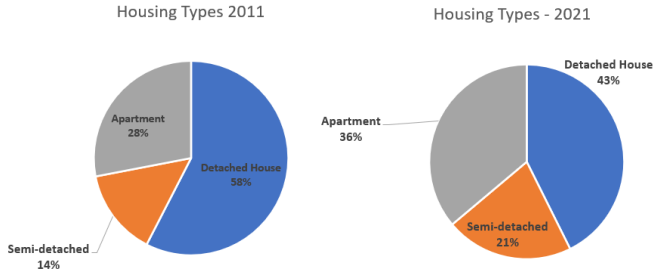
### Current dwellings

5,991

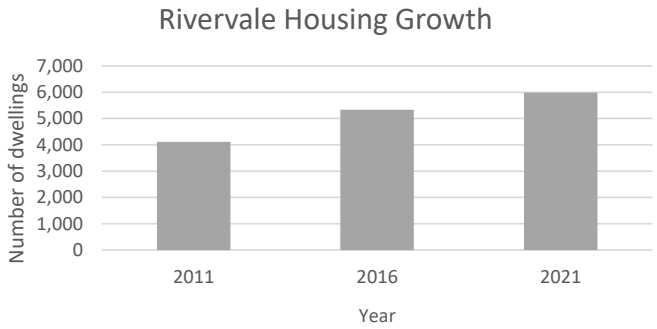
### Population Growth



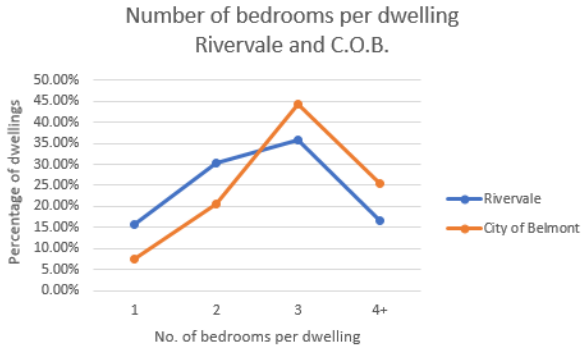

### Change in dwelling types – 2011 & 2021




### Housing Growth




### Bedrooms/dwelling




### People/dwelling

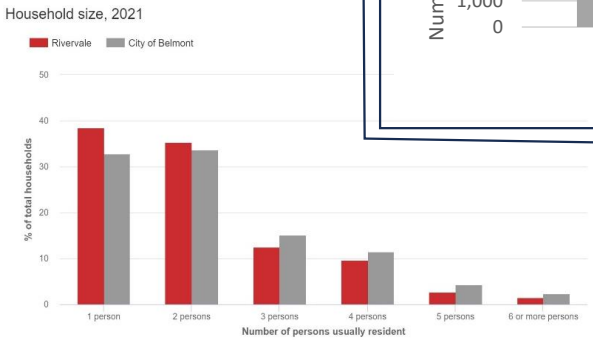



***Table 1: Snapshot (Source: ABS 2024 and .ID Community 2024)***

## Rivervale Overview

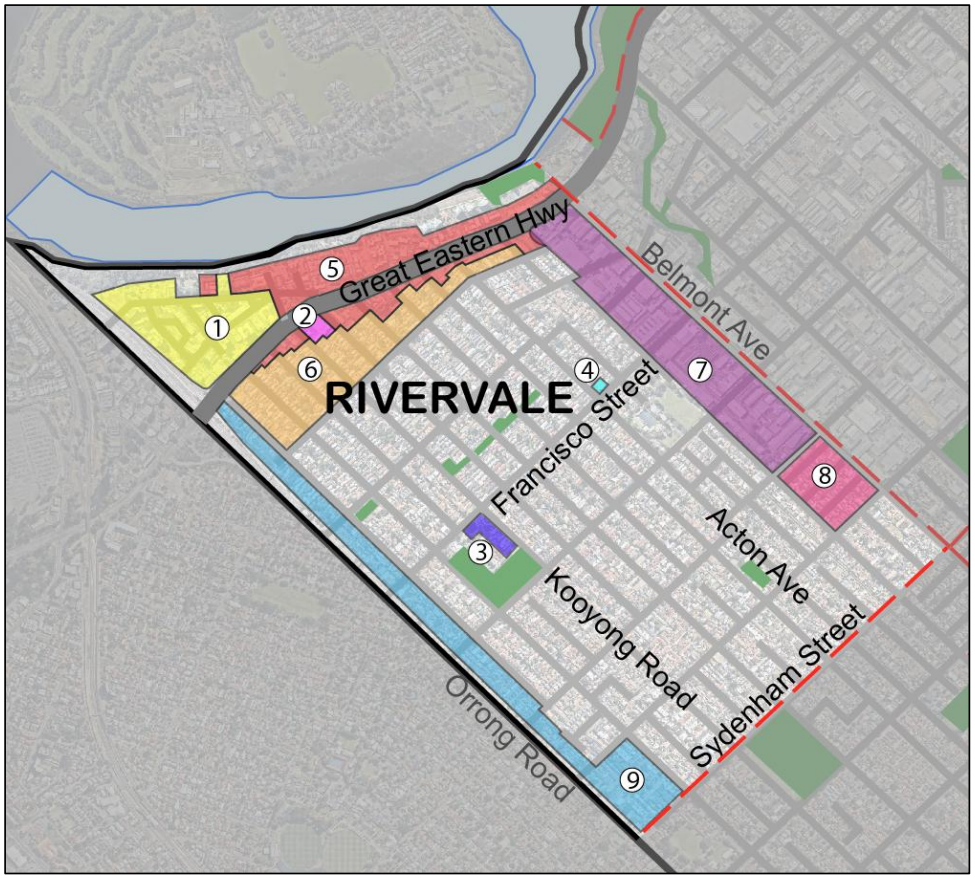
Location and Focus Areas

The suburb of Rivervale comprises an area of 3.3 square kilometres and is bound by the Swan River, Graham Farmer Freeway, Orrong Road, Sydenham Street and Belmont Avenue.

There are 9 key focus areas within the suburb of Rivervale that will be analysed as part of this Local Housing Strategy. These include:

1. The Springs Special Development Precinct
2. Eastgate Neighbourhood Centre
3. Kooyong Village Neighbourhood Centre
4. Francisco Street Local Centre
5. Great Eastern Highway Corridor
6. Great Eastern Highway Transition
7. Belmont Business Park – Mixed Business Zone
8. Additional Use Area
9. Orrong Road Corridor subject to Local Planning Policy No. 2

Land outside of these focus areas will be more broadly discussed in the City wide section of the Local Housing Strategy.



Key Features

**Connectivity**

- Rivervale benefits from connections to major roads including Orrong Road, Graham Farmer Freeway and Great Eastern Highway. These facilitate a high level of accessibility for vehicles.
- While the western part of Rivervale is located approximately 800m from Burswood Train Station, it is unlikely that this is highly utilised by residents due to Graham Farmer Freeway and Great Eastern Highway acting as a barrier for access.
- Rivervale is serviced by high frequency bus routes along Great Eastern Highway and Orrong Road, as well as the 998/999 Circle route which provides connections to other suburbs.
- Rivervale benefits from bicycle and pedestrian paths particularly along the Swan River Foreshore. There is also a number of bicycle lanes along streets such as Great Eastern Highway and Alexander Road. Surrey Road is also designated a safe active street.

**Centres and Services**

The Activity Centre Planning Strategy designates the following activity centres within Rivervale:

- Kooyong Road Neighbourhood Centre
- Eastgate Neighbourhood Centre
- Francisco Street Local Centre
- A Portion of the Belmont Business Park Specialised Centre.

The Belmont Business Park offers employment opportunities for nearby residents and encompasses a variety of land uses and services. Francisco Street local centre is specialised in nature, feature only a printing company. Meanwhile, the Kooyong Road and Eastgate Neighbourhood Centres are well established.

The suburb also contains Rivervale Primary School and St Augustine's Primary School.

**Public Open Space**

- Residents have good access to public open spaces, with 86% of properties located within 400 meters and none further than 800 meters from such spaces.
- Rivervale includes Wilson Park, one of the City's three District Open Spaces. This park serves the needs of local residents whilst also attracting visitors from nearby suburbs.

**Development Patterns**

- Development in Rivervale's residential areas primarily took place in the 1950s and 1960s. During this period, the State began to deliver numerous government homes within the suburb. Additional development occurred in the 1970s and 1980s.
- In the 1990s, grouped dwelling developments increased, especially around the Kooyong Road activity centre.
- The 2009 Springs Structure Plan led to the precinct developing into a higher density area., There are several sites within the precinct still available for redevelopment under the Structure Plan and Local Planning Policy No. 7 – The Springs Design Guidelines. This has led to Rivervale having a high level of growth of 22% between 2011 and 2021 compared to other suburbs in Belmont.
- The suburb has continued to see a level of grouped and multiple dwelling development occurring, especially in dual density coded areas.
- Land in close proximity to Orrong Road is coded R20/60. Development of this land is subject to Local Planning Policy No. 2 – Orrong Road. Several have been developed for grouped dwellings, but the majority still have development potential.
- There is also a portion of land surrounding the Belmont Town Centre coded R20/50/100. A number of higher density developments have occurred in this area guided by Local Planning Policy No. 1 – Performance Criteria – Town Centre Density Bonus Requirements.
- There are currently 2,655 residential zoned lots within Rivervale. Of these lots, 398 lots, based on their size and width have capacity for infill development. However, it is important to recognise that not all landowners may choose to pursue further development of their properties.

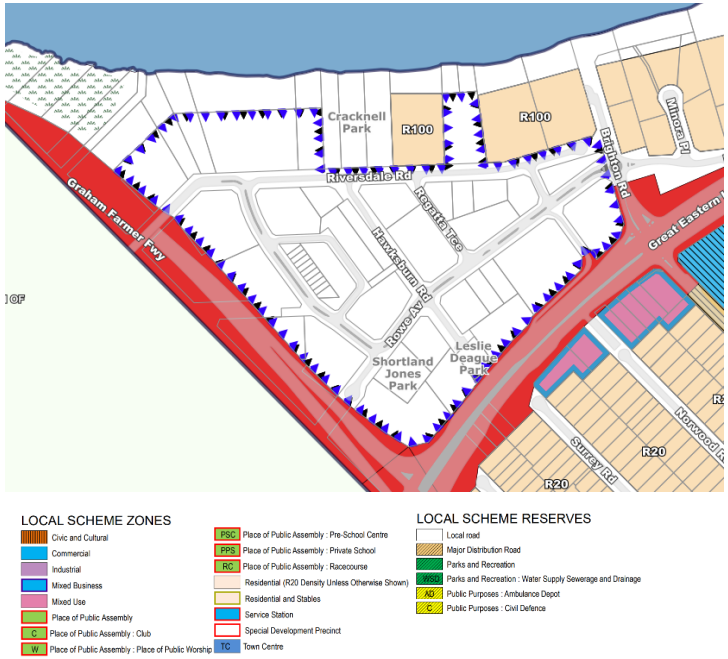
## Suburb Wide Actions

Suburb wide actions for Rivervale have been prepared based on information from the Key Features section, the Focus Area Summary Table, and Appendix 1 – Population and Housing Characteristics. By integrating these sources, actions were developed to facilitate and support the development of future housing within Rivervale.

- Encourage a variety of housing options to cater to the evolving needs of the community, especially with Rivervale's current ageing population.
- Encourage the development of diverse housing options to address changes in demographics, demands and trends towards higher density dwelling types.

- Promote alternative transport modes, such as public transport and active travel, to reduce reliance on private vehicles.

## Focus Areas

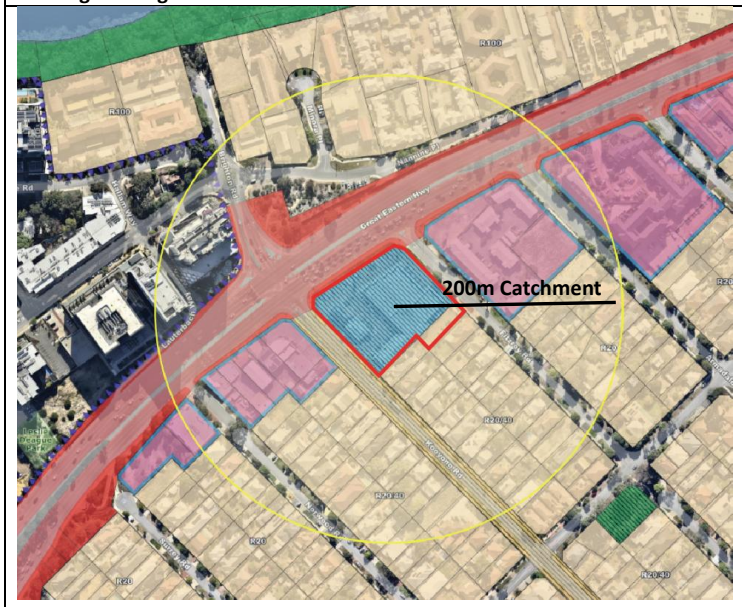
| 1: The Springs Special Development Precinct and Residential Zoned Lots West of Brighton Road | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of high-quality and positively contributes to the streetscape.<br>**Key Considerations and Opportunities**<br>• The Springs was identified as an area requiring coordinated planning to address land fragmentation and underutilisation.<br>• Therefore, the Springs Structure Plan was prepared to guide development within the precinct and was approved in 2009. The vision for the structure plan was to guide the redevelopment of The Springs into a vibrant medium-high-density residential mixed-use area. The Springs Structure Plan expired on 19 October 2025.<br>• To provide further guidance, the Springs Guidelines were prepared and adopted as a Local Planning Policy in 2012 (Local Planning Policy No. 7 – The Springs Design Guidelines). These Guidelines were prepared prior to the adoption of the Residential Design Codes Volume 2 (Apartments).<br>• The precinct is subject to a Development Contribution Plan. Development WA (formerly Landcorp) funded key infrastructure within the area. As landowners develop, they are required to pay their proportionate share for this infrastructure. 14 lots still have outstanding development contributions.<br>• There has been a high level of development which has occurred within the precinct, including both mixed use and residential developments (predominantly multiple dwellings). This has assisted in meeting the City's density targets set by the State Government. |

<table>
<tr><td colspan="2"></td><td>

- Mixed Use development is focussed along Rowe Avenue with the remainder of the area predominantly containing multiple dwellings.
- The precinct is zoned 'Special Development Precinct' which is not a model zone within the *Planning and Development (Local Planning Schemes) Regulations 2015*. This presents an opportunity for the future zoning to align with the Regulations.
- While the Structure Plan assigns density codes it should be noted that these codes and the associated development controls do not align with Volume 2 of the Residential Design Codes (R-Codes). This presents an opportunity to either normalise this situation or apply an R-AC0 density code and carry forward The Springs local planning framework into a new local planning scheme.
- Lots north of the Springs west of Brighton Road are currently coded R100. The R100 code provides for heights up to 4 storeys. It may be appropriate to retain the 'Residential' zone but upcode these lots to R-AC1. This will provide for development up to 9 storeys, aligning more closely with the scale of development that has occurred within the Springs Precinct.

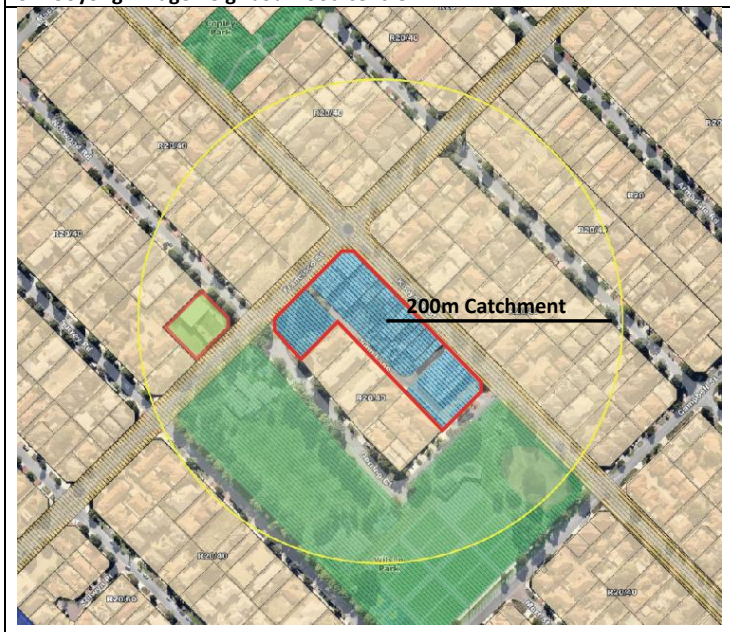
</td></tr>
<tr><td rowspan="3">Actions:</td><td colspan="2">Zoning<br>1. Through the preparation of a new local planning scheme, investigate the appropriateness of retaining the 'Residential' zone for lots north of the Springs Precinct west of Brighton Road.<br>2. Through the preparation of a new local planning scheme investigate the appropriateness of rezoning land from Special Development Precinct, as follows:<br>a. 31 Rowe Avenue to 'Neighbourhood Centre'.<br>b. Lots south of Rowe Avenue to 'Mixed Use'.<br>c. Either:<br>i. The balance of the precinct to 'Residential' and designate appropriate uses as Additional Uses; or<br>ii. The balance of the precinct to 'Mixed Use', and development standards that require a minimum residential component to be incorporated in all new developments.</td></tr>
<tr><td colspan="2">Residential Density<br>3. Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply an R-AC1 density code to 'Residential' zoned lots north of the Springs Precinct west of Brighton Road.<br>4. Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply an R-AC0 density code to the area subject to the Springs Structure Plan.</td></tr>
<tr><td colspan="2">Built Form<br>5. Investigate the approach of carrying forward The Springs local planning framework into a new local planning scheme, and consider:<br>a. The need to extend the operation of The Springs Structure Plan and the Riversdale Road North Detailed Area Plan.</td></tr>
</table>

| | |
|---|---|
| | b. The content of the structure plan within the context of the realised built form, and contemporary planning.<br>c. Undertaking a review of Local Planning Policy 7 – The Springs Design Guidelines in light of the new 2024 Residential Design Codes.<br>d. If the existing structure plan, detailed area plan and local planning policy can be consolidated into one local planning policy.<br>e. Any specific site and development requirements required in a new local planning scheme. |
| | 6. Retain The Springs Development Contribution Plan in a new local planning scheme. |

| 2: Eastgate Neighbourhood Centre | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of high-quality and positively contributes to the streetscape. |
| | **Key Considerations and Opportunities** |
| | • This Centre is identified as a Neighbourhood Centre within the Activity Centre Planning Strategy.<br>• The centre offers an opportunity for residential development within and around the centre to support the ongoing viability of commercial uses, provide convenient access to services and amenities, and increase housing diversity.<br>• The Centre does not currently have a density coding under Local Planning Scheme No. 15 (LPS 15). There is an opportunity to apply a density code through the preparation of a new local planning scheme.<br>• While the 'Commercial' zoning of the centre is currently consistent with the *Planning and Development (Local Planning Schemes) Regulations 2015*, the Department of Planning, Lands and Heritage are planning to introduce 'Centre', 'Neighbourhood Centre' and 'Local Centre' zones. This presents an opportunity for the future zoning of the local centre to align with these new zones.<br>• A portion of the rear car park associated with the centre is currently zoned 'Residential'. There is an opportunity to align the future zoning of this portion with the future zoning of the rest of the centre.<br>• The centre comprises one lot with a single landholder. While this eliminates this as a development constraint, the age and condition of the buildings on the site could hinder redevelopment in the long term. |

| | |
|---|---|
| | • There is an opportunity to align with the City's Activity Centre Planning Strategy which states that an R-AC1 or R-AC0 density code may be appropriate to apply to the centre. State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments designates that an R-AC1 residential density coding is suitable for high density urban centres. With the exception of the side and rear boundary setback provisions, the R-AC1 development requirements are considered appropriate for this Centre. However, if an R-AC1 density code is applied to the centre, the rear and side boundary setback provisions should be amended to achieve an appropriate interface between the centre and the adjoining low scale residential development.<br><br>• Alternatively, it may be appropriate for Local Planning Policy No. 20 to be updated to include site specific development controls for the centre and for an R-AC0 density code to be applied so that future development is undertaken in accordance with those controls.<br><br>• To ensure that residential development does not occur in a manner that erodes the intent of the Centre in providing services to the community, it may be appropriate to limit residential development on ground floors and require the provision for a commercial component in any redevelopment proposal.<br><br>• State Planning Policy 4.2 – Activity Centres (SPP 4.2) sets a residential density target of 25+ dwellings per gross urban zone hectare within the 200m catchment of local centres (outlined in yellow). The local centre has achieved a result of approximately 49 dwellings per urban zone hectare, largely attributed to the multiple dwelling developments on the northern side of Great Eastern Highway.<br><br>• There remains R20 coded lots within the walkable catchments of the neighbourhood centre.<br><br>• Many of the Residential R20/40 lots surrounding the centre have frontages less than 16m, typically of 15.09m. As written in the City's Local Planning Scheme, lots must have a frontage of 16m to develop/subdivide to a higher density. |

| | | |
|---|---|---|
| | | • DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes, creating an opportunity for the application of straight density codes to this area.<br><br>• The Central Sub-regional Planning Framework identifies that urban corridors should be the focus for increased residential densities, and the potential to provide a transition area between high density developments and existing low density neighbourhoods The residential density of properties fronting Great Eastern Highway and an appropriate transition area will be discussed in Focus Area 5 and 6. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning of the centre from 'Commercial' and 'Residential' to 'Neighbourhood Centre' through the preparation of a new local planning scheme. | |
| | **Residential Density**<br>2. Investigate whether it is appropriate to introduce a residential density code of R-AC0 or R-AC1 over Eastgate Neighbourhood Centre through the preparation of a new local planning scheme. | |
| | **Built Form**<br>3. Consider specific site and development requirements for the local centre through the preparation of a new local planning scheme. This may occur by updating Local Planning Policy No. 20.<br>4. Investigate the need to augment default development standards of the R-Codes Volume 2, and other planning controls to prevent the erosion of commercial uses within the activity centre.<br>5. Investigate planning controls to encourage commercial uses within the activity centre, and to ensure appropriate interface between commercial and residential land uses. | |

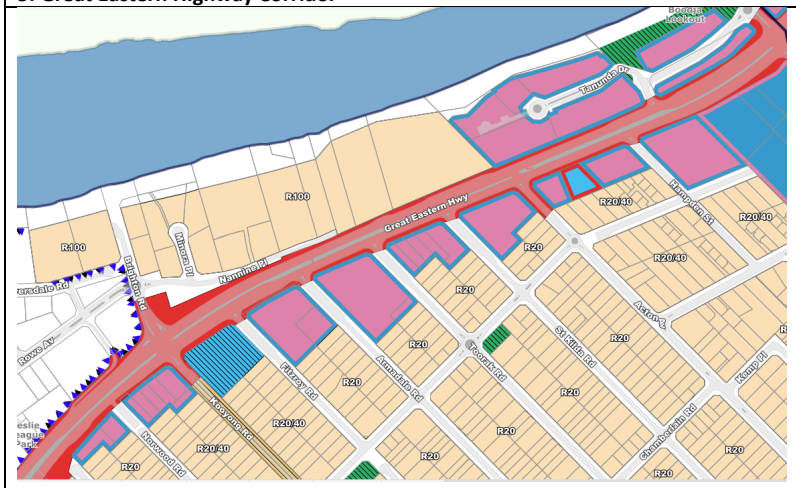
| 3: Kooyong Village neighbourhood centre | Strategies |
|---|---|
| <br> | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of high-quality and positively contributes to the streetscape. |
| | **Key Considerations and Opportunities** |
| | • The Centre is identified as a Neighbourhood Centre within the Activity Centre Planning Strategy.<br><br>• The centre offers an opportunity for residential development within and around the centre to support the ongoing viability of commercial uses, provide convenient access to services and amenities, and increase housing diversity.<br><br>• The Centre does not currently have a density coding under LPS 15. There is an opportunity to apply a density code through the preparation of a new local planning scheme.<br><br>• While the 'Commercial' zoning of the centre is currently consistent with the *Planning and Development (Local Planning Schemes) Regulations 2015*, the Department of Planning, Lands and Heritage are planning to introduce 'Centre', 'Neighbourhood Centre' and 'Local Centre' zones. This presents an opportunity for the future zoning of the local centre to align with these new zones.<br><br>• Within the centre, lots are generally narrow and ownership is fragmented. The main-street configuration is intact and all lots have access to a rear laneway. Buildings may be suitable for redevelopment in the medium to long term, and the centre is capable of accommodating medium to high density mixed use development.<br><br>• Application of a suitable density coding may incentivise redevelopment of the existing buildings to incorporate a residential component. This may also facilitate the |

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| | development of 23 Gerring Court which is currently vacant. In this respect, there is an opportunity to align with the Activity Centre Planning Strategy which states that it may be appropriate to introduce a residential density code of R-AC4 over the centre. State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments designates that an R-AC4 residential density coding is suitable for neighbourhood centres. This code allows for a maximum building height of three storeys and nil setbacks to the primary street and side boundaries. which is considered appropriate for the context of this centre.<br><br>• To ensure that residential development does not occur in a manner that erodes the intent of the Centre in providing services to the community, it may be appropriate to limit residential development on ground floors and require provision for a commercial component in any redevelopment proposal.<br><br>• SPP 4.2 sets a residential density target of 25+ dwellings per gross urban zone hectare within the 200m catchment of neighbourhood centres (outlined in yellow on the image to the left). The centre has achieved a result of approximately 17.81 dwellings per urban zone hectare.<br><br>• Significant redevelopment surrounding the centre has already occurred. Land fragmentation and the age and condition of dwellings within the area may serve as a barrier to further development above existing densities. There are few remaining lots that contain an original dwelling and/or are underdeveloped at existing densities.<br><br>• Opposite the centre, 92 Kooyong Road has been vacant for more than 10 years. This land has multiple street frontages and could accommodate a higher density residential or mixed use development which compliments the centre. Application of appropriate Additional Uses and/or a density increase may incentivise development of these lots.<br><br>• DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes, creating an opportunity for the application of straight density codes to this area. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning of the centre to 'Neighbourhood Centre' zone through the preparation of a new local planning scheme. |

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| | 2. Investigate the appropriateness of applying Additional Uses to 92 Kooyong Road, Rivervale. |
| | **Residential Density**<br>3. Investigate applying an R-AC4 density coding to the neighbourhood centre through the preparation of a new local planning scheme.<br>4. Investigate the appropriateness of a density increase for 92 Kooyong Road, Rivervale from R20/40 to R60.<br>5. Investigate the appropriateness of applying an R40 density coding to existing R20/40 coded lots surrounding the neighbourhood centre. |
| | **Built Form**<br>6. Investigate planning controls in a new local planning scheme to prevent residential developments without commercial components within the activity centre and ensure a suitable transition between commercial and residential land uses. This may be in the form of a Local Planning Policy.<br>7. Investigate the appropriateness of a built form provision requiring any development at 92 Kooyong Road, Rivervale to incorporate a minimum residential component as part of any mixed-use building. |

| 4: Francisco Street Local Centre | Strategies |
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| <br> | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high-density infill development which is of high-quality and positively contributes to the streetscape.<br>**Key Considerations and Opportunities**<br>• This Centre is identified as a Local Centre within the Activity Centre Planning Strategy.<br>• The centre offers an opportunity for residential development within and potentially around the centre to support the establishment of commercial uses, provide convenient access to services and amenities, and increase housing diversity.<br>• The Centre does not currently have a density coding under LPS 15. There is an opportunity to apply a density code through the preparation of a new local planning scheme.<br>• While the 'Commercial' zoning of the centre is currently consistent with the *Planning and Development (Local Planning Schemes) Regulations 2015*, the Department of Planning, Lands and Heritage are planning to introduce 'Centre', 'Neighbourhood Centre' and 'Local Centre' zones.<br>• The centre comprises of five freehold lots, owned by a single landowner. It has been developed for one commercial building. The building was constructed in the 1970s and is in fair condition. It is currently occupied by a print shop (Industry – Light) which is a non-conforming use.<br>• The site is bordered by a private right-of-way, and a large road reserve along Acton Avenue. The verge does not appear to contain any service infrastructure and is currently used for car parking. There may be an opportunity for this land to be consolidated into the private landholding. |

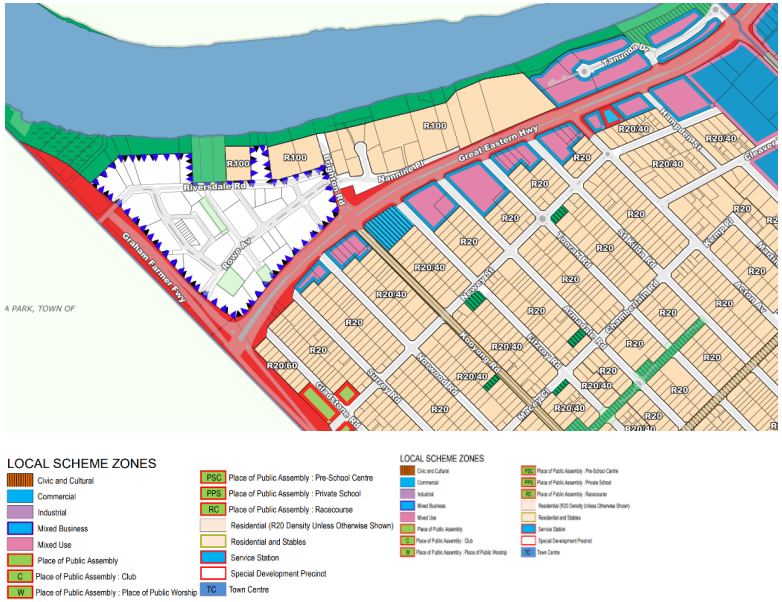
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| | | • There is an opportunity to align with the City's Activity Centre Planning Strategy which indicates that a density code of R60 may be appropriate to apply to the centre. This coding could facilitate medium density development, and achieve an appropriate interface between the centre and the adjoining residential development.<br><br>• SPP 4.2 sets a residential density target of 25+ dwellings per gross urban zone hectare within the 200 metre catchment of local centres (outlined in yellow). The local centre has achieved a result of approximately 10.83 dwellings per urban zone hectare.<br><br>• Lots between Acton Avenue and Martin Avenue within the 200m catchment generally contain 1960s era dwellings. Most of these lots are not currently subdivisible due to their lot area.<br><br>• Currently, the centre does not offer the services and amenities to effectively function as a local centre for the community.<br><br>• Because the local centre does not currently provide convenience goods and services to the surrounding area, it is not considered appropriate to upcode lots surrounding it. Densities surrounding the local centre will be further reviewed following redevelopment of the centre. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning the centre to 'Local Centre' zone through the preparation of a new local planning scheme. | |
| | **Residential Density**<br>2. Investigate the appropriateness of applying an R60 density coding to the local centre through the preparation of a new local planning scheme. | |
| | **Built Form**<br>3. Investigate planning controls to encourage commercial uses within the activity centre, and to ensure appropriate interface between commercial and residential land uses. | |

| 5: Great Eastern Highway Corridor | Strategies |
|---|---|
| <br>LOCAL SCHEME ZONES<br>Civic and Cultural<br>Commercial<br>Industrial<br>Mixed Business<br>Mixed Use<br>Place of Public Assembly<br>C Place of Public Assembly : Club<br>W Place of Public Assembly : Place of Public Worship<br>PSC Place of Public Assembly : Pre-School Centre<br>PPS Place of Public Assembly : Private School<br>RC Place of Public Assembly : Racecourse<br>Residential (R20 Density Unless Otherwise Shown)<br>Residential and Stables<br>Service Station<br>Special Development Precinct<br>TC Town Centre | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance. |
| | **Key considerations and opportunities** |
| | • Land adjacent to the Corridor is zoned 'Special Development Precinct', 'Residential', 'Mixed Use', 'Mixed Business', 'Commercial', and 'Service Station'.<br>• 'Residential' zones on the north side have an R100 density coding, while those interfacing with the highway on the south side are coded R20, R20/40 and R20/60.<br>• 'Mixed Business' zoned lots are addressed by Focus Area 7 and Special Development Precinct lots by Focus Area 1.<br>• Regarding 'Mixed Use' zoned lots, LPS 15 provides little guidance for residential development and does not specifically allocate residential density codes. Clause 4.2.3 of LPS 15 requires a residential density code to be assigned having regard to the density code of adjoining properties. This approach is inconsistent with the Central Sub-Regional Planning Framework which states that codes of R60 or higher are appropriate for urban corridors.<br>• Great Eastern Highway is identified as an Urban Corridor under Perth and Peel @ 3.5 Million. The focus is for higher density residential development to be located along transit corridors. |

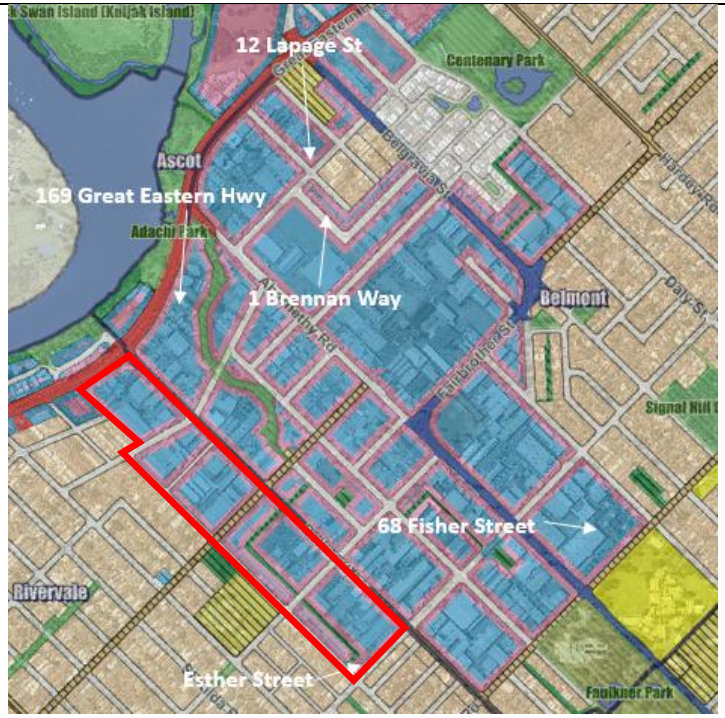
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| | • The City of Belmont has prepared the Great Eastern Highway Urban Corridor Strategy to guide development along the corridor. There is an opportunity to align with the Great Eastern Highway Corridor Strategy.<br><br>• The Strategy identifies the majority of the Rivervale section of Great Eastern Highway as an 'Activity Corridor' and envisages active, commercial land uses on ground floors, with upper floors containing permanent residential, transient residential, offices and other commercial uses. The Eastgate Neighbourhood Centre and the Springs Local centre are identified as 'Activity Nodes' and envisaged for retail, cafes, restaurant land uses on ground floors, with upper floors containing residential, commercial and offices. These are further addressed in focus area tables 1 and 2.<br><br>• The Great Eastern Highway Urban Corridor Strategy contemplates buildings (up to 20 storeys with a plot ratio of 7.0) for the northern edge of the corridor. The southern side will be of lower scale (up to 10 storeys) with a plot ratio of 3.0) to minimise impacts on adjacent residential properties.<br><br>• To support implementation of the Great Eastern Highway Urban Corridor Strategy, Council has adopted Local Planning Policy No. 20. The policy provides built form guidance for proponents and decision makers. Therefore, it may be appropriate to apply an R-AC0 density code to the corridor so that development is undertaken in accordance with the policy.<br><br>• A number of lots on the north side of Great Eastern Highway, east of the Springs Precinct are not subject to the Great Eastern Highway Urban Corridor Strategy or Local Planning Policy No. 20. It may be appropriate to update Local Planning Policy No. 20 to include these lots.<br><br>• It may be appropriate to apply a 'Mixed Use' zone to lots currently zoned 'Residential' north of Great Eastern Highway and east of Brighton Road. This will provide for development consistent with the rest of the corridor.<br><br>• There is an opportunity for development along Great Eastern Highway that takes advantage of good accessibility by private motor vehicles and public |

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| | transport. The corridor provides access to the Perth CBD, Perth Airport, and connections to other major regional roads. The corridor also contains a high frequency bus route providing access to the Perth CBD, Airport, Midland, and the Redcliffe Train Station.<br><br>• All lots are subject to transport noise considerations. Future development will be considered against State Planning Policy 5.4 – Road and Rail Noise (SPP 5.4).<br><br>• Lots on the northern side are designated as bushfire prone by the Department of Fire and Emergency Services. Future development will be considered against State Planning Policy 3.7 – Planning in Bushfire Prone Areas.<br><br>• The northern and southern portions of Rivervale, separated by Great Eastern Highway, differ significantly in lot characteristics, use, built form, and overall character.<br><br>• Undeveloped lots and ageing apartment complexes in Rivervale, especially on the northern side, hold potential for high-density residential development, capable of obtaining access from roads other than Great Eastern Highway.<br><br>• The Mixed Use zone objective within LPS 15 currently provides for appropriate industrial activities to occur within this zone. It is considered that this is contrary to the outcomes the draft Corridor Strategy is trying to achieve. |
| **Actions:** | **Zoning**<br>1. Engage with the State Government about their intentions for their landholdings.<br>2. Through the preparation of a new local planning scheme, review the 'Mixed Use' zone objectives to ensure that the statutory planning framework allows for the desired mix of commercial and residential land uses.<br>3. Through the preparation of the new Local Planning Scheme, investigate the appropriateness of applying a 'Mixed Use' zone to lots currently zoned 'Residential' north of Great Eastern Highway east of Brighton Road. |

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| | **Residential Density**<br>4. Through the preparation of a new local planning scheme, investigate the appropriateness of applying an R-AC0 density code to lots along the corridor. |
| | **Built Form**<br>5. Through the preparation of a new local planning scheme, investigate the appropriateness of updating Local Planning Policy No. 20 to include all lots north of Great Eastern Highway east of Brighton Road.<br>6. Consider the need for additional specific site and development requirements for the Mixed Use zoned lots under the new local planning scheme, e.g. building height, plot ratio, rear setbacks abutting residential zoned land. |

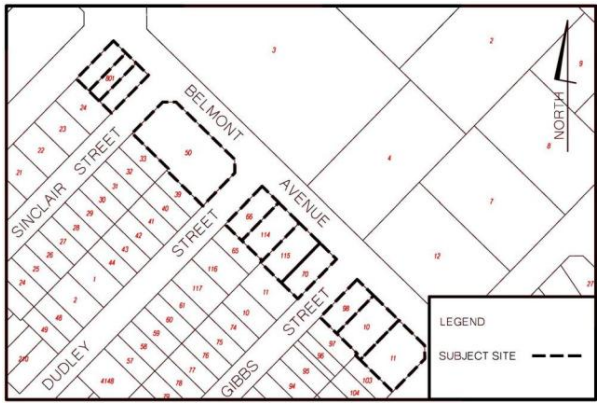
| 6: Great Eastern Highway Transition Area | Key Considerations and opportunities |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>7. Facilitate medium and high-density infill development which is of a high-quality and positively contributes to the streetscape.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance.<br><br>• The Central Sub-regional Planning Framework identifies land close to urban corridors as appropriate locations for increased residential densities.<br><br>• Currently, land within close proximity to Great Eastern Highway is coded Residential R20, R20/40 and R20/60.<br><br>• In the short-term, land fragmentation and the age and condition of dwellings within the transition area would serve as a barrier to further development above existing densities. Despite this, it is considered necessary to apply appropriate density codes to this land to facilitate an appropriate transition of development from Great Eastern Highway.<br><br>• Densities of R40-R160 may be suitable. The extent of the transition area and associated density code will be further investigated through the preparation of a new local planning scheme. |

| Actions: | Residential Density |
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| | 1. Through the preparation of a new local planning scheme, identify an appropriate transition area from Great Eastern Highway and investigate suitable density codes. |

| 7: Belmont Business Park – Rivervale Portion | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>2. Protect residential development from inappropriate land uses and conversely protect non-residential uses from encroachment of residential development. |
| | **Key Considerations and Opportunities** |
| | • Rivervale contains a portion of the 'Mixed Business' zone (Belmont Business Park) as outlined red on the plan to the left).<br>• The current Mixed Business zone is not a standard zone within the Model Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015.*<br>• There is an opportunity to align the future zoning with the Model Provisions by applying a zoning of 'Service Commercial' to the area. This zone is similar to the existing 'Mixed Business' zoning and provides for a range of wholesale businesses, showrooms, trades and services.<br>• The Mixed Business zone area was historically industrial in nature. Since the 1980s, this area has transitioned to comprise more commercial and large format retail activities.<br>• Part of the area was rezoned to Business Enterprise under the City's previous Town Planning Scheme No. 6 (TPS 6), then under TPS 14 the whole area was rezoned to Mixed Use. From the TPS 14 report: '*The clear change away from traditional industrial uses towards mixed commercial activities has increased over the last ten years and the Council is supportive of the transition particularly where it may give rise to the establishment of residential uses.*' The rationale behind this is unclear, however it may be attributed to the City's population decline prior to the 2000s.<br>• Due to uncertainty by landowners and tenants in regard to acceptable land uses under TPS 14, the City of Belmont initiated a Study title the 'Mixed Use Study'. This study was completed in the early 2000s and supported the establishment of the 'Mixed Business' zone. While the study was inconclusive about the |

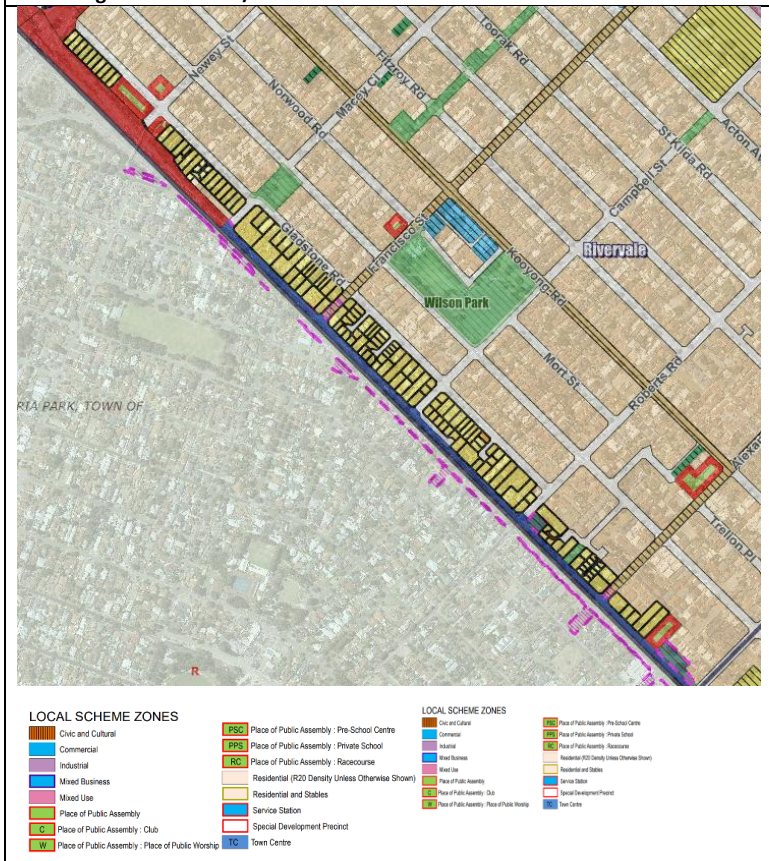
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| | necessity for residential uses in the precinct, it noted the mixed public sentiment regarding residential uses in the Business Park.<br><br>• Local Planning Policy No. 10 – Residential Land Uses in the Mixed Business Zone (LPP 10) was prepared to provide guidance on where residential land uses may be considered appropriate in the Mixed Business zone. LPP 10 has a requirement for 'some business use' where residential uses are proposed.<br><br>• There are several residential uses (predominantly grouped dwellings and an aged care facility) within the Mixed Business zone, including several on land zoned Industrial under the Metropolitan Region Scheme (MRS). (68 Fisher, Esther Street, 169 Great Eastern, 1 Brennan, 12 Lapage as shown on the image to the left on the previous page).<br><br>• Residential land uses are 'A' uses in the Mixed Business zone under LPS 15.<br><br>• While the locational criteria of LPP 10 is acknowledged, the permissibility of the use within the zone obligates the City to consider any proposal within that zone, which could result in undesirable locations being proposed and existing dwellings in inappropriate contexts being extended. Furthermore, the reliance on a Local Planning Policy as a "due regard" document creates an undesirable situation.<br><br>• There is no residential density coding designated on the scheme map under LPS 15. There is some inconsistency around density as LPP 10 specifies densities that the City will consider, however this conflicts with Clause 4.2.3 of LPS 15 which states the following:<br>*"The Residential Design Codes density applicable to land within the Scheme area is to be determined by reference to the Residential Design Codes density number superimposed on the particular areas contained within the borders shown on the Scheme Map or where such an area abuts another area having a Residential Design Code density, as being contained within the area defined by the centre line of those borders."*<br><br>• While the Belmont Business Park is focused on providing light industrial and business park type uses, the Central Sub-Regional Planning Framework |

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| | | stipulates that existing industrial centres should be preserved and protected from incompatible residential encroachment.<br><br>• As per State Planning Policy 4.1 - Industrial Interface (SPP 4.1), it is also necessary to consider land use conflicts and the interface between industrial facilities and sensitive land uses, i.e. residential development.<br><br>• Considering the early 2000s Mixed Use Study found no need for residential uses in the Business Park, coupled with the State's position on preserving industrial centres it may be appropriate to prevent further residential development in the Mixed Business zone. This also presents an opportunity to align future zoning and land use with the 'Industrial' zoning under the MRS.<br><br>• The Great Eastern Highway urban corridor is intended to provide for a mix of active commercial and residential land uses. The City has prepared the Great Eastern Highway Urban Corridor Strategy to guide development along the corridor. Consistent with the intent of this Strategy, a 'Mixed Use' zone may be more appropriate over the lots directly adjacent to Great Eastern Highway in place of the existing 'Mixed Business' zone. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of applying a 'Service Commercial' zone to the Belmont Business Park through the preparation of a new local planning scheme.<br>2. Investigate changing the permissibility of residential uses from 'A' to 'X' in the existing Mixed Business zone through the preparation of a new local planning scheme. Consider applying Additional Uses for existing residential developments.<br>3. Investigate rezoning the existing 'Mixed Business' zoned lots fronting Great Eastern Highway to 'Mixed Use' through the preparation of a new local planning scheme.<br>4. Review and/or investigate revoking Local Planning Policy No. 10 | |
| | 5. Investigate planning controls to ensure appropriate interface between Mixed Business zoned land and Residential zoned land. | |

| 8: Additional Use Area | Strategies |
|---|---|
| <br>LOCAL SCHEME ZONES<br>Civic and Cultural<br>Commercial<br>Industrial<br>Mixed Business<br>Mixed Use<br>Place of Public Assembly<br>C Place of Public Assembly : Club<br>W Place of Public Assembly : Place of Public Worship<br>PSC Place of Public Assembly : Pre-School Centre<br>PPS Place of Public Assembly : Private School<br>RC Place of Public Assembly : Racecourse<br>Residential (R20 Density Unless Otherwise Shown)<br>Residential and Stables<br>Service Station<br>Special Development Precinct<br>TC Town Centre | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>2. Protect residential development from inappropriate land uses and conversely protect non-residential uses from encroachment of residential development.<br>**Key Considerations and opportunities**<br>• There are a number of 'Residential' zoned lots fronting Belmont Avenue that contain Additional Uses under LPS 15 for 'Office', 'Consulting Room's and 'Studio' as pictured below and outlined red on the image to the left:<br><br>• 126 and 130 Belmont Avenue have realised the additional 'Office' use within mixed use developments (as shown below). |

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<ul>
<li>These low scale additional uses provide a transition between the ‘Mixed Business’ zone and residential area. Therefore, it is considered appropriate for these additional uses to be retained through the preparation of a new local planning scheme.</li>
<li>The current LPS 15 Additional Use provisions states:<br><br>“On Lots 801 (108), Lot 1 (110), Lot 66 (122), Lot 114 (124), Lot 115 (126), Lot 70 (130), Lot 98 (132), Lot 10 (136) Belmont Avenue and Lot 11 (185) Alexander Road, local government may consider approving the additional uses of office, consulting rooms and studio where the development incorporates a residential component.”<br><br>It is considered that the statement “where the development incorporates a residential component” is ambiguous. If the intent of the Additional Uses is to encourage a single mixed use building, then it would be desirable for the provisions to be explicit in this regard.</li>
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<td>Actions:</td>
<td colspan="2">1. Retain existing Additional Uses for 108-136 Belmont Avenue and 185 Alexander Road in a new local planning scheme, and review the wording of the development requirements.</td>
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| 9: Orrong Road Corridor/LPP 2 Area | Strategies |
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|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>4. Facilitate ongoing housing choice for the existing and future community which responds to discrepancies between dwelling size and household composition.<br>7. Facilitate medium and high density infill development which is of high quality and positively contributes to the streetscape. |
| | **Key Considerations and opportunities** |
| | • Orrong Road is identified as an 'Other Regional Road' and is under the care and control of Main Roads WA (MRWA). MRWA are currently investigating improvements to Orrong Road to improve safety, reduce congestion, enhance connectivity and improve liveability for people who travel along or live near this road. This project is an opportunity for the City to engage with MRWA to ensure that existing and future development along the corridor is carefully considered. The project is in its early stages and as it progresses the City will consider its implications for the future planning of land abutting the corridor.<br>• Based on MRWA traffic counts, Orrong Road averages between 47,000-55,000 vehicles per day on weekdays through Kewdale/Carlisle.<br>• Lots fronting and in proximity (approximately 300m) to Orrong Road may be subject to transport noise considerations.<br>• Clause 4.7.1 of LPS 15 states that where residential land abuts a regional road reserve, vehicular access to the road will not be permitted for residential development other than for a single house, unless a vehicular access plan has been approved.<br>• Land generally adjacent to Orrong Road is coded R20/60. |

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| | • Local Planning Policy No.2 - Orrong Road (LPP 2) was formulated considering the extent of traffic utilising Orrong Road, the need to limit the number of access points to the road, and the desire for high quality development.<br><br>• The Policy also states that within the R20/60 area, Council will only support subdivision up to a density of R30 where a comprehensive subdivision plan addressing all access issues has been adopted for the redevelopment of a street block. In all other instances, subdivision above a base density of R20 is not supported.<br><br>• For development above R40 within the R20/60 area, a minimum lot size of 2,000$m^2$ is required.<br><br>• The R20/60 coding and provisions of LPP 2 have partially resulted in the removal of ageing dwellings and vehicle access points and the introduction of right of way easements. However, only 12 vehicle access plans have been prepared and there are still many lots which remain undeveloped and have direct access to Orrong Road.<br><br>• The requirement for public access easements and the 2,000 square metre minimum lot size minimise direct vehicle access points on Orrong Road and promote the use of consolidated crossovers for improved traffic management and safety. These could remain in a local planning policy or be included in a new Local Planning Scheme as additional site and development requirements.<br><br>• LPP 2 has not been reviewed since the Residential Design Codes have been amended.<br><br>• Under LPS 15, 101-113 Orrong Road are permitted the Additional Uses of Consulting Rooms, Medical Centre, Office, Serviced Apartments, Showroom and Studio. Nos. 107-109, 111 and 113 have taken up these Additional Uses. 101, 103 and 105 contain single dwellings.<br><br>• DPLH is seeking to rationalise flexible density codes through the preparation of new local planning schemes, creating an opportunity for the application of straight density codes to this area. |

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| **faActions:** | **Zoning and Built Form**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to retain or repeal LPP 2.<br>2. Through the preparation of a new local planning scheme, investigate whether it is appropriate to include additional site and development requirements that require all development excluding single houses to achieve a minimum lot size and to provide a public easement in gross to promote shared vehicular access between lots in accordance with an adopted Vehicle Access Plan.<br>3. Through the review of the Orrong Road planning framework, engage with relevant stakeholders, i.e. MRWA and prominent landowners, as to their aspirations for the corridor and their land.<br>4. Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply Additional Uses of Consulting Rooms, Medical Centre, Office, Serviced Apartments, Showroom and Studio over 101-113 Orrong Road. |
| | **Residential Density**<br>5. Investigate the appropriateness of applying an R60 code to existing R20/60 coded properties along the corridor. |

# Appendix 1 - Population and Housing Characteristics

**Population**

The 2021 Census revealed Rivervale had a population of 10,897 people, which represents a population density of 3,302 persons per square km. From 2011 to 2021, Rivervale's population increased by 2,494 persons or 29%. Forecasts undertaken by Forecast id predict that by 2041 Rivervale's population will increase to 15,694 people and have a population density of 4,775 persons per square kilometre.

**Age Structure**

A comparison between Rivervale and the City of Belmont in 2021 reveals that Rivervale had a lower proportion of people in the younger age groups (under 19) and a lower proportion of people in the older age groups (65+). The largest age group in Rivervale was the 30 to 34 year age bracket, accounting for 13.2% of the population. This is consistent with the dominant age group for the City of Belmont (refer to **Figure 1**).

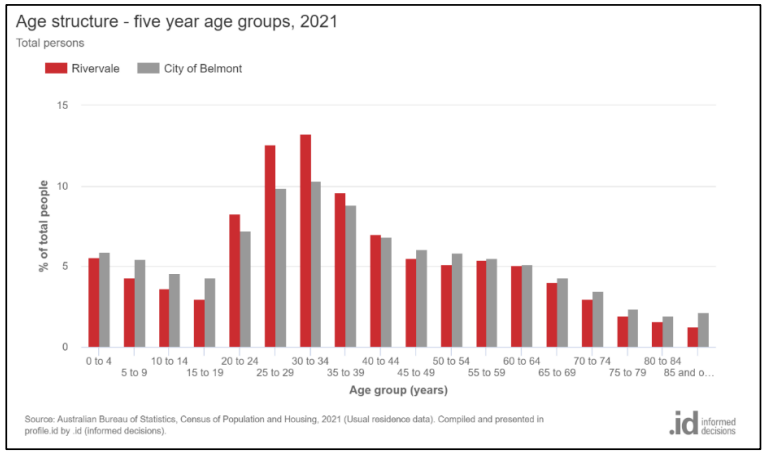



***Figure 1 – Age Structure – Five year Age Groups (2021) (.id 2024)***

There were several differences between Rivervale and the City of Belmont local government area in terms of age distribution.

- A larger percentage of persons aged 25 to 29 (12.6% compared to 9.9%)
- A smaller percentage of persons aged 15 to 19 (3.0% compared to 4.3%)
- A smaller percentage of persons aged 5 to 9 (4.3% compared to 5.5%)

The most significant changes in the age structure between 2011 and 2021 occurred in the following age groups (refer to **Figure 2**):

- 30 to 34 (+560 persons)
- 35 to 39 (+345 persons)
- 25 to 29 (+338 persons)
- 40 to 44 (+241 persons)

These changes indicate significant growth in those aged 25 to 44. Forecasts undertaken by Forecast Id indicate there will be significant growth in the number of young children between 2021 and 2031. The largest increase in persons between 2021 and 2031 is forecast to be in the ages 15 to 19, which is expected to increase by 470 and account for 6% of the total persons. However, this is forecast to change between the years 2031 and 2041 where the majority of growth will be concentrated in those aged 30 to 34 (refer to **Figure 3**).

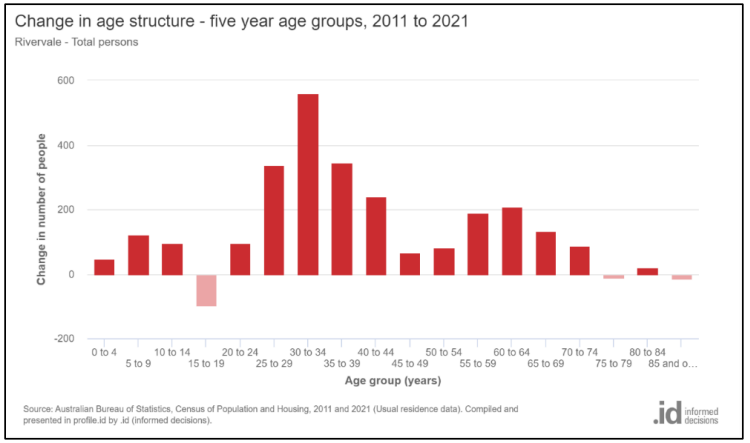



***Figure 2 – Change in Age Structure– Five year Age Groups (2011 - 2021) (.id 2024)***

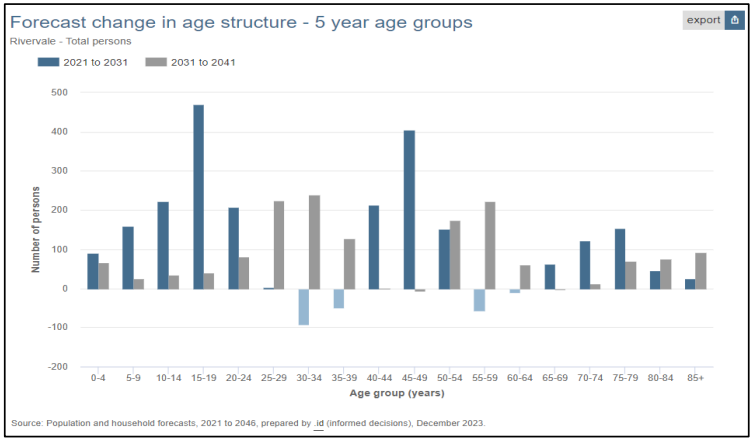



***Figure 3 – Forecast Change in Age Structure– Five year Age Groups (2011 - 2021) (.id 2024)***

**Family Structure**

When comparing the household and family types in Rivervale to the City of Belmont in 2021, the analysis revealed the following differences (refer to **Figure 4**):

- Rivervale had a smaller percentage of couples with children (17.3%) compared to Belmont (22.4%).
- Rivervale had a smaller percentage of one-parent families (7.1%) compared to Belmont (9.3%)
- Rivervale had a higher proportion of lone person households (36.7%) compared to Belmont (31.1%).
- Rivervale had a higher proportion of couples without children (25.2%) compared to Belmont (23.9%).

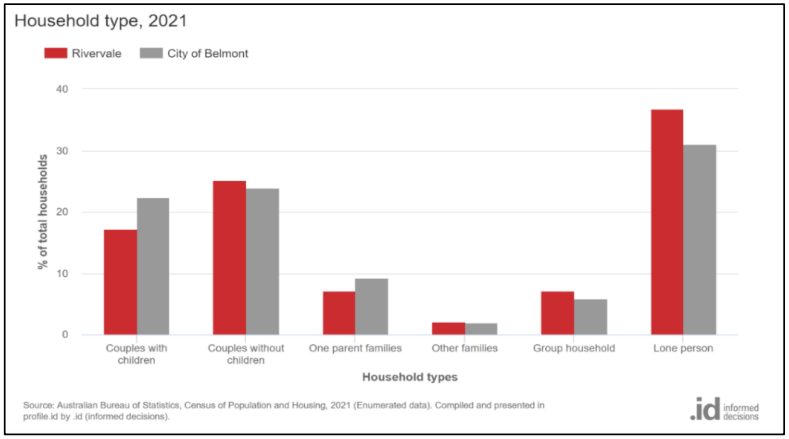



***Figure 4 – Household Type (2021) (.id 2024)***

This is also reflected in the growth patterns noticed between 2011 and 2021 (refer to **Figure 5**):

- Lone person (+707 households)
- Couples without children (+436 households)
- Couples with children (+189 households)
- One parent families (+64 households)

It is expected that this lower prevalence of families will continue. The projected growth between 2021 and 2031 is expected to be highest in lone person households, with an increase of 579 households, making up 38.7% of all households. In contrast, other families are estimated to increase by 24 households, accounting for 2.4% of all households in 2031, compared to 2.6% in 2021 (refer to **Figure 6**).

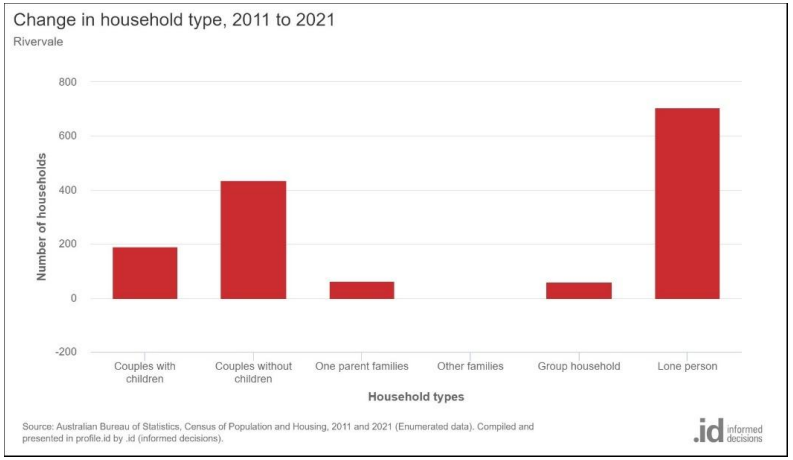



***Figure 5 – Change in Household Type (2011 - 2021) (.id 2024)***

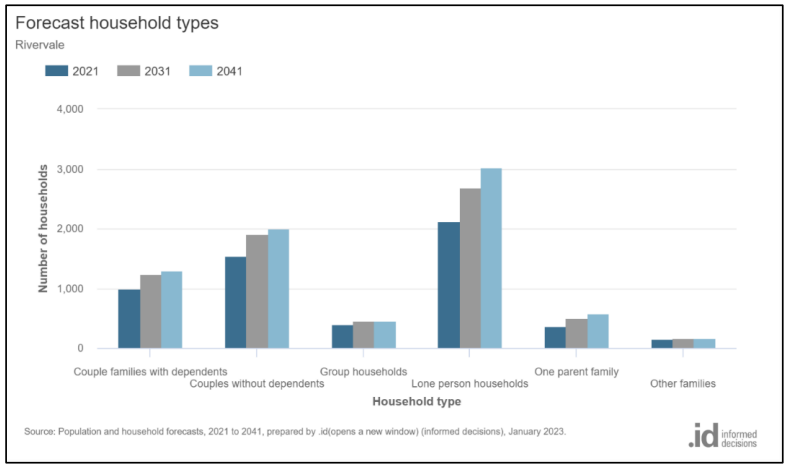



***Figure 6 – Forecast Change in Household Types 2021 to 2041 (.id 2024)***

**Dwelling Structure**

In 2021, the types of dwellings in Rivervale compared to the City of Belmont revealed some notable differences (refer to **Table 2**). In Rivervale, 42% of all occupied dwellings were separate houses, 21% were semi-detached, row or terrace house, townhouse, and 36% were flats or apartments. In comparison, the City of Belmont comprised 65% separate houses, 20% semi-detached, row or terrace house, townhouses and a lower proportion of flats and apartments at 14%. These figures indicate that Rivervale had a higher percentage of flats/apartments, a similar proportion of semi-detached, row or terrace house, townhouse dwellings, and a lower proportion of separate houses.

Examining the changes in dwelling types in Rivervale between 2011 and 2021, the following trends emerge:

- Separate House (+90 dwellings)
- Semi-detached, row or terrace house, townhouse (+538 dwellings)
- Flat or Apartment (+792 dwellings)

The above indicates a drastic shift toward flats and apartments within the suburb. It is expected that this trend will continue in the future as The Springs and land within and surrounding activity centres is developed.

| **Rivervale-Occupied Dwellings (Enumerated)** | **2021** | | | **2011** | | | **Change** |
|---|---|---|---|---|---|---|---|
| **Dwelling type** | **Number** | **%** | **City of Belmont %** | **Number** | **%** | **City of Belmont %** | **2011 to 2021** |
| Separate house | 2,075 | 42.6 | 65 | 1,985 | 57.5% | 73 | +90 |
| Semi-detached, row or terrace house, townhouse etc. | 1034 | 21.2 | 20.3 | 496 | 14.4% | 15.1 | +538 |
| Flat or apartment | 1760 | 36.1 | 14.4 | 968 | 28% | 11.6 | +792 |
| Other | 0 | 0.0 | 0.1 | 0 | 0.0 | 0.1 | 0 |
| **Total Occupied Private Dwellings** | **4,869** | **100.0** | **100.0** | **3,449** | **100.0** | **100.0** | **+1,420** |

***Table 2 – Occupied Dwelling Structure (ABS 2024)***

**Number of Bedrooms**

A comparative analysis of bedroom numbers between Rivervale and the City of Belmont in 2021 reveals that Rivervale had a smaller proportion of dwellings with 4 or more bedrooms, and a higher proportion of dwellings with 2 bedrooms or less. Specifically, 44.6% of households had 2 bedrooms or less and 16.1% had 4 or more bedrooms, compared with 27.5% and 24.2% for the City of Belmont respectively (refer to **Figure 7**). This indicates a trend towards reduced bedroom numbers, which is also reflected in the following changes between 2011-2021 (refer to **Figure 8**):

- 2 bedrooms (661 dwellings)
- 0 or 1 bedrooms (+463 dwellings)
- 4 bedrooms (+248 dwellings)
- 3 bedrooms (+90 dwellings)

This trend is largely attributed to the emergence of apartment style developments within The Springs area.

While a gap remains apparent between the prevalence of single bedroom dwellings, comprising 15.4% of the housing stock, and the proportion of lone person households, which constitutes 38%, it is important to acknowledge that this difference is notably narrower compared to disparities in other suburbs within the City of Belmont.

Nonetheless, it is important to promote further diversity in the range of dwelling types, with a particular focus on the construction of additional single-bedroom dwellings within Rivervale. This is especially pertinent given the continued dominance of lone person households as the prevailing household demographic.

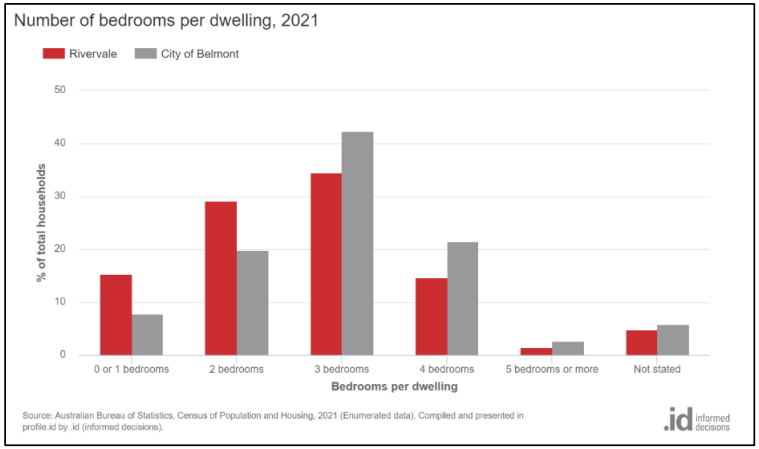



***Figure 7 – Number of bedrooms per dwelling – Ascot and City of Belmont (.id 2024)***

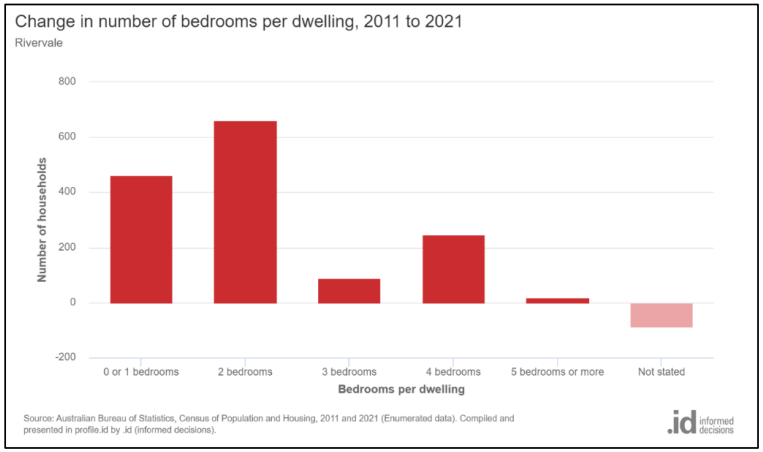



***Figure 8 – Change in number of bedrooms 2011-2021 (.id 2024)***

# PART 2
# Town Centre

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## Snapshot – Population and Dwellings (Residential R20/50/100 Area)

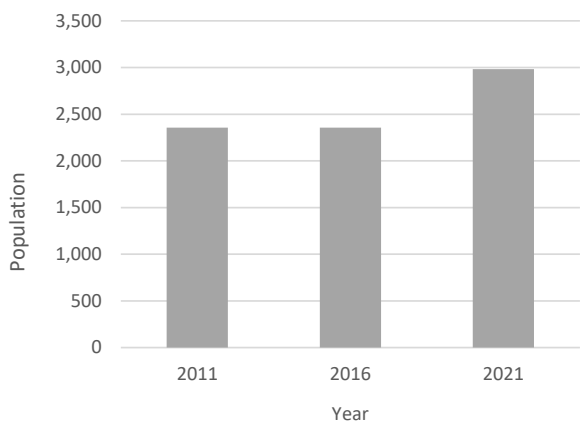
### Current population

**3,241 people**

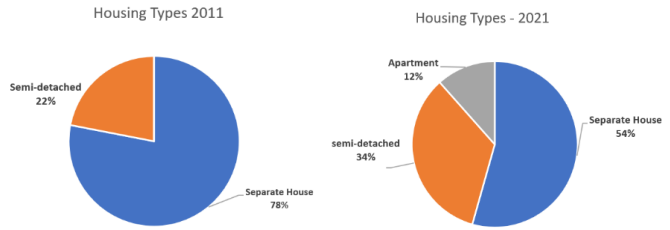
### Current dwellings

**1,521**

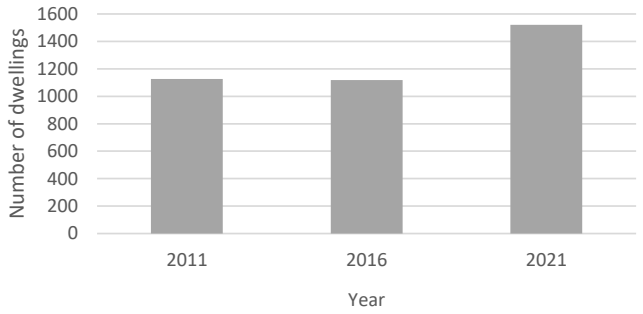
### Population Growth



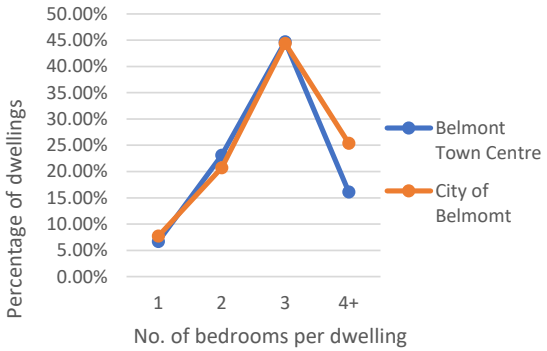

### Change in dwelling types – 2011 & 2021




### Housing Growth




### Bedrooms/dwelling




### People/dwelling

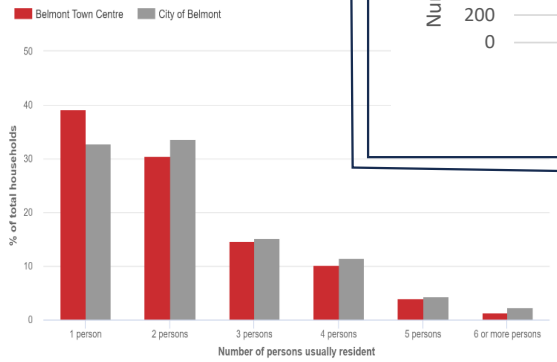



***Table 1: Snapshot (Source: ABS 2024 and .ID Community 2024)***

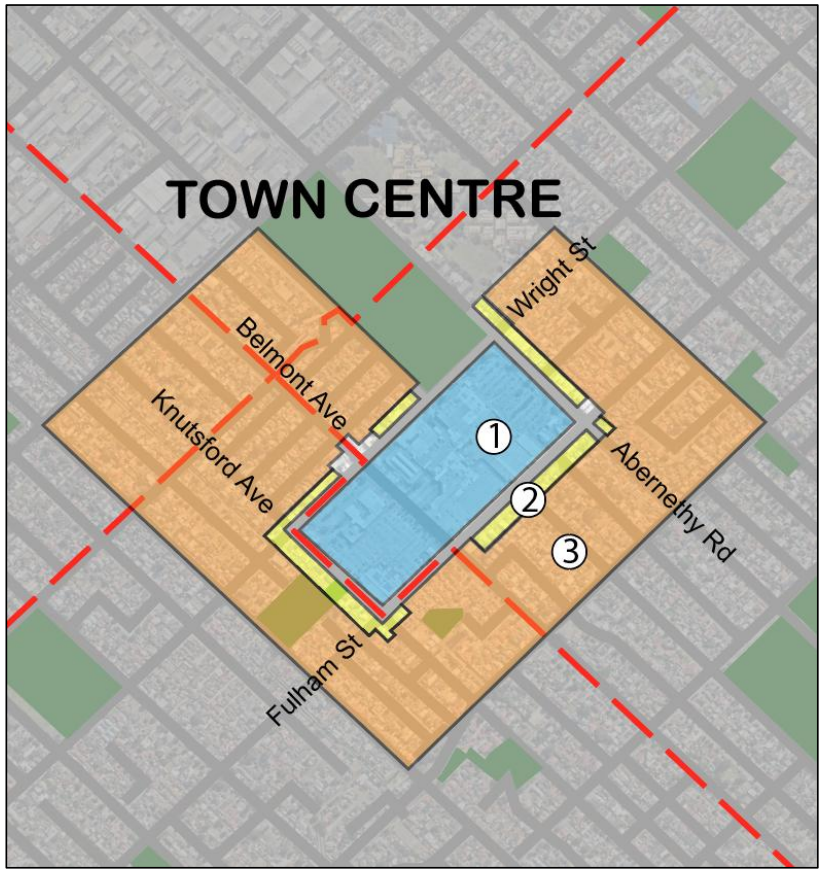
## Town Centre Overview

Location and Focus Areas

The Belmont Town Centre is located within the suburb of Cloverdale, and is bound by Abernethy Road, Fulham Street, Knutsford Avenue and Wright Street. The Centre has been operating as a major commercial hub for approximately 50 years and is a focal point of the City of Belmont.

There are three key focus areas that will be analysed in this section of the Local Housing Strategy. These include:

1. Belmont Town Centre
2. Belmont Town Centre Frame Area
3. Land coded R20/50/100 and subject to Local Planning Policy No. 1 – Town Centre Density Bonus Requirements



Key Features

**Connectivity**

- The Town Centre's boundaries are defined by Abernethy Road, Fulham Street, Knutsford Avenue, and Wright Street.
- Belmont Avenue intersects the Town Centre diagonally, enhancing overall connectivity and accessibility.
- These road connections link the Town Centre to suburbs and key routes like Great Eastern Highway, Orrong Road, and Leach Highway.
- Bus routes 935, 998, 999, 37, 39, 284, and 293 serve the Town Centre and surrounding residential land and provide connections to Perth Airport, Perth CBD, rail corridors, and surrounding suburbs.
- Pedestrian and cyclist infrastructure mainly consists of footpaths, with Wright Street offering a pedestrian and cyclist-friendly environment featuring dedicated crossings and slower traffic. The City's Activity Centre Planning Strategy includes actions to investigate improvements to pedestrian and cyclist priority.

**Services and Amenities**

- Belmont Town Centre is dominated by Belmont Forum which functions as a major shopping centre containing a range of land uses including supermarkets, department stores, specialty shops, restaurant/cafes and personal service businesses.
- Outside Belmont Forum, a range of land uses exist including entertainment uses, restaurant/cafes, offices, and small specialty shops.
- Belmont Town Centre is supported by surrounding activity generators and employment areas including the Belmont Oasis, Faulkner Civic Precinct, Cloverdale Primary School and Belmont City College. Faulkner Civic Precinct contains several community and civic land uses, as well as providing public open space. In particular, activity is generated by visitors to the Civic Centre, Belmont Hub and Belmont Oasis.

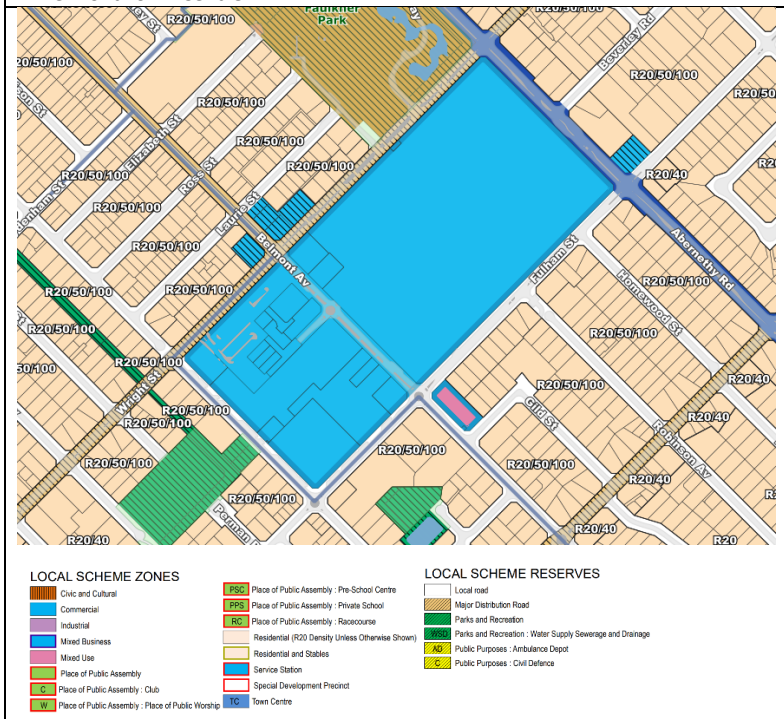
**Public Open Space**

- Currently, Belmont Town Centre lacks public open space. However, Wicca Reserve is situated to the south west and Faulkner Civic Precinct to the north west.
- The City's Activity Centre Planning Strategy (ACPS) proposes to explore creating an urban open space within Belmont Town Centre. It identifies potential locations for this space and includes an action to investigate its development though the preparation of a precinct structure plan.

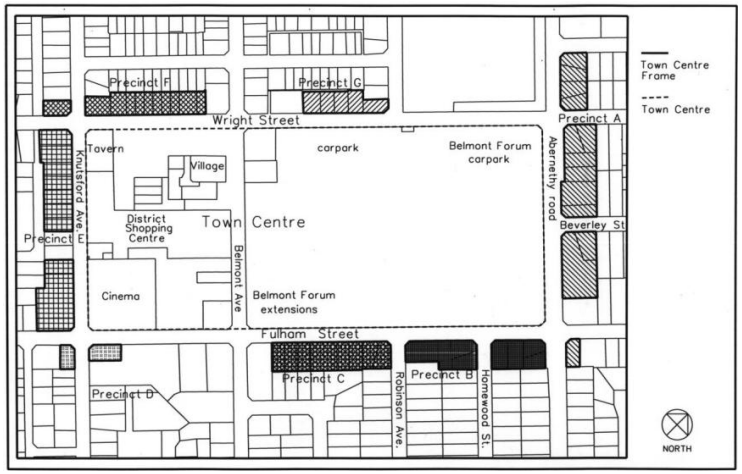
**Development Patterns**

- Belmont Forum was constructed in 1972 and was officially opened to the public in 1973.
- Development of other commercial uses in the Town Centre occurred at a similar time
- During the 1990s, Belmont Forum underwent expansion and renovation. Further expansion and refurbishments occurred between 2016 and 2018.
- There has been a level of commercial development undertaken surrounding the Belmont Town Centre within the Frame Area. A further description of this area is included in the Focus Area Tables.
- Residential development in the area zoned 'Residential' R20/50/100 surrounding Belmont Town Centre has seen limited uptake, primarily featuring low-scale single or grouped dwelling housing.

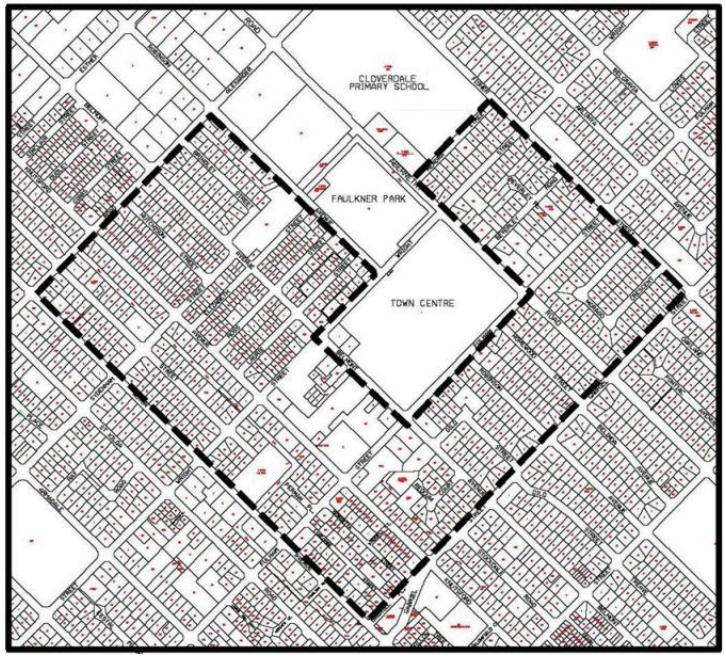
## Focus Areas

| 1: Belmont Town Centre | Strategies: |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance. |
| | **Key Considerations and Opportunities** |
| | • The Centre is identified as a secondary centre within the activity centre hierarchy established by State Planning Policy 4.2 – Activity Centres (SPP 4.2). SPP 4.2 requires the preparation of a Precinct Structure Plan for Secondary Centres.<br>• The Centre is currently zoned 'Commercial' under Local Planning Scheme No. 15 (LPS 15).<br>• While the 'Commercial' zoning is currently consistent with the *Planning and Development (Local Planning Schemes) Regulations 2015*, it is noted that the Department of Planning, Lands and Heritage (DPLH) are planning to introduce 'Centre', 'Neighbourhood Centre', and 'Local Centre' zones.<br>• The Town Centre contains only commercial land uses. The area northeast of Belmont Avenue is dominated by the Belmont Forum, while the southeast area primarily consists of at-grade parking. Consolidating this parking into a multistorey car park would create additional redevelopment opportunities within the Town Centre. |

| | | |
|---|---|---|
| | | • Land within the Town Centre does not currently have an allocated residential density coding. There is also no residential development that has occurred within it.<br><br>• During community consultation undertaken to inform the Strategy and broader scheme review project (detailed in Part One), respondents outlined a desire for a mix of commercial and residential land uses within centres, through the provision of apartment style development being located above retail/commercial tenancies on the ground floor.<br><br>• In this regard, the City's Activity Centre Planning Strategy (ACPS) recommends that a density code is applied to the centre to facilitate a mix of residential and retail commercial land uses.<br><br>• The provision of residential dwellings above commercial tenancies will generate activity, increase population, contribute to better passive surveillance, and incentivise further redevelopment within the Centre.<br><br>• To achieve the above, it may be appropriate to apply a residential density code of R-AC0 to the centre. This code provides for development to occur in accordance with a precinct structure plan.<br><br>• The precinct structure planning process is identified by State Planning Policy 7.2 – Precinct Design (SPP 7.2) as an appropriate method of guiding land use, density and development (including built form), access arrangements, infrastructure, environmental assets and community facilities in accordance with SPP 4.2. |
| **Actions:** | **Zoning**<br>1. Investigate the appropriateness of rezoning land within the centre to 'Centre' through the preparation of a new local planning scheme. | |
| | **Residential Density**<br>2. Investigate the appropriateness of applying an R-AC0 density code to land within the Town Centre through the preparation of a new local planning scheme, consistent with the recommendation of the Activity Centre Planning Strategy. | |
| | **Built Form**<br>3. Consistent with the recommendation of the Activity Centre Planning Strategy, liaise with the landowners of Belmont Town Centre regarding their preparation of a precinct structure plan. | |

| **2: Belmont Town Centre Frame Area and Residential, Commercial and Mixed Use zoned lots outside the Town Centre Frame** | **Strategies:** |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high density infill development which is of a high quality and positively contributes to the streetscape.<br>11. Facilitate higher density development near high frequency public transport stops and stations with an aim to reduce private vehicle reliance.<br><br>**Key Considerations and Opportunities**<br>• A variety of businesses and residential properties are positioned to provide essential support to the function of the centre. This area is known as the 'Town Centre Frame' and is visualised in the image to the left as the hatched land parcels.<br><br>• The Town Centre Frame area is currently zoned 'Residential' and has an associated density coding of R20/50/100.<br><br>• Schedule 2 of LPS 15 divides the frame area into seven precincts and provides for the additional uses of 'Art Gallery', 'Consulting Rooms', 'Office', and 'Studio'. Land within Precinct A is also subject to two additional land uses being 'Showroom' and 'Video Outlet'.<br><br>• Each precinct is subject to unique development controls aimed at encouraging small scale retail land uses to support the Belmont Town Centre operations, achieving an appropriate mix of land uses, and guiding built form to achieve a high architectural standard which respects the amenity of adjacent residential properties. |

| | | |
|---|---|---|
| | | • There has been an uptake of additional uses particularly along Wright Street, Abernethy Road, and Fulham Street. Uses predominantly consist of offices with a small number of consulting rooms and retail land uses.<br><br>• The ACPS suggests that it may be appropriate to retain the existing zoning of 'Residential' with 'Additional Uses' being applied.<br><br>• The ACPS also includes an action to investigate whether it is appropriate to introduce a residential density code of R160 over the Town Centre frame area through the preparation of a new local planning scheme.<br><br>• A number of residential zoned lots are located outside the Town Centre frame area, but remain adjacent to the Town Centre. It may be appropriate to adopt a consistent approach with other residential zoned lots in this location by applying the same additional uses and an R160 density code.<br><br>• A number of lots adjacent to the Town Centre are currently zoned 'Commercial' and 'Mixed Use'. To continue to accommodate the range of land uses on these sites, it may be appropriate to apply a 'Mixed Use' zone together with an R160 density code. |
| **Actions:** | **Zoning**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to retain the 'Residential' zoning and additional uses for the Town Centre Frame area.<br>2. Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply additional uses to 'Residential' zoned lots opposite the Town Centre that are not currently within the frame.<br>3. Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply a 'Mixed Use' zone to lots currently zoned 'Commercial' and 'Mixed Use' in proximity to the Town Centre. | |
| | **Residential Density**<br>4. Through the preparation of a new local planning scheme, investigate whether it is appropriate to introduce a residential density code of R160 over the Town Centre Frame Area, Residential zoned lots not currently within the Town Centre Frame, and lots currently zoned 'Mixed Use' and 'Commercial' . | |
| | **Built Form**<br>5. Through the preparation of a new local planning scheme, investigate the appropriate land use and built form control mechanisms for the Town Centre Frame area. | |

| 3: Local Planning Policy No. 1 Area (R20/50/100 coded Area) | Strategies |
|---|---|
|  | 1. Facilitate the delivery of a contemporary planning framework which meets the needs of the community.<br>3. Apply appropriate zonings and density codings to land in close proximity to transport corridors and activity centres.<br>5. Encourage development of underutilised 'Urban' zoned land.<br>7. Facilitate medium and high density infill development which is of a high quality and positively contributes to the streetscape.<br>11. Facilitate higher density developments near high frequency public transport stops and stations with an aim to reduce private vehicle reliance. |
| | **Key Considerations and Opportunities** |
| | • Residential zoned land surrounding the Belmont Town Centre is designated a flexible residential density coding of R20/50/100. Development within this area is guided by LPS 15 and Local Planning Policy No. 1 – Performance Criteria – Town Centre Density Bonus Requirements (LPP1).<br>• LPP 1 outlines the criteria (in addition to the provisions of the Residential Design Codes and LPS 15) against which all residential development, proposed above a density coding of R50, will be assessed against.<br>• The Policy has six objectives which in summary aim to ensure superior residential development, diverse housing options, vibrant community growth, amalgamation of lots for enhanced development, contemporary architectural consistency and optimised safety outcomes.<br>• A detailed description of the criteria of LPP 1 is included in the City Wide section of this Strategy.<br>• Since the implementation of LPP 1, there has been limited uptake of the maximum residential density coding, with the majority of the area still characterised by low-scale single or grouped dwellings. Within a 400m walkable |

| | | |
|---|---|---|
| | | catchment of the town centre, the urban zone density is approximately 12.75 dwellings per hectare, significantly falling short of the SPP 4.2 target of 40 dwellings per hectare.<br><br>• One of the intentions behind the triple code was to encourage increased housing choice and affordability within close proximity to the Town Centre. However, given many developments have not gone above R50, the potential for establishing increased housing diversity has not been realised to the extent originally envisioned.<br><br>• The current planning framework governing development in the R20/50/100 area was established before Volume 2 of the Residential Design Codes and the new Medium Density Code were introduced. Prior to Volume 2's introduction, several multiple dwelling developments showed poor built form outcomes, such as excessive screening, unattractive streetscape, insufficient setbacks and integration with neighbouring single-story dwellings, limited landscaping, and loss of tree cover. The implementation of Volume 2 and the involvement of the Design Review Panel have significantly improved this situation.<br><br>• The R20/50/100 density code has the potential to result in high-density dwellings being located adjacent to low-density housing. To address this, it may be appropriate to amend existing density codes to establish a suitable transition area.<br><br>• The City is aware that DPLH are seeking to rationalise flexible density codes through the preparation of new local planning schemes. |
| **Actions** | **Residential Density**<br>1. Through the preparation of a new local planning scheme, investigate whether it is appropriate to identify an appropriate transition area from the Town Centre and investigate suitable density codes. | |

# Appendix 1 - Population and Housing Characteristics (Residential R20/50/100 Area)

**Age Structure**

A comparison between the 'Residential R20/50/100' area surrounding the Town Centre and the City of Belmont in 2021 reveals that the 'Residential R20/50/100' area had a lower proportion of people in the younger age groups (under 9) and a higher proportion of people in the older age groups (75+ years) (refer to **Figure 1**).

Overall, 15.3% of the population was aged between 0 and 15, and 16.5% were aged 65 years and over, compared with 15.9% and 14.2% respectively for the City of Belmont. The largest age group was the 25 to 29 accounting for 11.8% of the population compared to the City of Belmont which was those aged 30-34, accounting for 10.3%.

From 2011 to 2021, the population of the 'Residential R20/50/100' area surrounding the Town Centre increased by 633 people (26.9%). This represents an average annual population change of 2.41% per year. The greatest changes in age structure occurred in the following age groups (refer to **Figure 2**):

- 25 to 29 (+142 persons)
- 30 to 34 (+97 persons)
- 20 to 24 (+81 persons)
- 5 to 9 (+58 persons).

These statistics indicate that the 'Residential R20/50/100' area surrounding the Town Centre accommodates people of various ages.

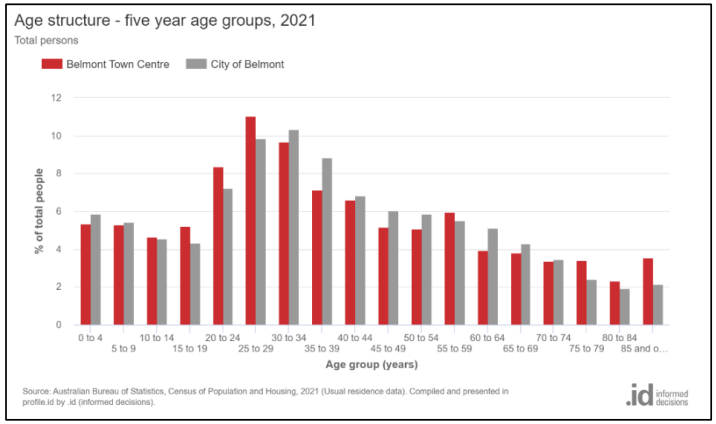



***Figure 1 – Age Structure – Five Year Age Groups (2021) (.id 2024)***

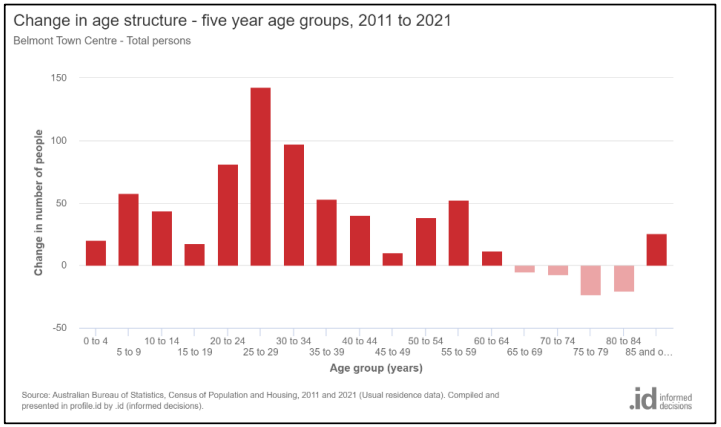



***Figure 2 –Change in Age Structure (2021) (.id 2024)***

**Family Structure**

When comparing the household types in the 'Residential R20/50/100' area to the City of Belmont in 2021, the analysis reveals the following (refer to **Figure 3**):

- The proportion of couple families with children was 19.9%, lower than the 22.4% in the City of Belmont.
- The proportion of one parent families is 9.0% similar to 9.3% in the City of Belmont.
- The proportion of lone person households was 36.8% higher than the 31.1% in the City of Belmont.
- The proportion of couple families without children was 19.4% lower than 23.9% for the City of Belmont.

Between 2011 and 2021, the greatest increase occurred in the number of lone person households followed by couples with children as visualised by **Figure 4**.

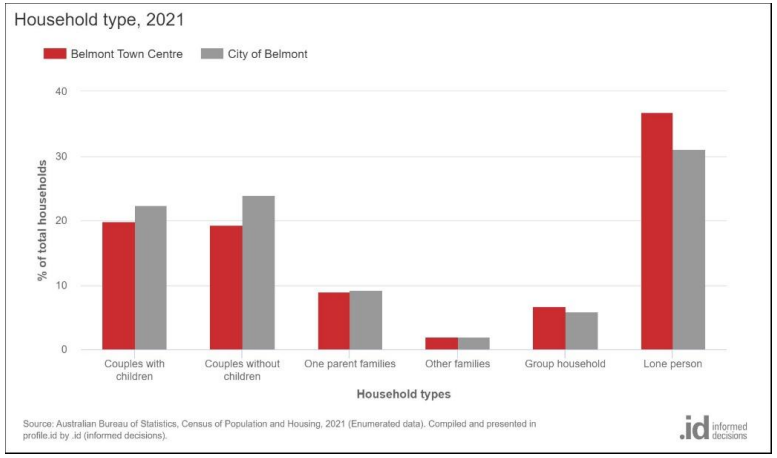



***Figure 3 – Household Type (2021) (.id 2024)***

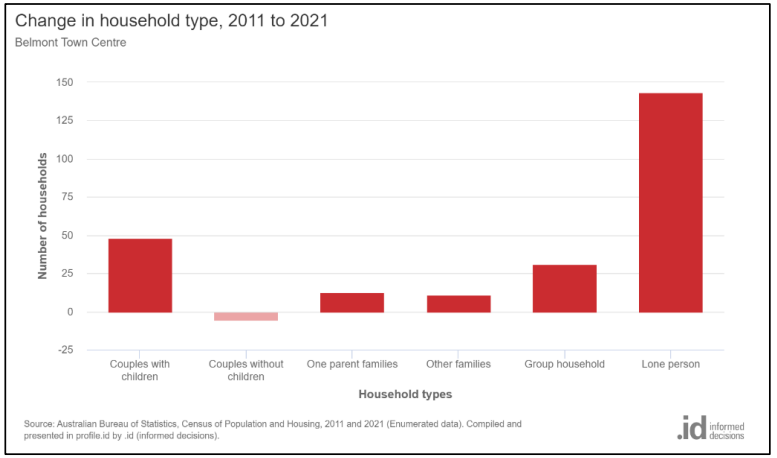



***Figure 4 – Change in Household Types 2011 to 2021 (.id 2024)***

**Dwelling Structure**

In the 'Residential R20/50/100' area surrounding the Town Centre, 45.3% of the dwellings were semi-detached, row, terrace, townhouses and villa units, plus flats and apartments compared to 37.4% in the City of Belmont. Specifically, 54% of all dwellings were separate houses, 33.8% were semi-detached, row, terrace, townhouses and villa units, plus 1-2 storey flats and apartments and 11.5% were flats/apartments in 3 storey and larger blocks, compared with 62.3%, 24.6%, and 12.8% in the City of Belmont respectively (refer to **Table 2**). Between 2011 and 2021, the following changes were experienced:

- Semi-detached, row, terrace, townhouses and villa units, plus 1-2 storey flats and apartments (+267)
- Flats and apartments in 3 storey and larger blocks (+176 dwellings)
- Separate house (-57 dwellings)

The decrease in number of separate houses can be attributed to the development of other housing typologies. It is expected that this trend will continue as further development occurs surrounding the town centre.

| **Belmont Town Centre – Occupied Dwellings (Enumerated)** | **2021** | | | **2011** | | | **Change** |
|---|---|---|---|---|---|---|---|
| **Dwelling type** | **Number** | **%** | **City of Belmont %** | **Number** | **%** | **City of Belmont %** | **2011 to 2021** |
| Separate house | 821 | 54.0 | 62.3 | 878 | 77.9 | 71.9 | -57 |
| Semi-detached, row, terrace, townhouses and villa units plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses | 513 | 33.8 | 24.6 | 246 | 21.9 | 22.0 | +267 |
| Flat or apartment in 3 storey and larger blocks | 175 | 11.5 | 12.8 | 0 | | 5.6 | +176 |
| Other/Not Stated | 11 | 0.7 | 0.5 | 3 | 0.3 | 0.1 | 0 |
| **Total Private Dwellings** | **1,520** | **100.0** | **100.0** | **1,127** | **100.0** | **100.0** | **+393** |

***Table 2: Dwelling Structure 2011-2021 (ABS 2024)***

**Number of Bedrooms**

A comparative analysis of bedroom numbers for the 'Residential R20/50/100' area surrounding the Town Centre and the City of Belmont in 2021 reveals that the 'Residential R20/50/100' area had a higher proportion of dwellings with 2 bedrooms or less, and a lower proportion of dwellings with 4 or more bedrooms. More specifically, 29.8% of households had 2 bedrooms or less and 16.1% had 4 or more bedroom dwellings, compared with 27.5% and 24.2% for the City of Belmont respectively (refer to **Figure 5**).

Between 2011 and 2021, the 'Residential R20/50/100' area saw a higher growth rate for dwellings with two bedrooms or less, indicating a shift towards reduced bedroom numbers. The number of additional 0 or 1 bedroom (+78) dwellings exceeded the number of additional 3 or more bedroom dwellings (+58) (refer to **Figure 6**).

Despite this trend, there remains a disparity between the proportion of lone-person households and the availability of single-bedroom dwellings. From 2011 to 2021, the number of lone-person households increased by 136 (refer to **Figure 7**), but only 78 single-bedroom dwellings were constructed. This indicates a discrepancy between the size of dwellings and the number of people residing in them. To address this issue, promoting a diverse range of dwelling types, including single-bedroom units, within the R20/50/100 area is crucial. This will help cater to the specific needs of residents.

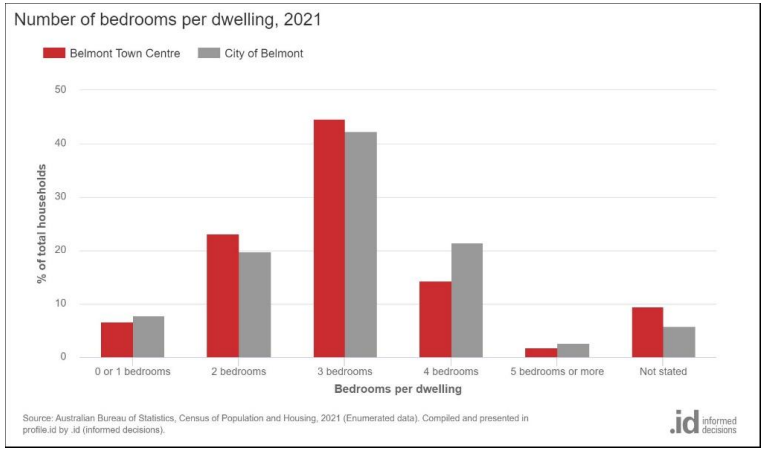



***Figure 4 – Number of bedrooms per dwelling – Belmont and City of Belmont (.id 2024)***

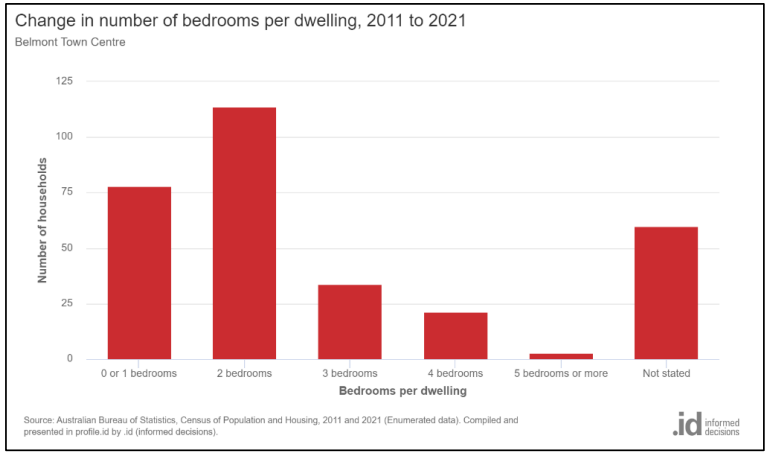



***Figure 6 – Change in number of bedrooms per dwelling 2011 to 2021 (.id 2024)***

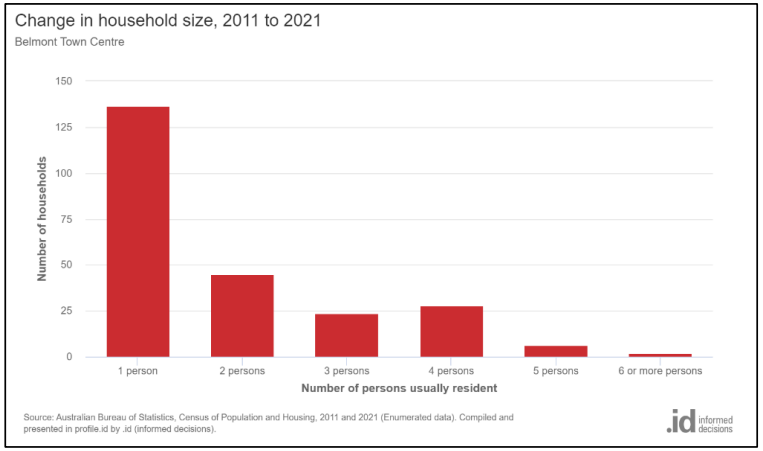



***Figure 7 – Change in Household Size 2011 to 2021 (.id 2024)***

## SCHEDULE OF SUBMISSIONS

| No. | Name and Address | Summary of Submission | Officer Comment |
|---|---|---|---|
| 1 | Public Submitter | Notes that between 2016 and 2021, Kewdale experienced an 8% population growth. Considers the code of R20 which is applied to much of Kewdale is too low given the area's significant potential.<br><br>States that the rapid expansion of the Australian Islamic College (AIC) is attracting large numbers of students from surrounding areas, as far as the City of Gosnells and City of Swan and that this influx combined with the lack of development within a 400m radius of the AIC has resulted in overwhelming pressure on local amenities, chaotic parking activities and excessive traffic due to rising enrolment numbers.<br><br>States that Council must review the density code within 400m of the AIC to allow for diverse housing options. Considers that the safety of the community is at risk with heavy traffic stretching all the way to Orrong Road. | Noted. The submitter's specific concerns are addressed below.<br><br>The submission identifies the R20 density code as contributing to traffic and parking issues at the AIC. However, the traffic and parking issues are more likely to be associated with increased enrolment at the AIC. It is the responsibility of the AIC to manage its school drop off and pick up arrangements so that traffic and parking impacts are mitigated.<br><br>Increased residential density codes would not directly alleviate traffic and parking matters within the area. If the density code were to be increased, there is no guarantee that housing provided for within the area would be associated with the AIC. Therefore, increased residential densities could in fact contribute to additional local traffic and parking demand. Accordingly, increasing residential density is not considered an |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | | appropriate mechanism to address school related traffic and parking concerns. |
| | | States that recent measures taken by the City of Belmont were not adequate to control the school drop off and pick up. | The concerns regarding the effectiveness of compliance activities are acknowledged; however, they do not provide a strategic basis for changing the density code of the area. |
| | | Notes that many properties along Kew Street and Reen Street are currently coded R20 and are more than 800m$^2$ but can't be developed because they do not meet the size requirements for the R20 code. Considers this renders the coding inappropriate when compared to the pressing issues from the AIC's expansion. Believes that the code should be elevated to R40 or R60 within 400m of AIC to enable necessary development and provide adequate housing solutions for the expanding population at AIC. States that the situation is getting worse year by year and that without proactive action by the planning team at the City, the community will be at significant risk due to the popularity and ranking of AIC. | Refer to previous responses. Additionally, the matters raised regarding the popularity and ranking of the AIC do not provide a strategic basis for an increase in residential density.. Instead, as detailed within the Officers report, density codes are to be determined in accordance with established contemporary planning principles contained within Perth and Peel @ 3.5 Million. This framework promotes urban consolidation, with a focus on higher density residential development within and along urban corridors, station precincts, and activity centres. The area referred to by the submitter is not located within an urban corridor, a station precinct, or a walkable catchment of an activity centre. On this basis, the draft Strategies do not anticipate an |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | Quotes the draft Local Housing Strategy where it says "Kewdale currently contains 3,432 residential lots. Of these, 536 lots, based on their size and width, have the capacity for infill development. However, it is important to recognise that not all landowners may choose to pursue further development of their properties." Questions why this does not translate into reviewing the coding especially for the AIC catchment area (within 400m radius)? | upcoding of the area referred to by the submitter.<br><br>This does not translate into broad upcoding of Kewdale or areas surrounding the AIC as any decision to do so should be based on contemporary planning principles advocated for in Perth and Peel @ 3.5 Million as detailed within the officers report. |
| | | Quotes the draft Local Housing Strategy where it says "Kewdale saw a relatively low level of growth between 2011 and<br>2021 at 12% compared to 26.4% for the City of Belmont." Believes this clearly demonstrates that development in Kewdale is centred only in the Belmont Centre catchment. | Noted. This approach is consistent with contemporary planning principles discussed above. |
| | | Quotes the draft Local Housing Strategy where it says "Encourage and support higher density development in appropriate locations, such as in close proximity to activity centres and high-frequency bus routes." States that the school is considered an activity centre as listed on Page 5 where it also refers to students commuting from surrounding areas. Believes this means the City then must review the coding in the school catchment area. | The AIC is not an activity centre under the activity centre hierarchy of State Planning Policy 4.2. It should also be noted that the submitter has quoted a section of the Local Housing Strategy titled "Centres and Services". The AIC is a service offered in the area but is not a centre. Additionally, the fact that students commute from surrounding |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | Includes a link to the following news article: https://www.watoday.com.au/national/western-australia/r-code-overhaul-could-boost-wa-block-values-supercharge-density-20260702-p60bxh.html<br><br>Notes that the state government is investigating changes to the R20 density code to remove the average lot area. States that many lots along Reen St, Kew Street and Nance Street are more than 700sqm and within 400-500m from the AIC. Considers that this is ground to revise the code to R40 or R60 and that the City should be proactive and implement the change. | areas does not of itself necessitate a density increase. Students commuting from a broad catchment is a common occurrence for private schools.<br><br>The announcement from the state government is noted. However, the announcement does not provide a strategic basis for increasing the density code in the area to R40 or R60. As discussed above, there is no strategic basis for such a change. |
| 2 | Public Submitter | Notes that properties along Hardey Road are only R20 and suggests that this be increased because the area is well serviced by public transport. Considers this is appropriate for their lot because it is already a noisy lot and because it is a corner lot with frontage to a main road so development can happen without impacting the neighbour. | As detailed within the Officers report, in preparing the Local Planning Strategy and Local Housing Strategy, officers had regard to contemporary planning principles outlined in Perth and Peel @ 3.5 Million. This framework promotes urban consolidation, with a focus on higher density residential development within and along urban corridors, station precincts, and activity centres.<br><br>The area referred to by the submitter is not located within an urban corridor, a station precinct, or a walkable |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | | catchment of an activity centre. On this basis, the draft Strategies do not anticipate an upcoding of the area referred to by the submitter. |
| | | States that at the 16 June Agenda Briefing Forum a lot of discussion occurred about planning but no discussion occurred about road realignment and resurfacing costs. Provides an example of Wright Street to Belgravia Street, Cloverdale where a section has no parking for residents, is not safe for cycling and is too narrow with a few trees that are suffering. Suggests some verge parking close to the intersection near the drain for locals. Considers that more trees could be planted to compensate for the one in the centre that is causing a traffic hazard, damage to vehicles, costly maintenance, and reduced use of the road when pruning or repairs to the bollards occurs. | These matters fall outside the scope of the draft Strategies and may be raised separately with the City of Belmont. |
| 3 | Public Submitter | Requests that high density complexes without sufficient visitor parking stop getting built. Requests consideration of angled parking on verges because occupants park on the roads and block oncoming vision which is dangerous. | Parking provision for residential development is guided by the Residential Design Codes. Where a proposal complies with the required parking standards, the City of Belmont cannot require additional parking bays.<br><br>Residential parking must be accommodated on site. If the submitter has observed unsafe parking on verges, this can be reported to the City of Belmont for investigation. |

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| 4 | Public Submitter | Submitter identifies a need for more shopping stores near Ascot | The Local Planning Strategy provides the strategic framework to support an appropriate level of retail provision over time through the application of suitable zoning, density provisions and land use permissibility. With respect to Ascot, Ascot Local Centre and the Golden Gateway precinct (including land within the Ascot Racecourse Precinct Structure Plan) may provide future retail opportunities. |
| 5 | Public Submitter | Questions where the strategy is to comment on. States that it would have been better if part 1 and 2 were attached. | All sections of the Local Planning Strategy and Local Housing Strategy are included on the Belmont Connect Page. Officers wrote to the submitter on 2 July 2026 informing them where to find the documents. |
| 6 | Public Submitter | Requests that the Kew Street residential precinct be considered for increased residential density coding as part of the future planning framework, moving from the current R20 designation to a higher residential density (such as R30 or appropriate dual coding where suitable). | As detailed within the Officers report, in preparing the Local Planning Strategy and Local Housing Strategy, officers had regard to contemporary planning principles outlined in Perth and Peel @ 3.5 Million. This framework promotes urban consolidation, with a focus on higher density residential development within and along urban corridors, station precincts, and activity centres.<br><br>The area referred to by the submitter is not located within an urban corridor, a station precinct, or a walkable |

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| | | | catchment of an activity centre. On this basis, the draft Strategies do not anticipate an upcoding of the area referred to by the submitter. |
| | | <u>Submission rationale</u><br>States that the Kew Street area is well suited for a modest increase in residential density for the following reasons: | Refer to previous comment. |
| | | <u>Strategic location</u><br>States that the area is located within reasonable proximity to key employment areas including Perth Airport and surrounding industrial and commercial precincts, as well as approximately 10 km from the Perth CBD. Believes this makes it a suitable candidate for increased housing supply within an established suburb. | Refer to previous comment. |
| | | <u>Housing demand and infill objectives</u><br>Notes that there is strong and ongoing demand for additional housing within established suburbs. Considers that a measured increase in density within existing residential areas aligns with broader State planning objectives to increase infill development and improve housing supply efficiency within the Perth metropolitan area. | Modelling undertaken indicates that the City can continue to deliver housing and meet density targets without the need to upcode large areas of the City. |
| | | <u>Existing urban context</u><br>States that the surrounding Cloverdale area | The immediate context is generally characterised by low density R20 |

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| | | contains a mix of residential housing forms and densities, indicating an evolving urban environment that could support incremental increases in density without compromising neighbourhood character. | development (this reflects the existing code). If the submitter wishes to subdivide into two lots, a minimum density of R35 would need to be applied. If the broader area were to be developed at this code, the neighbourhood character may change. Notwithstanding, the area referred to by the submitter is not considered appropriate for an increased density code as it is not located within an urban corridor, a station precinct, or a walkable catchment of an activity centre. |
| | | <u>Efficient land use</u><br>Notes that their property is 562m² in size and considers this is representative of lots that could reasonably support dual occupancy or small-scale redevelopment under a higher residential coding, contributing to more efficient use of serviced land and existing infrastructure. | Modelling undertaken indicates that the City can continue to deliver housing and meet density targets without the need to upcode large areas. |
| | | **Request**<br>Requests that the City:<br>• Consider the Kew Street precinct (including surrounding residential streets) for review under increased residential density coding (e.g. R30 or appropriate dual coding); and<br>• Assess the area for its suitability within the broader Local Planning Strategy | Refer to previous responses.<br><br>Refer to previous responses. |

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| | | objectives for infill housing and sustainable urban growth.<br><br>States that they support balanced planning outcomes that maintain neighbourhood character while allowing for gradual and appropriate intensification where infrastructure and location support it. | The area referred to by the submitter is not considered appropriate for an increased density code as it is not located within an urban corridor, a station precinct, or a walkable catchment of an activity centre. |
| 7 | Public Submitter | <u>Introduction and overall position</u><br>States that the property sits within the Belmont Town Centre Secondary Centre as defined in the City's endorsed Activity Centre Planning Strategy (bounded by Abernethy Road, Fulham Street, Knutsford Avenue and Wright Street) and is currently zoned 'Town Centre' under Local Planning Scheme No. 15, with no residential density coding.<br><br>Supports the draft Local Planning Strategy and draft Local Housing Strategy, and in particular the directions for the Town Centre planning area. Requests that the final Strategies carry those directions through clearly for our site, so that the new local planning scheme delivers on them.<br><br>Makes four requests as follows:<br><br><u>Request 1 — Retain the site wholly within the Centre zone</u> | Noted<br><br>Noted |

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| | | Requests, the final Local Planning Strategy confirm that the whole of the land within the Belmont Town Centre boundary, including their site, be zoned 'Centre' under the new local planning scheme, consistent with Action 1.2 of the Activity Centre Planning Strategy. States that their site is one of the few separately owned parcels within the Centre and should not be treated differently from the balance of the block. Considers that a consistent Centre zoning across the whole precinct is essential to the coordinated planning the Strategy seeks.<br><br><u>Request 2 — Apply the R-AC0 density coding across the Centre, including this site</u><br>Strongly supports Action 1.7 of the Activity Centre Planning Strategy (investigation of an R-AC0 residential density code over Centre zoned land) and asks that the final Local Planning Strategy commit to applying R-AC0, or an equivalent activity centre coding, across all land within the Centre — expressly including 223 Belmont Avenue — rather than leaving any Centre land uncoded. Notes that the absence of a residential density coding is identified in the City's own strategic work as a barrier to housing delivery in the Town Centre. States that the draft Local Housing Strategy's objective of focusing higher density housing in and around activity centres cannot be achieved on this site while it remains uncoded. | The draft Local Planning Strategy and draft Local Housing Strategy propose to treat the site as forming part of the broader centre with the same zoning and density code being applied.<br><br>Refer to previous comment. |

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| | | <u>Request 3 — Recognise the site as a near-term housing and mixed-use opportunity</u><br>Notes that the site is currently improved by a service station leased to a national fuel retailer and that the lease arrangements enable redevelopment within the life of the new scheme. States that unlike much of the strategically fragmented or long-encumbered land in and around activity centres, the site can genuinely transition to mixed-use development within that timeframe. Asks that the final Strategies recognise the site as a redevelopment opportunity within the Town Centre — supporting the transition of the existing legacy fuel use to mixed-use development consistent with the Centre's role as the City's only Secondary Centre, the Retail Needs Assessment finding that the Centre must more than double in floorspace by 2036, and the community's expressed preference for apartments above ground-floor commercial uses. States that they understand this is also consistent with the City's broader approach of consolidating fuel retailing on the Great Eastern Highway corridor rather than within the Town Centre.<br><br><u>Request 4 — Landowner engagement in the Precinct Structure Plan</u><br>Notes that SPP 4.2 requires a Precinct Structure Plan for the Secondary Centre and that Action 1.6 of the Activity Centre Planning Strategy | Officers note the redevelopment opportunities for this site. However, it is not necessary to specifically note those opportunities within the Strategies.<br><br>If a Precinct Structure Plan is prepared for the landholding, the landowner will be consulted. Action 1.6 of the |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | commits the City to liaising with landowners in its preparation. As the owner of one of the few parcels in the Centre not held by the Belmont Forum ownership, asks to be consulted directly at each stage of the Precinct Structure Plan process. States that the Precinct Structure Plan should ensure that development standards, access arrangements and any land requirements are framed so that each landholding in the Centre, including the submitters, retains an independently developable outcome and is not planned around solely at the initiative of the majority landowner. | Belmont Town Centre section of the Activity Centre Planning Strategy references liaising with "landowners". This will include the submitter. |
| | | In that context, notes the Strategy's investigation of an urban open space within the Town Centre, including one candidate location within the City-owned road reserve at the corner of Belmont Avenue and Wright Street. Supports the improvement of the public realm adjoining the site and states that any open space provision at this corner should be confined to the road reserve or delivered through the structure planning process in a manner that does not diminish the development potential of the site. | The specific location of any Urban Open Space falls outside the scope of the draft Strategies. Notwithstanding, the specific location of any Urban Open Space may be determined through the preparation of a Precinct Structure Plan. |
| | | <u>Conclusion</u><br>States that the draft Strategies set the right direction for the Belmont Town Centre and that applying a Centre zoning and R-AC0 coding | Noted. Refer to previous responses. |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | uniformly across the Centre, and recognising 223 Belmont Avenue as a deliverable redevelopment site, will make the City's housing and activity centre objectives more credible and more achievable. Welcomes the opportunity to discuss the submission with officers. | |
| 8 | Public Submitter | Notes that there is mention in the Local Housing Strategy that 54 Grandstand Road be 'Mixed Use'. Hopes that the use of the site considers the aged care facility across the road as well as surrounding houses.<br><br>States that they don't need high apartment blocks like the 20 storey Golden Gateway apartments.<br><br>Doesn't want State housing commission homes either because they have enough trouble from existing residents in the area.<br><br>Considers that planning in the area doesn't seem to take into consideration the amount of | This will be considered further at development application stage.<br><br>The submission does not identify specific planning grounds for this position.. Notwithstanding, it should be noted that by taking a nuanced approach to density, the City has been able to retain the character of much of its residential land. The City proposes to continue this approach by providing for higher density projects in strategic locations such as Great Eastern Highway.<br><br>This matter falls outside the scope of the draft Strategies.<br><br>A comprehensive traffic assessment was undertaken in support of the |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | traffic on Garrett Road at busy times. States that too much infill will only lead to further congestion on Grandstand & Garrett Roads. Notes that the roundabouts are often chaotic at peak times and during Ascot racecourse events. | Golden Gateway structure plan. This report (which also factors in race day traffic) concludes that the road network will have an acceptable level of service. |
| 9 | Public Submitter | States that if the plan is for further infill, then works need to be undertaken to allow traffic flow. States that currently during peak times, accessing Orrong Road or Abernethy Road from Cloverdale or Kewdale is not feasible. Considers that further infill will only worsen the situation.<br><br>States that Kewdale residential and Kewdale | The City is not proposing to broadly upcode large areas of Belmont. Instead, a targeted approach to density code changes has been adopted, generally focused within areas with good access to services and amenities, including public transport. This approach provides opportunities for residents to use alternative transport modes.<br><br>Notwithstanding, it is acknowledged that a level of infill development will occur outside these strategically identified precincts. In such cases, the City will continue to apply traffic assessment requirements where certain thresholds are reached, monitor the function of the road network, and respond as required. The City will also work with relevant stakeholders such as Main Roads Western Australia, Department of Transport and the Public Transport Authority. |

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| | | Industrial areas should be separated into separate suburbs with Kewdale residential being renamed to something aligned to Tomato Lake. States that this will help with the property prices and drawing people to the suburb. States that currently the wider population view Kewdale as purely an industrial area. | The notion of a suburb name change falls outside the scope of the draft Strategies. The potential effect on property values is not a planning consideration relevant to the draft Strategies. |
| 10 | Public Submitter | States that the City needs to fix the Secondary Centre because it is underperforming and is too reliant on the Belmont Forum Shopping Centre.<br><br>States that in 2024 some Council Members also stated there was a need to revisit the Precinct Structure Plan for Belmont City Centre.<br><br>States that there is a need for better redevelopment such as multi-storey residential housing, and multi-storey office uses. | The submitter's specific concerns and suggestions are addressed below.<br><br>Regarding the suggestion that planning is reliant on the owners of the Belmont Forum Shopping Centre, it should be noted that they have a significant role in the future of the centre given they own the majority of land within it.<br><br>Noted. Council in its consideration of the Activity Centre Planning Strategy noted the benefits of landowners preparing a Precinct Structure Plan to guide future land use and development.<br><br>The Strategies aim to facilitate this type of development through statements such as:<br><br>*"Land within the Centre does not currently have an allocated residential density coding. There is also currently* |

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| | | | *no residential development within the Centre. A residential density coding should be applied to land within the Centre to facilitate a mix of residential and retail commercial land uses, whilst promoting economic sustainability."* |
| | | Notes that many key sites are not redeveloping especially the northern side. | There are many reasons why a landowner may choose not to redevelop. The current and future planning framework provides landowners with opportunity to do so if they wish. |
| | | Notes that there is no basement parking and screening for ground level parking. | Noted. These matters could be further considered through the preparation of a Precinct Structure Plan and are therefore more appropriately considered at that stage. |
| | | Considers that two to three storey residential rebuilds with ground level parking is underwhelming on the northern side of the centre. | If the submitter is referring to R100 coded land adjacent to the centre, the R-Codes provides for 4 storeys. The draft Local Housing Strategy includes an action to investigate the appropriateness of introducing an R160 code to this area which would provide for 5 storeys. |
| | | Includes a list of land uses such as offices, medical centres and states that this is not proper redevelopment. States that the City must do better to provide a mix of job offerings. | The current and draft local planning scheme provides for a range of land uses. Ultimately, it is up to the private |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | Is concerned that properties along Fulham Street are being developed into one storey units despite being opposite a four storey high entertainment complex. | landowners to decide what they would like to develop.<br><br>The current planning scheme provides for increased densities surrounding the Town Centre and this approach is also supported by the draft Local Planning Strategy and draft Local Housing Strategy and carried forward into the draft Local Planning Scheme. Ultimately it is up to the private landowners to decide what they would like to develop. |
| | | States that they realise there are certain height restrictions due to flightpaths. | |
| | | States that the centre is a "ghost town" from 5pm onwards. Considers that it is a lonely, un-activated "nothing". States that the solution to these problems is to change the Precinct Structure Plan. | Noted. This is acknowledged within the draft Strategies.<br><br>The submitter assumes that a Precinct Structure Plan has been prepared. While officers agree that the preparation of a Precinct Structure Plan may be beneficial to guide future land use and development outcomes (thereby activating the centre), it may be more appropriate for landowners to prepare it. |
| | | Questions where the new laneways are being created? Questions if laneways are being implemented at the rear of Wight Street properties when redevelopment occurs? If not, requests that they be put in because they are needed for Secondary Centre evolution. | The submission does not identify the intended location or strategic role of the proposed laneways. The need for and location of any laneways would be |

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| | | States that the City needs bus lanes implemented on Wright Street and northbound on Abernethy Road. Considers that it is easy to do this as a Development Contribution. States that the Belmont Forum owners would need to give up some carparking space to make this happen but its not a big issue.<br><br>States that Bus lanes on Wright Street need to implemented within the planning frameworks before redevelopment occurs. Is worried that if the City continues down its ignorant path, there will be a future item presented to Council where the community is forced to choose between verge trees and bus lanes. The bus lanes would then be portrayed as environmentally destructive. Also states that if bus lanes are not implemented, then car culture will continue and the local roads will eventually be congested all the time during peak shopping hours.<br><br>Is surprised that the recent Coles carpark redevelopment occurred so close to the Wright Street road reserve. States that the City should not have allowed this.<br><br>Questions whether the intersection of Wright Street and Belmont Avenue is likely to be a roundabout one day or always traffic signals. Considers that this upgrade needs to be factored into the Strategies. | more appropriately considered through a future Precinct Structure Plan.<br><br>Both strategies were referred to the Public Transport Authority who did not identify a need for bus lanes.<br><br>Refer to previous comment.<br><br>The concerns regarding the Coles carpark redevelopment relate to a specific development approval and fall outside the scope of the draft Local Housing Strategy and draft Local Planning Strategy. |

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| | | States that the City should remember Belmont Forum Shopping Centre only cares about their landholding and so they don't care if Belmont Secondary Centre is underperforming. Considers changes need to happen otherwise the Centre will continue to fail and not evolve. States that if the City does not know what do that other local governments could provide input because they have faced similar problems. | The ultimate form of the Wright Street and Belmont Avenue intersection is not known at this stage. The Local Planning Strategy and Local Housing Strategy do not determine the design or timing of individual road intersection upgrades, which are subject to separate transport planning, design and funding processes. Accordingly, it is not considered necessary or appropriate to factor a specific intersection upgrade into the Strategies.<br><br>While officers do not agree with the submitter's assertion that the Belmont Secondary Centre is failing, the draft Strategies provide an appropriate strategic framework to support its long-term growth. |
| 11 | Public Submitter | Thanks the City for the opportunity to provide comment and appreciates the work that has been done to provide clear direction for Belmont's future.<br><br>Writes to seek a modest density increase to R40 for one lot on Chester Street. | Noted<br><br>Requests for upcoding of individual sites is more appropriately addressed through the advertising of the draft Local Planning Scheme. Notwithstanding, in preparing the Local Planning Strategy and Local Housing Strategy, officers had regard |

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| | | | to contemporary planning principles outlined in Perth and Peel @ 3.5 Million. This framework promotes urban consolidation, with a focus on higher density residential development within and along urban corridors, station precincts, and activity centres.<br><br>The submitter's lot is not located within an urban corridor, a station precinct, or a walkable catchment of an activity centre. On this basis, the draft Strategies do not anticipate an upcoding of the submitters lot. However, the submitter can provide further comment when the draft Local Planning Scheme is advertised. |
| | | States that their block is an anomaly within the street block because they do not have subdivision potential creating inconsistency in the street. States that the street functions above R20 and sites examples of a number of properties within proximity to the site that support higher density outcomes. | The suitability of a density code is assessed based on the broader character, context and strategic role of an area rather than isolated development examples. Officers consider that Chester Street predominantly supports low density residential outcomes consistent with the existing R20 coding. |
| | | States that DPLH has provided advice that alignment with standard single density codes is the State's preferred approach, and that flexible density codes will not be permitted. Also notes | The removal of flexible density codes does not in itself justify the application of a higher density code to the submitters site. |

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| | | that the City has confirmed it will investigate the application of single density codes. Considers that applying an R40 code to their lot simply ensures that the street is treated consistently. | |
| | | States that the lot is within a walkable distance to Belvidere Street Neighbourhood Centre even though it is just outside a 400m radius. States that residents already rely on Belvidere Street for daily needs, and so the property already forms part of the catchment. Considers that an uplift to R40 will align with this relationship. | Under SPP 4.2, the walkable catchment for a neighbourhood centre is 200 metres. The subject site is located outside this walkable catchment and is therefore not identified as being within an area where increased residential density is anticipated. |
| | | States that the lot has convenient public transport access which reinforces its suitability for a modest density increase consistent with the City's approach to locate lots near neighbourhood centres and public transport. | While it is noted that a high frequency bus route services Hardey Road, this alone does not justify a density increase. |
| | | Notes that the lot is within the 15-20 ANEF Contour meaning that it eligible for a density uplift consistent with SPP 5.1. | While SPP 5.1 identifies opportunities for increased residential density in appropriate circumstances within the 15–20 ANEF contour, this does not automatically require or justify an increase in residential density. Other planning considerations, including the strategic location must also be considered.<br><br>Refer to previous comments. |

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| | | In closing, reiterates comments provided above and requests a density increase to R40.<br>look forward to the next stages of consultation. | |
| 12 | Public Submitter | Provides a Planning Paper titled *Housing Renewal Through Performance-Based Planning* which recommends that the City investigate the introduction of a Retained Dwelling Performance Pathway (RDPP) as part of the preparation of the new Local Planning Scheme.<br><br>States that the preparation of a new planning framework provides an opportunity to consider not only where future housing growth should occur, but how existing housing may continue to contribute positively to the City's environmental, social and economic objectives.<br><br>Explains that the proposed RDPP would provide an additional performance-based planning mechanism that recognises circumstances where an existing dwelling is retained and substantially upgraded, rather than demolished and redeveloped, where measurable public benefit outcomes can be demonstrated.<br><br>States that the proposed pathway is intended to complement, rather than replace, conventional redevelopment and would not seek to prevent demolition, retain all existing dwellings or reduce housing supply. Rather, it seeks to provide an alternative pathway where adaptive renewal may achieve equivalent or improved | The proposed Retained Dwelling Performance Pathway is noted. However, it is important to note that the State planning framework does not currently provide for such a mechanism, and it is not considered appropriate for the City to introduce a separate local assessment pathway outside the framework established by the Residential Design Codes.<br><br>A key direction of the draft Strategies and the review of the Local Planning Scheme is to further align the City's planning framework with the State planning framework wherever appropriate. This includes removing split density coding and associated local development requirements that duplicate, modify or sit outside the provisions of the R-Codes.<br><br>Consistent with this direction, the R-Codes are intended to remain the primary mechanism for regulating residential development and assessing performance-based outcomes. The R-Codes already provide flexibility through the design principles pathway, |

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| | | planning outcomes.<br><br>Considers that planning decisions should focus on the overall quality of planning outcomes rather than the method of development and that housing renewal should be recognised alongside housing redevelopment where a net community benefit can be demonstrated.<br><br>Suggests that consideration of a RDPP could be linked to measurable public benefit outcomes including improved housing quality, removal or remediation of hazardous materials, improved building safety, improved environmental performance, retention and enhancement of urban canopy, reduced demolition waste, retention of embodied carbon, improved streetscape presentation, neighbourhood character outcomes and increased housing diversity.<br><br>Recommends that the City investigate a Measurable Public Benefit Assessment Framework to support consideration of retained dwelling proposals, including potential eligibility criteria, assessment methodology and implementation mechanisms through the Local Planning Scheme or supporting Local Planning Policy.<br><br>Further recommends that local planning provisions that exceed or duplicate the | including for proposals involving the retention and adaptation of existing dwellings.<br><br>It is noted that the draft Local Planning Scheme also removes a number of existing local requirements that may constrain the retention of dwellings, including the additional side setback requirement applying in flexible density coded areas.<br><br>It is therefore not considered appropriate to establish an additional local pathway providing further discretion or incentives beyond those available under the R-Codes. Doing so could introduce unnecessary complexity and create the potential for inconsistent amenity, streetscape and adjoining property outcomes.<br>Having regard to the above, no modifications are recommended to the draft Local Planning Strategy or draft Local Housing Strategy. |

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| | | Residential Design Codes be reviewed during preparation of the new Local Planning Scheme to determine whether they continue to provide a demonstrable local planning benefit or whether equivalent planning outcomes could be achieved through a performance-based approach.<br><br>States that recognising housing renewal alongside redevelopment would provide greater flexibility within the planning framework and assist in achieving the City's objectives relating to housing diversity, sustainability, neighbourhood character, liveability and contemporary planning practice. | |
| 13 | Public Submitter | Supports the City's intention to move towards a more contemporary and flexible planning framework for the Belvidere Street Neighbourhood Centre.<br><br>Provides the following recommendations:<br><br>1. "The proposed retail floorspace cap within the centre is too small – The Draft LPS proposes a cap of 3,500sqm of retail floorspace within the Belvidere Street Activity Centre. The existing approved floor space within the centre already exceeds the proposed retail floor space cap. We request the retail floor space be reviewed further and increased to reflect | The recommendations raised by the submitter are addressed below. |

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| | | the actual and likely expansion of the Belvidere Street precinct.<br>2. The proposed cap does not allow for growth – The forecasted population growth of the Belmont area is approximately 3,600 additional residents, resulting in a higher demand for retail services and choices in the area.<br>3. Flexible planning instruments for development - Removing the LPP and relying on a more flexible planning instrument would better support the Centre's ongoing growth, redevelopment and diversification, allowing future development to respond to changing market conditions and community needs over time."<br><br>**Proposed Retail Floorspace Cap**<br><u>Existing Retail Floorspace Discrepancy</u><br>Considers that the Draft Local Planning Strategy proposes a maximum retail floorspace of 3,500m$^2$ and that while they understand the intent of establishing a retail floorspace threshold, the proposed cap does not adequately reflect the existing planning context, built form, and what is under construction.<br><br>States that their client has recently obtained development approval for a large commercial development within the centre and that this approval expands retail floorspace to 8,850m$^2$. | The reference to 3,500m² of retail floorspace was identified through the Retail Needs Assessment undertaken as part of the preparation of the City's Activity Centre Planning Strategy. The purpose of the Retail Needs Assessment was to identify the retail floorspace needs across centres within the City of Belmont to ensure the future population has convenient access to a range of sustainable, attractive and viable activity centres that perform their intended role within the activity centre hierarchy. The |

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| | | Notes that this substantially exceeds the retail floorspace proposed under the Draft Strategy.<br><br>States that the proposed cap would establish a strategic limit that is significantly below what has already been approved and is currently being delivered. Considers this does not accurately represent the existing condition, function, or development expectations of he Centre, and would impact future framework development ad outcomes for the Centre. Considers that the proposed cap is inconsistent with the Draft Strategy's objective of protecting employment generating floorspace within activity centre from encroachment by incompatible land uses. Is concerned that limiting the amount of retail floorspace, the cap unnecessarily constrains opportunities for retain and commercial development and may instead incentivise a greater proportion of residential development, contrary to the strategic intent of maintaining and enhancing the Centre's employment function.<br><br><u>Commercial Growth Opportunity</u><br>States that the retail floorspace cap would limit opportunities for future reinvestment and redevelopment within the Centre because the existing approved retail floorspace already exceeds the cap and so there would be no capacity to accommodation future expansion, reconfiguration or redevelopment that may | assessment considered a range of matters, including future population projections, retail demand and the role and function of each activity centre, to inform the recommended level of retail floorspace for each centre.<br><br>It is acknowledged that development approval has been granted within the Belvidere Street Neighbourhood Centre that provides for retail floorspace in excess of 3,500m². However, the approval of additional floorspace does not alter the forecast population growth, retail demand or intended role and function of the Centre on which the identified need is based. The additional floorspace was considered having regard to the particular proposal and its supporting Net Benefit Test.<br><br>The 3,500 m² figure therefore represents the indicative level of retail need identified through the strategic assessment and should not be interpreted as a statutory cap or maximum amount of retail floorspace that may occur within the Belvidere Street Neighbourhood Centre. The Local Planning Strategy is a high-level strategic document that establishes |

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| | | respond to evolving market demands and community expectations.<br><br>States that this outcome is contrary to the vision of the draft Local Planning Strategy, which outlines it should provide sufficient flexibility to enable the centre to grow as a "dynamic" and "vibrant" centre whilst also allowing for "sustainable growth" in the area.<br><br>**Need for Additional Retail Floorspace**<br><u>Population Growth will Generate Additional Retail Demand</u><br>Notes that the Net Benefit Test forecasts approximately 3,600 additional residents within the surrounding area by 2041. States that this level of growth will result in increased demand for local shopping, services, food and beverage, employment opportunities, and other convenience based retail uses.<br><br>Highlights the importance of centres having the ability to respond to such population growth through additional retail and commercial floorspace.<br><br><u>Evidence Demonstrates Additional Floorspace can be Accommodated</u><br>States that their clients approved development and streetscape upgrades being undertaken by the City demonstrate that that the centre will evolve and be enhanced overtime. Suggests | the City's long-term planning direction and does not have a statutory function of applying development limit or retail floorspace caps.<br><br>Consistent with State Planning Policy 4.2 – Activity Centres for Perth and Peel, the retail floorspace identified through a Needs Assessment provides an indication of the level of activity centre uses anticipated for a centre. Where a proposal seeks to exceed the identified floorspace need, the Policy provides that a Net Benefit Test may be required to demonstrate that the proposal will not result in an unreasonable and detrimental impact on the activity centre hierarchy or the existing or planned function of activity centres, will not adversely impact existing, committed or planned investment within activity centres, and will deliver a net benefit to the community.<br><br>Accordingly, it would be the City's expectation that any future proposal seeking additional retail floorspace beyond the level identified through the Retail Needs Assessment would be supported by an appropriate Net Benefit Test, consistent with the |

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| | | that the reference to 3,500m² retail floorspace will result in a move in the opposite direction by restricting any future development to less than half of the existing approved and constructed floorspace. Emphasises previous points that this won't allow the centre to respond to changing needs.<br><br>Notes that the Net Benefit Test prepared in support of their clients application, concludes impacts on surrounding centres would be minor and manageable. States that the findings do not support the need for a cap of 3,500m².<br><br>Notes that the Net Benefit Test concludes that the approved retail floorspace would not change the role or function of the Centre. States that the centre hierarchy under SPP 4.2 is not protected by limiting appropriate development within neighbourhood centres. Instead, considers it is maintained by ensuring centres continue to operate in accordance with their designated role and catchment as supported through the completion of Net Benefit Tests and other detailed analysis for proposed development.<br><br>**Support for a Market Lead Approach for the Future of the Centre**<br>Notes that the draft Local Planning Strategy identifies the Belvidere Street Neighbourhood | requirements of State Planning Policy 4.2. This requirement does not, however, represent the application of a retail floorspace cap or prevent further retail expansion where appropriately justified.<br><br>To clarify the purpose and status of the 3,500 m² figure, a modification is proposed to the Draft Local Planning Strategy.<br><br>The submitter is also encouraged to review the Draft Local Planning Scheme, which does not include a retail floorspace cap for the Belvidere Street Neighbourhood Centre. Future development proposals will continue to be assessed through the relevant planning framework having regard to the Centre's role and function, applicable State Planning Policy requirements and the merits of each proposal. |

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| | | Centre as an area that will be subject to further detailed planning and proposes the removal of the existing Local Planning Policy Framework. States that their client is supportive of moving toward a contemporary and flexible planning framework provided it appropriately recognises the Centre's existing role, approved development capacity and future growth potential.<br><br>States that the centre is a unique and evolving precinct that has been subject to a range of strategic aspirations and design guidance. However, notes that the area has not experienced the level of redevelopment or streetscape activation that was anticipated through earlier planning initiatives. States that recent development approvals and the City's streetscape enhancement works indicate the centre is beginning to enter a new phase of investment and redevelopment. Noting this, highlights the importance of any future planning framework providing flexibility to guide redevelopment opportunities while ensuring consistency with the broader strategic objectives for the Centre. States that this could be achieved through a range of planning mechanisms, including a Local Development Plan or other detailed planning instrument capable of responding to site specific opportunities and evolving market conditions. | Officers have further considered the future planning framework for the Belvidere Street Neighbourhood Centre through the preparation of the Draft Local Planning Scheme. In summary, officers do not consider that there is a need for a site-specific planning instrument to be prepared for the Centre. Rather, it is considered appropriate that the existing Local Planning Policy be revoked and future development be guided by the R-Codes and the provisions of the Scheme.<br><br>In this regard, a 'Neighbourhood Centre' zone and R-AC4 density code are proposed to apply to the Centre, with the following development requirements included within the Scheme text:<br><br>1. In the absence of an approved precinct structure plan, structure plan, local development plan, or local planning policy, non-residential buildings shall be designed in accordance with the building height and setback deemed-to-comply provisions of the R- |

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| | | | Codes which apply under the density code assigned to the lot.<br>2. A nil front and side setback can be considered, where consistent with adjoining properties.<br>3. Residential uses shall not be located at ground level.<br>4. Canopy shade trees shall be provided within deep soil areas at a rate of one tree for every four open-air parking bays, with trees located between parking bays.<br><br>Trees shall have a mature canopy diameter of between 2 metres and 6 metres and be planted within a minimum deep soil area of 9 square metres, with a minimum dimension of 1.5 metres.<br><br>It is considered that the above requirements will provide appropriate guidance for future development while allowing flexibility to respond to redevelopment opportunities. The Draft Local Planning Scheme has been submitted to the Western Australian Planning Commission for consideration and consent to advertise. The submitter is encouraged to review the |

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| | | | Draft Local Planning Scheme and provide any comments during the formal advertising period. |
| 14 | ATCO<br>81 Prinsep Road<br>Jandakot WA 6164 | Due to the large area of planning and strategy that is taking place within the City of Belmont, it is recommended that if there are any works taking place within 15 mtrs of the Critical High Pressure Gas Main that ATCO will need to be notified.<br><br>Advice notes:<br><br>• ATCO identifies that the proposed future development may require additional safety measures to be considered, identified and in place for the high pressure gas pipeline risk mitigation.<br>• Anyone proposing to carry out construction or excavation works within 15 metres of Critical Asset Infrastructure must contact 'Before You Dig Australia' (www.byda.com.au) to determine the location of buried gas infrastructure. Refer to ATCO document AGA-O&M-PR24- Additional Information for Working Around Gas Infrastructure https://gas.atco.com/en-au/natural-gas/wa-gas network/working-around-gas-infrastructure.html<br>• All works occurring within 15 metres of Critical Asset Infrastructure must undergo ATCO Engineering Assessment | Noted. The draft Local Planning Strategy speaks about the need for close coordination with ATCO. |

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| | | to determine if additional safety measures are required. Risk mitigation and asset protection measures may be necessary. Notification for the works must be submitted to ATCO via the online web portal.<br>• All works occurring within 15 metres of Critical Asset Infrastructure must comply with the ATCO document Additional Information for Working Around Gas Infrastructure – AGA-O&M-PR24 https://gas.atco.com/en-au/natural-gas/wa gas-network/working-around-gas-infrastructure.html<br>• Future construction and any proposed access roads across the ATCO Critical Asset gas mains (including proposed roads and road upgrades) need to be managed in accordance with the ATCO document Additional Information for Working Around Gas Infrastructure – AGA-O&M-PR24 https://gas.atco.com/en au/natural-gas/wa-gas-network/working-around-gas-infrastructure.html<br>• Anyone proposing to carry out construction or excavation works must contact 'Before You Dig Australia' (www.byda.com.au) to determine the location of Document Set ID: 6153542 Version: 1, Version Date: 22/06/2026 buried gas infrastructure. Refer to ATCO document AGA-O&M-PR24- Additional | |

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| | | Information for Working Around Gas Infrastructure https://gas.atco.com/en au/natural-gas/wa-gas-network/working-around-gas-infrastructure.html<br>• If the disconnection and/or removal of an ATCO gas service is required, a request can be submitted via the online ATCO portal found here. Should you have any queries regarding the information above, please contact us on 13 13 56 or eservices@atco.com. Hoping this gives you some clarification on what ATCO requires if there is any works taking place within the 'City'. | |
| 15 | Department of Water and Environmental Regulation<br>7 Ellam Street<br>Victoria Park WA 6100 | The Department of Water and Environmental Regulation has assessed the Draft Local Planning Strategy and Draft Local Housing Strategy and has no objections. | Noted |
| 16 | Public Transport Authority<br>PO Box 8125<br>Perth Business Centre 6849 | The PTA is generally supportive of the Draft Local Planning Strategy and Draft Local Housing Strategy. In particular, the PTA commends the City's proposed approach to prioritise housing, higher densities, and infill development, along the Central Subregion's Urban Corridors and within the Belmont Town Centre and Redcliffe Station precincts. The PTA provides a high level of bus service to these centres and corridors with High Frequency routes 935, 940, Circle Route (998/999), bus routes 38 and 51, and the Airport Line. Focusing development along these corridors will enable a high level of public transport accessibility for all new residents and | Noted |

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| | | workers from the earliest possible stage without relying on uncommitted provision of additional services and infrastructure. The PTA also supports ongoing engagement with the City regarding service provision.<br><br>Notwithstanding the above, the PTA provides the following comments for the City's consideration:<br><br><u>Draft Local Planning Strategy</u><br><br>*Part 1, Section 4.5.1 – Key Consideration/Opportunity 10 – Transport Network (Road Network)*<br><br>While the PTA acknowledges that Great Eastern Highway and Orrong Road are controlled by Main Roads Western Australia, the PTA would encourage that any efforts by the City to rationalise or alter access to/from roads which are serviced by Transperth Bus routes should be preceded by consultation with the PTA to ensure that changes minimise or eliminate the need to permanently alter bus routes.<br><br>Where public transport is provided, the road network should prioritise permeability and safe crossing opportunities, as barriers to accessing bus stops can discourage public transport use and undermine network accessibility. | Noted<br><br>The City of Belmont has prepared and adopted the Great Eastern Highway Urban Corridor Strategy which looks at improvements to pedestrian infrastructure. These improvements will be subject to further investigation |

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| | | | in consultation with relevant stakeholders. |
| | | *Part 1, Section 4.6 – Planning Areas, Table 7*<br><br>Orrong Road itself is not served by a high frequency bus route along its length, noting that several routes cross Orrong Road between the Local Government Areas of Belmont and Victoria Park (including the Circle Route for 700 metres in Kewdale). While Route 51 currently operates at a 15-minute frequency along Orrong Road for much of the weekday, which the PTA does consider to be a high frequency, this presently does not extend to evenings or the weekend. It is also worth noting that in the Draft Local Housing Strategy (Part 2 – Kewdale), lots fronting Orrong Road are noted as not being within proximity to any high frequency bus routes. | Refer to schedule of modifications |
| | | Notwithstanding the above, Transperth continues to improve services along the Orrong Road corridor. An extension of the route to Carousel Shopping Centre, a Strategic Metropolitan Centre, is planned to be introduced later this year. As such, Transperth supports growth along this corridor, as increased residential densities will help to support future service frequency improvements. | Noted |

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| | | Abernethy Road is also not serviced by High Frequency bus routes.<br><br>*Part 2, Section 9.6.1 – Transport Network (Figure 27)*<br><br>This map is not up to date, and is missing several key Transperth bus services (including Routes 38 and 51 which provide a good service frequency).<br><br><u>Draft Local Housing Strategy</u><br><br>*Part 2 – Ascot – Suburb-wide Actions*<br><br>While the PTA isn't opposed to discussions with Local Governments regarding service provision, existing 940 and Circle Route bus services place almost all Ascot residents within a walkable catchment of a high-frequency bus stop. New routes within Ascot not along Great Eastern Highway or Grandstand Road are likely to be a lower priority for implementation, especially given the comparatively lower residential densities planned for future development in areas further from Great Eastern Highway.<br><br>*Part 2 – Kewdale – Orrong Road Corridor/LPP 2 Policy Area* | Refer to schedule of modifications<br><br>Refer to schedule of modifications<br><br>Officers consider it beneficial for this action to be retained and for discussions to occur to investigate any opportunities. |

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| | | This section states that lots in Kewdale fronting Orrong Road "are not within proximity to any high frequency bus routes". It is noted that the Circle Route operates along a 700-metre portion of Orrong Road adjoining Kewdale, and there are bus stops on this section serviced by this route.<br><br>*Part 2 – Redcliffe – Great Eastern Highway Corridor AND Rivervale – Great Eastern Highway Corridor*<br><br>Commentary that high frequency bus services along Great Eastern Highway provide connections to Midland is misleading. Route 940 terminates at Redcliffe Station. While onward bus connections to exist from Redcliffe Station to Midland, these do not operate at a high frequency, do not share any portion of Great Eastern Highway with Route 940, and require a transfer at/on approach to Redcliffe Station. | This comment relates to lots along Maikai Place and is therefore considered accurate.<br><br>Refer to schedule of modifications |
| 17 | Department of Housing and Works<br>130 Stirling Street<br>Perth WA 6000 | The Department of Housing and Works (the Department) thanks the City of Belmont for the opportunity to comment on the Draft Local Planning Strategy and Draft Local Housing Strategy.<br><br>The Department acknowledges the significant work undertaken by the City in preparing both strategies and supports their overarching objectives of facilitating a diverse range of housing options, encouraging sustainable urban | Noted<br><br>Noted |

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| | | consolidation, directing growth to appropriate locations, and ensuring future housing supply responds to the needs of the City's growing and changing community.<br><br>The Department notes the strategies' strong alignment with State planning objectives, including the delivery of infill housing within activity centres, transport corridors and station precincts, the promotion of housing diversity, and the efficient use of existing urban infrastructure.<br><br>The Department particularly welcomes the recognition within the strategies of:<br><br>• The importance of housing diversity in responding to changing demographic and household trends;<br>• The need to provide a greater range of dwelling types and sizes to meet future housing needs;<br>• The opportunities presented by strategic growth areas; and<br>• The role of social housing in contributing to housing diversity and affordability.<br><br>The Department recognises that achieving long-term housing outcomes will require ongoing collaboration between local government, State Government agencies, community housing providers and the private sector. As the City | Noted<br><br>Noted<br><br>The City will continue to engage with relevant stakeholders through |

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| | | progresses the implementation of the Local Planning Strategy and Local Housing Strategy through the preparation of a new Local Planning Scheme and associated planning frameworks, the Department welcomes continued engagement to help identify opportunities to support housing delivery and contribute to the achievement of the City's housing objectives. | preparation of the draft Local Planning Scheme. |
| 18 | Water Corporation<br>Locked Mail Bag 2,<br>Osborne Park Delivery Centre, WA 6916 | <u>Water and Wastewater</u><br>It is noted that the City of Belmont Local Housing Strategy is proposing significant widespread densification through the strategy area. To support the higher-density development outcomes proposed in this Strategy, upgrades to water and wastewater infrastructure will be required.<br><br>Prior to any proposed rezoning or increases in development density progressing through subsequent stages of the planning process and being formally adopted, the City of Belmont should engage a suitably qualified engineering consultant to prepare and assess a servicing strategy for each affected locality.<br><br>This assessment should include capacity reviews of the surrounding infrastructure networks and consultation with the Water Corporation to identify any existing constraints, servicing issues, required upgrades, and the feasibility of implementing such works. | It is noted that water and wastewater infrastructure may require upgrades. However, the Local Housing Strategy does not propose significant widespread densification. The approach taken is targeted density code changes.<br><br>The City acknowledges that water servicing and water management are relevant considerations in the preparation of a local planning scheme and has had regard to the requirements of State Planning Policy 2.9 – Water and the *Planning for Water Guidelines*. However, the City has not identified any statutory requirement or State planning policy that requires the preparation of a Local Water Management Strategy or whole-of-local government servicing report to support a new local planning scheme. |

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| | | Undertaking this work at an early stage will ensure sufficient time is available to comprehensively assess the impacts of the proposals and identify appropriate servicing solutions outside the constraints of statutory assessment timeframes.<br><br><u>Drainage</u><br>There is an extensive network of Water Corporation drainage and stormwater infrastructure throughout the Strategy area, and it is anticipated that much of the subject land falls within a Water Corporation drainage catchment. In areas where increased residential densities are proposed, the preparation of a Local Water Management Strategy (LWMS) is recommended to assess the impacts of additional development on stormwater runoff.<br><br>This assessment should address how increased flows will be managed within the existing drainage network, including opportunities for on-site detention and controlled discharge, as well as broader drainage and environmental considerations. It is recommended that an LWMS is prepared as part of consideration the Local Planning Strategy and Local Housing Strategy to better understand what measures may need to be implemented to accommodate suggested density increases. | The City's draft Local Planning Scheme does not propose the expansion of urban development into previously unserviced areas. Rather, it largely consolidates the existing urban area and updates the planning framework for land that is already serviced. It also does not intensify development beyond what can already occur under Local Planning Scheme No. 15 in areas where servicing is not currently available or capable of being provided.<br><br>It is also noted that strategic planning for water and wastewater infrastructure is primarily a function of the relevant service provider.<br><br>In the context of the City's draft Local Planning Scheme, which does not propose broadscale urban expansion or materially increase development potential beyond the existing serviced urban framework, the City does not consider there to be a sufficient nexus to require a local government wide servicing report or Local Water Management Strategy. |

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| | | Major drainage infrastructure exists within and adjacent to the subject area. Developers will be responsible for the full cost of protecting, relocating, or modifying any existing Water Corporation drainage assets impacted by development. To maximise community and environmental benefits, consideration should also be given to integrating water-sensitive urban design outcomes, including the potential creation of Living Streams where appropriate. In this regard, there may be opportunities to transform the Perth Airport Southern Main Drain into an urban stream within a parkland setting, enhancing amenity while supporting integrated water management outcomes.<br><br>For further guidance, it is recommended that the City engage early with the Water Corporation's Liveable Communities liveable.communities@watercorporation.com.au<br><br><u>General Comments</u><br>It is expected that any future developers in these up-coded areas will provide all water and sewerage reticulation if required. A contribution for Water, Sewerage and Drainage headworks may also be required. In addition, the developer may be required to fund new works or the upgrading of existing works and protection of all works associated with the | The responsibility of developers to relocate Water Corporation infrastructure at their cost is noted.<br><br>Consideration of water sensitive urban design outcomes can be further considered at application stage.<br><br>The transformation of the Perth Airport Southern Main Drain into an urban stream would require further detailed consideration by Water Corporation noting that it is a Water Corporation asset. Officers note that a portion of this drain within the Development Area 6 precinct has recently been converted into an urban stream as part of the Assets for Liveability Program delivered by Water Corporation in collaboration with the Department of Water and Environmental Regulation.<br><br>Noted. This will be subject to further consideration by developers and water corporation at later stages. |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | Water Corporation. Water Corporation may also require land being provided for works.<br><br>It should be noted that these required upgrades for both water and wastewater are likely to be costly and will all be at the cost of the developer. These upgrades will be completed piecemeal when the need is identified as proposals are referred to Water Corporation, with the developer paying for the upgrades required to service their development. This will be on a first come, first serve basis.<br><br>The above comments highlight the need for the preparation of a servicing strategy to accompany the Local Planning Strategy and Local Housing Strategy. If this is not undertaken, the potential outcome is that increased densities are implemented without the full understanding of associated servicing costs that may prohibit development in accordance with increased densities. | Refer to previous comment.<br><br>Refer to previous comments. |
| 19 | Western Power<br>95 William Street<br>Perth WA 6000 | Western Power has conducted an assessment of the possible increased densities, based on the expected maximum load per dwelling (6.5kVA per lot).<br><br>The City of Belmont is supplied by three zone substations: Belmont Zone substation, Kewdale Zone substation, and Rivervale Zone substation and is supplied by at least 12 feeders (lines that conduit power to the local network). | Noted<br><br>Noted |

<table>
<tr><th>No.</th><th>Name and Address</th><th>Summary of Submission</th><th>Officer Comment</th></tr>
<tr><td></td><td></td><td>
Belmont Zone substation, Kewdale Zone substation, and Rivervale Zone substation have limited spare capacity.<br><br>
Feeder capacity is expected to decrease over time as demand grows, so the ability to support new development and redevelopment projects will depend on the timing of the development, its demand, and available capacity on nearby feeders. If no existing feeders have capacity, new feeders will be required to be established. These new feeders are currently unplanned and uncommitted.<br><br>
Assuming no existing feeders have capacity, new feeders will be required to be established. These new feeders are currently unplanned and uncommitted.<br><br>
The table below demonstrates the likely required new infrastructure, and approximate cost of that infrastructure, to develop power to the proposed growth scenarios.<br><br>
<table>
<tr><th>Growth Scenarios</th><th>Low</th><th>Medium</th><th>High</th><th>Total Potential Development</th></tr>
<tr><td>Dwellings</td><td>13, 348</td><td>26, 696</td><td>40,042</td><td>53,386</td></tr>
<tr><td>New feeders required</td><td>9</td><td>18</td><td>27</td><td>36</td></tr>
<tr><td>Total feeder Cost</td><td>~$135M</td><td>~$270M</td><td>~$405M</td><td>~$540M</td></tr>
<tr><td>Zone Substations to be established</td><td>1</td><td>3</td><td>4</td><td>6</td></tr>
<tr><td>Total ZZS cost</td><td>~$75M</td><td>~$225M</td><td>~$300M</td><td>~$450M</td></tr>
<tr><td>Total Cost (Feeder + ZSS)</td><td>~$210M</td><td>~$495</td><td>~$705M</td><td>~$990M</td></tr>
</table>
*Assume 1500 new residential lots per feeder and (15 km/FDR, $1M/km), 7.15 kVA per dwelling, $75M per ZSS<br><br>
Please note that this forecast excludes Tx-Lines, Land Acquisition, Scoping & Planning<br><br>
<u>Assumptions:</u><br>
• This is a high-level preliminary assessment of potential network
</td><td>
Noted<br><br>
Noted<br><br>
Noted<br><br>
Noted<br><br>
Noted
</td></tr>
</table>

| No. | Name and Address | Summary of Submission | Officer Comment |
|---|---|---|---|
| | | infrastructure requirements, conducted based on information provided at the time of the request, and assessed independently of any other queries. Network infrastructure requirements, development projects and timings are subject to change over time.<br>• If urbanisation of the area progresses and development projects follow, further studies and a detailed technical assessment are required to confirm available capacity and network augmentation options to connect at that time to connect, including project cost and timing. The volume, timing/staging and location of development projects that progress will impact network infrastructure requirements.<br>• No capacity is reserved. When a developer progresses through the Western Power connection process, they will be allocated capacity on a "first come, first served" basis and on a "user pays" principle.<br>• This analysis and estimates do not include individual development connection requirements (non-headworks).<br><br><u>Recommendations:</u><br>• As part of the future proposed development, the relevant agency or | Noted<br><br>Noted<br><br>Noted |

| No. | Name and Address | Summary of Submission | Officer Comment |
|---|---|---|---|
| | | proponents are to engage with Western Power to inform specific development requirements, upgrading and provision of additional power infrastructure as required.<br>• The City of Belmont to liaise with Western Power to identify suitable sites which may accommodate a new zone substation. | Noted. This will occur at development or subdivision stage.<br><br>Western Power may like to review the draft Local Planning Scheme as part of the advertising process and identify sites that may be suitable for power infrastructure. The appropriateness of reserving such land for this purpose can then be further considered by the City. |
| 20 | Department of Education<br>151 Royal Street<br>East Perth WA 6004 | It is noted that the Local Planning Strategy envisions, in part, a growing population across the locality through the provision of more housing diversity and higher density development in strategic locations which could potentially result in an additional 53,386 dwellings (13,348 dwellings and 40,042 dwellings for low growth and high growth scenarios respectively) in the long term. The Department understands that this would align with the intent of the *Perth and Peel @ 3.5million* including the Central Sub-regional planning framework.<br><br>While the Department acknowledges the strategic intent to facilitate residential growth within the Strategy area, this requires careful | Noted<br><br>Noted |

| No. | Name and Address | Summary of Submission | Officer Comment |
|---|---|---|---|
| | | planning consideration to ensure that the resultant student enrolment demand balances with the provision of public schools in the locality. There are several public schools, particularly Redcliffe Primary School and Rivervale Primary School, within the Strategy area that are currently operating at or beyond their permanent student accommodation capacity and/or are constrained by reduced site areas. The projected increase in residential development, coupled with the cumulative impacts of ongoing urban infill and redevelopment across the locality, may place additional pressure on student enrolments at these schools in the long term.<br><br>It is noted that the Strategy does not identify public school planning as a key consideration or opportunity in the planning and delivery of future community infrastructure. Public school infrastructure is a critical component of supporting population growth and should be explicitly recognised within the Strategy. All new residential development and increases in residential density generate additional demand for public schools. This demand may extend beyond the Strategy area, depending on school catchments and enrolment patterns. Accordingly, the Strategy should recognise the importance of providing adequate public schools as part of the broader planning and delivery of community infrastructure. | As detailed within the schedule of modifications, a modification is proposed to acknowledge the importance of planning for future school sites and the role that the Department of Education has in this. |

| No. | Name and Address | Summary of Submission | Officer Comment |
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| | | The Department will continue to monitor the student enrolment demand as residential development progresses in this locality and is likely to require a range of responses via localised planning instruments. These responses may include, but are not limited to, identification and reservation of new public school site/s, the expansion and/or augmentation of existing school sites (e.g. off-site early childhood facility) and/or other measures necessary to ensure that educational infrastructure keeps pace with residential development. In addition, any requirements for primary school developer contributions will be considered and applied at the subdivision stage in accordance with the WAPC's *Operational Policy 2.4 – Planning for School Sites*.<br><br>In view of the above, the Department has no in-principle objection to the proposed Strategies. The Department welcomes the opportunity to work with the proponent and the City during the preparation of future localised planning instruments to ensure it can suitably forward plan for the public education needs of the locality. | Refer to previous comment.<br><br>Noted |

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
**SCHEDULE OF MODIFICATIONS**

Attachment 3

| PART 1 - STRATEGY | | | |
|---|---|---|---|
| **NO.** | **SECTION** | **PROPOSED MODIFICATION** | **RATIONALE** |
| 1. | 1 Introduction | Remove paragraphs and table referencing sub-strategies. | Whilst local government sub-strategies are beneficial for information, they do not form part of a Local Planning Strategy. The relevant information should be contained within Part 2 – Background Information and Analysis. |
| 2. | 3.2.1 Key Consideration/ Opportunity 1 - Housing | Replace the text of the sub-section (including Density, Dwelling Diversity, Aged Housing, Shared Living and Short Term Rentals) with the following:<br><br>'Single houses with 3 to 4 bedrooms remain the dominant housing type across the City. The City has a growing number of 1 or 2 person households, a trend that has continued since 2011 and is expected to persist. While there was an increase in 1 and 2 bedroom dwellings between 2011 and 2021, more of these are needed to meet the demand from the rising lone-person household population.<br><br>The Strategy outlines actions to review existing density codes, apply appropriate density codes where residential development is suitable, remove dual density codes, and review and implement suitable land use definitions and development requirements through the preparation of a new local planning scheme.<br><br>Table 1 demonstrates how the development of Planning Areas and activity centres, even with a low growth (25% uptake rate of additional dwellings) provides for the City to achieve the additional dwelling target of Perth & Peel @ 3.5 Million Planning Framework. Further additional dwellings are achievable should other areas be applied with an increased density code, such as along other Urban Corridors that are not identified as Planning Areas.<br><br>[INSERT ESTIMATED DWELLING YIELD TABLE FROM APPENDIX 1 OF THIS SCHEDULE OF MODIFICATION]'<br><br>The text to be removed could be included in the relevant area of Part 2 of the Strategy. | The overview is to be brief. The relevant information is to be contained in Part 2 – Background Information and Analysis. |
| 3. | 3.2.2 Key Consideration/ Opportunity 2 – Built form and character | Delete the first paragraph in section 3.2.2. | The overview is to be brief, and the paragraph is background information suited to Part 2.. |
| 4. | 3.2.4 Key Consideration/ Opportunity 4 - Activity centres | Delete section 3.2.4 and renumber the remaining 'Key Consideration/Opportunity'. | Covered by Key Consideration/Opportunity 1 and 7. |
| 5. | 3.2.5 Key Consideration/ Opportunity 5 – Public open space and community facilities | Delete the sub-section 'Strategies' and the associated dot points, that are covered by actions within Table 1. | To be concise. |
| 6. | Table 1: Community, Urban Growth and Settlement | Replace Action 1a with:<br>'Investigate and rationalise flexible codes across the City of Belmont.' | To be concise. |
| 7. | Table 1: Community, Urban Growth and Settlement | Replace Action 1c with:<br>'Apply density codes to Urban Corridors with a stepping down towards adjacent areas.' | To cover all Urban Corridors, and not only Great Eastern Highway. Great Eastern Highway is specifically covered by a Planning Area. |
| 8. | Table 1: Community, Urban Growth and Settlement | Delete Action 1d relating to Development Areas.<br><br>Insert a new Action 5b to Planning Direction 5 for alignment with Model Provision as follows:<br>'Rationalise Development Areas and Special Control Areas, with application of the Urban Development zone where necessary.' | To identify that Development Areas can be replaced in the new Scheme for other areas too. |
| 9. | Table 1: Community, Urban Growth and Settlement | Under Planning Direction 1, add a new Action 1d as follows:<br>'Apply density codes to activity centres and surrounds to address the dwelling targets of State Planning Policy 4.2 – Activity Centres.' | To address the activity centre dwelling target of SPP4.2. |
| 10. | Table 1: Community, Urban Growth and Settlement | Delete 'Planning Direction 3. Facilitate the provisions of long-term housing available for the community' and the Action. | Matter addressed by WAPC Planning Bulletin 115 – Short-Term Rental Accommodation (STRA) Guide for Local Government and subsequent amendment No. 23 to LPS15. Planning Direction 3 duplicates Planning Direction 18. |

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
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<table>
<tr><th colspan="4">PART 1 - STRATEGY</th></tr>
<tr><th>NO.</th><th>SECTION</th><th>PROPOSED MODIFICATION</th><th>RATIONALE</th></tr>
<tr><td>11.</td><td>Table 1: Community, Urban Growth and Settlement</td><td>Replace Action 5a with:<br>‘Replace areas of ‘Special Development Precinct’ zone with the appropriate zoning.’</td><td>To be concise.</td></tr>
<tr><td>12.</td><td>3.3.1 Key Consideration/ Opportunity 7 – Activity Centres & Industry</td><td>At the end of the first paragraph of Section 3.3.1 add the following:<br>‘, which is identified in Table 3 along with the minimum dwelling target for each activity centre as per State Planning Policy 4.2 – Activity Centres’<br><br>After the paragraph discussing the future planning of the City’s activity centres, insert the Retail Needs Assessment Table from Appendix 2 of this Schedule of Modification. The table is to identify activity centres with a suffix to be used on the Strategy Map and state the SPP4.2 Dwelling Target:</td><td>To provide the relevant information.</td></tr>
<tr><td>13.</td><td>3.3.1 Key Consideration/ Opportunity 7 – Activity Centres & Industry</td><td>• Replace ‘The ACPS identifies five specialised centres within the City of Belmont:’ with ‘The City has the Perth Airport Specialised Centre, as identified in SPP4.2 – Activity Centres, and the following four employment precincts:’<br>• Delete Perth Airport from the list of other employment centres.<br>• Replace ‘An overview of these specialised centres is included in Part 2 Section 4.3.’ with ‘An overview of these employment precincts is included in Part 2 Section 4.3.’</td><td>To differentiate between Specialised Activity Centres identified in SPP4.2 and other employment centres.</td></tr>
<tr><td>14.</td><td>Table 2: Economy and Employment</td><td>For Action 15a and 15b delete the second paragraph referencing a potential MRS Amendment.</td><td>The current MRS zoning is appropriate.</td></tr>
<tr><td>15.</td><td>Table 2: Economy and Employment</td><td>Replace Action 16a with:<br>‘Revoke Local Planning Policy No. 10 – Residential Land Uses in the ‘Mixed Business’ zone.’</td><td>Residential land uses are not supported in the Model Provision Service Commercial zone.</td></tr>
<tr><td>16.</td><td>Table 2: Economy and Employment<br><br>Table 5: Planning Area F</td><td>For ‘Consideration/opportunity: Activity Centres & Industry’ add the following row:
<table>
<tr><th>Planning Direction</th><th>Action</th><th>Rationale</th><th>Timeframe</th></tr>
<tr><td># Ensure employment floorspace is not decreased as a result of introducing residential land uses to activity centres, urban corridors and employment precincts.</td><td>#a. In preparation of the new local planning scheme, consider appropriate scheme or local planning policy provisions to ensure residential land uses do not impede employment floorspace, in particular on the ground floor fronting streets, in zones that allow for a mixed use developments.</td><td>Section 9.4.2 of Part 2</td><td>Short term (1-5 years)</td></tr>
</table>
For Planning Area F, delete Planning Direction 7 and Action 7a.</td><td>To protect employment floorspace, and ensure active street frontages in high density mixed use locations. The Action does not need to be replicated in the Planning Area for Great Eastern Highway Urban Corridor.</td></tr>
<tr><td>17.</td><td>Table 2: Economy and Employment</td><td>For Action 17a replace ‘a ‘Special Purpose’ or ‘Recreation’ reservation’ with ‘an appropriate zone or reservation’.</td><td>To not foreshadow the outcomes of the investigation.</td></tr>
<tr><td>18.</td><td>Table 2: Economy and Employment</td><td>Replace Action 18a with the following:<br>‘Amend Local Planning Policy No. 19 – Short-Term Rental Accommodation to reflect the land use permissibility in the Zoning Table following Amendment No. 23 to LPS15.’</td><td>To address the land use permissibility for Short-Term Rental Accommodation resultant from Amendment No. 23 to LPS15.</td></tr>
<tr><td>19.</td><td>3.4.1 Key Consideration/ Opportunity 9 – Natural Areas</td><td>Replace ‘Parks and Recreation’ with ‘Public Open Space’.</td><td>Correct terminology.</td></tr>
<tr><td>20.</td><td>Table 3: Environment</td><td>For Action 19a delete ‘Parks and Recreation,’.</td><td>Correct terminology.</td></tr>
<tr><td>21.</td><td>Table 3: Environment</td><td>Replace Action 20a with:<br>‘Review local planning instruments and amend where necessary to ensure sustainable development principles are appropriately considered.’</td><td>Action modified to identify for the local planning framework.</td></tr>
<tr><td>22.</td><td>Table 3: Environment</td><td>For Action 21e replace ‘retaining Tree Preservation Order criteria’ with ‘a Significant Tree Register’.</td><td>Significant Tree Registers are the mechanisms supported in recent local planning schemes.</td></tr>
<tr><td>23.</td><td>Table 4: Infrastructure</td><td>For Action 26b replace ‘Investigate the appropriate mechanism through the preparation of the new local planning scheme’ with ‘Through the preparation of the new local planning scheme apply the appropriate mechanism’.</td><td>To be concise.</td></tr>
<tr><td>24.</td><td>Table 4: Infrastructure</td><td>For Action 27a replace ‘Investigate the appropriateness of encouraging’ with ‘ Encourage’.</td><td>To be concise.</td></tr>
<tr><td>25.</td><td>Planning Areas</td><td>• Delete the section header ‘3.6 Overview’ and ‘3.7A City of Belmont Planning Area’.<br>• Provide a section number 3.6 to the header of ‘Planning Areas’.<br>• Replace ‘Table X’ with the appropriate table number.</td><td>Corrections.</td></tr>
<tr><td>26.</td><td>Table 5: Planning Areas</td><td>Merge Planning Area A and B and renumber all subsequent Planning Areas.</td><td>The two areas can be considered together wholistically.</td></tr>
<tr><td>27.</td><td>Table 5: Planning Area A</td><td>For Planning Area A:<br>• replace the description to be ‘Land adjacent Stanton Road and Tonkin Highway’;<br>• in the rationale replace ‘1.4-hectare’ with ‘2.4-hectare’.</td><td>To reflect Planning Area’s A and B being merged.</td></tr>
</table>

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
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| PART 1 - STRATEGY | | | |
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| 28. | Table 5: Planning Area A | For Planning Area A replace Action 1b, 1c and 1d as follows:<br>'1b. Identify land bound by Ryans Court, Morrison Street, Stanton Road and Tonkin Highway as being subject to additional site and development requirements within the new local planning scheme that requires coordination of vehicle access and tree retention.<br>1c. Through the preparation of a new local planning scheme, investigate the appropriate zoning and density code.' | To be concise. |
| 29. | Table 5: Planning Area C | For Planning Area C replace the description to be 'Redcliffe Station Precinct'. | For easier reference to where the site is located. |
| 30. | Table 5: Planning Area D | For Planning Area D in the description and rationale replace 'Coolgardie' with '(55) Fauntleroy'. | Correcting the address |
| 31. | Table 5: Planning Area D | For Planning Area D:<br>• replace Action 4a, 4b and 4c as follows:<br>'4a. Identify appropriate requirements within the new local planning scheme for development to address the environmental considerations for the site.'<br>• delete the last paragraph referring to a structure plan or local development plan. | To be concise. |
| 32. | Table 5: Planning Area F | For Planning Area F replace the description to be 'Great Eastern Highway and adjacent transition areas'. | Clarifying that the transition area is |
| 33. | Table 5: Planning Area F | For Planning Area F:<br>• replace Action 6a as follows:<br>'6a. Through the preparation of a new local planning scheme, investigate the appropriate zoning and density code and possible local planning policy for the Great Eastern Highway Urban Corridor.'<br>• replace Action 6c as follows:<br>'6c. Investigate the suitable density code for the land in Rivervale, bound by the Swan River (to the north), Great Eastern Highway (to the south), Brighton Road (to the west) and the boundary extending northwest from Acton Avenue (to the east), and mechanism to remove vehicle access from Great Eastern Highway.'<br>• delete the last paragraph referring to the Great Eastern Highway Urban Corridor Strategy. | To be concise. |
| 34. | Table 5: Planning Area G | For Planning Area G:<br>• replace the description to be 'Orrong Road – Abutting Lots';<br>• replace Action 9a and 9b as follows:<br>'9a. Identify additional site and development requirements within the new local planning scheme to require vehicle access to be taken from roads other than Orrong Road.' | To be concise. |
| 35. | Table 5: Planning Area H | For Planning Area H:<br>• replace the description to be 'Abernethy Road – Abutting Lots';<br>• replace Action 10a and 10b as follows:<br>'10a. Identify additional site and development requirements within the new local planning scheme to require vehicle access to be taken from roads other than Abernethy Road.' | To be concise. |
| 36. | Table 5: Planning Area I | For Planning Area I:<br>• delete from the Planning Direction 11 'This should be achieved without eroding the primary intent of the centre.'<br>• Delete Action 11b. | SPP4.2 has a requirement for Precinct Structure Plans to be prepared for Secondary Centres. However this can be exempted where a local planning scheme and local planning strategy provides sufficient land use and built-form controls, and strategic guidance for the activity centre, which could occur in the City's new scheme. |
| 37. | Table 5: Planning Area I | For Planning Area I delete from the rationale:<br>• 'The Centre has steadily grown over time and in a Retail Needs Assessment prepared for the City, it has been identified that the Centre will be required to more than double in size by 2036.'<br>• 'The 'Centre' zone would provide a basis for further detailed planning, in the form of a structure plan to be prepared to guide future development and ensure it occurs in a coordinated manner. This approach is consistent with SPP 4.2 which mandates the preparation of precinct structure plans for secondary centres. This is further reinforced by SPP 7.2 which identifies the precinct structure planning process as an appropriate method of guiding land use, density and development (including built form), access arrangements, infrastructure, environmental assets and community facilities.'<br>• 'or a Precinct Structure Plan is in place to guide uses through appropriate built form controls.'<br>• 'In this regard, it may be appropriate to apply an R-ACO density code so that residential development is guided in accordance with a precinct structure plan.'<br>• 'Land surrounding Belmont Town Centre is designated a flexible density code of R20/50/100. Development is capable of a maximum R100 coding, provided that the requirements of LPS 15 and LPP 1 are met.'<br><br>For Planning Area I add to the rationale:<br>'Such provisions being contained within the new local planning scheme, may forgo the need for a Precinct Structure Plan for the Secondary Centre as per SPP4.2.' | To be concise. |

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| PART 1 - STRATEGY | | | |
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| 38. | Table 5: Planning Area J | For Planning Area J:<br>• replace Action 12a and 12b as follows:<br>'12a. Investigate the appropriate zoning and land use permissibility for land within the City's neighbourhood centres.'<br>• replace Action 12c and 12d as follows:<br>'12c. Apply an appropriate density code to land within and surrounding the neighbourhood centres through the preparation of a new local planning scheme.' | To be concise. |
| 39. | Table 5: Planning Area K | For Planning Area K:<br>• replace Action 13a and 13b as follows:<br>'13a. Investigate the appropriate zoning and land use permissibility for land within the City's local centres.'<br>• replace Action 13c and 13d as follows:<br>'13c. Apply an appropriate density code to land within and surrounding the local centres through the preparation of a new local planning scheme.' | To be concise. |
| 40. | Table 5: Planning Area L | For Planning Area L:<br>• replace Action 14a, 14c, 14d and 14f as follows:<br>'14a. Investigate and apply an appropriate zone and density code to the area to support the stabling of horses, with consideration for excluding properties adjacent the Swan River foreshore and Great Eastern Highway.'<br>• replace Action 14b as follows:<br>'14b Investigate the appropriate mechanism to inform prospective purchasers of potential amenity impacts associated with horse-related activities in the area.' | To be concise. |
| 41. | Table 5: Planning Area L | For Planning Area L in the rationale:<br>• add 'in LPS15' to the end of the first sentence.<br>• Replace 'applying an R10 density code' with 'applying a density code' in the second paragraph. | To not foreshadow the outcomes of the investigation. |
| 42. | 4 Strategy Map | Move 'section 4 Strategy Map' to between 'section 1 Introduction' and 'section 2 Vision' and renumber accordingly. | To ensure Figure 1 is before Figure 2, and the Strategy map is at the forefront of the document. |

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
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| PART 2 – BACKGROUND INFORMATION AND ANALYSIS | | | |
|---|---|---|---|
| **NO.** | **SECTION** | **PROPOSED MODIFICATION** | **RATIONALE** |
| 43. | All of Part 2 | Make necessary changes to Part 2, including additional text with rationale to reflect the modifications required to Part 1. | To allow the City to provide additional rationale where changes to Part 1 are required. |
| 44. | 7.2 State Planning Policies | In Table 6 delete the row for:<br>• State Planning Policy 2.10 – Swan-Canning River System (SPP2.10); and<br>• State Planning Policy 7.3 – Residential Design Codes (SPP7.3). | SPP2.10 has been revoked. SPP7.3 has been converted into a Planning Code. |
| 45. | 7.2 State Planning Policies | In Table 6 from the row for State Planning Policy 2.8 replace the paragraphs in the last column with:<br>'There are two Bush Forever sites located within the City, which are both reserved in the Metropolitan Region Scheme (Site 313 is reserved Public Open Space and Site 386 is reserved Public Purposes – Commonwealth Government).<br><br>The City adopted Environment and Sustainability Strategy identifies developing a local Bushland Protection Plan.' | To be concise, whilst providing the relevant sites. |
| 46. | 7.2 State Planning Policies | In Table 6 from the row for Draft State Planning Policy 2.9:<br>• Replace the first column with 'State Planning Policy 2.9 – Water';<br>• Replace the last column with:<br>'Local Government to advocate to Water Corporation to provide sewer connections through the industrial areas.<br><br>Consider appropriate local planning scheme reservations for land adjacent to the Swan River to ensure appropriate protection and conservation.<br><br>Local Government to develop a Foreshore Management Plan to continue foreshore restoration programs, to increase habitat and parkland amenity.<br><br>Local Government to investigate introducing a local planning scheme special control area and relevant provisions for properties located within the floodway and/or flood fringe.<br><br>Water Management Reports will be required to support subsequent planning stages, including the preparation of a new local planning scheme and amendments, and structure planning.' | Alignment with release of modified SPP2.9. |
| 47. | 7.2 State Planning Policies | In Table 6 from the row for State Planning Policy 4.1 add to the end of the first paragraph in the last column with:<br>'(which aligns with the Service Commercial zone in the Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 1 Model Provision).' | Acknowledgement of Model Provision zones. |
| 48. | 7.2 State Planning Policies | In Table 6 from the row for State Planning Policy 4.2 replace the second paragraph in the last column with:<br>'Consistent with SPP4.2 and SPP7.2 a precinct structure plan may be required to be prepared for Belmont Secondary Centre.<br><br>SPP4.2 sets dwelling density targets for walkable catchments around all activity centres in the hierarchy, which this Strategy addresses.' | Removing presumption that a precinct structure plan must be prepared.<br><br>Identifying the dwelling targets. |
| 49. | 7.2 State Planning Policies | In Table 6 from the row for State Planning Policy 5.1 in the last column delete 'for the Strategy, particularly'. | The implications also relate to the future new scheme and ongoing amendments. |
| 50. | 7.2 State Planning Policies | In Table 6 from the row for State Planning Policy 5.2 replace the paragraphs in the last column with:<br>'Review local planning scheme zoning table to ensure Telecommunication Infrastructure is permissible in all zones, but encouraged within certain zones, including industrial and business park areas.' | Updating the wording to ensure Telecommunication Infrastructure remains permissible in all zones. |
| 51. | 7.2 State Planning Policies | In Table 6 from the row for State Planning Policy 7.2 replace the paragraphs in the last column with:<br>'A precinct structure plan that may be prepared for the Belmont Secondary Centre, is to be prepared in accordance with SPP 7.2.' | Removing presumption that a precinct structure plan must be prepared. |
| 52. | 7.3 Regional Planning Context | In Table 7 for the row for 'Metropolitan Region Scheme' in the last column replace 'future planning framework is' with 'planning instruments are'. | Changing the tense of the language to be an ongoing requirement. |
| 53. | 7.3 Regional Planning Context | In Table 7 for the row for 'Perth and Peel @ 3.5 million (2018) and Central Sub-regional Planning Framework (2018)' in the middle column<br>• add a paragraph break between '3.5 million by 2050.' and 'The four Perth';<br>• replace the last paragraph with:<br>'The Central Sub-regional Planning Framework (Framework) provides high level guidance for the growth of the Central sub-region of the Perth Metropolitan Area, and forms part of the Perth and Peel@3.5 Million suite of strategic land use and infrastructure plans.<br><br>The Central Framework provides high-level guidance regarding where new homes and jobs will be located, how to make best use of existing and proposed infrastructure and how best to protect the natural environment to allow sustainable growth within the Central sub-region.' | Alignment with the WAPC Local Planning Strategies Guidelines Appendix 4. |

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
**SCHEDULE OF MODIFICATIONS**

Attachment 3

<table>
<tr><th colspan="4">PART 2 – BACKGROUND INFORMATION AND ANALYSIS</th></tr>
<tr><th>NO.</th><th>SECTION</th><th>PROPOSED MODIFICATION</th><th>RATIONALE</th></tr>
<tr><td>54.</td><td>7.3 Regional Planning Context</td><td>In Table 7 for the row for ‘Perth and Peel @ 3.5 million (2018) and Central Sub-regional Planning Framework (2018)’ in the last column retain the last paragraph but replace all previous paragraphs with:<br>‘The Central Sub-regional planning framework has set the following targets for additional dwellings being delivered within the City:<br>2031: 6,100 dwellings<br>2050: 10,410 dwellings<br>The Framework required an additional 1,860 dwellings between 2011-2016 and an additional 1,410 dwellings between 2016-2021 to be provided within the City. 2,346 and 1,901 dwellings were delivered during these periods, exceeding the targets by 486 and 491 dwellings respectively. This was largely due to development in The Springs precinct.’</td><td>To be concise.</td></tr>
<tr><td>55.</td><td>7.5 Position Statement and Guidelines</td><td>In Table 9 add ‘(December 2020)’ and ‘(September 2020)’ to the end of ‘Residential Accommodation for Ageing Persons’ and ‘Container Deposit Scheme Infrastructure’ respectively.</td><td>Identifying the dates.</td></tr>
<tr><td>56.</td><td>7.5 Position Statement and Guidelines</td><td>In Table 9 in the row for ‘Residential Accommodation for Ageing Persons’ replace the second paragraph with:<br>‘‘Residential Care Facility’ and ‘Independent Living Complex’ land use terms that are not in the Model Provisions are to be included in the new Scheme.’</td><td>Correction.</td></tr>
<tr><td>57.</td><td>7.5 Position Statement and Guidelines</td><td>In Table 9 insert the following two rows for Position Statements:
<table>
<tr><th>Position statement/ guidelines</th><th>Overview</th><th>Local Planning Strategy Implications and Responses</th></tr>
<tr><td>Public Open Space (December 2025)</td><td>This Position Statement has been prepared by the WAPC to outline how public open space (POS) should be considered and assessed in the Western Australian planning system. The Position Statement seeks to:<br>• Ensure POS is an essential consideration across the planning framework;<br>• Ensure all communities have well-planned POS that adequately provides for evolving community needs in a predictable and equitable manner;<br>• Establish a consistent minimum standard for contributions towards POS, where the creation of additional lots generates the need for an increase in either POS quantity or functionality; and<br>• Provide guidance on the collection, expenditure and management of cash in lieu contributions towards POS to benefit the community.</td><td>[To be completed by the local government]</td></tr>
<tr><td>Renewable Energy Facilities (March 2020)</td><td>This position statement has been prepared by the WAPC to outline the requirements to support the consistent consideration and provision of renewable energy facilities within Western Australia. The position statement seeks to:<br>• guide the establishment of renewable energy facilities to support the State Energy Transformation Strategy (March 2019)<br>• outline key planning and environmental considerations for the location, siting and design of renewable energy facilities<br>• promote the consistent consideration and assessment of renewable energy facilities<br>• facilitate appropriate development of renewable energy facilities while minimising any potential impact upon the environment, natural landscape, and urban areas<br>• encourage informed public engagement early in the renewable energy facility planning process.</td><td>The Model Provision land use term of ‘Wind Farm’ is to be replaced by ‘Renewable Energy Facility’ in the new scheme.</td></tr>
</table></td><td>Inclusion of recent Position Statements.</td></tr>
<tr><td>58.</td><td>8.2 Previous local planning strategy(s)</td><td>Delete ‘as it was prepared prior to the Planning and Development (Local Planning Schemes) Regulations 2015.’</td><td>Local Planning Strategies were required to be approved by the WAPC prior to the current LPS Regulations.</td></tr>
<tr><td>59.</td><td>8.5 Local Planning Policies</td><td>In Table 12 from the row for Local Planning Policy 8 replace the ‘Local Planning Strategy Implications and Responses’ with:<br>‘It is anticipated that this local planning policy will be revoked.’</td><td>Update from the City.</td></tr>
<tr><td>60.</td><td>8.7 Other relevant Strategies, plans and Policies</td><td>In Table 14 from the row for Activity Centre Planning Strategy delete the first paragraph and dot points from the ‘Local planning strategy implications and responses’.</td><td>Correction for what is contained within the sub-strategy.</td></tr>
<tr><td>61.</td><td>9.2 Dwelling Yield Analysis</td><td>Replace the term ‘density target’ with ‘additional dwelling target’.</td><td>Correction to terminology.</td></tr>
</table>

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
**SCHEDULE OF MODIFICATIONS**

Attachment 3

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<tr><td>62.</td><td>9.2 Dwelling Yield Analysis</td><td>Replace Table 16 – Infill Targets with the following.<br><table><tr><th></th><th>Target</th><th>Delivered</th></tr><tr><td>2011-2016</td><td>1,860</td><td>2,346</td></tr><tr><td>2016-2021</td><td>1,410</td><td>1,899</td></tr><tr><td>Total 2011-2021</td><td>3,270</td><td>4,245 (975 surplus)</td></tr><tr><td>2021-2026</td><td>1,560</td><td>TBD</td></tr><tr><td>2026-2031</td><td>1,270</td><td>TBD</td></tr><tr><td>2031-2050</td><td>4,310</td><td>TBD</td></tr><tr><td>Total 2011-2050</td><td>10,410</td><td>4,245 (6,165 outstanding)</td></tr></table><br>Delete the following sentences:<br>‘Between 2011 and 2016 Belmont was required to provide an additional 1,860 dwellings and between 2016 and 2021 an additional 1,410 dwellings. The City provided 2,346 and 1,899 dwellings during these periods, exceeding the targets by 486 and 489 dwellings respectively.’<br>And:<br>‘Belmont is required to provide an additional 6,100 dwellings by 2031 and 10,410 dwellings by 2050. Between 2026 and 2031, 1,270 new dwellings must be delivered in the City of Belmont, increasing the total to 6,100 dwellings. By 2050, a further 4,310 dwellings will be required, bringing the total to 10,410.’</td><td>To be concise, by replacing paragraphs with additional information within the table.</td></tr>
<tr><td>63.</td><td>9.2 Dwelling Yield Analysis</td><td>From the last dot point between Table 16 and 17 delete ‘assumed to be vacant and’ and at the end of the second sent of the dot point add ‘of additional dwellings’.</td><td>To reflect updated additional dwelling yield analysis.</td></tr>
<tr><td>64.</td><td>9.2 Dwelling Yield Analysis</td><td>Add a dot point to the end of the list between Table 16 and 17 that states ‘Land identified as Urban Corridors by Perth and Peel @ 3.5 Million, but are not within a Planning Area of this Strategy have not been provided with an increased density code for the purpose of this modelling. Increased dwelling capacity is achievable in these Urban Corridors following future investigations.’</td><td>To acknowledge other Urban Corridors that the Strategy does not provide actions for.</td></tr>
<tr><td>65.</td><td>9.2 Dwelling Yield Analysis</td><td>Update Estimated Dwelling Yield Tables 17 and 18 to reflect the table in the Appendix 1 of this Schedule of Modifications by:<br>• update the Planning Area listed and include their descriptive name;<br>• replace ‘R-ACO’ with ‘R-AC0’ (number instead of letter)<br>• remove ‘max yield’ columns;<br>• insert ‘total capacity’ and ‘potential additional’ columns; and<br>• change yields to reflect additional dwellings instead of total dwellings.<br>Update the text to reflect the changes to the Dwelling Yield Tables, such as the Growth Scenarios reflecting Additional Dwellings instead of Total Dwellings..</td><td>To reflect additional dwelling yields.</td></tr>
<tr><td>66.</td><td>9.2 Dwelling Yield Analysis</td><td>From the list of dot points after Table 18:<br>• delete the first, third and fifth dot points;<br>• in the second dot point delete the first and third sentences;<br>• in the second dot point replace ‘the City’s existing dwellings and a 50% uptake rate,’ with ‘the City’s existing dwellings and uptake rates,’.</td><td>To reflect updated additional dwelling yield analysis.</td></tr>
<tr><td>67.</td><td>9.3.1 Housing – Current Density Codes</td><td>Replace:<br>‘Regarding flexible density codes, the City acknowledges that the DPLH is seeking to rationalise flexible density codes through the development of new local planning schemes. In response, it may be appropriate for the City to explore the application of singular density codes as part of preparing a new local planning scheme.’<br>With:<br>‘Flexible density codes are not a contemporary approach, the City is to explore the application of singular density codes as part of preparing a new local planning scheme.’</td><td>Remove reference to DPLH as having a position.</td></tr>
<tr><td>68.</td><td>9.3.1 Housing – Current Density Codes</td><td>Delete ‘is subject to’ at the end of the third dot point.</td><td>Correction</td></tr>
<tr><td>69.</td><td>9.3.3 Cultural Heritage</td><td>Make reference to the Heritage Act 2018 and Planning and Development (Local Planning Schemes) Regulations 2015 where detailing historic heritage.</td><td>Correct legislation reference.</td></tr>
<tr><td>70.</td><td>9.3.3 Cultural Heritage</td><td>Add P11342 Garratt Road Bridge (Registered 23 March 2010) to Figure 16.</td><td>Correction</td></tr>
<tr><td>71.</td><td>9.3.5 Public Open Space and Community Facilities</td><td>In subsection Community Facilities, remove from the fourth dot point ‘considering the’.</td><td>Correction</td></tr>
<tr><td>72.</td><td>9.3.6 Hazards<br><br>7.2 State Planning Policies</td><td>Replace references to 'State Planning Policy 3.7: Planning in Bushfire Prone Areas' or the like with 'State Planning Policy - Bushfire', including within Table 6, and update Figure 21 to the latest depiction of Bushfire Prone Areas.</td><td>Correction</td></tr>
</table>

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
**SCHEDULE OF MODIFICATIONS**

Attachment 3

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<tr><td>73.</td><td>9.3.6 Hazards</td><td>• On Figure 22 depict the Water Corporation drains potential flooding areas referenced in the Flood subsection.<br>• On Figure 22 separate ‘Floodway’ and ‘Flood Fringe’ to be depicted separately.</td><td>Depicting the location.</td></tr>
<tr><td>74.</td><td>9.3.6 Hazards</td><td>Insert a new subsection titled 'Climate Change' and discuss climate change impacts on water resources, including flood risk, wetlands and groundwater resources and identify any appropriate mitigation and management measures to inform future planning stages.</td><td>To address SPP2.9 - Water</td></tr>
<tr><td>75.</td><td>9.4 Economy and Employment</td><td>Replace the second paragraph with the following:<br>‘Unlike most local governments, the City has more local jobs (62,684, National Institute of Economic and Industry Research 2025) than employed residents (26,509, NIEIR 2025). This represents 2.4 jobs for every 1 employed resident from within the City. The Central Sub-regional Planning Framework identifies a target of 1.4 jobs per employed resident within the sub-region. A large proportion of the jobs within the central sub-region are located within the City of Perth (240,000, NIEIR 2025) which has 11.5 jobs per employed resident.<br><br>Transport, Postal and Warehousing is the largest employment sector (21.4%), followed by Mining (15.1%), Retail Trade (8.4%) and Health Care and Social Assistance (8.3%), reflecting the area’s economic diversity. The City’s Gross Regional Product is $12 billion (NIEIR, 2025), equating to 2.7% of Western Australia’s GRP and reflecting strong growth, with a 27% increase in GRP compared to the WA average of 18% in the last 10 years.<br><br>The Central Sub-regional Planning Framework has identified the following anticipated job numbers for activity and industrial centres (employment precincts) that are wholly or partially within the City of Belmont:’
<table>
<tr><th>Centre</th><th>2011</th><th>2050</th><th>Additional</th></tr>
<tr><td>Belmont Secondary Centre</td><td>2,460</td><td>3,510</td><td>1,050</td></tr>
<tr><td>Perth Airport Specialised Centre</td><td>12,900</td><td>20,390</td><td>7,490</td></tr>
<tr><td>Belmont Industrial Centre</td><td>3,967</td><td>4,047</td><td>80</td></tr>
<tr><td>Kewdale/Welshpool Industrial Centre</td><td>28,052</td><td>28,775</td><td>723</td></tr>
</table></td><td>To provide updated data on employment.</td></tr>
<tr><td>76.</td><td>9.5.1 Natural Areas</td><td>Provide a map depicting:<br>• Sensitive Water Resource Areas identified in SPP2.9;<br>• The location of the Swan-Canning River Development Control Area;<br>• Bush Forever areas;<br>• Threatened Ecological Communities;</td><td>To locate the environmental features.</td></tr>
<tr><td>77.</td><td>10 Appendix</td><td>Delete the section for Appendix.</td><td>The Local Housing Strategy is not to be an appendix.</td></tr>
</table>

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
**SCHEDULE OF MODIFICATIONS**

Attachment 3

| STRATEGY MAP | | |
|---|---|---|
| **NO.** | **PROPOSED MODIFICATION** | **RATIONALE** |
| 78. | Align the colours for Secondary Centre, Neighbourhood Centre and Local Centre with the Local Planning Strategies Guidelines Attachment 3. | For consistency. |
| 79. | Simplify the boundary for Planning Areas F and L by not excluding roads. | To simplify the map. |
| 80. | Modify the boundary for Planning Area F to include the properties in the transition area, and in Rivervale north of Great Eastern Highway, east of Brighton Road. | To identify the width of the corridor. |
| 81. | Remove Parks and Reserves colour from Lot 602 (55) Fauntleroy Avenue, Ascot that is Planning Area D – Development Area 7. | The area is zoned Urban in the MRS and identified for development |
| 82. | Remove depiction of all Heritage Sites from the map and the legend. | Not to be shown on the Strategy Map. |
| 83. | In the legend update the name for each Planning Area as per previous modifications. | Alignment with previous modification. |
| 84. | In the legend replace 'Belmont Town Centre' with 'Belmont Secondary Centre' and 'Town Centre' with 'Secondary Centre'. | Alignment with Activity Centre hierarchy. |
| 85. | • For each Neighbourhood and Local Centre provide a suffix to the 'J' and 'K' labels as per Appendix 2 of this of this Schedule of Modifications.<br>• Provide a separate legend listing each Neighbourhood and Local Centre against the relevant suffix. | Identifying each Activity Centre. |
| 86. | Identify Golden Gateway Precinct 'future' Local Centre, and identify the Redcliffe Neighbourhood Centre is 'future'. | To identify future centres. |
| 87. | Replace the Rivervale/Springs Local Centre with a Neighbourhood Centre depiction and be included with the Eastgate Neighbourhood Centre. | The two sites are co-located opposite an intersection. They functionally operate as a single Activity Centre. |
| 88. | Depict each of the Urban Corridors from the Central Sub-regional Planning Framework, using the symbol from the Local Planning Strategies Guidelines Attachment 3. | For consistency. |

| ENTIRE LOCAL PLANNING STRATEGY | | |
|---|---|---|
| **NO.** | **PROPOSED MODIFICATION** | **RATIONALE** |
| 89. | Replace references of 'Belmont Town Centre' with 'Belmont Secondary Centre'. | To align with Activity Centre hierarchy. |
| 90. | • Update contents page as necessary.<br>• Add reference to 'Part 1 – Strategy' and 'Part 2 – Background Information and Analysis' to the contents page.<br>• Renumber all sections, tables, figures, 'key consideration/opportunity', planning directions, actions, etc to address this schedule of modifications. | Correction |
| 91. | Only 'Perth Airport' is to be referred to as a 'Specialised Centre', other locations such as 'Belmont Business Park' are to be referred to as 'Employment Centres'. Make all necessary changes, such as in section 9.3.4 Activity Centres and 9.4.1 Specialised Activity Centres & Industry. | Alignment with SPP4.2 terminology. |
| 92. | Replace the term 'Cultural Heritage' with 'Historic Heritage'. | Alignment with SPP3.6 terminology. |

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
**SCHEDULE OF MODIFICATIONS**

Attachment 3

Appendix 1

| Estimated Dwelling Yield (Net Yield) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **PLANING AREA** | **INDICATIVE DENSITY CODE APPLIED FOR MODELLING** | **EXISITING DWELLINGS** | **DWELLING TOTAL CAPACITY** | **POTENTIAL ADDITIONAL DWELLINGS** | **LOW GROWTH (25% of Additional Dwellings)** | **MEDIUM GROWTH (50% of Additional Dwellings)** | **HIGH GROWTH (75% of Additional Dwellings)** |
| A – Land adjacent Stanton Road and Tonkin Highway | R30-40 | 12 | 121 | 109 | 28 | 55 | 82 |
| C – Redcliffe Station Precinct | The potential of this land is being explored through the Redcliffe Station Precinct Improvement Plans/Schemes | | | | | | |
| D – Lot 602 (55) Fauntleroy Avenue, Ascot | R20-30 | 0 | 129 | 129 | 32 | 65 | 97 |
| E – Golden Gateway Precinct | R-AC0 (Plot ratio ranging between 3.0 and 5.0) | 0 | 2,196 | 2,196 | 549 | 1,098 | 1,647 |
| F – Great Eastern Highway Urban Corridor | R-AC0 (Plot ratio ranging between 2.5 and 7.0) | 1,107 | 29.045 | 27,938 | 6,985 | 13,969 | 20,954 |
| G – Orrong Road – Abutting Lots | R60 (50% multiple dwellings based on average site area of 85m$^2$ and 50% grouped dwellings based on 150m$^2$ average lot size) | 279 | 1,048 | 769 | 192 | 385 | 577 |
| H – Abernethy Road – Abutting Lots | R60 (50% multiple dwellings based on average site area of 85m$^2$ and 50% grouped dwellings based on 150m$^2$ average lot size) | 52 | 315 | 263 | 66 | 132 | 197 |
| I – Belmont Secondary Centre | R40, R60, R100 and R-AC1 | 1,778 | 10,935 | 9,157 | 2,289 | 4,579 | 6,868 |
| J – Neighbourhood Centres | R40, R60 and R100 | 788 | 2,330 | 1,542 | 386 | 771 | 1,157 |
| K – Local Centres | R40, R50, R60 and R100 | 2,205 | 5,397 | 3,192 | 798 | 1,596 | 2,394 |
| L – Residential and Stable Areas | R10 | 241 | 455 | 214 | 54 | 107 | 161 |
| Residential zone (outside Planning Areas) | R-Code as per LPS15 | 7,299 | 15,176 | 7,877 | 1,969 | 3,939 | 5,908 |
| Total number of dwellings | | 13,761 existing | 67,147 capacity | 53,386 potential additional | 13,348 additional | 26,696 additional | 40,042 additional |

**CITY OF BELMONT - LOCAL PLANNING STRATEGY**
**SCHEDULE OF MODIFICATIONS**



Appendix 2

| Location | SPP4.2 Dwelling Target (walkable catchment) | Forecast Net Lettable Area ($m^2$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Shop/ Retail | | | | | Other Retail | | | | |
| | | 2016 | 2021 | 2026 | 2031 | 2036 | 2016 | 2021 | 2026 | 2031 | 2036 |
| **Activity Centre** | | | | | | | | | | | |
| Perth Airport – West Specialised Centre | - | - | 28,000 | 28,000 | 28,000 | 28,000 | - | - | 5,000 | 5,000 | 5,000 |
| Perth Airport – South Specialised Centre | - | - | - | - | - | - | - | 5,000 | 5,000 | 5,000 | 5,000 |
| Belmont Secondary Centre - I | 1,000 dwellings (40ha, 400m) | 43,148 | 50,000 | 55,500 | 61,500 | 67,000 | 40 | 40 | 500 | 1,000 | 2,000 |
| Belvidere Street NC – J1 | 225 dwellings (9ha, 200m) | 2,958 | 3,500 | 3,500 | 3,500 | 3,500 | 33 | 33 | 33 | 33 | 33 |
| Kooyong Road NC – J2 | 225 dwellings (9ha, 200m) | 2,276 | 2,500 | 2,500 | 2,500 | 2,500 | - | - | - | - | - |
| Eastgate NC – J3 | 225 dwellings (9ha, 200m) | 1,938 | 2,720 | 3,500 | 3,500 | 4,000 | - | - | 3,000 | 3,000 | 3,000 |
| Redcliffe Station NC – J4 | 1,800 dwellings (59ha, 800m) | - | - | 1,000 | 2,000 | 3,000 | - | - | - | 500 | 500 |
| Redcliffe LC – K1 | 225 dwellings (9ha, 200m) | 355 | 360 | 360 | 360 | 360 | 170 | 170 | 170 | 170 | 170 |
| Belgravia Street LC – K2 | 225 dwellings (9ha, 200m) | 942 | 1,000 | 1,000 | 1,000 | 1,000 | - | - | - | - | - |
| Wright Street LC – K3 | 225 dwellings (9ha, 200m) | 675 | 700 | 700 | 700 | 700 | - | - | - | - | - |
| Epsom Avenue LC – K4 | 225 dwellings (9ha, 200m) | 1,140 | 1,200 | 1,200 | 1,200 | 1,200 | - | - | - | - | - |
| Love Street LC – K5 | 225 dwellings (9ha, 200m) | 370 | 400 | 500 | 500 | 500 | 799 | 799 | 799 | 799 | 799 |
| Belmay LC – K6 | 225 dwellings (9ha, 200m) | 180 | 180 | 180 | 180 | 180 | - | - | - | - | - |
| Belmont Square LC – K7 | 225 dwellings (9ha, 200m) | 580 | 600 | 600 | 600 | 600 | - | - | - | - | - |
| Belmont Avenue LC – K8 | 225 dwellings (9ha, 200m) | 120 | 120 | 120 | 120 | 120 | - | - | - | - | - |
| Francisco Street LC – K9 | 225 dwellings (9ha, 200m) | - | - | - | - | - | - | - | - | - | - |
| Ascot Waters LC – K10 | 225 dwellings (9ha, 200m) | - | - | 500 | 500 | 500 | - | - | - | - | - |
| Golden Gateway LC (emerging) – K11 | 225 dwellings (9ha, 200m) | - | - | - | 1,200 | 1,200 | - | - | - | - | - |
| **Other Precincts** | | | | | | | | | | | |
| Belmont Business Park | - | 14,111 | 14,111 | 14,111 | 14,111 | 14,111 | 29,962 | 29,962 | 29,962 | 29,962 | 29,962 |
| Redcliffe North | - | 710 | 710 | 910 | 910 | 910 | - | - | - | - | - |
| Kewdale | - | 3,357 | 3,357 | 3,357 | 3,357 | 3,357 | 30,613 | 30,613 | 30,613 | 30,613 | 30,613 |
| Great Eastern Highway - West | - | 1,605 | 1,700 | 1,700 | 1,700 | 1,700 | 98 | 98 | 98 | 98 | 98 |
| Great Eastern Highway – Central | - | 4,286 | 4,500 | 4,500 | 5,500 | 5,500 | 2,345 | 2,345 | 2,345 | 2,345 | 2,345 |
| Great Eastern Highway – East | - | 4,286 | 4,300 | 4,300 | 4,300 | 4,300 | 2,345 | 2,345 | 2,345 | 2,345 | 2,345 |

**Local Housing Strategy Schedule of Modifications - Prior to Advertising**

| Section | Required Change | Rationale |
|---|---|---|
| **Part One** | | |
| 8.2.3 | Replace Figure 21 with a new plan of the Golden Gateway precinct | DPLH has directed the City modify the Golden Gateway Structure Plan to exclude Perth Racing's land. |
| State Planning Policies | Retitle SPP 7.3 – Residential Design Codes Volume 1 and Volume 2 to "Planning Codes" and include it as a new subheading. | This reflect modifications required by DPLH to the draft Local Planning Strategy. |
| **Part Two – City Wide** | | |
| Special Purpose Dwellings | Review and update formatting | The text on page 23 has been cut off. |
| Heritage | Delete "At this stage it is anticipated that the policy will be reviewed and continue operation. | The appropriateness of the continued operation of Local Planning Policy No. 8 will need to be further considered through the preparation of the new local planning scheme. |
| **Part Two – Ascot** | | |
| Focus Area 4 | • Update the text to reflect that the Structure Plan has now expired.<br>• Update the address to "Lot 602 (No. 55) Fauntleroy Avenue"<br>• Delete "for the existing Structure Plan to be revoked, however the requirement for a SP to be prepared to guide future subdivision and development on the land should be retained" and replace with "to identify appropriate requirements within the new local planning scheme for development to address the environmental considerations for Lot 602."<br>• Delete Actions, 1 and 2 and replace with "Through the preparation of a new local planning scheme, identify appropriate requirements for development on Lot 602 (No. 55) Fauntleroy Avenue to address environmental considerations." | These updates reflect modifications required by DPLH to the draft Local Planning Strategy. |
| **Part Two – Belmont** | | |
| Focus Area 6 | Remove text and corresponding action making reference to an MRS amendment. | DPLH have directed that reference to an MRS Amendment be removed from the Local Planning Strategy. |
| **Part Two – Cloverdale** | | |
| Nil | Nil | N/A |
| **Part Two - Kewdale** | | |
| Nil | Nil | N/A |
| **Part Two - Redcliffe** | | |
| Focus Area 2 | • Delete "continue to require a structure plan or to require a local development plan for the DA 4 area to ensure a coordinated approach to subdivision and development which holistically considers vehicle access" and insert "identify additional site and development requirements within the new local planning scheme that requires coordination of vehicle access and tree retention."<br>• Replace action 3 and 4 with "through the preparation of a new local planning scheme, investigate additional site and development requirements within the new local planning scheme that require coordination of vehicle access and tree retention."<br>• Delete "(acknowledging this may be subject to change if a structure plan is prepared for this land)" from Action 6. | These updates reflect modifications required by DPLH to the draft Local Planning Strategy. |
| Focus Area 3 | • Delete "continue to require a structure plan or to require a local development plan for the DA 4 area to ensure a coordinated approach to subdivision and development which holistically considers vehicle access and tree retention" and insert ""identify additional site and development requirements within the new local planning scheme that requires coordination of vehicle access and tree retention."<br>• Delete "(acknowledging this may be subject to change if a structure plan is prepared for this land)" from Action 3. | These updates reflect modifications required by DPLH to the draft Local Planning Strategy. |
| **Part Two – Rivervale** | | |
| Focus Area 1 | • Update Action 1a as follows:<br><br>"31 Rowe Avenue to 'Neighbourhood Centre' zone.<br>• Remove references to the Springs Local Centre. | DPLH is seeking to group the Springs Centre and Eastgate together. Therefore, it may need to be zoned 'Neighbourhood Centre'. |
| **Part Two – Town Centre** | | |
| Nil | Nil | N/A |

**Local Planning Strategy Schedule of Modifications – Post Advertising**

| Section | Required Change | Rationale |
|---|---|---|
| **Part One** | | |
| 4.6 Planning Areas | *Delete* - "Orrong Road contains high frequency bus routes and is therefore well-suited for residential development. However,"<br><br>Delete - "Abernethy Road contains high frequency bus routes and is therefore well-suited for residential development. However," | The Public Transport Authority has advised that Orrong Road itself is not served by a high frequency bus route along its length nor is Abernethy Road. |
| **Part Two** | | |
| 8.5 Local Planning Policies | Include reference to Local Planning Policy No. 20, Local Planning Policy No. 21 and Local Planning Policy No. 22. | These Local Planning Policies have been adopted by Council since preparation of the strategy. |
| 8.5 Local Planning Policies | Update sections for LPP 2, LPP 3 and LPP 4 to state that it is anticipated that these polices will be revoked.<br><br>Update the LPP 7 section to state that it is anticipated that this policy will remain operational. | These updates reflect the City's current position on existing local planning policies in light of further investigations undertaken through the preparation of the draft local planning scheme. |
| 9.3.4 Activity Centres | Insert "The 2020 Retail Needs Assessment prepared to support this Strategy identifies an indicative retail floorspace need of approximately 3,500m² for the Belvidere Street Neighbourhood Centre through an assessment of forecast population growth, retail demand and the intended role and function of the Centre. It is noted that development approval has since been granted for retail floorspace exceeding this figure. However, the approval of additional floorspace does not alter the forecast population, retail demand or intended role and function of the Centre on which the identified need is based. The additional floorspace was considered having regard to the particular proposal and its supporting Net Benefit Test. The 3,500m² figure therefore represents the indicative level of retail need identified through the strategic assessment and is not a statutory cap or maximum development outcome. Proposals for additional retail floorspace may be considered in accordance with State Planning Policy 4.2, including through a Net Benefit Test where required." | This text is intended to clarify matters relating to retail floorspace raised by a landowner within the Belvidere Street Neighbourhood Centre precinct. |

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| 9.3.5 Public Open Space and Community Facilities | Insert "Public education facilities also form an important component of community infrastructure and support the needs of growing communities. The Department of Education has advised that it will continue to monitor student enrolment demand as residential development progresses within the locality and that a range of responses may be required through future localised planning processes. These responses may include the identification and reservation of new public school sites, expansion and/or augmentation of existing school sites, and other measures necessary to ensure educational infrastructure keeps pace with residential growth. | This text is intended to acknowledge the role of the Department of Education in planning for school sites in response to their submission. |
| 9.6.1 Transport Network | Replace Figure 27 with an up-to-date map. | The Public Transport Authority has advised that Figure 27 does not show all current routes. |

**Local Housing Strategy Schedule of Modifications – Post Advertising**

| Section | Required Change | Rationale |
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| **Part One** | | |
| Executive Summary | Last sentence – remove reference to GEHUCS. | The Strategy has been adopted by Council now. |
| 8.2.3 | Replace Figure 21 with a new plan of the Golden Gateway precinct | DPLH has directed the City modify the Golden Gateway Structure Plan to exclude Perth Racing's land. |
| 6 – Planning and Strategic Context | Update Figure 3 and associated text in this section to reflect the existing statutory situation (Development Control Policy 2.3 has been repealed). | Since preparation of the draft Local Housing Strategy, the Planning and Strategic context at a state level has changed. |
| **Part Two – City Wide** | | |
| Local Planning Policies | Include reference to Local Planning Policy No. 20, Local Planning Policy No. 21 and Local Planning Policy No. 22. | These Local Planning Policies have been adopted by Council since preparation of the strategy. |
| Flexible Density Codes Criteria – Clause 4.7.7 | • Insert "Given the requirements of Clause 4.7.3 are generally not anticipated to be carried forward, Clause 4.7.7 may also not be required. This will be further investigated through the preparation of the new local planning scheme."<br>• Delete "subdividing land into vacant parcels may lead to separate development applications rather than a coordinated proposal that considers site wide elements such as boundary walls and bin storage."<br>• Delete "Retaining the requirement for dwellings to be constructed to plate height may be appropriate where the density exceeds R30. While this requirement has been applied historically and we may be able to advocate for its retention, it will be difficult to justify at a local level when it is not mandated within the state framework. investigated through the preparation of a new local planning scheme." | Given the requirements of Clause 4.7.3 of LPS 15 are unlikely to be carried forward into the new local planning scheme, Clause 4.7.7 may not be required. Updates to the text make it clear that this will be further investigated through the preparation of the new local planning scheme. |
| Flexible Density Codes | • Insert "Through the preparation of a new Local Planning Scheme, consider whether any criteria currently applied to flexible density coded sites should be incorporated into the scheme." | The action does not need to refer to specific clauses. Rather, the action can more generally be applied to all flexible density coded criteria. |

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| Criteria – Actions | • Delete "through the preparation of a new Local Planning Scheme, investigate whether Clause 4.7.3 (a), (b), (g), (h), (i), and Clause 4.7.7 of LPS 15 should be retained and whether any modifications are required." | |
| **Part Two – Ascot** | | |
| Ascot Overview | To be updated to separate reference to Golden Gateway and Perth Racing landholdings | Consistent with direction from DPLH on Strategy and Structure Plan |
| Focus Area 7 | Update Golden Gateway references and map | To be consistent with directions from DPLH on Strategy and Structure Plan.<br><br>Perth Racing landholdings subject to separate plan. |
| Focus Area 1 | Update Action 1 as follows:<br><br>"Investigate the appropriateness of rezoning land within the precinct through the preparation of a new local planning scheme, from 'Special Development Precinct' having regard to the following options:<br>a. The Ascot Waters Local Centre located at 10 Marina Drive, Ascot, to 'Local Centre' zone.<br>b. Consider 2 Waterway Crescent and 54 Grandstand Road for a 'Mixed Use' or 'Residential' zoning.<br>c. Consider 2 Marina Drive for a 'Mixed Use' or 'Residential' zoning.<br>d. The wider precinct to 'Residential'." | Clarify that points a – d are options and that 2 Waterway Crescent and 54 Grandstand Road could be considered for a 'Residential' zoning. |
| Focus Area 3 – Action 3 | Insert the following as an option:<br><br>"The appropriateness of applying a 'Residential' zone and an Additional Use area that provide for equine related uses" | Officers have further considered the options and identified that applying a 'Residential' zone with additional uses may be appropriate. |
| Focus Area 5 | • Update all text to reflect that the Structure Plan has now expired.<br>• Delete "The Development Area 9 Structure Plan is due to expire in 2025. Given an R20/60 code has been applied to land zoned 'Residential' and further investigations are pending for the 'Mixed Use' zoned land, it may be appropriate to let the Structure Plan expire" and replace with "Given the above, it may no longer be necessary to require a structure plan for this area." | These updates are proposed noting that the Development Area 9 Structure Plan has now expired. The need for a structure plan will be further investigated through the preparation of the new local planning scheme. |
| Focus Area 6 | Delete "The DA 10 Structure Plan will expire in October 2025" and replace with "on 15 May 2025, the Western Australian Planning Commission approved an | Since preparation of the Strategy, the DA 10 Structure Plan has been extended. |

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| | extension of the approval period for the structure plan for a further 5 years expiring on 19 October 2030." | |
| Focus Area 8 | Update Action 2 as follows:<br><br>"Engage with the Department of Planning, Lands and Heritage regarding the development of the land, and investigate whether it is appropriate for further detailed planning to be undertaken for these lots to guide subdivision and development." | The need for further detailed planning should be investigated through the preparation of the new local planning scheme. Investigations may find that it is not appropriate to advocate for a Local Development Plan. |
| Focus Area 10 | • Delete "alternatively it may be appropriate for a site specific planning framework to be prepared to guide future development. To enable this, an R-AC0 density code would need to be applied to the centre" and replace with "alternatively it may be appropriate for Local Planning Policy No. 20 to be updated to include site specific development controls for the centre and for an R-AC0 density code to be applied so that future development is undertaken in accordance with those controls.<br>• Delete "Although a relatively low density of 9.15 dwellings per urban zoned hectare has been achieved within 200m of the centre, it is currently considered inappropriate to upcode the adjacent residential area. This is primarily due to the centres specialised function, which does not cater to daily/convenience needs. If the Centre undergoes redevelopment, it may be suitable to reassess the surrounding density codes at that time" and replace with "The density of lots bound by Great Eastern Highway, Coolgardie Avenue, and Central Avenue is currently R20. This has resulted in 9.15 dwellings per urban-zoned hectare, which is below the 25 dwellings per hectare target outlined in SPP 4.2. In this context, it may be appropriate to apply an R40 density code to the land. This may encourage redevelopment over time, support the function and operation of the activity centre, and assist in meeting the SPP 4.2 target for the centre."<br>• Update Action 3 as follows "Investigate the appropriateness of applying an R40 density coding to land surrounding the local centre." | Officers have further considered appropriate densities surrounding the centre and for reasons mentioned in the suggested text, consider that an R40 density code may be appropriate to apply to land surrounding the Ascot Local Centre.<br><br>Officers also consider that it may be appropriate to update Local Planning Policy No. 20 to apply site specific development requirements to the Ascot local centre. |

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| | • Update Action 4 as follows "consider specific site and development requirements for the local centre through the preparation of a new local planning scheme. This may occur but updating Local Planning Policy No. 20. | |
| Focus Area 12 | • Insert a new dot point "To support implementation of the Great Eastern Highway Urban Corridor Strategy, Council has adopted Local Planning Policy No. 20. The policy provides built form guidance for proponents and decision makers. Therefore, it may be appropriate to apply an R-AC0 density code to the corridor so that development is undertaken in accordance with the policy."<br>• Update Action 1 as follows:<br>"Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply an R-AC0 density code to the corridor so that future development is undertaken in accordance with the built form controls contained within Local Planning Policy No. 20. | Council has adopted Local Planning Policy No. 20 to provide built form guidance for development along the Corridor. Text within the Strategy should reflect this. |
| **Part Two – Belmont** | | |
| Focus Area 1 | • Insert a new Figure 2.<br>• Delete; "The 2011 Local Housing Strategy included an initiative to upcode land within a 400m walkable distance from local and neighbourhood centres, such as the Belvidere Street neighbourhood centre. This area was previously affected by the 20 ANEF contour to the southeast. However, as these lots (outlined in red on the adjacent plan) are now outside the noise contour, their density code should be reviewed."<br>• Delete "It is appropriate to increase the code of existing R20 lots within the block bordered by Gregory Street, Belvidere Street, Hardey Road, and Ellard Avenue to match the zoning of other lots in the area. The R20 code for other lots should stay the same to keep consistency with the surrounding blocks, especially since some have already been developed at the R20 code.<br>• Insert "there are a number of lots within the street block bordered by Gregory Street, Belvidere Street, Hardey Road and Ellard Avenue that are coded R20 while the rest of the street block is coded R20/40. Through the preparation of the new local planning scheme, it may be appropriate to align the future density code of these lots with the balance | Since preparation of the Strategy, Perth Airport has released the 2026 ANEF Noise contours. Figure 2 and the text should be updated accordingly. |

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| | of the street block some of which are also subject to the 20-25 ANEF noise contour. | |
| Focus Area 7 | • Insert "To support implementation of the Great Eastern Highway Urban Corridor Strategy, Council has adopted Local Planning Policy No. 20. The policy provides built form guidance for proponents and decision makers. Therefore, it may be appropriate to apply an R-AC0 density code to the corridor so that development is undertaken in accordance with the policy."<br>• Update action 3 as follows:<br>"Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply an R-AC0 density code to the corridor so that future development is undertaken in accordance with the built form controls contained within Local Planning Policy No. 20. | Council has adopted Local Planning Policy No. 20 to provide built form guidance for development along the Corridor. Text within the Strategy should reflect this. |
| **Part Two - Cloverdale** | | |
| Focus Area 1 | • Insert a new context image. | A new context image is appropriate given the ANEF contours have changed since preparation of the Local Housing Strategy. |
| Focus Area 5 | • Update text noting that the DA 3 Structure Plan has expired. | To reflect that the DA 3 Structure Plan has expired. |
| **Part Two – Kewdale** | | |
| Nil | Nil | Nil |
| **Part Two – Redcliffe** | | |
| Focus Area 1 | • Insert a new context image.<br>• Delete "to R20 would allow for eight additional dwellings. The R20 coding would also allow for additional flexibility of development on the sites, e.g. slightly reduced street setback and open space requirements under the R-Codes" and replace with "may be appropriate as they are in proximity to Belmay Local Centre." | A new context image is appropriate given the ANEF contours have changed since preparation of the Local Housing Strategy.<br><br>Officers have further considered the lots bound by Epsom Avenue, Grand Parade, Board Avenue and Field Avenue. The centre currently provides a limited range of convenience goods and services. Increasing residential densities in |

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| | | proximity to the centre presents an opportunity to support its viability and encourage reinvestment. Additionally, redevelopment of adjacent lots would assist in achieving applicable dwelling targets. |
| Focus Area 5 | • Insert "To support implementation of the Great Eastern Highway Urban Corridor Strategy, Council has adopted Local Planning Policy No. 20. The policy provides built form guidance for proponents and decision makers."<br>• Update the last dot point under Key Considerations and Opportunities as follows:<br><br>"There is an opportunity to align with the City's Great Eastern Highway Urban Corridor Strategy and Local Planning Policy No. 20, which contemplates this portion of the activity corridor having development up to 10 storeys and a plot ratio of 3.0. To enable this, it may be appropriate to apply an R-AC0 density code to the corridor so that development is undertaken in accordance with the policy."<br><br>• Delete "Midland" from the point that speaks about accessibility. | Council has adopted Local Planning Policy No. 20 to provide built form guidance for development along the Corridor. Text within the Strategy should reflect this.<br><br>The public transport authority has advised commentary that high frequency bus services along Great Eastern Highway provide connections to Midland is misleading. Route 940 terminates at Redcliffe Station. While onward bus connections to exist from Redcliffe Station to Midland, these do not operate at a high frequency, do not share any portion of Great Eastern Highway with Route 940, and require a transfer at/on approach to Redcliffe Station. |
| Focus Area 7 | • Delete "To facilitate cohesive redevelopment of this land, it may be appropriate to require a Structure Plan or Local Development Plan to be prepared. This could look at matters including dwelling orientation, vehicle access arrangements and fencing design." | Officers have further considered this and there may not be a need for a structure plan or local development plan to guide development. Notwithstanding, this can |

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| | • Insert "At this stage, the preparation of a Local Development Plan or Structure Plan is not considered necessary to coordinate development. However, this should be further investigated through the preparation of a new local planning scheme." | be further investigated through the preparation of the new local planning scheme. |
| **Part Two – Rivervale** | | |
| Focus Area 1 | • Retitle to "The Springs Special Development Precinct and Residential Zoned Lots West of Brighton Road and reflect this change within the table of contents.<br>• Insert a new context image.<br>• Insert "Lots north of the Springs west of Brighton Road are currently coded R100. The R100 code provides for heights up to 4 storeys. It may be appropriate to retain the 'Residential' zone but upcode these lots to R-AC1. This will provide for development up to 9 storeys, aligning more closely with the scale of development that has occurred within the Springs Precinct."<br>• Insert a new action under Zoning: "Through the preparation of a new local planning scheme, investigate the appropriateness of retaining the 'Residential' zone for lots north of the Springs Precinct west of Brighton Road."<br>• Insert a new action under Residential Density: "Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply a R-AC1 density code to 'Residential' zoned lots north of the Springs Precinct west of Brighton Road." | Officers consider that a discussion and actions regarding the 'Residential' zoned lots west of Brighton Road should be included within this section noting their proximity to the Springs precinct.<br><br>A new context image is needed to provide greater clarity. |
| Focus Area 2 | • Delete "alternatively it may be appropriate for a site specific planning framework to be prepared to guide future development. To enable this, an R-AC0 density code would need to be applied to the centre" and replace with "alternatively it may be appropriate for Local Planning Policy No. 20 to be updated to include site specific development controls for the centre and for an R-AC0 density code to be applied so that future development is undertaken in accordance with those controls.<br>• Insert a new action under Built Form: "Consider specific site and development requirements for the local centre through the preparation of a new local planning scheme. This may occur by updating Local Planning Policy No. 20. | Officers have further considered the planning of Eastgate Neighbourhood Centre and consider that there may be an opportunity to update Local Planning Policy No. 20 to apply site specific development controls. A discussion on this and associated actions should be included. |

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| Focus Area 5 | • Insert a new context image<br>• Move the following points to the start of the Key considerations and opportunities section:<br>  ○ "Land adjacent to the Corridor is zoned 'Special Development Precinct', 'Residential', 'Mixed Use', 'Mixed Business', 'Commercial', and 'Service Station'.<br>  ○ 'Residential' zones on the north side have an R100 density coding, while those interfacing with the highway on the south side are coded R20, R20/40 and R20/60.<br>  ○ 'Mixed Business' zoned lots are addressed by Focus Area 7 and Special Development Precinct lots by Focus Area 1.<br>  ○ Regarding 'Mixed Use' zoned lots, LPS 15 provides little guidance for residential development and does not specifically allocate residential density codes. Clause 4.2.3 of LPS 15 requires a residential density code to be assigned having regard to the density code of adjoining properties. This approach is inconsistent with the Central Sub-Regional Planning Framework which states that codes of R60 or higher are appropriate for urban corridors."<br>• Insert the following points:<br>  ○ "The Great Eastern Highway Urban Corridor Strategy contemplates buildings (up to 20 storeys with a plot ratio of 7.0) for the northern edge of the corridor. The southern side will be of lower scale (up to 10 storeys) with a plot ratio of 3.0) to minimise impacts on adjacent residential properties.<br>  ○ To support implementation of the Great Eastern Highway Urban Corridor Strategy, Council has adopted Local Planning Policy No. 20. The policy provides built form guidance for proponents and decision makers. Therefore, it may be appropriate to apply an R-AC0 density code to the corridor so that development is undertaken in accordance with the policy.<br>  ○ A number of lots on the north side of Great Eastern Highway, east of the Springs Precinct are not subject to the Great Eastern Highway Urban Corridor Strategy or Local Planning Policy No. 20. It may be appropriate to update Local Planning Policy No. 20 to include these lots. | Officers have further considered the future planning of the Great Eastern Highway corridor. Specifically, it may be appropriate to apply a 'Mixed Use' zone to all lots north of Great Eastern Highway east of Brighton Road and apply development controls through Local Planning Policy No.20 by applying an R-AC0 density code. This may necessitate an update to Local Planning Policy No. 20 to include these lots. A discussion and associated actions relating to this is recommended to be included. |

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| | ○ It may be appropriate to apply a 'Mixed Use' zone to lots currently zoned 'Residential' north of Great Eastern Highway. This will provide for development consistent with the rest of the corridor."<br>• Insert a new action under Zoning: "Through the preparation of the new local planning scheme, investigate the appropriateness of applying a 'Mixed Use' zone to lots currently zoned 'Residential' north of Great Eastern Highway east of Brighton Road."<br>• Update the action under Residential Density: "Through the preparation of a new local planning scheme, investigate the appropriateness of applying an R-AC0 density code to lots along the corridor.<br>• Include a new action under Built Form: "Through the preparation of a new local planning scheme, investigate the appropriateness of updating Local Planning Policy No. 20 to include all lots north of Great Eastern Highway east of Brighton Road. | |
| **Part Two – Town Centre** | | |
| Focus Area 2 | • Update title to: "Belmont Town Centre Frame Area and Residential, Commercial and Mixed Use zoned lots outside the Town Centre Frame"<br>• Insert the following points:<br>○ "A number of residential zoned lots are located outside the Town Centre frame area, but remain adjacent to the Town Centre. It may be appropriate to adopt a consistent approach with other residential zoned lots in this location by applying the same additional uses and an R160 density code.<br>○ A number of lots adjacent to the Town Centre are currently zoned 'Commercial' and 'Mixed Use'. To continue to accommodate the range of land uses on these sites, it may be appropriate to apply a 'Mixed Use' zone together with an R160 density code."<br>• Insert the following actions under Zoning:<br>○ Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply additional uses to 'Residential' zoned lots opposite the Town Centre that are not currently within the frame.<br>○ Through the preparation of a new local planning scheme, investigate whether it is appropriate to apply a 'Mixed Use' | These updates are required because the focus area previously did not address Residential, Commercial and Mixed Use zoned lots not part of the frame area. |

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| | zone to lots currently zoned 'Commercial' and 'Mixed Use' in proximity to the Town Centre.<br>• Update the action under Residential Density: "Through the preparation of a new local planning scheme, investigate whether it is appropriate to introduce a residential density code of R160 over the Town Centre Frame Area, Residential zoned lots not currently within the Town Centre Frame, and lots currently zoned 'Mixed Use' and 'Commercial'." | |
| Focus Area 3 | • Update Action 1: "Through the preparation of a new local planning scheme, investigate whether it is appropriate to identify an appropriate transition area from the Town Centre and investigate suitable density codes." | Inserting the words "investigate whether it is appropriate to" is considered appropriate given this will need to be further investigated. |

# 12.3 Community Contribution Fund Review

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| Voting Requirement | : | Absolute Majority |
| Subject Index | : | 57/035 - Community Contribution Fund Review |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | 27 April 2011 Ordinary Council Meeting Item 12.8 – Community Contribution Scheme;<br>26 May 2026 Ordinary Council Meeting Item 12.4 – Delegation Register;<br>23 June 2026 Ordinary Council Meeting Item 12.5 – Adoption of 2026-27 Annual Budget |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Development and Communities |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

For Council to note the review of the City's Community Contribution Fund program, and to seek Council's endorsement of associated revisions to the Delegation Register 2026-27.

## Summary and key issues

- The Community Contribution Fund (CCF) is the City's grant program available to local community groups, to support projects, initiatives and events within the City of Belmont.
- The CCF is administered by the Economic and Community Development department, with an annual budget of up to $80,000 distributed over two funding rounds per year. Currently, each successful applicant can receive a maximum of $5,000.

- The CCF round due to be opened in February/March 2026 was put on hold to allow for a comprehensive review of the program.
- A key finding from community consultation indicated that the grant amount available to each applicant should be increased. It is noted that no increase to the grant amount has been contemplated since commencement of the program in September 2011.
- It is proposed that the $80,000 2026-27 annual budget adopted by Council for the CCF program remains unchanged, but the grant amount available to each applicant is increased from a maximum of $5,000 to a maximum of $7,000.
- Currently, the relevant provisions in the Delegation Register (Attachment 12.3.1) sets a maximum limit of $5,000 per applicant for grants to be awarded under delegated authority. Amounts larger than $5,000 need to be presented to Council for approval.
- To facilitate a streamlined grant administration process, it is recommended that Council approves a revision to Delegation 1.1.29 of the Delegation Register 2026-27 to increase the limit on delegation for CCF grants to $7,000 (Attachment 12.3.2).

**Officer Recommendation**

That Council:

1. Notes the review of the Community Contribution Fund program.
2. Approves the amendment to Delegation 1.1.29 of the Delegation Register 2026-27 to increase the limit on delegation for the Community Contribution Fund grants to $7,000 as shown in Attachment 12.3.2.

**An absolute majority of Council is required**

## Location

Not applicable.

## Consultation

An online survey was advertised through the City's marketing channels. Previous applicants to the CCF were also contacted directly and encouraged to participate in the survey. A total of 17 responses were received.

Applicants from the previous three CCF rounds were invited to attend an in-person workshop, which focused on gathering more in-depth information and feedback on all aspects of the program, including strengths, gaps, opportunities and overall user experience. A total of 15 community representatives attended.

A number of operational improvements were identified and will be implemented accordingly. Two key indications from consultation for Council to consider are:

1. An increase of the maximum grant amount available to each applicant from $5,000 to $7,000 is appropriate;
2. The desire for rapid approvals of grant applications.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: People**
**Outcome:** 3. People of all ages and abilities feel connected and supported.

## Policy implications

Council Policy CP50 – Donations and Financial Assistance includes matters to be considered in administration of the Community Contribution Fund program.

## Statutory environment

Section 5.42 of the *Local Government Act 1995 (WA)* outlines provisions for the local government to delegate certain powers and duties to the Chief Executive Officer.

Delegation 1.1.29 of the City's Delegation Register 2026-27 specifies conditions for administration of the grant program.

## Background

The CCF program was placed on hold in February/March 2026 to allow a comprehensive review of the program. The review has now been completed and a number of improvements have been identified for implementation before the relaunch of the program in the latter half of the 2026 calendar year.

The administrative improvements include:

1. Strengthening strategic alignment of the program by explicitly linking funding criteria and assessment to the City of Belmont Strategic Community Plan 2024-2034;
2. Moving the grants process online through adoption of the Smarty Grants application and management platform; and
3. Improving recording of data and outcome results to facilitate ongoing assessment of the program.

Notwithstanding the administrative improvements, Council endorsement is sought for the increase in delegation limit from $5,000 to $7,000.

## Report

There has been no increase to the grant amount available to each applicant since commencement of the CCF program in September 2011. Given increasing costs of living over the years, the current $5,000 limit reduces the capability and scale of community projects. Feedback from stakeholder engagement identified that an increase to $7,000 would facilitate better outcomes.

In recent years, the Community Contribution Fund has not fully utilised its annual budget allocation of $80,000. During 2023-24, 16 successful applicants received a total of $57,622.73, while in 2024-25, 17 successful applicants received a total of $68,500.11. Based on historical demand, it is anticipated that increasing the maximum grant available to individual applicants from $5,000 to $7,000 can be accommodated within the existing 2026-27 budget allocation. Should the first funding round of 2026-27 indicate a need for an increase to the overall funding pool, this can be considered as part of the 2027-28 budget development process.

A comparative review of the grants offered by four other local governments was undertaken. The maximum grants available to each applicant among those local governments ranged from $5,000 to $10,000, and up to $15,000 for one of the local governments for partnership projects with not-for-profit organisations.

The City's Delegation Register 2026-27 limits the delegation for CCF grants to $5,000. This means that approvals for grant amounts greater than $5,000 must be presented to Council for determination.

To ensure efficient administration of the CCF grant program, it is recommended that Delegation 1.1.29 of the Delegation Register 2026-27 is amended to increase the limit on delegation for CCF grants to $7,000. Approval of this delegation allows a timelier and more efficient process for grant approvals which addresses the findings from community consultation.

## Financial implications

While the grant amount available to each applicant increases to $7,000, the $80,000 adopted annual budget for 2026-27 remains unchanged. Any future increase to the funding pool would be subject to Council consideration through the annual budget process.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

A contemporary Community Contribution Fund program:

- Ensures that the community has access to the services and facilities it needs;
- Assists in developing community capacity;
- Provides equipment to further enhance community access to services;
- Supports community groups; and
- Enhances a sense of community and the image of Belmont.

## Attachment details

| Attachment No and title |
|---|
| 1. Community Contribution Funds - Track Change Version [**12.3.1** - 2 pages] |
| 2. Community Contribution Funds - Final Version [**12.3.2** - 2 pages] |

## 1.1.29 Community Contribution Funds

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| **Power or Duty Delegated: Relevant section of legislation for the delegation** | *LGA95 (WA)*<br>s 6.7 *Local Government (Financial Management) Regulations 1996* (WA) 12. |
| **Function:** | To approve applications for the release of funds as part of the Community Contribution Fund through requests for financial assistance in accordance with the CP50 - Donations – Financial Assistance Policy |
| **Council General Conditions on this Delegation:** | Any person proposing to exercise a power under delegated authority shall comply with the Standard Conditions of Delegation and the following specific additional conditions for this delegation.<br><br>**Additional Conditions:**<br><br>1. Limit on Delegation is ~~$5,000~~$7,000 as outlined within Council Policy 50 Donations – Financial Assistance.<br>2. All amounts over ~~$5,000~~$7,000 are to be determined by Council resolution.<br>3. Expenditure to be within approved budget and must be in accordance with programs outlined in CP50 - Donations – Financial Assistance Policy.<br>4. Delegation is only to be exercised where there is a direct benefit to the City of Belmont Residents and communities. |
| **References:** | *Local Government Act 1995*(WA) s 6.7 Municipal Fund<br>*Local Government (Financial Management) Regulations 1996* (WA): 12. Payments from municipal fund or trust fund, restrictions on making<br><br>CP50 - Donations – Financial Assistance Policy<br>CP63 – Execution of Documents Policy. |
| **Record Keeping:** | Ensure that evidentiary documents that meet the requirements of *Local Government (Administration) Regulations 1996* (WA) r 19.<br><br>Records of exercise of delegated authority to be retained in ECM index:11/005.<br><br>Record details of documented procedures; the subsequent amendment of procedures and ECM-links to relevant evidentiary documents. |
| **Version** | Formerly DA 17 Community Contribution Funds in 2020-2021 Delegation Register. OCM 22/6/2021 Item 12.6. |

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| | Minor Change to Council Policy Numbering<br>Reviewed OCM 28/6/2022<br>Reviewed OCM 26/4/2023<br>Policy Amendments OCM 22/8/2023 and New policy 12/12/2023<br>Reviewed OCM 23/4/2024 Item 12.8 Reviewed OCM 24/6/2025 Item 12.5; Reviewed OCM 26/5/2026 Item 12.4 |

## 1.1.29 Community Contribution Funds

| | |
|---|---|
| **Power or Duty Delegated: Relevant section of legislation for the delegation** | *LGA95 (WA)*<br>s 6.7 *Local Government (Financial Management) Regulations 1996* (WA) 12. |
| **Function:** | To approve applications for the release of funds as part of the Community Contribution Fund through requests for financial assistance in accordance with the CP50 - Donations – Financial Assistance Policy |
| **Council General Conditions on this Delegation:** | Any person proposing to exercise a power under delegated authority shall comply with the Standard Conditions of Delegation and the following specific additional conditions for this delegation.<br><br>**Additional Conditions:**<br><br>1. Limit on Delegation is $5,000 as outlined within Council Policy 50 Donations – Financial Assistance.<br>2. All amounts over $5,000 are to be determined by Council resolution.<br>3. Expenditure to be within approved budget and must be in accordance with programs outlined in CP50 - Donations – Financial Assistance Policy.<br>4. Delegation is only to be exercised where there is a direct benefit to the City of Belmont Residents and communities. |
| **References:** | *Local Government Act 1995*(WA) s 6.7 Municipal Fund<br>*Local Government (Financial Management) Regulations 1996* (WA): 12. Payments from municipal fund or trust fund, restrictions on making<br><br>CP50 - Donations – Financial Assistance Policy<br>CP63 – Execution of Documents Policy. |
| **Record Keeping:** | Ensure that evidentiary documents that meet the requirements of *Local Government (Administration) Regulations 1996* (WA) r 19.<br><br>Records of exercise of delegated authority to be retained in ECM index:11/005.<br><br>Record details of documented procedures; the subsequent amendment of procedures and ECM-links to relevant evidentiary documents. |
| **Version** | Formerly DA 17 Community Contribution Funds in 2020-2021 Delegation Register. OCM 22/6/2021 Item 12.6. |

| | |
|---|---|
| | Minor Change to Council Policy Numbering<br>Reviewed OCM 28/6/2022<br>Reviewed OCM 26/4/2023<br>Policy Amendments OCM 22/8/2023 and New policy 12/12/2023<br>Reviewed OCM 23/4/2024 Item 12.8 Reviewed OCM 24/6/2025 Item 12.5; Reviewed OCM 26/5/2026 Item 12.4 |

# 12.4 2025 Compliance Audit Return

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 39/005 |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | ARIC 27 July 2026;<br>OCM 25 March 2025 Item 11.1 |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Corporate and Governance |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

To provide Council with the outcomes of the statutory Compliance Audit Return (CAR) for the period 1 January 2025 to 31 December 2025 as provided for in Attachment 12.4.1.

## Summary and key issues

- At the Audit, Risk and Improvement Committee meeting held on 27 July 2026, the 2025 Compliance Audit Return was endorsed for recommendation to Council.
- It is a requirement of the *Local Government Act 1995 (WA)* (the Act) that all local governments carry out an audit of compliance.
- Following the amendments to the Act and the commencement of the Local Government Inspector (the Inspector) the submission of the 2025 CAR was delayed until September 2026.
- The Inspector is now responsible for the administration of the CAR including the approval of the form and questions for the CAR.
- The Inspector has now provided the questions for the 2025 CAR.

- Although the questions are in a different format for 2025, they are similar to previous year's questions.
- As in previous years, Tthe 2025 audit questions focus on key areas of potential non-compliance . The City of Belmont's 2025 compliance score is 100%. The 2024 score was 100%.

**Committee Recommendation**

That Council:

1. Receive and adopt the 2025 Compliance Audit Return responses as provided in Attachment 12.4.1.
2. Authorise the Mayor and Chief Executive Officer to complete the Joint Certification of the 2025 Compliance Audit Return.
3. Direct the Chief Executive Officer to submit the certified 2025 Compliance Audit Return and a copy of the minutes relevant to this report to the Local Government Inspector by 30 September 2026 in accordance with the *Local Government (Audit) Regulations 1996 (WA).*

## Location

Not applicable.

## Consultation

There has been no specific consultation undertaken in respect to this matter.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

Regulation 14 of the *Local Government (Audit) Regulations 1996 (WA)* (the Regulations) requires that a compliance audit for the period 1 January to 31 December is completed each year in a form approved by the Inspector. Regulation 14 also requires the Audit Risk and Improvement Committee (ARIC) to review the CAR and present those results to Council. The CAR is then to be adopted by Council and recorded in the minutes.

Regulation 15 of the Regulations requires that after the adoption by Council of the CAR, a certified copy (signed by both the Mayor and Chief Executive Officer) of the return, together with a copy of the minutes of the meeting in which the return was adopted with any additional information is required to be submitted to the Inspector by 30 September 2026.

## Background

The compliance audit period is 1 January 2025 to 31 December 2025. Once the audit is completed the City is required to:

1. Present the CAR to ARIC for consideration and endorsement.
2. ARIC to recommend the CAR to Council.
3. Seek Council's endorsement of the completed CAR.
4. Return the endorsed and certified CAR, along with a copy of the Council Minutes, to the Inspector by 30 September 2026.

In compiling the CAR, designated officers have undertaken an audit of the City's activities, practices and procedures applicable to each section.

The City's draft responses to the 2025 CAR questions are detailed in Attachment 12.4.1. The response will be submitted to the Inspector once Council has resolved its satisfaction with the contents of the return, and it has been jointly certified by the Mayor and Chief Executive Officer

ARIC considered the CAR responses at the meeting held on 27 July 2026. No questions were raised. At its meeting, ARIC recommended that Council adopt the 2025 CAR.

## Report

Following receipt of the CAR questions from the Inspector in late June 2026, the City's officers determined responses to questions in the CAR. To further substantiate responses, the City has opted to provide evidence through citation of items from the City's Council Meeting Minutes and documents registered in the Electronic Document Management System (ECM). Reference is also made to

information contained in hard copy files, which includes original copies of Elected Member and designated officers' Primary and Annual Returns.

The questions in the CAR should be read with the relevant extract of the *Local Government Act 1995 (WA)* (the Act) and/or associated Regulations.

The 2025 CAR contains 82 questions relating to 96 legislative areas as prescribed in Regulation 13 of the *Local Government (Audit) Regulations 1997 (WA)*, across the following pieces of legislation -

- *Local Government Act 1995 (WA)*
- *Local Government (Administration) Regulations 1996 (WA)*
- *Local Government (Audit) Regulations 1996 (WA)*
- *Local Government (Constitution) Regulations 1998 (WA)*
- *Local Government (Elections) Regulations 1997 (WA)*
- *Local Government (Financial Management) Regulations 1996 (WA)*
- *Local Government (Functions and General) Regulations 1996 (WA)*

The City's 2025 Compliance Score is 100%.

The attached responses to the 2025 CAR are in the format provided by the Inspectorate. Following ARIC consideration on Monday 27 July 2026 the CAR responses were submitted on the Local Government Inspector's portal for the final CAR version to be generated for Council endorsement. This version is required to be certified by the Mayor and CEO before being uploaded to the Local Government Inspector's portal together with an extract of the minutes.

The Inspectorate advised in the email accompanying the final version that should Council resolve to make an amendment to the CAR responses, the submission process will recommence from the beginning, including consideration by ARIC.

## Financial implications

There are no financial implications evident at this time.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
| --- |
| 1. Compliance Audit Return LG-CAR-537288 [**12.4.1** - 27 pages] |

GOVERNMENT OF WESTERN AUSTRALIA

**Local Government Inspector**

# 2025 Compliance Audit Return

**Local Government Authority:** The City of Belmont

## *Local Government Act 1995*

**s. 2.29**

Has every person elected or appointed to a mayor, president, deputy, or councillor role made the required declaration in the prescribed form before a prescribed person, prior to acting in the office?

**Response:** Yes

**Comments:** Refer to Special Council Meeting Minutes – 20 October 2025.

**s. 3.16**

Has the local government reviewed local laws, which have not been reviewed in the previous 8 years, to ensure compliance with Schedule 9.3, Clause 65?

**Response:** N/A

**Comments:** The Consolidated Local Law 2020 and Standing Orders are within the prescribed time frame and not due for review. The Health Local Laws are being reviewed in 2026 subject to the implementation of the Public Health Act

**s.3.57**

Subject to Local Government (Functions and General) Regulations 1996, regulation 11(2), did the local government invite tenders for all contracts for the supply of goods or services where the consideration under the contract was, or was expected to be, worth more than the consideration stated in regulation 11(1) of the Regulations?

**Response:** Yes

**Comments:** Refer to ECM subject: Tenders 114/2025.

**s. 3.58(3)**

Where the local government disposed of property other than by public auction or tender, did it dispose of the property in accordance with section 3.58(3) of the Local Government Act 1995 (unless section 3.58(5) applies)?

**Response:** Yes

**Comments:** Refer to ECM 6101223

**s. 3.58(4)**

Where the local government disposed of property under section 3.58(3) of the Local Government Act 1995, did it provide details, as prescribed by section 3.58(4) of the Act, in the required local public notice for each disposal of property?

**Response:** N/A

**Comments:** Not applicable. The transaction referenced in Item 4 was exempt from public notice requirements under Regulation 30(2)(b) of the Local Government (Functions and General) Regulations 1996 as the tenant is a registered Not-for-Profit organisation. Therefore, the notice disclosure requirements under section 3.58(4) do not apply.

**s. 3.59(2)(a)**

Has the local government prepared a business plan for each major trading undertaking that was not exempt in 2025?

**Response:** N/A

**Comments:** None carried out for 2025

**s. 3.59(2)(b)**

Has the local government prepared a business plan for each major land transaction that was not exempt in 2025?

**Response:** N/A

**Comments:** None carried out for 2025

**s. 3.59(2)(c)**

Has the local government prepared a business plan before entering into each land transaction that was preparatory to entry into a major land transaction in 2025?

**Response:** N/A

**Comments:** None carried out for 2025

**s. 3.59(4)**

Has the local government complied with public notice and publishing requirements for each proposal to commence a major trading undertaking or enter into a major land transaction or a land transaction that is preparatory to a major land transaction for 2024?

**Response:** N/A

**Comments:** None carried out for 2025

**s. 3.59(5)**

During 2025, did the council resolve to proceed with each major land transaction or trading undertaking by absolute majority?

**Response:** N/A

**Comments:** None carried out for 2025

**s. 5.16 (1)**

Were all delegations to committees resolved by absolute majority?

**Response:** N/A

**Comments:** No delegations to committees

**s. 5.16 (2)**

Were all delegations to committees in writing?

**Response:** N/A

**Comments:** No delegations to committees

**s. 5.17**

Were all delegations to committees within the limits specified in section 5.17 of the Local Government Act 1995?

**Response:** N/A

**Comments:** No delegations to committees

**s. 5.18**

Were all delegations to committees recorded in a register of delegations?

**Response:** Yes

**Comments:** No delegations to Committees.  Referenced in Delegations Register for 2024/2025 and 2025/2026

**s. 5.36(4) and s. 5.37(3)**

Were all CEO and/or senior employee vacancies advertised in accordance with Local Government (Administration) Regulations 1996, regulation 18A?

**Response:** N/A

**Comments:** No vacancies

**s. 5.37(2)**

Did the CEO inform council of each proposal to employ or dismiss senior employee?

**Response:** N/A

**Comments:** The city does not have any designated senior employees.

Where council rejected a CEO's recommendation to employ or dismiss a senior employee, did it inform the CEO of the reasons for doing so?

**Response:** N/A

**s. 5.39B**

Has the local government adopted and maintained model standards that incorporate the prescribed model standards within required timeframes (including amendments), ensured adoption by absolute majority, published an up-to-date version on its official website, and avoided including any inconsistent additional provisions?

**Response:** Yes

**Comments:** Available on official website (About Us - Our Council – Governance - Policies and Standards

**s. 5.42**

Were all delegations to the CEO resolved by an absolute majority?

**Response:** Yes

**Comments:** Refer Council Minutes OCM 24 June 2025 Item 12.5

Were all delegations to the CEO in writing?

**Response:** Yes

**Comments:** Refer Council Minutes OCM 24 June 2025 Item 12.5 & Delegations Register 2024-2025 & 2025-2026

**s. 5.43**

Did the powers and duties delegated to the CEO exclude those listed in section 5.43 of the Local Government Act 1995?

**Response:** Yes

**Comments:** Refer Council Minutes OCM 24 June 2025 Item 12.5 & Delegations Register 2024-2025 & 2025-2026

**s. 5.44(2)**

Were all employees delegated authority by the CEO under Section 5.44(1), issued with a written instrument of delegation?

**Response:** Yes

**Comments:** Refer ECM Folder 11/005

**s. 5.45(1)(b)**

Were all decisions by the Council to amend or revoke a delegation made by absolute majority?

**Response:** Yes

**Comments:** As part of the annual review some delegations were amended slightly as to wording by Council by absolute majority. No delegations were revoked. . Refer Council Minutes OCM 24 June 2025 Item 12.5 & Delegations Register 2024-2025 & 2025-2026.

**s. 5.46**

Has the CEO kept a register of all delegations made under Division 4 of the Act to the CEO and to employees?

**Response:** Yes

**Comments:** Refer Delegations Register 2024-2025 & 2025-2026

Were all delegations made under Division 4 of the Act reviewed by the delegator at least once during the 2024/2025 financial year?

**Response:** Yes

**Comments:** Reviewed by Council and CEO June 2025 as part of the annual review process

Did all persons exercising a delegated power or duty under the Act keep, on all occasions, a written record in accordance with Local Government (Administration) Regulations 1996, regulation 19?

**Response:** Yes

**Comments:** Refer ECM Folder 11/005

**s. 5.50**

If the local government paid a finishing employee an amount in addition to their entitlement, did the local government follow a policy it had adopted and published on its website outlining the circumstances in relation to payments made to terminated employees?

**Response:** N/A

**Comments:** No additional payments above entitlement were paid.

If the local government made a payment to a finishing employee that is more than the amount set out in the policy, was local public notice given?

**Response:** N/A

**s. 5.51A**

Has the CEO prepared and implemented a code of conduct to be observed by employees of the local government?

**Response:** Yes

Has the CEO published an up-to-date version of the code of conduct for employees on the local government's website?

**Response:** Yes

**s. 5.67**

Where a council member disclosed an interest in a matter and did not have participation approval under sections 5.68 or 5.69 of the Local Government Act 1995, did the council member ensure that they did not remain present to participate in discussion or decision making relating to the matter?

**Response:** N/A

**Comments:** Where disclosures were made, no instances were recorded of a member participating in discussion or decision making.

**s. 5.68(2)**

Were all decisions regarding participation approval in relation to Section 5.68(2), including the extent of participation allowed and, where relevant, the information required by the Local Government (Administration) Regulations 1996 regulation 21A, recorded in the minutes of the relevant council or committee meeting?

**Response:** N/A

**Comments:** Refer to the response above. No instances recorded of participation approval being sought by Council.

**s. 5.69(5)**

Were all decisions regarding participation approval in relation to Section 5.69(5), including the extent of participation allowed recorded in the minutes of the relevant council or committee meeting?

**Response:** N/A

**Comments:** Refer to the response above. No instances recorded of participation approval being sought

**s. 5.70**

Where an employee had an interest in any matter in respect of which the employee provided advice or a report directly to council or a committee, did that person disclose the nature and extent of that interest when giving the advice or report?

**Response:** Yes

**Comments:** Refer to minutes of the relevant meeting(s). The City of Belmont maintains a Register of Interest for Elected Members and Employees as part of the Financial Interest Register. Employee disclosure of interests registered and are recorded in a register. Refer ECM 163/001 & 164/001

**s. 5.71B(5) and (7)**

Where council applied to the Minister to allow the CEO to provide advice or a report to which a disclosure under section 5.71A(1) of the Local Government Act 1995 relates, did the application include details of the nature of the interest disclosed and any other information required by the Minister for the purposes of the application?

**Response:** N/A

**Comments:** No instances recorded of participation approval being sought from the Minister.

Was any decision made by the Minister under section 5.71B(6) of the Local Government Act 1995, recorded in the minutes of the council meeting at which the decision was considered?

**Response:** N/A

**Comments:** No instances recorded of participation approval being sought from the Minister.

**s. 5.73**

Were disclosures under sections 5.65, 5.70 or 5.71A(3) of the Local Government Act 1995 recorded in the minutes of the meeting at which the disclosures were made?

**Response:** Yes

**Comments:** Refer to minutes of the relevant meeting(s).

**s. 5.75**

Was a primary return in the prescribed form lodged by all relevant persons within three months of their start day?

**Response:** Yes

**Comments:** Refer ECM folder163/001 and relevant disclosure folder held by records if received in hardcopy

**s. 5.76**

Was an annual return in the prescribed form lodged by all relevant persons by 31 August 2025?

**Response:** Yes

**Comments:** Refer ECM folder 163/001

**s. 5.77**

On receipt of a primary or annual return, did the CEO, or the Mayor/President, as the case may be, give written acknowledgment of having received the return?

**Response:** Yes

**Comments:** Refer ECM folder 163/001

**s. 5.88**

Did the CEO keep a register of financial interests which contained the returns lodged under sections 5.75 and 5.76 of the Local Government Act 1995?

**Response:** Yes

**Comments:** Hardcopies located in compliance files in the Records area

Did the CEO keep a register of financial interests which contained a record of disclosures made under sections 5.65, 5.70, 5.71 and 5.71A of the Local Government Act 1995, in the form prescribed in the Local Government (Administration) Regulations 1996, regulation 28?

**Response:** Yes

**Comments:** Hardcopies located in compliance files in the Records area

After a person ceased to be a person required to lodge a return under sections 5.75 and 5.76 of the Local Government Act 1995, did the CEO remove from the register all returns relating to that person?

**Response:** Yes

**Comments:** All returns have been removed and retained in accordance with the statutory requirements.

Have all returns removed from the register in accordance with section 5.88(3) of the Local Government Act 1995 been kept for a period of at least five years after the person who lodged the return(s) ceased to be a person required to lodge a return?

**Response:** Yes

**Comments:** All returns have been removed and retained in accordance with the statutory requirements.

**s. 5.89A**

Did the CEO keep a register of gifts which contained a record of disclosures made under sections 5.87A and 5.87B of the Local Government Act 1995, in the form prescribed in the Local Government (Administration) Regulations 1996, regulation 28A?

**Response:** Yes

**Comments:** DSID 4937126 Elected Members and CEO (published on website) & DSID 4777945 Gift Register – Elected Members and CEO Below Regulatory threshold.

Did the CEO publish an up-to-date version of the gift register on the local government's website?

**Response:** Yes

**Comments:** DSID 4937126 Elected Members and CEO

**s. 5.90A**

Did the local government prepare, adopt by absolute majority and publish an up-to-date version on the local government’s website, a policy dealing with the attendance of council members and the CEO at events?

**Response:** Yes

**Comments:** CP17 Attendance at Events:  Review presented to December OCM Deferred by Council  - Adopted at May 2026 Ordinary Council Meeting.  Available on official website (About Us - Our Council – Governance - Policies and standards). This replaced the City’s previous policy.

**s. 5.94**

Does the local government have information available for members of the public to inspect, free of charge as prescribed under section 5.94 and Admin Reg 29, except where restricted under this section?

**Response:** Yes

**s. 5.96**

Where a person is entitled to inspect information under this Division, can the local government confirm that copies are available and that the price at which it sells copies does not exceed the cost of providing them, (unless prescribed otherwise)?

**Response:** Yes

**s. 5.96A**

Did the CEO publish information on the local government's website in accordance with sections 5.96A(1), (2), (3), and (4) of the Local Government Act 1995?

**Response:** Yes

**Comments:** Quarterly compliance checks undertaken.

**s. 5.104**

Did the local government prepare and adopt, by absolute majority, a code of conduct to be observed by council members, committee members and candidates that incorporates the model code of conduct?

**Response:** Yes

**Comments:** Code of Conduct last reviewed 29/4/24.

Note: Code of conduct has been updated following 1/1/2026 amendments. CAR Responses relate to 1/1/2025-31/12/2025.

Did the local government adopt additional requirements in addition to the model code of conduct?

**Response:** Yes

Does it comply with section 5.104(3) and (4) of the Local Government Act 1995?

**Response:** Yes

Has the CEO published an up-to-date version of the code of conduct for council members, committee members and candidates on the local government’s website?

**Response:** Yes

**Comments:** Up to date version published on website.

**s. 5.128**

Did the local government prepare and adopt (by absolute majority) a policy in relation to the continuing professional development of council members?

**Response:** Yes

**Comments:** CP21 – Elected Member Professional Development and Authorised Travel Amended 23/7/24. Note Policy was Presented to December 2025 OCM policy review and deferred - Reviewed and

Adopted at February 2026 Ordinary Council Meeting. Available on official website (About Us - Our Council – Governance - Policies and standards)

**s. 7.12A(3), (4) and (5)**

Where the local government determined that matters raised in the auditor's report prepared under section 7.9(1) of the Local Government Act 1995 required action to be taken, did the local government ensure that appropriate action was undertaken in respect of those matters?

**Response:** Yes

**Comments:** All audit recommendations are inputted into an audit log to ensure appropriate action is undertaken.

Where matters identified as significant were reported in the auditor's report, did the local government prepare a report that stated what action the local government had taken or intended to take with respect to each of those matters?

**Response:** N/A

**Comments:** No audit findings were identified by the Office of the Auditor General (OAG) as significant.

Within 14 days after the local government gave a report to the Minister under section 7.12A(4)(b) of the Local Government Act 1995, did the CEO publish a copy of the report on the local government's official website?

**Response:** N/A

**Comments:** No audit findings were identified by the Office of the Auditor General (OAG) as significant.

## *Local Government (Administration) Regulations 1996*

**r. 18F**

Were the remuneration and other benefits paid to a CEO on appointment the same remuneration and benefits advertised for the position under section 5.36(4) of the Local Government Act 1995?

**Response:** N/A

**Comments:** No vacancy or appointment in 2025

**r. 19AB**

Does the code of conduct contain the requirement that a local government employee (not including the CEO) must not accept a prohibited gift from an associated person?

**Response:** Yes

**Comments:** Clause 6.16 (c) & (d)

**r. 19AC**

Does the local government's code of conduct include requirements for the recording, storing, disclosure, and use of information relating to gifts accepted by local government employees (excluding the CEO) from associated persons, in accordance with regulatory requirements?

**Response:** Yes

**Comments:** Refer Clause 6.16

**r. 19AE**

Does the local government's code of conduct include requirements addressing employee behaviour in the performance of duties, interactions with others, use and disclosure of information, use of local government resources and finances, the keeping of records, and the reporting and management of suspected breaches and misconduct, in accordance with regulatory requirements?

**Response:** Yes

**Comments:** Areas listed are covered in clauses of the Code of conduct and are referenced in multiple clauses.

**r. 19B**

Did the local government include in its annual report all information required under section 5.53(2)(g) and (i) and regulation 3A(2), including number of employee's in salary bands over $130,000, remuneration and allowances paid, ordered payments, CEO remuneration, council member meeting attendance, available demographic information about council members, and details of any modifications to the strategic community plan or significant modifications to the corporate business plan?

**Response:** Yes

**Comments:** Refer to Annual Report 2024-25:

- number of employee's in salary bands over $130,000 - Page 11
- remuneration and allowances paid - Pages 33, 34
- ordered payments - N/A
- CEO remuneration - Page 109
- council member meeting attendance - Page 31
- available demographic information about council members - Page 4
- details of any modifications to the strategic community plan or significant modifications to the corporate business plan - N/A

**r. 19C**

Has the local government adopted by absolute majority a strategic community plan?

**Response:** Yes

**Comments:** Refer OCM 24 June 2025 Major Review. Strategic Community Plan 2024-2034

Adoption date or the date of the most recent review: 24/06/2025

**r. 19DA**

Has the local government reviewed its corporate business plan in accordance with Admin Regulation 19DA(4)?

**Response:** Yes

**Comments:** Refer OCM 24 June 2025 Item 12.4

Date of review: 24/06/2025

Does the corporate business plan comply with the requirements of Local Government (Administration) Regulations 1996 19DA(2) & (3)?

**Response:** Yes

**r. 22**

No response required. This is covered by s5.75.

**r. 23**

No response required. This is covered by s5.76.

**r. 28**

No response required. This is covered by s5.88(1).

**r. 28A**

No response required. This is covered by s5.89A(1).

**r. 29**

No response required. This is covered by s5.94.

**r. 29C**

Does the local government publish all prescribed information on its official website— including up-to-date policies, required details of council member and employee returns, council member fees and allowances, and relevant public notices—within the specified timeframes and in accordance with legislative requirements?

**Response:** Yes

**Comments:** Compliance undertakes quarterly checks to ensure that items are published as required. Business Improvement also conduct quality check

**r. 35**

Has every local government council member completed and passed the Council Member Essentials course, consisting of the five required modules and delivered by an approved provider, within 12 months of being elected?

**Response:** Yes

**Comments:** ECM DSID 4773154

**r. 36**

Does the local government appropriately identify and document council members who are exempt from the training requirements under section 5.126(1), including verifying that the member:

- has completed an approved course within the specified 5-year period prior to election, or
- completed the LGASS00002 Elected Member Skill Set before 1 July 2019 within the relevant timeframe, or
- qualifies for the transitional exemption applicable to council members in office at the commencement of the 2019 regulatory amendments?

**Response:** Yes

**Comments:** Council members have completed the mandatory training since introduced in 2019 or have completed the Diploma of Local Government as part of their professional development providing Certificates of completion. 2025 newly Elected members are currently completing mandatory modules. Reelected members were within the statutory timeframes.

## *Local Government (Audit) Regulations 1996*

**r. 10**

Was the auditor's report for the financial year ending 30 June 2025 received by the local government within 30 days of completion of the audit?

**Response:** Yes

**Comments:** Audit report was received by the City on 21/11/2025 (DSID 6155444)

**r. 17**

Did the CEO review the appropriateness and effectiveness of the local government's systems and procedures in relation to risk management, internal control and legislative compliance in accordance with Local Government (Audit) Regulations 1996 regulation 17 within the three financial years prior to 31 December 2025?

**Response:** Yes

**Comments:** Regulation 17 Internal Audit Report was presented to Council in 26 August 2025.

Date of council's resolution to accept the report: 26/08/2025

## *Local Government (Constitution) Regulations 1998*

**r. 11FA**

Did the CEO provide the Minister a report as to the result of the election within 14 days of the declaration and in the form of Form 20 of the Local Government (Elections) Regulations 1997, modified as necessary?

**Response:** Yes

**Comments:** WAEC provided Election Form 20 through LG Elections Portal. 18/10/2025. Form 20 for Deputy Mayoral Election submitted through LG Elections Portal

**r. 13**

Were all required oaths, affirmations and declarations under section 2.42 (in relation to Commissioners) made in the correct form (Form 8), before the appropriate authorised person?

**Response:** N/A

**Comments:** No declarations in relation to Commissioners

## *Local Government (Elections) Regulations 1997*

**r. 30G**

Did the CEO establish and maintain an electoral gift register and ensure that all disclosure of gifts forms completed by candidates and donors and received by the CEO were placed on the electoral gift register at the time of receipt by the CEO and in a manner that clearly identifies and distinguishes the forms relating to each candidate in accordance with regulations 30G(1) and 30G(2) of the Local Government (Elections) Regulations 1997?

**Response:** Yes

**Comments:** No Gifts were disclosed to the CEO for the 2025 election

Did the CEO remove any disclosure of gifts forms relating to an unsuccessful candidate, or a successful candidate that completed their term of office, from the electoral gift register, and retain those forms separately for a period of at least two years in accordance with regulation 30G(4) of the Local Government (Elections) Regulations 1997?

**Response:** N/A

**Comments:** No gifts were disclosed to the CEO for previous elections that were still on the register at the time of recent amendments

Did the CEO publish an up-to-date version of the electoral gift register on the local government's official website in accordance with regulation 30G(5) of the Local Government (Elections) Regulations 1997?

**Response:** Yes

**Comments:** ECM 4772695

## *Local Government (Financial Management) Regulations 1996*

**r. 5**

Has the CEO ensured efficient systems and procedures are established under provisions set out in Financial Management Regulations 5(1)(a) to (g)?

**Response:** Yes

**Comments:** Regulation 5 Internal Audit Report was presented to Council in August 2025.

**r. 6**

Has the local government ensured that any employee delegated responsibility for day-to-day accounting or financial management operations is not also delegated the responsibility for conducting internal audits, reviewing their own duties, or for managing, directing or supervising someone who carries out these functions?

**Response:** Yes

**Comments:** City maintains an independent Internal Audit Function of the Finance Department.

**r. 7**

Did the local government ensure it has regard to the needs of the inhabitants of the district as a whole and not keep separate ward accounts or determine expenditure on the basis of revenue from a ward?

**Response:** Yes

**r. 8**

Does the local government maintain separate accounts with a bank or other financial institution for money to be held in the municipal fund, trust fund and for reserve account purposes?

**Response:** Yes

**r. 9**

Did the local government keep separate financial records for each trading undertaking and each major land transaction?

**Response:** N/A

**r. 11**

Has the local government developed procedures for the authorisation of, and the payment of, accounts in accordance with Local Government (Financial Management) Regulations 11(1), (2) and (3)?

**Response:** Yes

**Comments:** Delegation Register 2025-26 including subdelegations (DSID 5847302)

**r. 12**

Were payments made from the municipal fund or trust fund made by the CEO under a delegated authority or authorised, in accordance with regulation 13(2), in advance by a council resolution?

**Response:** Yes

**Comments:** Delegation Register 2025-26 including subdelegations (DSID 5847302)

**r. 13**

Can the local government confirm that, where the CEO has been delegated authority to make payments from the municipal or trust fund, the CEO prepared accurate monthly lists that are presented at the next ordinary council meeting and recorded in the minutes?

- includes the payee's name, payment amount, payment date, and sufficient information to identify each transaction where payments have already been made; or
- includes the payee's name, payment amount, sufficient information to identify each transaction, and the date of the council meeting (to which the list will be presented) for accounts requiring council approval.

**Response:** Yes

**Comments:** An accounts for Payment Listing is presented to Council each month (refer to ECM subject 54/007: Creditors - Payment Authorisations )

**r. 13A**

Did the local government prepare a list each month of all payments made using employee-authorised credit, debit or other purchasing cards, and include the payee’s name, the amount of the payment, the date of the payment, sufficient information to identify the payment, and present the list at the next ordinary council meeting (and record in the minutes)?

**Response:** Yes

**Comments:** Payments made by credit card and other purchasing cards is included in accounts for Payment Listing presented to Council each month (refer to ECM subject 54/007: Creditors - Payment Authorisations)

**r. 19**

Has the local government established and documented internal control procedures to enable identification of the nature and location of all investments and any related transactions?

**Response:** Yes

**Comments:** Control procedures are documented on CP31 – Investment of Funds and Process Map (DSID 2053388)

**r. 19C**

Has the local government ensured that all investments made under section 6.14(1) comply with statutory restrictions set out in Financial Management Reg. 19C?

**Response:** Yes

**Comments:** Refer CP31 – Investment of Funds policy

## *Local Government (Functions and General) Regulations 1996*

**r. 7**

No response required. This is covered by s3.59(2).

**r. 9**

No response required. This is covered by s3.59(2).

**r. 10**

No response required. This is covered by s3.59(2).

**r. 11A**

Did the local government comply with its current purchasing policy, adopted under the Local Government (Functions and General) Regulations 1996, regulations 11A(1) and (3) in relation to the supply of goods or services where the consideration under the contract was, or was expected to be, $250,000 or less or worth $250,000 or less?

**Response:** Yes

**Comments:** Refer CP 29 – Purchasing Policy and ECM subject 135/2025: Quotations

**r. 11**

No response required. This is covered by s3.57.

**r. 12**

Did the local government consider the implications of Local Government (Functions and General) Regulations 1996, Regulation 12 when deciding to enter into multiple contracts rather than a single contract?

**Response:** N/A

**r. 14(1), (3) and (5)**

If the local government sought to vary the information supplied to tenderers, was every reasonable step taken to give each person who sought copies of the tender documents, or each acceptable tenderer notice of the variation?

**Response:** Yes

**Comments:** Addenda to the Request for Tender were issued via both eTenderBox and the WALGA portal. All registered and invited respondents were automatically notified.

Signed addenda were retained and recorded in ECM.

**r. 15**

Did the local government's procedure for receiving and opening tenders comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 15 and 16?

**Response:** Yes

**Comments:** All tenders were advertised for a minimum of 14 working days (excluding public holidays) in accordance with Regulation 15.

All tenders were opened in accordance with Regulation 16.

Refer to the 2025 Tender Register (Ref: 5947639).

**r. 16**

No response required. This is covered by r. 15.

**r. 17**

Did the information recorded in the local government's tender register comply with the requirements of the Local Government (Functions and General) Regulations 1996, Regulation 17 and did the CEO make the tenders register available for public inspection and publish it on the local government's official website?

**Response:** Yes

**Comments:** Refer to the 2025 Tender Register (Ref: 5947639).

**r. 18(1) and (4)**

Did the local government reject any tenders that were not submitted at the place, and within the time, specified in the invitation to tender?

**Response:** Yes

**Comments:** Tenders not submitted at the place, or within the time specified in the invitation to tender, were considered and rejected in accordance with Regulation 18(1).

Were all tenders that were not rejected assessed by the local government via a written evaluation of the extent to which each tender satisfies the criteria for deciding which tender to accept?

**Response:** Yes

**Comments:** All tenders that were not rejected were assessed through a documented written evaluation against the prescribed criteria, in accordance with Regulation 18(4).

Refer to ECM subject: Tenders 114/2025.

**r. 19**

Did the CEO give each tenderer written notice containing particulars of the successful tender or advising that no tender was accepted?

**Response:** Yes

**Comments:** Refer to ECM subject: Tenders 114/2025.

**r. 21**

Does the local government's advertising and expression of interest processes for limiting who can tender comply with the requirements of the Local Government (Functions and General) Regulations 1996, Regulations 21 and 22?

**Response:** Yes

**Comments:** Refer to ECM subject: Expression of Interest 185/2025.

**r. 22**

No response required. This is covered by r. 21.

**r. 23**

Did the local government reject any expressions of interest that were not submitted at the place, and within the time, specified in the notice or that failed to comply with any other requirement specified in the notice?

**Response:** No

**Comments:** "No non-conforming EOIs were received Refer to ECM subject: Expression of Interest 185/2025.

Were all expressions of interest that were not rejected under the Local Government (Functions and General) Regulations 1996, Regulation 23(1) & (2) assessed by the local government? Did the CEO list each person as an acceptable tenderer?

**Response:** Yes

**r. 24**

Did the CEO give each person who submitted an expression of interest a notice in writing of the outcome in accordance with Local Government (Functions and General) Regulations 1996, Regulation 24?

**Response:** Yes

**r. 24AD(2), (4) and (6)**

Did the local government invite applicants for a panel of pre-qualified suppliers via Statewide public notice in accordance with Local Government (Functions & General) Regulations 1996 regulations 24AD(4) and 24AE?

**Response:** N/A

If the local government sought to vary the information supplied to the panel, was every reasonable step taken to give each person who sought detailed information about the proposed panel or each person who submitted an application notice of the variation?

**Response:** N/A

**r. 24AE**

No response required. This is covered by r. 24AD(2), (4) and (6).

**r. 24AF**

No response required. This is covered by r. 24AD(2), (4) and (6).

**r. 24AG**

Did the information recorded in the local government's tender register about panels of pre-qualified suppliers comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 24AG?

**Response:** N/A

**r. 24AH(1) and (3)**

Did the local government reject any applications to join a panel of prequalified suppliers that were not submitted at the place, and within the time, specified in the invitation for applications?

**Response:** N/A

Were all applications that were not rejected assessed by the local government via a written evaluation of the extent to which each application satisfies the criteria for deciding which application to accept?

**Response:** N/A

**r. 24AI**

Did the CEO send each applicant written notice advising them of the outcome of their application?

**Response:** N/A

**r. 24E**

Where the local government gave regional price preference, did the local government comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 24E and 24F?

**Response:** N/A

**r. 24F**

No response required. This is covered by r. 24E.

I certify this is a true and accurate copy of the 2025 Compliance Audit Return, as adopted by Council at the meeting of _____ 2026.

CEO

Date

Mayor or President

Date

# 12.5 2026-27 Consolidated Assurance Map

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 19/003 Audit, Risk and Improvement Committee |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | Item 12.4 OCM 26 August 2025 |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Executive Services |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

To submit the 2026-27 Consolidated Assurance Map to Council. Refer Confidential Attachment 12.5.1.

## Summary and key issues

- At the Audit, Risk and Improvement Committee meeting held on 27 July 2026, the 2026-27 Consolidated Assurance Map was endorsed for recommendation to Council.
- The Institute of Internal Auditors defined an assurance map as "a high level document that identifies the holistic risk coverage across the organisation by a range of assurance providers. It helps to identify gaps and duplication of assurance coverage."

| Committee Recommendation |
| --- |
| That Council endorses the City of Belmont's 2026–27 Consolidated Assurance Map at Confidential Attachment 12.5.1. |

## Location

Not applicable.

## Consultation

Assurance providers have advised timing of assurance activities.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

Section 7.2 of the *Local Government Act 1995 (WA)* requires annual financial audits.

Regulation 14 of the *Local Government (Audit) Regulations 1996 (WA)* requires that a compliance audit for the period 1 January to 31 December is completed each year in a form approved by the Minister.

Regulation 17 of the *Local Government (Audit) Regulations 1996 (WA)* states the following:

17. CEO to review certain systems and procedures

(1) The CEO is to review the appropriateness and effectiveness of a local government's systems and procedures in relation to —

(a) risk management; and
(b) internal control; and

(c) legislative compliance.

(2) The review may relate to any or all of the matters referred to in sub regulation (1)(a), (b) and (c), but each of those matters is to be the subject of a review not less than once in every 3 financial years.

(3) The CEO is to report to the audit committee the results of that review.

Regulation 5(2) of the *Local Government (Financial Management) Regulations 1996 (WA)* states the following:

(2) The CEO is to:

(a) ensure that the resources of the local government are effectively and efficiently managed; and

(b) assist the council to undertake reviews of fees and charges regularly (and not less than once in every financial year); and

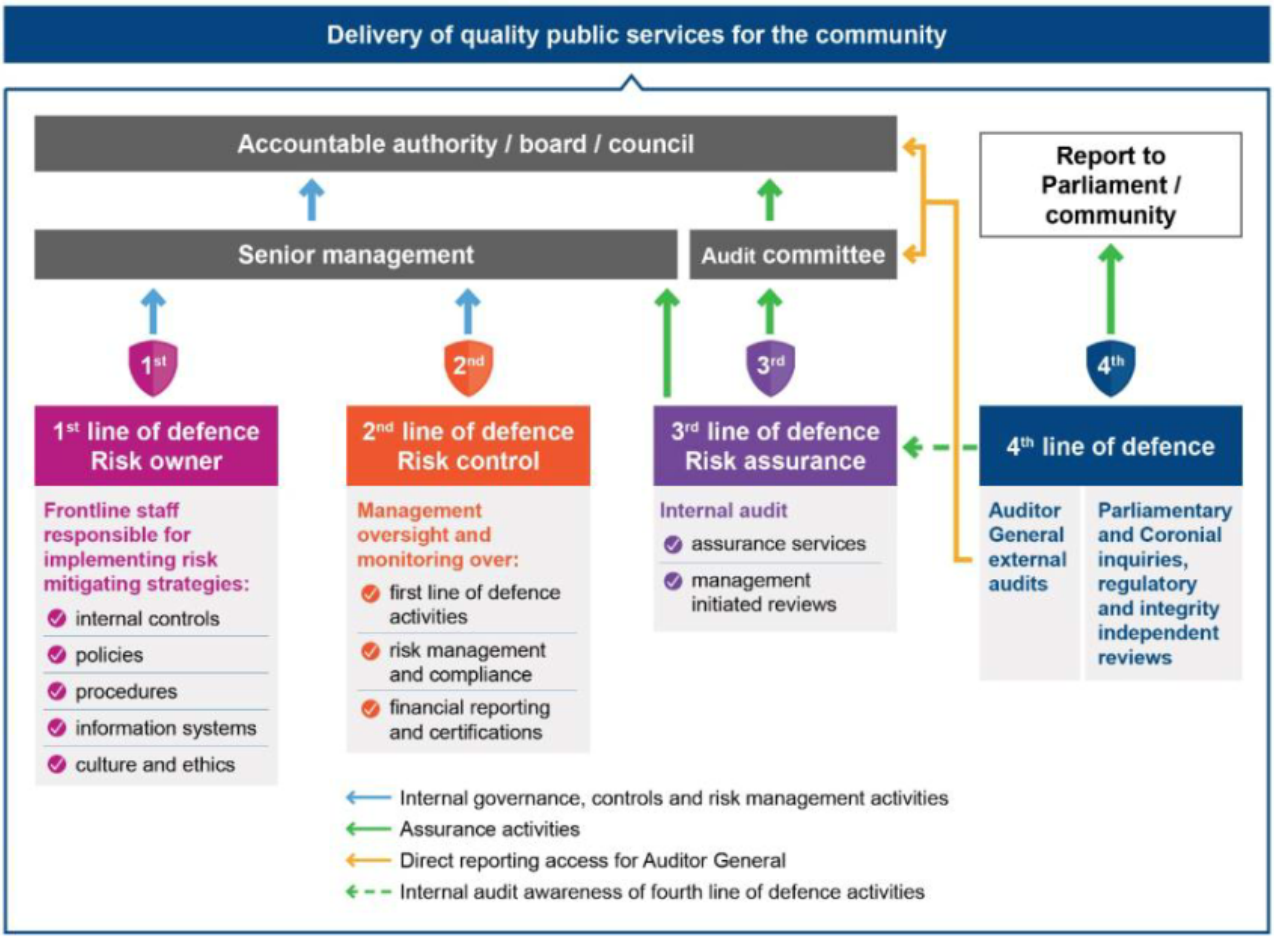
(c) undertake reviews of the appropriateness and effectiveness of the financial management systems and procedures of the local government regularly (and not less than once in every 3 financial years) and report to the local government the results of those reviews.

In addition, under the International Standard ISO 9001:2015, Quality Management Systems, the City is required to conduct an annual program of internal and external audits to maintain certification of ISO Standards.

## Background

The 2026–27 Consolidated Assurance Map (refer Confidential Attachment 12.5.1) provides an overview of the audits and reviews planned for financial year 2026-27 and was reviewed by the Audit, Risk and Improvement Committee at their meeting on 27 July 2026.

Referencing in the Consolidated Assurance Map reflects the WA Public Sector Audit Committees – Better Practice Guide, issued by the Office of the Auditor General (25 June 2020) "Lines of Defence Model" as shown in Figure 1 below.




Source: OAG

## Report

The 2026–27 Consolidated Assurance Map gives Council oversight of the scope and focus of assurance activities for financial year 2026–27.

Assurance drivers are requirements for:

- Internal control and legislative compliance.
- Statutory external audit requirements.
- External certifications of Quality, Environmental and Occupational Health & Safety management systems.
- The need to support the City's chosen governance approach.
- The requirement to provide a comprehensive solution that can be undertaken with existing resources.

There are a number of focus audits that any area of the City could be subject to each year. These could be conducted as internal audits or reviews, operational comparison reports, or by external third parties, the Department of Local Government, Sport and Culture Industries, the Corruption and Crime Commission, Public Sector Commission or the Western Australian Office of the Auditor General. As these audits are carried out as required, they are not identified on the Consolidated Assurance Map.

## Financial implications

There are no financial implications evident at this time.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
|---|
| 1. CONFIDENTIAL REDACTED - 2026-27 Consolidated Assurance Map (Confidential Matter in accordance with the Local Government Act 1995 (WA) Section 5.23(4)(e)(f)) [**12.5.1** - 1 page] |

# 12.6 Internal Audit Plan 2026-27 – 2028-29

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 19/003 Audit, Risk and Improvement Committee |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | Item 11.2 OCM 16 December 2025 |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Executive Services |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

To submit the draft three year forward "Internal Audit Plan 2026-2027 – 2028-29" to Council for endorsement.

## Summary and key issues

The "Terms of Reference – Internal Audit" requires the internal audit activity present "annual and longer term risk based internal audit plans" to the Audit, Risk and Improvement Committee for review prior to recommendation to Council.

At the Audit Risk and Improvement Committee meeting held on 27 July 2026, the Internal Audit Plan 2026-2027 – 2028-29 was endorsed for recommendation to Council.

The plan at Confidential Attachment 12.6.1, records:

- Audits planned and completed this financial year (2026-27) to date.
- Audits planned for the future financial years 2027-28 – 2028-29.

For historical information the plan also records 2022-23, 2023-24, 2024-25 and 2025-26 audits planned and completed.

| Committee Recommendation |
| --- |
| That Council endorses the draft three year forward "Internal Audit Plan 2026-27 – 2028-29", as contained in Confidential Attachment 12.6.1. |

## Location

Not applicable.

## Consultation

The development of the "Internal Audit Plan 2026-2027 – 2028-2029" was reviewed by:

- All Department Managers
- All Division Directors
- The CEO
- Executive Leadership Team

Comments provided have been considered and incorporated in the draft plan.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

***Local Government Act 1995 (WA)***

7.1A. Audit committee

(1) A local government is to establish an audit committee of 3 or more persons to exercise the powers and discharge the duties conferred on it.

***Local Government (Audit) Regulations 1996 (WA)***

16. Functions of audit committee

An audit committee has the following functions —

(a) to guide and assist the local government in carrying out —

(i) its functions under Part 6 of the Act; and

(ii) its functions relating to other audits and other matters related to financial management.

(b) to guide and assist the local government in carrying out the local government's functions in relation to audits conducted under Part 7 of the Act;

(c) to review a report given to it by the CEO under regulation 17(3) (the CEO's report) and is to —

(i) report to the council the results of that review; and

(ii) give a copy of the CEO's report to the council.

(d) to monitor and advise the CEO when the CEO is carrying out functions in relation to a review under —

(i) regulation 17(1); and

(ii) the Local Government (Financial Management) Regulations 1996 regulation 5(2)(c);

(e) to support the auditor of the local government to conduct an audit and carry out the auditor's other duties under the Act in respect of the local government;

(f) to oversee the implementation of any action that the local government —

(i) is required to take by section 7.12A(3); and

(ii) has stated it has taken or intends to take in a report prepared under section 7.12A(4)(a); and

(iii) has accepted should be taken following receipt of a report of a review conducted under regulation 17(1); and

(iv) has accepted should be taken following receipt of a report of a review conducted under the Local Government (Financial Management) Regulations 1996 regulation 5(2)(c);

(g) to perform any other function conferred on the audit committee by these regulations or another written law.

## Background

The draft three year forward "Internal Audit Plan 2026-27 – 2028-29" was presented to the Audit, Risk and Improvement Committee at the 27 July 2026 meeting.

The Audit, Risk and Improvement Committee recommended the draft three year forward "Internal Audit Plan 2026-27 – 2028-29" be presented to Council for endorsement.

### Internal Audit Plan - Methodology

The draft internal audit plan was developed using the following steps:

- Status of the 2025-26 internal audit plan.
- Meeting with Department Managers to identify their operations, key objectives, key risks, new developments and related City strategies.
- Meeting with Division Directors and the CEO to identify the need for additional audits.

The Institute of Internal Auditors (IIA) Supplementary Guidance paper "Developing a Risk Based Internal Audit Plan" was also used as a reference to develop the draft plan.

When each audit is commenced a detailed engagement plan is completed and discussed with management to ensure areas of current risk are identified.

## Report

The attached three year forward "Internal Audit Plan 2026-2027 – 2028-29" provides an outline for the two internal audit staff to review the city's activities using a risk-based approach.

## Financial implications

There are no financial implications evident at this time.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
| --- |
| 1. CONFIDENTIAL REDACTED - Three Year Internal Audit Plan 2026-27 - 2028-29 (Confidential Matter in accordance with the Local Government Act 1995 (WA) Section 5.23(4)(e)(f)) [**12.6.1** - 2 pages] |

# 12.7 Internal Audit Report 2026

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 19/006 |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Executive Services |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

To submit three completed internal audit reports to Council. These audits have been completed in accordance with the Council approved 2025-26 internal audit plan.

## Summary and key issues

At the Audit, Risk and Improvement Committee meeting held on 27 July 2026, the Internal Audit Report 2026 was endorsed for recommendation to Council.

Findings for the completed audits are detailed below.

**Infrastructure Services Division – Asset Management Roads and Drains (report issued 29 January 2026)**

Good practices observed:

- Processes in place to measure and monitor road and drainage conditions to prioritise future works.
- Finance Asset Register is reconciled bi-annually to asset information systems maintained specifically for roads and drains.

- Engaged a consultant to undertake asset management maturity assessments across the City's asset portfolio.
- Developed a four-year drainage inspection program covering 2025-2029 calendar years.
- Annual road visual condition inspection process in place that is well coordinated and delivered through a multidisciplinary team.

Findings:

- Four Business Management System (BMS) documents are due for review and updating to ensure they remain current and aligned with organisational requirements.
- There is an opportunity to strengthen process consistency and knowledge retention by formally documenting the stormwater drainage inspection process.

**Corporate and Governance Division – Review of Late Purchase Orders (report issued 6 May 2026)**

Good practices observed:

- Monthly procurement and contract management reporting in place.
- City's Purchasing Policy is comprehensive and aligned with legislative requirements.
- Procurement & Contracts officers demonstrated active engagement in monitoring policy compliance, validating data, and supporting business units to improve purchase order practices.

Findings:

- The Procurement and Contract Management Report currently presents the total number of purchase orders raised after invoice date. Reporting this information on a month-by-month basis would provide greater visibility of trends within Business Units and support more targeted compliance improvement initiatives.
- Internal Audit identified opportunities to further strengthen procurement practices across several business areas, particularly in ensuring that invoices consistently reference the correct Purchase Order (PO) number and are accurately linked to the relevant commitment.
- The City Facilities & Property Department utilises the 'My Buildings' system to generate work orders; however, this process does not replace the requirement to raise Purchase Orders. Of the 712 late POs identified within

the audit scope, 186 (26%) were associated with City facility maintenance activities, indicating an opportunity to further enhance procurement compliance within this area.

**Executive Services Division – Payroll System Reliability (report issued 25 June 2026)**

Good practices observed:

- Appropriate set up of payroll user permissions within the Aurion Payroll System.
- Appropriate segregation of duties in place within People and Culture and Finance business units.
- Accuracy and completeness of the Master File Change Report which reports key changes to the Payroll System during the fortnightly pay period and requires review and sign off prior to payroll processing.
- Comprehensive Payroll procedures manual in place.
- Payroll System user access controls are subject to independent review.
- No unauthorised or incorrect payments detected during audit sampling.

Findings:

- An opportunity was identified to further strengthen the payroll sign-off process by requiring secondary sign-off of the Pay Run Checklist and implementing a reference sheet to support consistent interpretation of Master File Change Report remarks prior to final sign off.
- A further opportunity identified to enhance governance over Master File Change Reports by implementing an independent review process for any changes to the report scope.
- Introduce Pay Certification Reports to provide an additional layer of review and assurance over payroll processing activities.
- Increase staff awareness and consistency in payroll practices by publishing essential payroll controls on the Intranet.
- Improved payroll auditability and transparency by enhancing documentation supporting the reconciliation between the Trial Pay Report and Final Pay Run Report.

**Committee Recommendation**

That Council:

1. Receives the report (Confidential Attachment 12.7.1) titled Internal Audit – Asset Management Roads and Drains.
2. Receives the report (Confidential Attachment 12.7.2) titled Internal Audit – Review of Late Purchase Orders.
3. Receives the report (Confidential Attachment 12.7.3) titled Internal Audit – Payroll System Reliability.
4. Notes the City of Belmont management comments in Confidential Attachments 12.7.1, 12.7.2 and 12.7.3 and actions to be undertaken in response to the internal audit recommendations.

## Location

Not applicable.

## Consultation

All draft internal audit reports were reviewed by relevant staff, Managers, Directors and the CEO before being issued for action.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

### *Local Government Act 1995 (WA)*

7.1A. Audit committee

(1) A local government is to establish an audit committee of 3 or more persons to exercise the powers and discharge the duties conferred on it.

### *Local Government (Audit) Regulations 1996 (WA)*

16. Functions of audit committee

An audit committee has the following functions —

(a) to guide and assist the local government in carrying out —

(i) its functions under Part 6 of the Act; and

(ii) its functions relating to other audits and other matters related to financial management.

(b) to guide and assist the local government in carrying out the local government's functions in relation to audits conducted under Part 7 of the Act;

(c) to review a report given to it by the CEO under regulation 17(3) (the CEO's report) and is to —

(i) report to the council the results of that review; and

(ii) give a copy of the CEO's report to the council.

(d) to monitor and advise the CEO when the CEO is carrying out functions in relation to a review under —

(i) regulation 17(1); and

(ii) the Local Government (Financial Management) Regulations 1996 regulation 5(2)(c);

(e) to support the auditor of the local government to conduct an audit and carry out the auditor's other duties under the Act in respect of the local government;

(f) to oversee the implementation of any action that the local government —

(i) is required to take by section 7.12A(3); and

(ii) has stated it has taken or intends to take in a report prepared under section 7.12A(4)(a); and

(iii) has accepted should be taken following receipt of a report of a review conducted under regulation 17(1); and

(iv) has accepted should be taken following receipt of a report of a review conducted under the Local Government (Financial Management) Regulations 1996 regulation 5(2)(c);

(g) to perform any other function conferred on the audit committee by these regulations or another written law.

17. CEO to review certain systems and procedures

(1) The CEO is to review the appropriateness and effectiveness of a local government's systems and procedures in relation to —

(a) risk management; and
(b) internal control; and
(c) legislative compliance.

(2) The review may relate to any or all of the matters referred to in sub regulation (1)(a), (b) and (c), but each of those matters is to be the subject of a review not less than once in every 3 financial years.

(3) The CEO is to report to the audit committee the results of that review.

***Local Government (Financial Management) Regulations 1996 (WA)***

(2) CEO's duties as to financial management

(c) undertake reviews of the appropriateness and effectiveness of the financial management systems and procedures of the local government regularly (and not less than once in every 3 financial years) and report to the local government the results of those reviews.

## Background

The Internal Audit Report 2026 provides a summary of the findings and management responses, and an auditor's conclusion, for each of the three internal audit reports (Confidential Attachments 12.7.1, 12.7.2 and 12.7.3) that have been completed in accordance with the Council approved 2025-26 internal audit plan.

At the Audit, Risk and Improvement Committee held on 27 July 2026, the Internal Audit Report 2026 was endorsed for recommendation to Council.

## Report

### Infrastructure Services Division – Asset Management Roads and Drains (report issued 29 January 2026)

Findings and Management Responses

- Design Assets and Development is responsible for the management of 36 Business Management Systems (BMSs) comprising of 9 process maps and 27 work instructions.
- Four Business Management System (BMS) documents are due for review and updating to ensure they remain current and aligned with organisational requirement.
    - Management has agreed to review and update the following Business Management System (BMS) documents:
        - Roads Program (Work Instruction).
        - Capital Works Program for Roads, Drains and Paths (Process Map).
        - Design Control - Roads and Drainage Design (Work Instruction).
        - Drainage Asset Data (Work Instruction).
- There is an opportunity to strengthen process consistency and knowledge retention by formally documenting the stormwater drainage inspection process.
    - Management has agreed to develop and document a standardised inspection process supported by a process map and/or work instruction. Internal Audit confirms that processes are in place to ensure key stakeholders are always reminded of when BMSs are next due for review.

### Auditor Conclusion

The City's asset management practices for road and drainage assets are generally effective and aligned with the objectives of the Asset Management Strategy and associated Asset Management Plans. The governance framework, condition assessment processes, and supporting information systems such as QGIS, AWM, and Univerus, provide a sound foundation for evidence-based lifecycle planning and operational decision-making.

**Corporate and Governance Division – Review of Late Purchase Orders (report issued 6 May 2026)**

Findings and Management Responses

- The Procurement and Contract Management Report currently presents the total number of purchase orders raised after invoice date. Reporting this information on a month-by-month basis would provide greater visibility of trends within Business Units and support more targeted compliance improvement initiatives.
    - Management has agreed to:
        - Report Late POs based on statistical data on a month-by-month basis.
        - It should be noted that under the City's Purchasing Policy CP29, a purchase order is not required for the provision of goods and services if a blanket order is in place or if listed as a purchasing exemption under clause 6 of CP29.
- Internal Audit identified opportunities to further strengthen procurement practices across several business areas, particularly in ensuring that invoices consistently reference the correct Purchase Order (PO) number and are accurately linked to the relevant commitment.
    - Management has agreed to:
        - Highlight such non-compliances in their next Monthly Procurement and Contract Management Report.
        - Publish this finding on the intranet (i.e. BelNet). This publication will include the fact that additional audit sampling will be performed by Internal Audit in 2026-27.
- The City Facilities & Property Department utilises the 'My Buildings' system to generate work orders; however, this process does not replace the requirement to raise Purchase Orders. Of the 712 late POs identified within the audit scope, 186 (26%) were associated with City facility maintenance activities, indicating an opportunity to further enhance procurement compliance within this area.
    - Management has agreed to:
        - Generate PO in CiA prior to work order being released.
        - Reference all POs in 'My Buildings'.
        - Reconcile work orders to POs at month end.
        - Update building maintenance process map to reflect the above three points.

**Auditor Conclusion**

The Internal Audit identified that while the City maintains a structured procurement framework supported by the Purchasing Policy, procedures, and the CiA, the consistent occurrence of late purchase orders indicates that key pre-approved controls are not operating effectively across most business units. Despite these issues, the Internal Audit observed positive practices, including regular procurement reporting and clear policy foundations.

**Executive Services Division – Payroll System Reliability (report issued 25 June 2026)**

Findings and Management Responses

- An opportunity was identified to further strengthen the payroll sign-off process by requiring secondary sign-off of the Pay Run Checklist and implementing a reference sheet to support consistent interpretation of Master File Change Report remarks prior to final sign off.
    - Management has agreed:
        - The Pay Run Checklist will now also be signed off by the HR and Payroll Systems Administrator.
        - A Reference Sheet will be introduced.
- A further opportunity identified to enhance governance over Master File Change Reports by implementing an independent review process for any changes to the report scope.
    - Management has agreed to introduce unscheduled quarterly reviews.
- Introduce Pay Certification Reports to provide an additional layer of review and assurance over payroll processing activities.
    - Management has agreed to introduce fortnightly Pay Certification Reports (i.e. The Aurion Payroll Pay Summary Report).
- Increase staff awareness and consistency in payroll practices by publishing essential payroll controls on the Intranet.
    - Management has agreed to prepare a separate document which will be published on the Intranet covering the following key internal controls:
        - Segregation of duties.
        - Management of payroll exception reporting and sign off.
        - Control and independent review of user access.
        - Security of the Payroll Payment File.
        - Pay Certification Reports.

- Improved payroll auditability and transparency by enhancing documentation supporting the reconciliation between the Trial Pay Report and Final Pay Run Report.
    - Management has agreed to prepare a separate document listing each final update made to improve clarity and transparency of the current handwritten notes for each pay run and attached to the Master File Change Report.

**Auditors Conclusion**

Internal Audit is confident that existing payroll controls are sound and consistently being adhered to. This is based upon the fact that extensive audit sampling was conducted and no incorrect nor unauthorised payments were detected. The improvement opportunities identified are intended to further mitigate the risk of incorrect or unauthorised payments.

## Financial implications

There are no financial implications evident at this time.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
|---|
| 1. CONFIDENTIAL REDACTED - Internal Audit - Audit Report (Asset Management Roads and Drains) (Confidential Matter in accordance with the Local Government Act 1995 (WA) Section 5.23(4)(e)(f)) [**12.7.1** - 10 pages] |
| 2. CONFIDENTIAL REDACTED - Internal Audit - Audit Report (Review of Late Purchase Orders) (Confidential Matter in accordance with the Local Government Act 1995 (WA) Section 5.23(4)(e)(f)) [**12.7.2** - 13 pages] |
| 3. CONFIDENTIAL REDACTED - Internal Audit - Audit Report (Payroll System Reliability) (Confidential Matter in accordance with the Local Government Act 1995 (WA) Section 5.23(4)(e)(f)) [**12.7.3** - 13 pages] |

# 12.8 Review of CP63 - Execution of Documents Policy

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | N/A |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Corporate and Governance |

## Council role

| | |
|---|---|
| **Legislative** | The making and adopting of local laws, local town planning schemes and Council policies. |

## Purpose of report

The purpose of the report is for Council to consider the attached amended policy, and if satisfied, to adopt the proposed amendments to the document.

## Summary and key issues

- The Execution of Documents policy was reviewed and adopted at the 26 May 2026 Ordinary Council Meeting.
- The policy was adopted with a minor omission.
- Council is asked to consider and resolve to adopt the proposed amendments to the policy.

**Officer Recommendation**

That Council endorses the amended Execution of Documents Policy as contained in Attachment 12.8.1 to this report.

## Location

Not applicable.

## Consultation

There has been no specific consultation undertaken in respect to this matter.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

Should Council endorse the amended policy, the policy will be updated on the City's website.

## Statutory environment

The Act provides the basis for the policy therefore consistency with the Act has been reflected in the amendments proposed.

Section 2.7 of the *Local Government Act 1995 (WA)* outlines the role of Council. Section 2.7(2)(b) requires the Council to determine the local government's policies.

Section 9.49A(4) of the *Local Government Act 1995 (WA)* provides for a local government by resolution to authorise the CEO or another employee or agent of the local government to sign documents on behalf of the local government, either generally or subject to conditions or restrictions as specified in the authorisation.

## Background

Council considered the Execution of Documents policy at the May 2026 Ordinary Council Meeting as part of the Review of Tranche 2 policies. The policy that was adopted contained a minor omission under 3.1. The table did not include the authority to execute for those documents that are part of the ordinary operations of the City. Amendment to the policy is therefore required.

## Report

As stated, a minor omission has been identified in the policy at 3.1. This refers to documents that are part of the ordinary operations of the City which are:

a) not a Council decision, and

b) not a Category 1 document.

The table should have included reference to the CEO, or responsible Director where the documents concern subject matter wholly within their Directorate.

As a consequence, the policy has been amended to formally provide authority to those individuals under this class of documents.

An additional amendment to the policy is proposed to include a definition of a legal document. This was not previously defined in the policy. It provides the class of legal documents to be distinguished from other documents and clarity to the term at clause 2.1. The term has also been included in the tables at 2.1 and 3.1, and at clause 4(a)(iii). A further amendment has been made to the titles of the internal administrative procedures. The amendments are minor and provide clarity to the operation of the policy.

## Financial implications

There are no financial implications evident at this time.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
|---|
| 1. CP63 Execution of Documents - August 2026 [**12.8.1** - 5 pages] |

# {item-title}

## Policy Objective

To ensure that the City's documents are executed in accordance with Section 9.49A of the *Local Government Act 1995* (WA) (the Act).

## Policy Detail

**1. Execution of Documents**

1.1. Section 9.49A(1) of the Act provides that a document is duly executed by a local government if:

a) the common seal of the local government as authorised by the local government is affixed to it in the presence of:

i) The Mayor or President, and

ii) The CEO or a senior employee authorised by the CEO,

each of whom must sign the document to attest the common seal was affixed (Section 9.49A(1)(a)), or

b) It is signed on behalf of the local government by a person authorised by the Council (by resolution) to do so (s9.49A(1)(b)).

1.2. This policy categorises documents as falling within certain categories and provides the appropriate method of execution for each category.

1.3. The following take precedent, in order, over this policy in the event of an inconsistency:

a) legislation,

b) the formal requirements of a Commonwealth or State department, authority or agency, and

c) a Council decision expressly specifying a particular way in which a document is to be executed.

1.4. This policy applies to all officers preparing documents for execution or who have been authorised under this policy to execute documents on behalf of the City.

**2. Category 1A & 1B Documents – By Council Resolution**

a) Section 9.49A(2) of the Act provides that the common seal shall be affixed only as authorised by Council.

b) Category 1A & 1B documents require at least two specific resolutions of Council:

i) The decision to do the act or enter the agreement, and

ii) The approval to execute the document related to the above decision in accordance with this policy, or

c) Documents to enact a decision made under delegated authority as detailed and referenced in the Delegation Register.

2.1. The below table lists Category 1A & 1B Documents

| **Category 1A – Common Seal Required** | |
|---|---|
| Creation of Local Laws and amendments to Local Laws | |
| Creation of Local Planning Schemes and amendments to Local Planning Schemes | |
| Financing documents, mortgages, loans and debentures documents | |
| Power of attorney to act for and on behalf of the City | |
| State and Commonwealth Grants and Funding Agreements which require the Common Seal to be affixed | |
| Legal documents to enact a decision made under delegated authority as detailed and referenced in the Delegation Register that requires the common seal to be affixed | |
| Any document, which in the opinion of the CEO or a Director, is sufficiently complex, high risk or of such significance to the City to warrant the affixing of the Common Seal | |
| **Category 1B – Common Seal Not Required** | |
| **Document Type** | **Authority to Execute** |
| Documents and/or Legal Documents to enact a Council decision which does not require the Common Seal | CEO, or<br>as determined by the Council decision |

**3. Category 2 Documents - Under Delegated or Sub Delegated Authority**

a) Under Section 9.49A(4) of the Act, Council authorises those officers listed in the table below to sign documents on behalf of the City.

b) Details of officers authorised by Council (and any conditions of the authorisation) to sign documents on behalf of the City are noted in the Delegation Register.

c) Category 2 documents are not Category 1A or 1B documents and cannot require the Common Seal to be affixed.

3.1. The below table lists Category 2 Documents

| **Category 2** | |
|---|---|
| **Document Type** | **Authority to Execute** |
| Documents and/or Legal Documents to enact a decision made under delegated (and sub-delegated) authority as detailed and referenced in the Delegation Register | CEO, or<br>officer with delegated authority |
| Document and/or Legal Documents required for management (excluding Disposal) of land owned by the City or ~~C~~crown land where the City has management authority | CEO |
| Ceremonial certificates | CEO and Mayor (no common seal required) |
| Grants from ~~Application to~~ State Government/Agencies, Federal Government/~~,~~ Agencies and Philanthropy Organisation | CEO, or<br>responsible Director where the documents concern subject matter wholly within their Directorate |
| | |
| Documents and/or Legal Documents that are part of the ordinary administration and operations of the City which are:<br>a) not a Council decision, and<br>b) not a Category 1A & 1B document | CEO, or<br>responsible Director where the documents concern subject matter wholly within their Directorate |

**4. Category 3 Documents - Ordinary Course of Business**

a) Category 3 documents are created in the normal and routine course of business and meet all the following requirements:

i) not a Category 1A, Category 1B or Category 2 document,

ii) required to carry out or complete a determination or Council decision made by a Category 1A, Category 1B or Category 2 document,

iii) not a Legal Document,

~~iii)~~iv) required to enable an officer to discharge the duties of an officer,

~~iv)~~v) does not have a formal execution clause, and

~~v)~~vi) does not require the ~~City's c~~Common S~~s~~eal to be affixed.

b) Category 3 documents are to be executed by a Director or Manager, or an Officer with delegated authority (per Delegation Register).

## Reference/Associated Documents

*Local Government Act 1995 (WA)*

## Reference to Internal Procedure

Work Instruction –Document for Execution

Signing of Legal or Formal ~~Form~~ Documents ~~for Execution~~ – Officer Declaration

Request for CEO Signature or Authorisation

Delegation Register (as updated)

## Definitions

'**CEO**' means the Chief Executive Officer of the City.

'**City**' means the City of Belmont.

'**Council decision**' means decision of Council, Council committee or Development Assessment Panel

'**Director**' means a division director of the City.

'**~~d~~Disposal**' means to sell, lease or otherwise dispose of property as defined in s3.58 of the Act.

'Legal Documents" means any document that creates obligation(s) on the City to other(s) and/or confers right(s) to the City by other(s) including but not limited to agreements, contracts, variations of contract, deeds, licenses, notices, instruments, undertakings and memorandums of understanding but excluding purchase orders of the City.

| **This Policy is supported by:** | | |
|---|---|---|
| Policy No: | CP63 | |
| Strategic Community Plan: | **Key Performance Area: Performance**<br>**Outcome:** 10. Effective leadership, governance and financial management. | |
| Register of Delegations: | n/a | |
| Service Area: | Corporate and Governance | |
| Policy Owner: | Manager Governance and Legal | |
| Policy Stakeholder: | Legal Counsel | |
| **Amendment Status:** | | |
| Date of Amendment | Status of Amendment | Minute Item Reference |
| 12/12/23 | New Policy | 12.10 |
| 26/05/26 | Review - Minor | 12.5 |
| | Review - Minor | |

# 12.9 Review of Delegated Authority 1.1.14A – Tenders, Tender Exemptions & Procurement

| | | |
|---|---|---|
| Voting Requirement | : | Absolute Majority |
| Subject Index | : | N/A |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | OCM 26 May 2026 |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Corporate and Governance |

## Council role

| | |
|---|---|
| **Legislative** | The making and adopting of local laws, local town planning schemes and Council policies. |

## Purpose of report

To amend Delegated Authority 1.1.14A Procurement – Tenders, Tender Exemptions & Procurement under the approved Purchasing Policy (DA 1.1.14A).

## Summary and key issues

- The delegation was reviewed by Council on the 26 May 2026 Ordinary Council Meeting as part of the Statutory Review of Delegations.
- Minor amendments to the delegation were included.
- Officers identified an anomaly in the wording under Council General Conditions at 2(b).
- Council is requested to amend the conditions of delegation to align with contemporary procurement practices and the WALGA model.

**Officer Recommendation**

That Council adopts the amended Delegated Authority 1.1.14A as contained in Attachment 12.9.1.

**An absolute majority of Council is required**

## Location

Not applicable.

## Consultation

There has been no specific consultation undertaken in respect to this matter.

Officers have consulted with internal stakeholders and members of the Procurement Advisory Group (PAU).

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

The delegated authority impacts CP29 – Purchasing Policy.

## Statutory environment

### *Local Government Act 1995 (WA)*

Section 5.42 of the *Local Government Act 1995 (WA)* outlines provisions for the local government to delegate certain powers and duties to the Chief Executive Officer.

Section 3.57 of the *Local Government Act 1995 (WA)* outlines provisions for tenders for the provision of goods and services.

*Local Government (Functions and General) Regulations 1996 (WA)*

Part 4, Division 2 of the *Local Government (Functions and General) Regulations 1996 (WA)* includes provisions for the supply of goods and services through the tender process.

## Background

DA 1.1.14A was reviewed at the May 2026 Ordinary Council Meeting. After its adoption, officers became aware of an inconsistency in clause 2(b) of the Council general conditions on the delegation. As a consequence, procurement officers and delegates were consulted. Request was made to amend the delegation at the earliest convenience to ensure clarity of the condition and compliance with contemporary delegations in this area.

## Report

The Council general conditions on the delegation clause 2(b) currently states -

> It is for Annual supplies of a routine annual supplies of operational nature within the budget amount and where the contract is no longer than 5-years and expenditure per year is not more than $250,000.

At present, the total contract amount in clause 2(b) without amendment would result in the CEO having delegation to potentially approve contract expenditure up to $1.25 million over a 5 year contract term.

It is considered appropriate to amend the condition to align the threshold amount to correspond with the maximum amount stated in clause 2(a) and clause 2(c) of the general conditions of delegation. This provides consistency of threshold amounts across the conditions. The proposed condition would therefore read -

> It is for the annual supply of goods and services of a routine operational nature, within the budgeted amount, and where the contract term is no longer than 5-years and total contract expenditure does not exceed $500,000.

The amendment will provide for alignment of the total contract expenditure amount in clause 2(b) with clause 2(a) and clause 2(c).

The amendment, although minor, will ensure that it is endorsed by Council as the delegator. Should Council not endorse the amendment, the clause may be read down to allow for it to be operable, however, this is not ideal due to the ambiguity and inconsistency with clause 2(a) and clause 2(c).

Minor amendment to the delegation to include reference to the *Local Government (Functions and General) Regulations 1996 (WA)* has also been made. This has been included to provide clarity to the delegation and ensure

alignment with the legislation. Reference to tender variation regulations have been deleted in the delegation as these are dealt with under delegated authority 1.1.14B.

Clause 2(a) has been amended to include the word ‘any’ and reference to the regulations.

## Financial implications

There are no financial implications evident at this time.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
|---|
| 1. Delegated Authority 1.1.14A - Tenders, Tender Exemptions & Procurement [**12.9.1** - 4 pages] |

*~~1~~.1.14A Procurement - Tenders; Tender Exemptions & Procurement under the approved Purchasing Policy*

**Delegation: Council to CEO (s5.42 & s5.43 of the Local Government Act 1995 (WA)(LGA95))**

| | |
|---|---|
| **Power or Duty Delegated: Relevant section of legislation for the delegation** | LGA95 s 3.57 & s 3.47<br>*Local Government (Functions and General) Regulations 1996* (WA) (LG(F&G)R96)- Part 4:<br>r. 11;13;14;18 ~~;~~20; 21~~; 21A~~ & Division 3 – Panels of pre-qualified suppliers |
| **Function:** | 1. To call tenders and set weighted criteria as outlined in the relevant legislation and this delegation.(R11(1); r13; r14)<br>2. To authorise procurement and accept or reject tenders according to the conditions of this delegation. (R11;13,14;R18<br>3. To authorise procurement and accept quotations according to the conditions of this delegation. (R11A)<br>4. To limit tenderers in accordance with r. 21<br>5. To establish panels of pre-qualified suppliers in accordance with Division 3 including calling for applications, setting weighted criteria, accepting and rejecting applications. |
| **Council General Conditions on this Delegation:** | Any person proposing to exercise a power under delegated authority shall comply with the Standard Conditions of Delegation. This delegation must be read in conjunction with the LG(F&G)R96, the Council approved Purchasing Policy and the following specific additional conditions for this delegation.<br>**Additional Conditions**<br>**This delegation can only be exercised where there is an identified and approved budget allocation in the current year.**<br>The CEO can<br>1. Reject any Tenders (R18(5))<br>2. Accept tenders where :<br>(a) the tender value for any one project is no more than $500,000 (ex GST)<br>(b) It is for the ~~A~~annual supply~~ies~~ of goods and services of a routine ~~annual supplies of~~ operational nature, within the budgeted amount and where the contract term is no longer ~~-~~than 5-years and ~~annual~~ total contract expenditure ~~per~~ |

| | |
|---|---|
| | ~~year is not more than~~does not exceed $~~250~~500,000.<br>(c) the tender amount for the new capital item is less than the amount of $500,000, including changeover costs where relevant.<br>(d) It relates to the disposal of impounded perishable and non-perishable goods in accordance with s3.47 of the LGA95.<br>3. authorise purchases that are exempt from tendering regulations excluding r.11.2(d) and complies with the general conditions & additional conditions 2(b) & (c).<br>4. Accept quotes below $250,000.<br>5. ~~a~~Approve purchase orders for expenditure exceeding $250,000 that have been approved by Council via Council Resolution or via this delegated authority.<br>6. To call, accept the short listing and if required reject all Expression of Interests.<br>7. To determine the criteria for deciding which applications should be accepted, accept or reject all applications for the establishment of Panels of Pre-Qualified Suppliers |
| **References** | *Local Government Act 1995* (WA)<br>*Local Government (Functions and General) Regulations 1996* (WA)<br><br>CP29 - Purchasing Policy<br>CP63 - Execution of Documents |
| **Record Keeping:** | Maintain Tender Register, recording details of decisions under this delegation and insert ECM-links to relevant evidentiary documents.<br><br>Ensure that evidentiary documents that meet the requirements of *Local Government (Administration) Regulations 1996* (WA) r. 19 Delegates to keep certain records, are retained in the City's record keeping systems. |
| **Version** | Formerly incorporated as DA04 Tenders in 2020-2021 Delegation Register. OCM 22/6/2021 Item 12.6.<br>OCM 28/6/2022<br>OCM 26/4/2023<br>Amended New Policy OCM 12/12/2023<br>OCM 23/4/2024 Item 12.8<br>Amended OCM 10/12/2024 item 12.6 Reviewed OCM 24/6/2025 Item 12.5; Reviewed OCM 26/5/2026 Item 12.4 |

# 12.10 Accounts for Payment July 2026

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 54/007 - Creditors - Payment Authorisations |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Corporate and Governance |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

To present to Council the list of expenditure paid for the period 01 July 2026 to 31 July 2026 under delegated authority.

## Summary and key issues

A list of payments is presented to the Council each month for confirmation and endorsement in accordance with the *Local Government (Financial Management) Regulations 1996 (WA)*.

| **Officer Recommendation** |
|---|
| That the Authorised Payment Listing for July 2026 as provided under Attachment 12.10.1 be received. |

## Location

Not applicable.

## Consultation

There has been no specific consultation undertaken in respect to this matter.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.
**Outcome:** 11. A happy, well informed and engaged community.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

Regulation 13(1) of the *Local Government (Financial Management) Regulations 1996 (WA)* states:

> "If the local government has delegated to the CEO the exercise of its power to make payments from the municipal fund or the trust fund, a list of accounts paid by the CEO is to be prepared each month showing for each account paid since the last such list was prepared:
>
> the payee's name;
>
> (a) the amount of the payment;
> (b) the date of the payment; and
> (c) sufficient information to identify the transaction."

(3) A list prepared under sub regulation (1) is to be presented to Council at the next ordinary meeting of Council after the list is prepared; and recorded in the minutes of that meeting.

Regulation 13A of the *Local Government (Financial Management) Regulations 1996 (WA)* effective from 1 September 2023 states:

(1) If a local government has authorised an employee to use a credit, debit or other purchasing card, a list of payments made using the card must be prepared each month showing the following for each payment made since the last such list was prepared —

(a) the payee's name;
(b) the amount of the payment;
(c) the date of the payment;
(d) sufficient information to identify the payment.

(2) A list prepared under subregulation (1) must be —

(a) presented to the council at the next ordinary meeting of the council after the list is prepared; and
(b) recorded in the minutes of that meeting.

## Background

Council has delegated to the Chief Executive Officer under Delegation 1.1.18 to make payment from the Municipal and Trust Fund account. In accordance with Regulation 13(1) of the *Local Government (Financial Management) Regulations 1996 (WA),* where this power has been delegated, a list of payments each month is to be compiled and presented to Council.

## Report

The following summary of payments are recommended for confirmation and endorsement.

| Payment type | Payment reference | $ |
|---|---|---|
| **Municipal Fund Cheques** | 788909-788910 | 41,026.35 |
| **Municipal Fund EFTs** | EF102925 - EF103418 | 7,662,495.64 |
| **Municipal Fund Payroll** | July 2026 | 2,256,979.75 |
| **Trust Fund EFT** | EF103032 - EF103033 | 54,514.36 |
| **Total Payments for July 2026** | | 10,015,016.10 |

A copy of the Authorised Payment Listing is included as Attachment 12.10.1.

## Financial implications

All expenditure included in the Payment Listing is in accordance with Council's Annual budget.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
| --- |
| 1. July 2026 Payments [**12.10.1** - 8 pages] |

## City of Belmont

## Accounts for Payment - July 2026

Compiled : 02/08/26 09:39

| Pmnt_Ref | Date | CR_Code | Supplier | Pmnt_Amnt | Description |
|---|---|---|---|---|---|
| **Contractors** | | | | | |
| EF102931 | 09/07/26 | 00346 | Action Couriers | 38.01 | Courier Service |
| EF102932 | 09/07/26 | 00350 | Veolia Environmental Services | 681,604.66 | Rubbish Removals |
| EF102933 | 09/07/26 | 00390 | Landgate | 293,402.14 | Title Searches- Triennial GRV Revaluation |
| EF102935 | 09/07/26 | 00575 | Reward Hospitality | 175.78 | Catering/Catering Supplies |
| EF102937 | 09/07/26 | 00707 | LoGo Appointments | 7,129.66 | Labour/Personnel Hire |
| EF102938 | 09/07/26 | 00931 | Sonic HealthPlus Pty Ltd | 315.00 | Pre Employment Medicals |
| EF102945 | 09/07/26 | 01719 | Jaycar Electronics Pty Ltd | 279.60 | Electrical Goods |
| EF102949 | 09/07/26 | 02216 | Western Australia Police | 17.60 | Volunteer National Police Check |
| EF102951 | 09/07/26 | 02958 | Yoshino Sushi | 601.70 | Catering/Catering Supplies - Citizenship |
| EF102952 | 09/07/26 | 03011 | Camera Electronic Service Co Pty Ltd | 2,301.48 | Photography/Framing Expenses |
| EF102954 | 09/07/26 | 03537 | Mackay Urban Design | 1,200.00 | Professional Fees - Planning |
| EF102958 | 09/07/26 | 03862 | Eurofins ARL PTY Ltd | 356.40 | Professional Fees - Testing |
| EF102960 | 09/07/26 | 04146 | JB Hi-Fi Group Commercial Account, Osborne Park | 11,803.11 | Electrical Goods - Electronics |
| EF102961 | 09/07/26 | 04246 | Bibliotheca Australia Pty Ltd | 4,913.30 | Computer Software Maintenance - Subscription |
| EF102963 | 09/07/26 | 04580 | Brenda Greenfield | 500.00 | Music/Entertainment Expenses - Naidoc |
| EF102964 | 09/07/26 | 04794 | Stiles Electrical Services Pty Ltd | 2,090.13 | Electrical Contractor - Miles Park Sports Lighting |
| EF102965 | 09/07/26 | 05016 | Cyclus Pty Ltd | 726.00 | Labour/Personnel Hire |
| EF102966 | 09/07/26 | 05190 | Mark Foote | 9,614.00 | Building Maintenance - COB |
| EF102967 | 09/07/26 | 05336 | West-Sure Group Pty Ltd | 612.54 | Security Services |
| EF102968 | 09/07/26 | 05493 | Dapth | 2,117.50 | Computer Software Maintenance - Website Support Service |
| EF102969 | 09/07/26 | 05642 | Steve's Sand Sifting for Playground Services | 5,357.18 | Sand Sifting - Various Parks |
| EF102970 | 09/07/26 | 05840 | Commercial Aquatics Australia Pty Ltd | 595.10 | Oasis Expenses |
| EF102971 | 09/07/26 | 06277 | Ignite Limited | 6,114.24 | Labour/Personnel Hire |
| EF102972 | 09/07/26 | 06293 | Freo Fire Maintenance Services Pty Ltd | 2,355.53 | Fire Equipment/Service |
| EF102973 | 09/07/26 | 06304 | Prestige Property Maintenance | 114,830.65 | Gardening Maintenance - Landscaping |
| EF102974 | 09/07/26 | 06434 | Quash Soundproofing | 3,479.06 | Building Maintenance- Library Acoustic Panels |
| EF102975 | 09/07/26 | 06454 | Gorman Design Engineering P/L - T/as Basketball Ringleader | 59,125.00 | Building Maintenance - New Basketball Backboard System - Oasis |
| EF102977 | 09/07/26 | 06511 | The Trustee for Osborne Truck Rentals T/A Europcar WA | 3,068.67 | Plant/Equipment Hire |
| EF102979 | 09/07/26 | 06580 | Omnicom Media Group | 1,035.56 | Advertising |
| EF102980 | 09/07/26 | 06592 | Grosvenor Engineering Group | 4,714.93 | Electrical Contractor - COB |
| EF102982 | 09/07/26 | 06619 | Baaz Security Services Pty Ltd | 277.20 | Security Services |
| EF102984 | 09/07/26 | 06751 | HFM Asset Management | 2,769.38 | Building Maintenance |
| EF102985 | 09/07/26 | 06773 | Evolve Talent | 10,833.01 | Labour/Personnel Hire |
| EF102986 | 09/07/26 | 06795 | AMPAC Debt Recovery( WA) Pty Ltd | 258.00 | Professional Fees - Debt Collection |
| EF102988 | 09/07/26 | 06863 | Kleen Slate Services | 885.00 | Other Property & Services |
| EF102989 | 09/07/26 | 06875 | Jimbu4J | 681.50 | Catering/Catering Supplies - Morning Tea |
| EF102990 | 09/07/26 | 06883 | Norma Morrison | 250.00 | Music/Entertainment Expenses - Naidoc |
| EF102991 | 09/07/26 | 06907 | Leanne Hampson | 1,000.00 | Advertising |
| EF102992 | 09/07/26 | 06910 | Dream Courts Pty Ltd | 4,978.04 | Playground Inspections/Repairs - Centenary Park Basketball Court |
| EF102993 | 09/07/26 | 06928 | Integrity Staffing | 1,979.45 | Labour/Personnel Hire |
| EF102994 | 09/07/26 | 06929 | Brett David Investments T/A Successful Projects | 15,621.40 | Professional Fees - Belvidere Street Revitalisation |
| EF102995 | 09/07/26 | 06960 | Phase 3 Landscape Construction | 23,118.35 | Professional Fees - Faulkner Park Lakes |
| EF102996 | 09/07/26 | 06962 | Siragusa Family Trust TA Trinacria Consulting | 6,060.43 | Professional Fees - Esplanade Storm Damage |
| EF102997 | 09/07/26 | 06989 | Propagule Consulting Pty Ltd | 1,584.00 | Professional Fees - Volcano Park Water Play |
| EF102998 | 09/07/26 | 07004 | I Know | 1,500.00 | Community Exercise Classes |
| EF102999 | 09/07/26 | 07006 | Moorditj Mida Moort | 1,500.00 | Community Exercise Classes |
| EF103000 | 09/07/26 | 07043 | Kinglarp Pty Ltd T/A The Pressure King | 946.00 | Graffiti Removal - Various Locations |
| EF103002 | 09/07/26 | 07066 | Marnie Richardson | 1,250.00 | Library - Entertainment Expense - Harmony Day |
| EF103004 | 09/07/26 | 07099 | Perth Testing and Tagging | 165.00 | Building Maintenance |
| EF103005 | 09/07/26 | 07143 | The Ortin Family Trust t/a Eastside Concrete | 8,800.00 | Building Maintenance |
| EF103006 | 09/07/26 | 07145 | Airline Laundry Services Australia Pty Ltd | 718.65 | Cleaning Services |
| EF103008 | 09/07/26 | 07160 | Plus Architecture Western Australia Pty Ltd | 7,700.00 | Professional Fees - Peet Park Community Centre |
| EF103010 | 09/07/26 | 07176 | R & R Autobody Repair Centre Pty Ltd T/As Greive Panelbeater | 2,031.59 | Plant Parts & Repairs |
| EF103011 | 09/07/26 | 07265 | BOS Civil | 629,624.36 | Building Construction - Belvidere Streetscape |
| EF103014 | 09/07/26 | 07352 | CK Maloney Surveying Pty Ltd | 36,773.00 | Building Maintenance - Ascot Waters- External Lighting Wiring |
| EF103015 | 09/07/26 | 07356 | D2E Gardening | 500.00 | Library - Entertainment Expense - Workshop |
| EF103016 | 09/07/26 | 07365 | Hempfield Small Motor Service Pty Ltd | 94.35 | Plant Parts & Repairs |
| EF103018 | 09/07/26 | 07379 | Chic Management Pty Ltd | 3,661.01 | Library - Entertainment Expense - After Dark |
| EF103034 | 17/07/26 | 00118 | Australia Post | 9,638.31 | Postage |
| EF103039 | 17/07/26 | 00707 | LoGo Appointments | 3,564.83 | Labour/Personnel Hire |
| EF103041 | 17/07/26 | 00830 | Canon Production Printing Australia Pty Ltd | 270.89 | Photocopy Expenses |
| EF103044 | 17/07/26 | 00984 | Risk Management Technologies - Chem Alert | 8,453.50 | Computer Software Maintenance - Annual License |
| EF103045 | 17/07/26 | 01243 | WARP Pty Ltd | 6,342.28 | Traffic Control - Various Locations |
| EF103050 | 17/07/26 | 01499 | Porter Consulting Engineers | 6,795.80 | Professional Fees - Design |
| EF103051 | 17/07/26 | 02059 | Western Resource Recovery Pty Ltd | 308.00 | Rubbish Removals |
| EF103053 | 17/07/26 | 02627 | Dunbar Services WA Pty Ltd | 695.20 | Cleaning Services |
| EF103057 | 17/07/26 | 02958 | Yoshino Sushi | 347.38 | Catering/Catering Supplies - Staff Farewell |
| EF103059 | 17/07/26 | 03498 | Talis Consultants Pty Ltd | 5,775.00 | Professional Fees - Design - Belvidere St |
| EF103060 | 17/07/26 | 03504 | Classic Tree Services | 5,038.09 | Tree Pruning Within CoB |
| EF103062 | 17/07/26 | 03684 | Univerus Software Pty Ltd | 36,704.17 | Computer Software Maintenance Subscription |
| EF103066 | 17/07/26 | 04584 | ThinkProject Australia Pty Ltd | 15,847.00 | Computer Software Maintenance - Annual License |
| EF103068 | 17/07/26 | 05133 | Nami Osaki t/as namisartroom | 800.00 | Library - Entertainment Expense - Workshop |
| EF103069 | 17/07/26 | 05493 | Dapth | 2,420.00 | Computer Software Maintenance - Website Outage Investigation |
| EF103072 | 17/07/26 | 05911 | Cherished Cherubs Pty Ltd | 840.00 | Music/Entertainment Expenses - Creche Service |
| EF103073 | 17/07/26 | 05944 | Delron Cleaning Pty Ltd - Ventia | 543.81 | Cleaning Services |
| EF103074 | 17/07/26 | 06031 | Williams Creative Company PL tas Proof The Band | 1,457.50 | Music/Entertainment Expenses - Anzac Day |
| EF103075 | 17/07/26 | 06091 | Engineering Technology Consultants | 3,025.00 | Professional Fees - Peet Park Lighting Review |
| EF103076 | 17/07/26 | 06094 | Boyan Electrical Services | 7,938.70 | Electrical Contractor - COB |
| EF103077 | 17/07/26 | 06277 | Ignite Limited | 2,615.54 | Labour/Personnel Hire |

| Pmnt_Ref | Date | CR_Code | Supplier | Pmnt_Amnt | Description |
|---|---|---|---|---|---|
| EF103078 | 17/07/26 | 06304 | Prestige Property Maintenance | 1,692.35 | Gardening Maintenance - Landscaping |
| EF103081 | 17/07/26 | 06450 | Sport and Recreation Surfaces Pty Ltd | 4,840.00 | Gardening Contractor - Wilson Park Netball Courts |
| EF103082 | 17/07/26 | 06461 | Kristy Nita Brown | 84.00 | Library - Entertainment Expense - ROLA |
| EF103083 | 17/07/26 | 06591 | Blue Tang (WA) T/A The Reef Unit Trust | 1,100.00 | Professional Fees - Faulkner Park Civic Centre |
| EF103084 | 17/07/26 | 06592 | Grosvenor Engineering Group | 2,639.17 | Electrical Contractor - COB |
| EF103086 | 17/07/26 | 06754 | Doon Raj P/L - T/as Belmont (WA) Carpet Court | 1,115.00 | Building Maintenance - Oasis Meeting Room |
| EF103087 | 17/07/26 | 06773 | Evolve Talent | 6,893.74 | Labour/Personnel Hire |
| EF103088 | 17/07/26 | 06795 | AMPAC Debt Recovery( WA) Pty Ltd | 1,487.20 | Professional Fees - Debt Collection |
| EF103090 | 17/07/26 | 06898 | CHG-MERIDIAN AUSTRALIA | 9,745.37 | Plant/Equipment Hire - Oasis Cardio |
| EF103091 | 17/07/26 | 06928 | Integrity Staffing | 5,819.59 | Labour/Personnel Hire |
| EF103092 | 17/07/26 | 06951 | Janali & Co. | 5,445.00 | Professional Fees- First Nations Strategy Evaluation |
| EF103094 | 17/07/26 | 06989 | Propagule Consulting Pty Ltd | 10,890.00 | Professional Fees - Belmont Streetscapes Guide |
| EF103096 | 17/07/26 | 07160 | Plus Architecture Western Australia Pty Ltd | 16,500.00 | Professional Fees - Peet Park community Centre |
| EF103097 | 17/07/26 | 07162 | Katherine Parker | 480.00 | Public Art Project Consultancy |
| EF103100 | 17/07/26 | 07243 | Gambara Pty Ltd | 8,002.50 | Environmental Expenses - Drainage Maintenance |
| EF103101 | 17/07/26 | 07245 | Little People Play | 994.40 | Plant/Equipment Hire - Wiggles & Giggles |
| EF103103 | 17/07/26 | 07258 | Mirliny | 2,335.00 | Community Exercise Classes - Welcome to Country |
| EF103104 | 17/07/26 | 07286 | Ansell Strategic Pty Ltd | 22,000.00 | Professional Fees - Review of Aged Accommodation Engagement |
| EF103105 | 17/07/26 | 07303 | Word on a Wire Writing | 541.00 | Library-Entertainment Expense - Speaker Series |
| EF103106 | 17/07/26 | 07345 | Grayson Dennis Music | 700.00 | Music/Entertainment Expenses - Paws in Park |
| EF103107 | 17/07/26 | 07358 | A E Hoskins Building Services | 1,324.95 | Building Construction - Resource Centre Upgrades |
| EF103108 | 17/07/26 | 07364 | Statewide Turf Pty Ltd | 16,830.00 | Gardening Contractor - Forster Park Maintenance |
| EF103109 | 17/07/26 | 07374 | Michelle Pearson | 8,896.74 | Library - Entertainment Expense - After Dark |
| EF103128 | 24/07/26 | 00221 | John Hughes Group | 405.00 | Plant Parts & Repairs |
| EF103131 | 24/07/26 | 00350 | Veolia Environmental Services | 52,935.62 | Rubbish Removals |
| EF103133 | 24/07/26 | 00707 | LoGo Appointments | 7,177.20 | Labour/Personnel Hire |
| EF103134 | 24/07/26 | 00910 | The Poster Girls - Flyer Distribution Co | 840.40 | Labour/Personnel Hire |
| EF103135 | 24/07/26 | 00988 | Reece Australia Pty Ltd | 1,683.86 | Plumbing Maintenance/Supplies - COB Irrigation Fittings |
| EF103136 | 24/07/26 | 01006 | Ron Fullers Air | 11,750.00 | Plant Parts & Repairs |
| EF103139 | 24/07/26 | 01243 | WARP Pty Ltd | 4,277.59 | Traffic Control - Various Locations |
| EF103142 | 24/07/26 | 01835 | Peteris and Jillian Ciemitis t/a Ciemitis Public Art | 797.50 | Art Awards/Exhibition - PARP Meeting |
| EF103143 | 24/07/26 | 02172 | Miss Maud | 348.70 | Catering/Catering Supplies - Staff function |
| EF103144 | 24/07/26 | 02207 | Wilson Security | 2,509.67 | Security Services - Anzac Day |
| EF103149 | 24/07/26 | 03504 | Classic Tree Services | 427,119.85 | Tree Pruning Within CoB |
| EF103150 | 24/07/26 | 03543 | Labyrinth Constructions | 11,000.00 | Building Construction - Gutters Replacement (ILUs) |
| EF103151 | 24/07/26 | 04120 | Randstad Pty Ltd | 7,641.99 | Labour/Personnel Hire |
| EF103152 | 24/07/26 | 04146 | JB Hi-Fi Group Commercial Account, Osborne Park | 10,520.00 | Electrical Goods |
| EF103153 | 24/07/26 | 04246 | Bibliotheca Australia Pty Ltd | 67,183.60 | Library - Self Check Kiosk Desktop |
| EF103154 | 24/07/26 | 05127 | Champion Music | 665.50 | Music/Entertainment Expenses - Citizenship Ceremony |
| EF103155 | 24/07/26 | 05427 | Horizon West Landscape & Irrigation Pty Ltd | 43,484.10 | Gardening Maintenance - Various Locations |
| EF103156 | 24/07/26 | 06094 | Boyan Electrical Services | 189.75 | Electrical Contractor |
| EF103157 | 24/07/26 | 06213 | Culture Care WA Inc | 4,180.00 | Library - Entertainment Expense - Food Safari |
| EF103158 | 24/07/26 | 06277 | Ignite Limited | 5,095.20 | Labour/Personnel Hire |
| EF103159 | 24/07/26 | 06377 | Choiceone Pty Ltd | 3,318.08 | Labour/Personnel Hire |
| EF103161 | 24/07/26 | 06438 | Marketlife Pty Ltd T/As Erin Madeley Consulting | 10,524.75 | Music/Entertainment Expenses - Community Markets |
| EF103162 | 24/07/26 | 06469 | Element Advisory Pty Ltd | 561.79 | Professional Fees - Building |
| EF103166 | 24/07/26 | 06754 | Doon Raj P/L - T/as Belmont (WA) Carpet Court | 2,994.00 | Building Maintenance - Oasis |
| EF103167 | 24/07/26 | 06875 | Jimbu4J | 830.50 | Catering/Catering Supplies - Flag Raising |
| EF103168 | 24/07/26 | 06989 | Propagule Consulting Pty Ltd | 5,494.50 | Professional Fees - Belmont Streetscapes Guide |
| EF103169 | 24/07/26 | 07062 | Horizon West Landscape Constructions | 7,524.00 | Building Construction - Irrigation Maintenance |
| EF103170 | 24/07/26 | 07104 | Aboriginal Land Care (Ngala-Boodja) Pty Ltd | 7,204.34 | Gardening Contractor - Garvey Park & Breaverly Ave |
| EF103171 | 24/07/26 | 07117 | Pam Family Trust t/a Professional Arts Mgmt | 2,362.80 | Repair - Artwork |
| EF103172 | 24/07/26 | 07161 | Ashleigh Jane Whyte | 720.00 | Public Art Project Consultancy |
| EF103173 | 24/07/26 | 07215 | Silverback Enterprises Pty Ltd- Paramount Security Services | 693.00 | Security Services |
| EF103174 | 24/07/26 | 07221 | Kaarla Baabpa Pty Ltd | 3,408.00 | Community Art Classes - Welcome to Country |
| EF103175 | 24/07/26 | 07248 | Baidam Solutions Pty Ltd | 101,168.09 | Professional Fees - Cloud Security and Data Loss Prevention |
| EF103176 | 24/07/26 | 07367 | Glynis Traill-Nash | 144.08 | Library - Entertainment Expense - After Dark |
| EF103177 | 24/07/26 | 07374 | Michelle Pearson | 571.80 | Library - Entertainment Expense - After Dark |
| EF103179 | 24/07/26 | 07390 | KCI Industries Pty Ltd | 314.50 | Building Maintenance |
| EF103193 | 30/07/26 | 00187 | Statewide Bearings | 20.75 | Plant Parts & Repairs |
| EF103194 | 30/07/26 | 00195 | Bin Bath Australia Pty Ltd | 3,065.69 | Cleaning Services |
| EF103195 | 30/07/26 | 00221 | John Hughes Group | 4,274.40 | Plant Parts & Repairs |
| EF103196 | 30/07/26 | 00230 | Jackson McDonald | 48,526.82 | Legal Expenses |
| EF103200 | 30/07/26 | 00295 | Capital Recycling | 10,530.68 | Rubbish Removals |
| EF103201 | 30/07/26 | 00305 | CJD Equipment Pty Ltd | 5,562.41 | Mower Parts & Repairs |
| EF103202 | 30/07/26 | 00390 | Landgate | 8,391.06 | GRV's Metro & DFES Search |
| EF103203 | 30/07/26 | 00391 | Chemistry Centre (WA) t/as ChemCentre | 1,841.89 | Professional Fees - Testing |
| EF103204 | 30/07/26 | 00394 | Child & Adolescent Health Service - Dept of Health WA | 1,672.00 | Immunisation Expenses |
| EF103206 | 30/07/26 | 00412 | Dowsing Group Pty Ltd | 61,066.34 | Concrete Contractor - Profiling and Concrete Various Locations |
| EF103209 | 30/07/26 | 00491 | Fujifilm Business Innovation Australia | 2,121.90 | Photocopy Expenses |
| EF103210 | 30/07/26 | 00501 | Infor Global Solutions (ANZ) Pty Ltd | 5,621.39 | Computer Software Maintenance - Cloud Transition |
| EF103211 | 30/07/26 | 00585 | Hydroquip Pumps | 3,850.00 | Bore Drilling/ Maintenance - Miles Park |
| EF103213 | 30/07/26 | 00613 | Qualcon Laboratories Pty Ltd | 1,061.50 | Core Analysis and Asphalt Testing |
| EF103216 | 30/07/26 | 00699 | Marketforce Pty Ltd | 27,832.20 | Advertising & Printing |
| EF103217 | 30/07/26 | 00706 | Local Health Authorities Analytical Committee | 11,665.30 | Professional Fees - LHAAC Sampling Scheme |
| EF103218 | 30/07/26 | 00734 | McIntosh and Son WA | 9,061.85 | Plant Parts & Repairs |
| EF103220 | 30/07/26 | 00830 | Canon Production Printing Australia Pty Ltd | 459.02 | Photocopy Expenses |
| EF103222 | 30/07/26 | 00859 | Cannington Mazda( Prev Parkland Mazda) | 583.20 | Plant Parts & Repairs |
| EF103223 | 30/07/26 | 00917 | Positive Auto Electrics | 68.06 | Plant Parts & Repairs |
| EF103224 | 30/07/26 | 00931 | Sonic HealthPlus Pty Ltd | 979.00 | Pre Employment Medicals |
| EF103225 | 30/07/26 | 00972 | Repco Auto Parts | 674.73 | Plant Parts & Repairs |
| EF103226 | 30/07/26 | 00988 | Reece Australia Pty Ltd | 5,448.01 | Plumbing Maintenance/Supplies - COB Irrigation Fittings |
| EF103228 | 30/07/26 | 01074 | Shred-X Pty Ltd | 72.86 | Rubbish Removals |
| EF103231 | 30/07/26 | 01090 | St John Ambulance Australia Inc | 1,025.10 | First Aid Service |

| Pmnt_Ref | Date | CR_Code | Supplier | Pmnt_Amnt | Description |
|---|---|---|---|---|---|
| EF103232 | 30/07/26 | 01097 | Dept of the Premier & Cabinet | 143.91 | Advertising |
| EF103233 | 30/07/26 | 01118 | SuperSealing Pty Ltd | 10,747.00 | Road Building Contractor - COB |
| EF103234 | 30/07/26 | 01180 | Aptella Pty Ltd | 328.72 | Calibration |
| EF103235 | 30/07/26 | 01186 | ZircoDATA Pty Ltd | 2,049.34 | Records Storage |
| EF103236 | 30/07/26 | 01201 | Truckline | 142.15 | Plant Parts & Repairs |
| EF103238 | 30/07/26 | 01233 | Stihl Shop Redcliffe | 464.00 | Tools/Tool Repairs |
| EF103239 | 30/07/26 | 01237 | Wren Oil | 1,794.10 | Rubbish Removals |
| EF103240 | 30/07/26 | 01243 | WARP Pty Ltd | 66,131.53 | Traffic Control - Various Locations |
| EF103242 | 30/07/26 | 01289 | Wayne's Windscreens Pty Ltd | 500.00 | Plant Parts & Repairs |
| EF103243 | 30/07/26 | 01317 | WA Hino Sales & Service | 3,417.20 | Plant Parts & Repairs |
| EF103245 | 30/07/26 | 01353 | Aurion Corporation Pty Ltd | 26,053.50 | Computer Software Maintenance - Subscription |
| EF103246 | 30/07/26 | 01358 | Kevrek Australia Pty Ltd | 440.00 | Plant Parts & Repairs |
| EF103249 | 30/07/26 | 01533 | WC Convenience Management | 66,940.71 | Building Maintenance - Hardy Park Auto Toilets |
| EF103253 | 30/07/26 | 01625 | Unitest Instruments | 264.00 | Professional Fees - Testing |
| EF103254 | 30/07/26 | 01712 | Donegan Enterprises Pty Ltd | 45,996.72 | Various Parks Repairs and Maintenance |
| EF103255 | 30/07/26 | 01721 | Fulton Hogan Industries | 46,997.13 | Road Building Contractor - Asphalt |
| EF103257 | 30/07/26 | 02000 | Hames Sharley (WA) Pty Ltd | 3,850.00 | Professional Fees - Planning - Oasis |
| EF103260 | 30/07/26 | 02207 | Wilson Security | 145,529.81 | Security Services |
| EF103261 | 30/07/26 | 02234 | Blackwell and Associates Pty Ltd | 600.00 | Professional Fees - Planning |
| EF103263 | 30/07/26 | 02298 | Pelican Linemarking | 660.00 | Line Marking |
| EF103264 | 30/07/26 | 02303 | Ultimo Catering and Events | 44,279.45 | Catering/Catering Supplies - Pioneers Function |
| EF103267 | 30/07/26 | 02387 | Triton Electrical Contractors Pty Ltd | 11,874.50 | Electrical Contractor - COB |
| EF103268 | 30/07/26 | 02410 | System Maintenance T/A Systems By Ballantyne | 6,877.60 | Plumbing Maintenance/Supplies |
| EF103269 | 30/07/26 | 02418 | Programmed Property Services Pty Ltd | 74,474.61 | Gardening Contractor - Mowing |
| EF103270 | 30/07/26 | 02425 | Prestige Alarms | 20,379.70 | Security Services |
| EF103275 | 30/07/26 | 02589 | Zenien | 33,544.75 | Security Services |
| EF103277 | 30/07/26 | 02672 | Ruah Community Services | 21,426.92 | Provision of Preventive Domestic Violence |
| EF103279 | 30/07/26 | 02779 | Natural Area Holdings Pty Ltd | 72,915.15 | Gardening Maintenance - Verge Mowing |
| EF103280 | 30/07/26 | 02837 | GLG Greenlife Group | 46,015.98 | Gardening Maintenance - Verge Mowing |
| EF103281 | 30/07/26 | 02851 | Perth Scientific Pty Ltd | 2,585.00 | Plant Parts & Repairs |
| EF103283 | 30/07/26 | 02867 | Arbor Centre | 836.00 | Gardening Contractor |
| EF103285 | 30/07/26 | 02958 | Yoshino Sushi | 77.44 | Catering/Catering Supplies - Home Host Session |
| EF103286 | 30/07/26 | 03110 | Experian Australia Operations Pty Ltd | 1,144.18 | Computer Software Maintenance |
| EF103288 | 30/07/26 | 03142 | Redfish Technologies Pty Ltd | 10,622.04 | Electrical Contractor - Subscription |
| EF103290 | 30/07/26 | 03197 | West Coast Turf | 32,105.00 | Gardening Contractor - Turf Maintenance |
| EF103291 | 30/07/26 | 03464 | Bridgestone Australia Ltd | 2,119.61 | Plant Parts & Repairs |
| EF103292 | 30/07/26 | 03498 | Talis Consultants Pty Ltd | 5,775.00 | Professional Fees - Design - Belvidere St |
| EF103293 | 30/07/26 | 03504 | Classic Tree Services | 4,760.68 | Tree Pruning Within CoB |
| EF103294 | 30/07/26 | 03567 | Gardner Autos Pty Ltd t/as Gardner Isuzu | 863.00 | Plant Parts & Repairs |
| EF103295 | 30/07/26 | 03583 | DFES Direct Brigade Alarm Monitoring | 1,881.00 | Fire Equipment/Service |
| EF103296 | 30/07/26 | 03599 | Donald Cant Watts Corke (WA) Pty Ltd | 2,006.88 | Professional Fees - Belmont Hub & Superintendency Service |
| EF103297 | 30/07/26 | 03897 | Genesis Accounting Pty Ltd | 3,905.00 | Professional Fees - Licence Fee |
| EF103298 | 30/07/26 | 03908 | Road Specialist Australia Pty Ltd | 1,604.76 | Plant Parts & Repairs |
| EF103303 | 30/07/26 | 04211 | Triodia Scanning Services | 2,631.75 | Survey Expenses - COB |
| EF103304 | 30/07/26 | 04250 | TLC Safety Pty Ltd T/As Einsteins Australia | 412.50 | Library - Entertainment Expense - Workshop |
| EF103305 | 30/07/26 | 04302 | Southern Cross Housing Ltd | 8,121.61 | Independent Living Units Management - June 2026 |
| EF103306 | 30/07/26 | 04320 | ABM Landscaping | 1,980.00 | Bricks/Bricklaying |
| EF103307 | 30/07/26 | 04391 | Lifeskills Australia | 968.00 | Professional Fees - EAP Consultation |
| EF103308 | 30/07/26 | 04454 | FM Contract Solutions Pty Ltd | 2,348.50 | Professional Fees - Analysis |
| EF103309 | 30/07/26 | 04467 | Rent a Fence Pty Ltd | 55.24 | Fencing |
| EF103310 | 30/07/26 | 04474 | Aquamonix | 4,468.20 | Gardening Contractor - COB |
| EF103311 | 30/07/26 | 04477 | Place Laboratory Pty Ltd | 8,085.00 | Professional Fees - Belvidere Street Landscaping |
| EF103313 | 30/07/26 | 04496 | Azure Painting Pty Ltd | 23,339.00 | Painting Contractor - COB |
| EF103314 | 30/07/26 | 04529 | Southern Cross Care (WA) Inc | 6,487.20 | Independent Living Units Management - June 2026 |
| EF103315 | 30/07/26 | 04594 | Website Weed and Pest W A Pty Ltd | 21,587.26 | Weed Control - Kerbs & Paths |
| EF103316 | 30/07/26 | 04677 | 3 Monkeys Audiovisual | 6,356.90 | Plant/Equipment Hire- Video Conference |
| EF103317 | 30/07/26 | 04693 | Allwest Plant Hire Australia Pty Ltd | 10,290.50 | Plant/Equipment Hire |
| EF103319 | 30/07/26 | 04779 | One 20 Productions | 1,494.90 | Plant/Equipment Hire - Pioneers Luncheon |
| EF103320 | 30/07/26 | 04783 | Tetra Tech Coffey Pty Ltd (Prev Coffey Services Australia) | 4,170.10 | Professional Fees - Air Quality Assessment |
| EF103321 | 30/07/26 | 04813 | Aisha Novakovich | 700.00 | Music/Entertainment Expenses - Food Safari |
| EF103322 | 30/07/26 | 04917 | Environmental Industries Pty Ltd | 22,582.67 | Landscape Maintenance for Ascot Waters & COB Parks |
| EF103326 | 30/07/26 | 05090 | Elan Energy Matrix Pty Ltd | 694.85 | Rubbish Removals |
| EF103327 | 30/07/26 | 05190 | Mark Foote | 220.00 | Building Maintenance |
| EF103328 | 30/07/26 | 05252 | AAAC Towing Pty Ltd | 4,072.86 | Towing Vehicles |
| EF103329 | 30/07/26 | 05427 | Horizon West Landscape & Irrigation Pty Ltd | 16,854.93 | Gardening Maintenance - Various Locations |
| EF103331 | 30/07/26 | 05523 | Go Doors Pty Ltd | 5,553.37 | Building Maintenance |
| EF103332 | 30/07/26 | 05558 | BlueFit Pty Ltd | 76,053.26 | Oasis Management Subsidy - May 2026 |
| EF103333 | 30/07/26 | 05568 | Allstate Kerbing and Concrete | 10,490.69 | Kerbing Contractor - COB |
| EF103334 | 30/07/26 | 05623 | Tree Planting and Watering - Baroness Holdings | 51,867.14 | Street Tree Watering Services for CoB |
| EF103335 | 30/07/26 | 05692 | Newground Water Services Pty Ltd | 45,888.70 | Gardening Maintenance - Mowing |
| EF103336 | 30/07/26 | 05726 | Pool Robotics Perth | 21,844.96 | Plant Parts & Repairs - Oasis Pool Maintenance |
| EF103337 | 30/07/26 | 05771 | Alsco Pty Ltd | 213.03 | Cleaning Services |
| EF103339 | 30/07/26 | 05805 | Nature Play Solutions Pty Ltd | 74,454.60 | Professional Fees - Bilya Kard Boodja Lookout Nature Play |
| EF103340 | 30/07/26 | 05809 | Specialized Cleaning Group t/as Clean Sweep | 34,403.28 | Plant/Equipment Hire - Belmont Carparks |
| EF103342 | 30/07/26 | 05840 | Commercial Aquatics Australia Pty Ltd | 4,092.00 | Oasis Expenses - Monthly Maintenance |
| EF103343 | 30/07/26 | 05854 | Com-Al Windows Pty Ltrd | 3,537.60 | Window Treatments - Aluminium Pressings |
| EF103344 | 30/07/26 | 05944 | Delron Cleaning Pty Ltd - Ventia | 9,207.39 | Cleaning Services |
| EF103345 | 30/07/26 | 05951 | Cycling Without Age Australia Inc | 2,598.75 | Music/Entertainment Expenses - Kidz Fest |
| EF103348 | 30/07/26 | 06066 | Fiscus Consulting Pty Ltd | 1,277.10 | Reticulation Installation - Belvidere Street Revitalisation |
| EF103349 | 30/07/26 | 06091 | Engineering Technology Consultants | 3,300.00 | Professional Fees - Belvidere St Streetscape Revitalisation & Peet Park Lighting |
| EF103350 | 30/07/26 | 06094 | Boyan Electrical Services | 44,991.12 | Electrical Contractor - COB |
| EF103351 | 30/07/26 | 06104 | Flick Anticimex Pty Ltd | 2,458.49 | Pest Control |
| EF103352 | 30/07/26 | 06130 | Amalgam Recruitment | 489.59 | Labour/Personnel Hire |
| EF103354 | 30/07/26 | 06276 | Efficient Site Services (WA) | 47,743.85 | Building Construction - Belvidere Bollards & Hub Vegetation |

| Pmnt_Ref | Date | CR_Code | Supplier | Pmnt_Amnt | Description |
|---|---|---|---|---|---|
| EF103355 | 30/07/26 | 06282 | Dell Financial Services Pty Ltd | 13,087.93 | Computer Hardware - Lease Costs |
| EF103356 | 30/07/26 | 06293 | Freo Fire Maintenance Services Pty Ltd | 4,632.10 | Fire Equipment/Service |
| EF103357 | 30/07/26 | 06304 | Prestige Property Maintenance | 92,882.68 | Gardening Maintenance - Landscaping |
| EF103358 | 30/07/26 | 06345 | SoCo Studios - Travis Hayto Photography | 7,315.00 | Photography/Framing Expenses |
| EF103359 | 30/07/26 | 06362 | Marjan Partitions Pty Ltd t/as M & M Interiors | 22,174.00 | Building Construction - Independent Units Renovation |
| EF103360 | 30/07/26 | 06377 | Choiceone Pty Ltd | 48,612.24 | Labour/Personnel Hire |
| EF103361 | 30/07/26 | 06389 | Netstar Australia Pty Ltd | 286.00 | Security Services |
| EF103363 | 30/07/26 | 06425 | Vanessa Bray | 3,076.95 | Professional Fees - Workshop |
| EF103364 | 30/07/26 | 06468 | Perth Bouncy Castle Hire - The Fun Depot | 499.40 | Plant/Equipment Hire - Wiggles & Giggles |
| EF103365 | 30/07/26 | 06552 | Iconic Security Services Pty Ltd | 852.90 | Security Services |
| EF103366 | 30/07/26 | 06561 | Pinyo Fordham | 280.00 | Professional Fees - Marketing |
| EF103367 | 30/07/26 | 06580 | Omnicom Media Group | 12,286.95 | Advertising |
| EF103369 | 30/07/26 | 06591 | Blue Tang (WA) T/A The Reef Unit Trust | 12,540.00 | Professional Fees - Matheson Public Open Space |
| EF103370 | 30/07/26 | 06592 | Grosvenor Engineering Group | 28,919.73 | Electrical Contractor - COB |
| EF103373 | 30/07/26 | 06660 | Rehbein Consulting Pty Ltd | 6,325.00 | Building Inspection |
| EF103374 | 30/07/26 | 06662 | Tool Kit Depot | 1,295.09 | Tools/Tool Repairs |
| EF103377 | 30/07/26 | 06718 | Empire Roofing Services | 5,800.00 | Building Maintenance |
| EF103379 | 30/07/26 | 06874 | Bug Busters | 4,616.00 | Pest Control |
| EF103380 | 30/07/26 | 06884 | McLeods Lawyers | 14,858.31 | Legal Expenses |
| EF103381 | 30/07/26 | 06888 | Veolia Water Operations Pty Ltd T/A Allpipe Technologies | 10,195.28 | Building Maintenance - COB |
| EF103382 | 30/07/26 | 06900 | AMS Technology Group Pty Ltd - Maintenance | 6,295.30 | Airconditioning/Refrigeration Maintenance - COB |
| EF103383 | 30/07/26 | 06928 | Integrity Staffing | 3,228.59 | Labour/Personnel Hire |
| EF103384 | 30/07/26 | 06929 | Brett David Investments T/A Successful Projects | 8,360.70 | Professional Fees - Ornamental Lakes & Belvidere St |
| EF103385 | 30/07/26 | 06934 | Positively Green Pty Ltd | 7,222.31 | BSRC Bowling Green Maintenance |
| EF103387 | 30/07/26 | 06960 | Phase 3 Landscape Construction | 5,304.77 | Professional Fees - Wilson Park Zone2 & Faulkner Park Lake |
| EF103389 | 30/07/26 | 07005 | Verdex Equipment | 5,258.01 | Plant Parts & Repairs - Vacuum Cleaner |
| EF103390 | 30/07/26 | 07043 | Kinglarp Pty Ltd T/A The Pressure King | 31,343.89 | BBQ Cleaning - Various Locations |
| EF103391 | 30/07/26 | 07045 | Burgess Enterprises Australia T/A Kalamunda Electrics | 83,067.60 | Electrical Contractor - COB LED Lights Upgrade |
| EF103392 | 30/07/26 | 07061 | Zenith Search | 4,503.15 | Labour/Personnel Hire |
| EF103393 | 30/07/26 | 07062 | Horizon West Landscape Constructions | 77,911.90 | Gardening Maintenance - Landscaping |
| EF103394 | 30/07/26 | 07070 | Hoopla ANZ LLC | 470.35 | Library - Entertainment Expense - Econtents |
| EF103395 | 30/07/26 | 07114 | Michael Griffiths | 3,419.36 | Library - Entertainment Expense - After dark |
| EF103396 | 30/07/26 | 07119 | Maxey Plumbing Pty Ltd | 13,455.41 | Plumbing Maintenance/Supplies - COB Irrigation Fittings |
| EF103397 | 30/07/26 | 07120 | REALMSTUDIOS Pty Ltd | 19,877.55 | Professional Fees - Belmont Trust Land |
| EF103398 | 30/07/26 | 07143 | The Ortin Family Trust t/a Eastside Concrete | 35,942.50 | Building Maintenance - Stanton Rd Kerbing & Concrete |
| EF103399 | 30/07/26 | 07182 | Brightmark Group Pty Ltd | 3,808.75 | Cleaning Services - COB |
| EF103400 | 30/07/26 | 07235 | UGC Holdings Pty Ltd | 73,865.86 | Building Maintenance - Spraying & Mowing |
| EF103401 | 30/07/26 | 07243 | Gambara Pty Ltd | 3,311.00 | Environmental Expenses - Weed Control |
| EF103403 | 30/07/26 | 07257 | Sasha Wasley | 402.00 | Library - Entertainment Expense - Speaker Series |
| EF103404 | 30/07/26 | 07263 | WA Recycling Pty Ltd | 10,070.50 | Rubbish Removals |
| EF103405 | 30/07/26 | 07265 | BOS Civil | 712,108.43 | Building Construction - Belvidere Streetscape |
| EF103406 | 30/07/26 | 07282 | Yidarra Group Pty Ltd | 80,311.00 | Gardening Contractor - Volcano Park - Stage1 Water Play Claim 1 |
| EF103407 | 30/07/26 | 07283 | GPT Property Management Pty Ltd | 825.00 | Plant/Equipment Hire |
| EF103408 | 30/07/26 | 07290 | Dynamic Asset Consulting Pty Ltd | 1,558.33 | Professional Fees - Analysis |
| EF103409 | 30/07/26 | 07314 | S.J. Electric (WA) Pty Ltd | 550.00 | Electrical Contractor |
| EF103410 | 30/07/26 | 07333 | Piper Alderman | 15,519.75 | Legal Expenses - Ascot Waters Marina Lease |
| EF103411 | 30/07/26 | 07348 | AMS Technology Group Perth Pty Ltd - Projects | 16,629.47 | Plant Parts & Repairs - Chiller Unit Pipework |
| EF103412 | 30/07/26 | 07350 | Dec the Malls Pty Ltd | 4,583.34 | Plant/Equipment Hire - Christmas Lights |
| EF103413 | 30/07/26 | 07364 | Statewide Turf Pty Ltd | 24,656.99 | Gardening Contractor - Various Parks |
| EF103414 | 30/07/26 | 07365 | Hempfield Small Motor Service Pty Ltd | 1,509.45 | Plant Parts & Repairs |
| EF103415 | 30/07/26 | 07381 | Skill Hire WA Pty Ltd | 4,009.06 | Labour/Personnel Hire |
| EF103416 | 30/07/26 | 07384 | Trayd Australia Group Pty Ltd | 440.00 | Building Maintenance - Hub Door |
| | **Contractors Total** | | | **6,222,794.02** | |
| **Councillor Payments** | | | | | |
| EF103341 | 30/07/26 | 05828 | Deborah Sessions | 570.00 | Reimbursement - Childcare Fee |
| | **Councillor Payments Total** | | | **570.00** | |
| **Credit Card 2310** | | | | | |
| EF103122 | 21/07/26 | 03526 | Repco | 500.00 | Gratuity Gift to Employee |
| EF103122 | 21/07/26 | 03526 | Repco | 276.00 | Gratuity Gift to Employee |
| EF103122 | 21/07/26 | 03526 | Waivpay | 229.95 | Gratuity Gift to Employee |
| EF103122 | 21/07/26 | 03526 | Coles | 83.90 | Gift Cards - HSR Development Sessions |
| | **Credit Card 2310 Total** | | | **1,089.85** | |
| **Credit Card 4739** | | | | | |
| EF103124 | 21/07/26 | 06409 | Asic | 20.00 | Supplier - ASIC |
| EF103124 | 21/07/26 | 06409 | Australian Financial | 15.00 | Procurement due diligence |
| EF103124 | 21/07/26 | 06409 | Chat GPT | 58.10 | Subscription |
| EF103124 | 21/07/26 | 06409 | News | 36.00 | Subscription |
| EF103124 | 21/07/26 | 06409 | Endeavour Holdings | 323.34 | Beverages |
| | **Credit Card 4739 Total** | | | **452.44** | |
| **Credit Card 7563** | | | | | |
| EF103125 | 21/07/26 | 06834 | Children's Book Council of Australia | 137.25 | Books |
| EF103125 | 21/07/26 | 06834 | Dept of Justice | 194.30 | Legal Expenses |
| EF103125 | 21/07/26 | 06834 | Dept of Justice | 194.30 | Legal Expenses |
| EF103125 | 21/07/26 | 06834 | Dept of Justice | 194.30 | Legal Expenses |
| EF103125 | 21/07/26 | 06834 | Dept of Justice | 194.30 | Legal Expenses |
| EF103125 | 21/07/26 | 06834 | Bank fo I.D.E.A.S | 399.00 | Registration |
| EF103125 | 21/07/26 | 06834 | Baldavis Enchanted Florist | 80.00 | Flowers |
| | **Credit Card 7563 Total** | | | **1,393.45** | |
| **Credit Card 8380** | | | | | |
| EF103123 | 21/07/26 | 06342 | The Pin Factory | 785.05 | Citizenship Ceremony Flags |
| EF103123 | 21/07/26 | 06342 | Facebook | 68.00 | Advertising |
| EF103123 | 21/07/26 | 06342 | Facebook | 68.00 | Advertising |
| EF103123 | 21/07/26 | 06342 | The Telecom Warehouse | 584.91 | TIPT Handsets |
| EF103123 | 21/07/26 | 06342 | Campaign Monitor | 1,807.30 | Subscription |

| Pmnt_Ref | Date | CR_Code | Supplier | Pmnt_Amnt | Description |
|---|---|---|---|---|---|
| EF103123 | 21/07/26 | 06342 | Microsoft | 2,919.50 | Subscription |
| EF103123 | 21/07/26 | 06342 | Adobe | 43.99 | Subscription |
| EF103123 | 21/07/26 | 06342 | Twilio | 31.53 | Subscription |
| EF103123 | 21/07/26 | 06342 | Google | 17.09 | Subscription |
| EF103123 | 21/07/26 | 06342 | Facebook | 1,339.13 | Advertising |
| EF103123 | 21/07/26 | 06342 | Kmart | 238.00 | Microwave |
| | **Credit Card 8380 Total** | | | **7,902.50** | |
| **Credit Card 8670** | | | | | |
| EF103126 | 21/07/26 | 06849 | Cloud Cycles | 403.00 | e-Bike Service |
| EF103126 | 21/07/26 | 06849 | Institution of Engineers Australia | 640.00 | Membership |
| EF103126 | 21/07/26 | 06849 | Parking Novo Perth | 28.00 | Parking |
| | **Credit Card 8670 Total** | | | **1,071.00** | |
| **Fuels and Utilities** | | | | | |
| 788909 | 09/07/26 | 00392 | Department of Transport - Fleet Licensing | 400.00 | Vehicle Licences |
| EF102930 | 09/07/26 | 00323 | John Christie | 654.00 | Phone/Internet expenses |
| EF102941 | 09/07/26 | 01252 | Water Corporation | 2,044.76 | Water, Annual & Excess |
| EF102942 | 09/07/26 | 01274 | Synergy | 25,125.67 | Light, Power, Gas |
| EF102955 | 09/07/26 | 03592 | Steven Harling | 112.69 | Fuel, Oil, Additives |
| EF103047 | 17/07/26 | 01252 | Water Corporation | 21,235.75 | Water, Annual & Excess |
| EF103049 | 17/07/26 | 01274 | Synergy | 88,383.93 | Light, Power, Gas |
| EF103054 | 17/07/26 | 02631 | Ampol - Caltex | 25,302.33 | Fuel, Oil, Additives |
| EF103080 | 17/07/26 | 06424 | Telstra Limited | 3,938.90 | Phone/Internet expenses |
| 788910 | 24/07/26 | 00392 | Department of Transport - Fleet Licensing | 40,626.35 | Vehicle Licences Renewal to 31.07.27 |
| EF103127 | 24/07/26 | 00042 | Alinta Energy | 9,485.65 | Light, Power, Gas |
| EF103140 | 24/07/26 | 01252 | Water Corporation | 5,648.07 | Water, Annual & Excess |
| EF103160 | 24/07/26 | 06424 | Telstra Limited | 20,973.37 | Phone/Internet expenses |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3615 - Liberty Gosnell | 314.83 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 4660 - Reddy Express Beeliar | 207.30 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 1699 - BP Canningvale | 69.95 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8188 - Ampol Livingston | 234.15 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 0833 - BP Express Carlisle | 360.33 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 2494 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3273 - Ampol Rivervale | 4.95 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8319 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 7739 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 9733 - BP Express Carlisle | 122.78 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 0095 - BP Crystal Brook | 21.00 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5233 - BP Kewdale | 415.16 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 2432 -WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3277 - BP Welshpool | 225.00 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3454 - BP Welshpool | 215.05 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 1420 - Ampol Rivervale | 170.07 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5373 - Reddy Express Cloverdale | 164.49 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 6031 - Reddy Express Cloverdale | 286.31 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5786 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3572 - BP Express Carlisle | 199.14 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 9978 - BP Baldivis | 80.53 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 7867 - Reddy Express Cloverdale | 287.82 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 7483 -WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8198 - Reddy Express Cloverdale | 241.00 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 6813 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5612 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 9342 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5691 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5677 - BP Express Carlisle | 187.24 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3584 - BP Express Carlisle | 88.53 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 4115 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 9786 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8863 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8931 - BP Express Carlisle | 203.05 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5912 - BP Express Carlisle | 401.61 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 4559 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 2898 - BP Express Carlisle | 243.26 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5649 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 2391 - BP Connect Ascot | 222.92 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8473 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 9694 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3575 - BP Express Carlisle | 233.65 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5656 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 2011 - Altas Stratton | 128.94 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8301 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8390 - Caltex Bayswater | 71.46 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 2562 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 1492 - Ampol Belmont | 233.13 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 0330 - 7-Eleven Carlisle | 184.24 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3174 - 7 Eleven Carlisle | 155.20 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8960 - Liberty Gosnells | 145.85 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3579 - Reddy Express Cloverdale | 61.40 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 2323 - Reddy Express Cloverdale | 167.60 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 6256 - 7 eleven Carlisle | 585.45 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 7540 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 6156 - Ampol Willetton | 589.94 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 0916 - Reddy Express Cloverdale | 166.24 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 4488 - Ampol Applecross | 219.63 | Fuel, Oil, Additives |

| Pmnt_Ref | Date | CR_Code | Supplier | Pmnt_Amnt | Description |
|---|---|---|---|---|---|
| EF103165 | 24/07/26 | 06707 | Motorpass - 1877 - EG Greenwood | 162.39 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 0609 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3871 - BP Clarkson | 23.61 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 9171 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 4472 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 4743 -Pertro Shoalwaters | 32.05 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5161 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 0655 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 2651 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 7545 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5623 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 8780 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 9015 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 1773 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 9118 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 6175 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 5174 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 3902 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 1031 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 0844 - WEX Card Fee | 4.95 | Fuel, Oil, Additives |
| EF103165 | 24/07/26 | 06707 | Motorpass - 6918 - WEX Card Fee | 4.50 | Fuel, Oil, Additives |
| EF103190 | 30/07/26 | 00042 | Alinta Energy | 328.50 | Light, Power, Gas |
| EF103273 | 30/07/26 | 02474 | Digital Marketing Australia - Captivate Connect | 880.00 | Phone/Internet expenses |
| EF103362 | 30/07/26 | 06424 | Telstra Limited | 7,838.53 | Phone/Internet expenses |
| EF103371 | 30/07/26 | 06614 | Oracle Customer Management Solutions | 7,573.41 | Phone/Internet expenses |
| EF103376 | 30/07/26 | 06713 | Powerlyt Group | 2,849.00 | Light, Power, Gas |
| | **Fuels and Utilities Total** | | | **271,704.11** | |
| **Materials** | | | | | |
| EF102926 | 09/07/26 | 00203 | BOC Gases Australia Ltd | 299.95 | Welding Equipment/Supplies |
| EF102927 | 09/07/26 | 00220 | Burswood Trophies | 129.80 | Badges & Pendants |
| EF102929 | 09/07/26 | 00317 | Coles Supermarkets Aust Pty Ltd | 627.71 | Groceries |
| EF102943 | 09/07/26 | 01474 | Natsync Environmental | 8,900.00 | Gardening - Plants/Supplies |
| EF102946 | 09/07/26 | 01945 | Rynat Industries Australia | 249.08 | Building Material |
| EF102948 | 09/07/26 | 02201 | Neverfail Springwater Limited | 33.80 | Beverages |
| EF102953 | 09/07/26 | 03528 | Plantrite | 3,394.82 | Gardening - Plants/Supplies |
| EF102956 | 09/07/26 | 03660 | Safe T Card Australia Pty Ltd | 53.90 | Safety Clothing/Equipment |
| EF102962 | 09/07/26 | 04491 | Woolworths Group - Functions/Catering only | 299.03 | Groceries |
| EF102976 | 09/07/26 | 06484 | Gould Genealogy & History | 92.95 | Books/CDs/DVDs |
| EF102978 | 09/07/26 | 06535 | ActiveXchange Pty Ltd | 9,652.50 | Computer Software - Annual License Fee |
| EF102987 | 09/07/26 | 06800 | The Aivish Family Trust T/as Fruit Break | 2,866.03 | Groceries |
| EF103003 | 09/07/26 | 07096 | Melbourne Bicycle Centre Prahran | 5,980.00 | Safety Clothing/Equipment - Locks |
| EF103009 | 09/07/26 | 07167 | Khodal Krupa WA | 116.90 | Publications/Newspapers |
| EF103013 | 09/07/26 | 07308 | Crow Books T/A Frogmouth (WA) Pty Ltd | 377.89 | Books/CDs/DVDs |
| EF103035 | 17/07/26 | 00220 | Burswood Trophies | 282.70 | Badges & Pendants |
| EF103036 | 17/07/26 | 00231 | Bunnings Group Ltd | 37.00 | Hardware |
| EF103037 | 17/07/26 | 00317 | Coles Supermarkets Aust Pty Ltd | 926.84 | Groceries |
| EF103042 | 17/07/26 | 00832 | Officeworks | 296.25 | Stationery & Printing |
| EF103043 | 17/07/26 | 00883 | The Perth Mint | 2,786.30 | Badges & Pendants - Citizenship |
| EF103048 | 17/07/26 | 01263 | West Australian Newspapers Ltd | 209.99 | Publications/Newspapers |
| EF103052 | 17/07/26 | 02201 | Neverfail Springwater Limited | 109.10 | Beverages |
| EF103056 | 17/07/26 | 02869 | Customer Service Benchmarking Australia Pty Ltd | 13,062.50 | Publications/Newspapers - Customer Centricity Audit |
| EF103061 | 17/07/26 | 03528 | Plantrite | 641.30 | Gardening - Plants/Supplies |
| EF103064 | 17/07/26 | 04491 | Woolworths Group - Functions/Catering only | 564.13 | Groceries |
| EF103065 | 17/07/26 | 04537 | Cameron Aitkenhead t/as Head Office Studio | 9,900.00 | Books/CDs/DVDs |
| EF103070 | 17/07/26 | 05521 | Bilby Publishing & Consulting | 65.90 | Books/CDs/DVDs |
| EF103079 | 17/07/26 | 06385 | Belmont Liquor Store (Cellarbrations at Belmont) | 174.00 | Beverages |
| EF103099 | 17/07/26 | 07190 | Green Plant Enterprises Pty Ltd - Bloomin Boxes | 247.50 | Flowers |
| EF103102 | 17/07/26 | 07254 | Chefmaster Australia | 628.29 | Cleaning Products |
| EF103129 | 24/07/26 | 00231 | Bunnings Group Ltd | 21,808.62 | Gardening - SCRUF 2 Project ,Native Plants |
| EF103130 | 24/07/26 | 00317 | Coles Supermarkets Aust Pty Ltd | 705.20 | Groceries |
| EF103145 | 24/07/26 | 02320 | Ambius Indoor Plants | 694.98 | Gardening - Plants/Supplies |
| EF103178 | 24/07/26 | 07376 | Health Management Group Pty Ltd T/as Dementia Shop | 898.57 | Toys |
| EF103192 | 30/07/26 | 00185 | Benara Nurseries | 50,718.96 | Gardening - Plants/Supplies - Street Tress & Replacement Plants |
| EF103197 | 30/07/26 | 00231 | Bunnings Group Ltd | 1,856.06 | Hardware |
| EF103198 | 30/07/26 | 00233 | Bunzl Limited | 10,768.89 | Cleaning Products |
| EF103199 | 30/07/26 | 00285 | City of Armadale | 3,094.78 | Stationery & Printing |
| EF103205 | 30/07/26 | 00406 | Domus Nursery | 33,789.71 | Gardening - 2026 Streetscape Enhancement Plant |
| EF103207 | 30/07/26 | 00414 | Dulux Australia | 333.76 | Paint & Accessories |
| EF103208 | 30/07/26 | 00475 | Saferight Pty Ltd | 460.00 | Safety Clothing/Equipment |
| EF103214 | 30/07/26 | 00617 | Jacksons Drawing Supplies Pty Ltd | 850.51 | Craft/Display Materials |
| EF103215 | 30/07/26 | 00627 | Jason Signmakers | 19,852.97 | Signs -Tomato Lake |
| EF103221 | 30/07/26 | 00850 | Pacific Safety Wear Malaga | 2,949.34 | Safety Clothing/Equipment |
| EF103227 | 30/07/26 | 01031 | Brady Australia Pty Ltd T/As Seton Australia | 222.34 | Safety Clothing/Equipment |
| EF103229 | 30/07/26 | 01083 | SERCUL South East Regional Centre for Urban Landcare | 2,768.37 | Gardening - Plants/Supplies |
| EF103230 | 30/07/26 | 01085 | OHS Alert - Specialist News Pty Ltd | 1,089.00 | Publications/Newspapers |
| EF103237 | 30/07/26 | 01206 | Access Icon Pty Ltd t/a Cascada | 15,733.30 | Concrete Products |
| EF103241 | 30/07/26 | 01265 | Westbooks | 1,526.34 | Books/CDs/DVDs |
| EF103244 | 30/07/26 | 01325 | Poolegrave Signs and Engraving | 99.00 | Signs |
| EF103247 | 30/07/26 | 01398 | Winc Australia Pty Ltd | 2,805.97 | Stationery & Printing |
| EF103248 | 30/07/26 | 01426 | Sprayline Spraying Equipment | 117.04 | Gardening - Plants/Supplies |
| EF103250 | 30/07/26 | 01547 | Big W | 173.80 | Craft/Display Materials |
| EF103251 | 30/07/26 | 01570 | Blackwoods | 1,919.89 | Hardware |
| EF103256 | 30/07/26 | 01983 | Whistlers Products Pty Ltd | 567.40 | Groceries |
| EF103258 | 30/07/26 | 02088 | Lock Stock & Farrell Locksmith | 2,734.10 | Hardware |

| Pmnt_Ref | Date | CR_Code | Supplier | Pmnt_Amnt | Description |
|---|---|---|---|---|---|
| EF103259 | 30/07/26 | 02168 | Ergolink | 2,486.01 | Stationery & Printing |
| EF103266 | 30/07/26 | 02320 | Ambius Indoor Plants | 694.98 | Gardening - Plants/Supplies |
| EF103271 | 30/07/26 | 02431 | Look Brilliant Pty Ltd | 3,837.46 | Promotional Items |
| EF103272 | 30/07/26 | 02459 | A1 Steel & Alloy | 687.50 | Metal Goods |
| EF103274 | 30/07/26 | 02498 | City of South Perth | 3,850.99 | Books/CDs/DVDs |
| EF103276 | 30/07/26 | 02649 | ALS Library Services Pty Ltd | 12.74 | Books/CDs/DVDs |
| EF103282 | 30/07/26 | 02862 | James Bennett Pty Ltd | 1,013.78 | Books/CDs/DVDs |
| EF103284 | 30/07/26 | 02912 | Sanity Music Stores Pty Ltd | 637.06 | Books/CDs/DVDs |
| EF103287 | 30/07/26 | 03117 | Six Axis Nominees T/A OCP Sales | 450.45 | Safety Clothing/Equipment |
| EF103289 | 30/07/26 | 03144 | COS Complete Office Supplies Pty Ltd | 3,118.30 | Stationery & Printing |
| EF103300 | 30/07/26 | 04053 | Totally Workwear TWW | 1,123.26 | Safety Clothing/Equipment |
| EF103302 | 30/07/26 | 04145 | T J Depiazzi and Sons | 10,905.80 | Gardening - Plants/Supplies |
| EF103312 | 30/07/26 | 04491 | Woolworths Group - Functions/Catering only | 190.69 | Groceries |
| EF103318 | 30/07/26 | 04759 | StrataGreen | 4,590.22 | Gardening - Plants/Supplies |
| EF103324 | 30/07/26 | 05055 | Statewide Cleaning Supplies | 1,330.36 | Cleaning Products |
| EF103325 | 30/07/26 | 05082 | Accidental Health and Safety Perth | 1,598.44 | Medical/First Aid Supplies |
| EF103330 | 30/07/26 | 05465 | QBD Books | 682.53 | Books/CDs/DVDs |
| EF103338 | 30/07/26 | 05790 | One Shade Sails | 9,735.00 | Gardening - Plants/Supplies - Shade Sail |
| EF103346 | 30/07/26 | 05992 | Corsign WA | 269.50 | Signs |
| EF103347 | 30/07/26 | 06005 | MDM Entertainment Pty Ltd | 127.47 | Books/CDs/DVDs |
| EF103353 | 30/07/26 | 06234 | Brandworx Australia | 6,426.75 | Uniforms |
| EF103368 | 30/07/26 | 06589 | OverDrive Australia Pty Ltd | 389.98 | Books/CDs/DVDs |
| EF103375 | 30/07/26 | 06681 | Prefet Pty Ltd T/A Minuteman Press Perth | 1,581.80 | Stationery & Printing |
| EF103378 | 30/07/26 | 06844 | Print and Sign Co | 3,262.71 | Stationery & Printing |
| EF103386 | 30/07/26 | 06957 | Booktopia Direct | 122.87 | Books/CDs/DVDs |
| EF103388 | 30/07/26 | 06969 | ABCO Products | 756.58 | Cleaning Products |
| EF103402 | 30/07/26 | 07254 | Chefmaster Australia | 1,706.42 | Cleaning Products |
| | **Materials Total** | | | **303,134.71** | |
| **Other** | | | | | |
| EF102928 | 09/07/26 | 00292 | City of Belmont State Emergency Service Inc | 7,762.85 | State Emergency Services Expense |
| EF102934 | 09/07/26 | 00441 | Records & Information Management Practitioners Alliance | 698.50 | Subscription |
| EF102936 | 09/07/26 | 00610 | ID Consulting Pty Ltd | 15,290.00 | Subscription |
| EF102944 | 09/07/26 | 01599 | WA Rangers Association Inc | 125.00 | Membership Fee |
| EF102950 | 09/07/26 | 02366 | Jacaranda Community Centre Inc | 10,000.00 | Donation - Naidoc Family Day |
| EF102957 | 09/07/26 | 03760 | Wilmot Loh | 402.90 | Reimbursements - Expense of Office |
| EF102959 | 09/07/26 | 04079 | Belmont Men's Shed Inc | 990.00 | Grants General |
| EF102981 | 09/07/26 | 06613 | Host Tel | 145.00 | State Emergency Services Expense |
| EF103001 | 09/07/26 | 07055 | Jack Bidwell | 2,506.97 | Staff Reimbursement - Conference |
| EF103012 | 09/07/26 | 07267 | Prasad Dharmadhikari | 6.18 | Staff Reimbursement - Stationery |
| EF103019 | 09/07/26 | 07382 | Benjamin Houweling | 34.33 | Staff Reimbursement - Parking |
| EF103020 | 09/07/26 | 07383 | Leonie Mann | 87.00 | Staff Reimbursement - Working With Children |
| EF103021 | 09/07/26 | 99998 | Ashburton Aboriginal Corporation | 2,000.00 | Grants General - Naidoc Week |
| EF103022 | 09/07/26 | 99998 | Tory D'Alessio | 900.00 | Sports Donation |
| EF103023 | 09/07/26 | 99998 | Christopher Thomas | 900.00 | Sports Donation |
| EF103024 | 09/07/26 | 99998 | Lexi Walters | 900.00 | Sports Donation |
| EF103025 | 09/07/26 | 99998 | Kaung Kyaw | 500.00 | Sports Donation |
| EF103026 | 09/07/26 | 99998 | Kayleb Win | 900.00 | Sports Donation |
| EF103027 | 09/07/26 | 99998 | Ava Win | 500.00 | Sports Donation |
| EF103028 | 09/07/26 | 99998 | Perth Patio Magic | 147.00 | Application Fee |
| EF103029 | 09/07/26 | 99998 | Complete Approvals | 147.00 | Application Fee |
| EF103030 | 09/07/26 | 99998 | Dept of Treasury & Finance | 126.60 | ESL Rebate |
| EF103031 | 09/07/26 | 99998 | Davley Building | 295.00 | Application Fee |
| EF103040 | 17/07/26 | 00793 | LGIS Insurance Broking - JLT | 5,624.86 | Insurance Premiums |
| EF103046 | 17/07/26 | 01244 | Western Australian Treasury Corporation | 36,561.95 | Loan Repayment - Guarantee Fee June 2026 |
| EF103055 | 17/07/26 | 02827 | Cloverdale Canine Companions Inc | 119.00 | Community Contribution Fund |
| EF103058 | 17/07/26 | 03393 | Cloverdale Comets Diamond Sports Association | 130.00 | Donation |
| EF103063 | 17/07/26 | 03960 | Befriend Inc | 4,592.50 | Grants General - Community Leadership Support |
| EF103067 | 17/07/26 | 04595 | Copyright Agency Limited | 6,432.69 | Subscription |
| EF103089 | 17/07/26 | 06858 | Mario Murphy | 296.32 | Staff Reimbursement - Membership Fee |
| EF103093 | 17/07/26 | 06986 | GrantGuru Pty Ltd ATF The Spencer Family Trust | 5,390.00 | Subscription |
| EF103095 | 17/07/26 | 07159 | Long Jetty Holdings Pty Ltd t/as Bathers Beach | 341.00 | Sister City Expenses |
| EF103110 | 17/07/26 | 99998 | Wayne Apollos | 878.53 | Rates Refund |
| EF103111 | 17/07/26 | 99998 | H & C International | 2,902.88 | Rates Refund |
| EF103112 | 17/07/26 | 99998 | PTL International | 272.11 | Rates Refund |
| EF103113 | 17/07/26 | 99998 | Dawn Patricia Hughes | 566.41 | Application Fee |
| EF103114 | 17/07/26 | 99998 | Complete Approvals | 147.00 | Application Fee |
| EF103115 | 17/07/26 | 99998 | CIK Investments | 255.68 | Rates Refund |
| EF103116 | 17/07/26 | 99998 | Teagan Scott | 500.00 | Sports Donation |
| EF103117 | 17/07/26 | 99998 | Natalia Vollrath Hale | 500.00 | Sports Donation |
| EF103118 | 17/07/26 | 99998 | Joey Scott | 500.00 | Sports Donation |
| EF103119 | 17/07/26 | 99998 | Bree Taia | 400.00 | Application Fee |
| EF103120 | 17/07/26 | 99998 | Wanpat | 147.00 | Application Fee |
| EF103121 | 17/07/26 | 01236 | Department of Fire and Emergency Services | 29,086.00 | Emergency Services Levy June 2026 |
| EF103141 | 24/07/26 | 01711 | Irrigation Australia Ltd | 2,500.00 | Membership Fee |
| EF103147 | 24/07/26 | 03071 | Department of Transport - Vehicle Owner Searches | 887.40 | Vehicle Ownership Searches |
| EF103148 | 24/07/26 | 03453 | Clare Bridges | 2,000.00 | Reimbursements - Expense of Office |
| EF103163 | 24/07/26 | 06474 | Vend Ltd | 831.86 | Subscription |
| EF103164 | 24/07/26 | 06477 | Bruce Mentz | 17.90 | Staff Reimbursement - Batteries |
| EF103184 | 24/07/26 | 99998 | Anthony James Morrissey | 514.56 | Rates Refund |
| EF103185 | 24/07/26 | 99998 | Cayden Wedge | 900.00 | Sports Donation |
| EF103186 | 24/07/26 | 99998 | Davis Resources | 147.00 | Application Fee |
| EF103187 | 24/07/26 | 99998 | Wanpat | 147.00 | Application Fee |
| EF103188 | 24/07/26 | 99998 | Tracy & David Ryan | 11.00 | Working With Children |
| EF103189 | 24/07/26 | 99998 | Ling Tam | 11.00 | Working With Children |

| Pmnt_Ref | Date | CR_Code | Supplier | Pmnt_Amnt | Description |
|---|---|---|---|---|---|
| EF103191 | 30/07/26 | 00116 | OneMusic - Australasian Performing Right Assoc | 9,122.47 | Subscription |
| EF103219 | 30/07/26 | 00795 | LGISWA | 636,629.77 | Insurance Premiums 2026-2027 |
| EF103417 | 30/07/26 | 99998 | Julie A Taylor | 877.50 | Crossover Subsidy |
| EF103418 | 30/07/26 | 99998 | Australia Post Platinum Mastercard | 2,000.00 | Adachi 2026 |
| | **Other Total** | | | **797,605.72** | |
| **Property, Plant & Equipment** | | | | | |
| EF102947 | 09/07/26 | 02090 | Woodlands Distributors & Agencies | 372.90 | Street Furniture - Drink Fountain |
| EF103007 | 09/07/26 | 07148 | Digital Imaging Express Pty Ltd | 638.95 | Computer Hardware |
| EF103017 | 09/07/26 | 07377 | Locktec Australia Pty Ltd | 138.90 | Computer Hardware |
| EF103038 | 17/07/26 | 00624 | IKEA Pty Ltd | 439.89 | Office Furniture |
| EF103071 | 17/07/26 | 05769 | Stylecraft Australia | 2,904.00 | Office Furniture - HUB |
| EF103262 | 30/07/26 | 02254 | PLE Computers | 275.00 | Computer Hardware |
| EF103265 | 30/07/26 | 02310 | Exteria Pty Ltd - Landmark Engineering | 5,804.70 | Street Furniture - Parks |
| EF103299 | 30/07/26 | 03994 | BFX Furniture Pty Ltd | 6,577.84 | Office Furniture - Sensory Booths |
| EF103301 | 30/07/26 | 04132 | Castledex Pty Ltd | 23,815.00 | Office Furniture - Library |
| EF103372 | 30/07/26 | 06640 | Arteil (WA) Pty Ltd | 1,009.02 | Office Furniture |
| | **Property, Plant & Equipment Total** | | | **41,976.20** | |
| **Salaries/Wages** | | | | | |
| SL020726 | 02/07/26 | COB | City of Belmont Payroll | 838,492.04 | Salaries/Wages |
| EF102925 | 03/07/26 | 99971 | SuperChoice | 179,457.22 | Superannuation Contribution |
| SL080726 | 09/07/26 | COB | City of Belmont Payroll | 22,690.03 | Salaries/Wages |
| WG080726 | 09/07/26 | COB | City of Belmont Payroll | 177,661.73 | Salaries/Wages |
| SL150726 | 16/07/26 | COB | City of Belmont Payroll | 859,309.95 | Salaries/Wages |
| WG220726 | 23/07/26 | COB | City of Belmont Payroll | 174,061.28 | Salaries/Wages |
| EF103181 | 24/07/26 | 99952 | Child Support Agency | 4,265.50 | Salaries/Wages |
| EF103182 | 24/07/26 | 99954 | City of Belmont Social Club | 910.00 | Salaries/Wages |
| EF103183 | 24/07/26 | 99962 | LGRCEU - WA Shire Councils Union | 132.00 | Salaries/Wages |
| | **Salaries/Wages Total** | | | **2,256,979.75** | |
| **Training and Conferences** | | | | | |
| EF102939 | 09/07/26 | 00953 | Planning Institute of Australia Limited | 2,922.00 | Training - PIA WA State Conference |
| EF102940 | 09/07/26 | 01197 | Helloworld Travel Belmont WA | 989.00 | Travel Expense - After Dark |
| EF102983 | 09/07/26 | 06741 | EEO Specialists | 5,445.00 | Training - Unlawful Workplace Behaviours Workshop |
| EF103085 | 17/07/26 | 06741 | EEO Specialists | 5,445.00 | Training - Unlawful Workplace Behaviours Workshop |
| EF103098 | 17/07/26 | 07169 | Ubuntu Australia Inc | 1,000.00 | Training |
| EF103132 | 24/07/26 | 00602 | Local Government Professionals Australia WA | 7,650.00 | Conference Expenses - Membership & Workshops |
| EF103137 | 24/07/26 | 01197 | Helloworld Travel Belmont WA | 11,016.00 | Library Entertainment - After dark |
| EF103138 | 24/07/26 | 01240 | WA Local Government Association | 682.00 | Training |
| EF103146 | 24/07/26 | 02439 | Down to Earth Training & Assessing | 2,100.00 | Training |
| EF103180 | 24/07/26 | 07397 | A Plus Training Solutions Pty Ltd | 1,650.00 | Training |
| EF103212 | 30/07/26 | 00595 | Work Health & Safety Foundation (Previously IFAP) | 5,940.00 | Training - Emergency Evacuation Process |
| EF103252 | 30/07/26 | 01605 | ATM Australian Training Management | 1,425.00 | Training |
| EF103278 | 30/07/26 | 02685 | SLR Consulting Australia Pty Ltd | 6,053.99 | Archival Record |
| EF103323 | 30/07/26 | 04977 | Workmate Training Academy Pty Ltd | 1,510.00 | Training |
| | **Training and Conferences Total** | | | **53,827.99** | |
| **MUNI Total** | | | | **9,960,501.74** | |
| **Trust Funds** | | | | | |
| EF103032 | 10/07/26 | 154102 | Building and Energy - Building Services Levy | 54,243.36 | Building and Energy - Building Services Levy |
| EF103033 | 10/07/26 | 164040 | Department of Planning DAP fees | 271.00 | Department of Planning DAP fees |
| | **Trust Funds Total** | | | **54,514.36** | |
| **TRUST Total** | | | | **54,514.36** | |
| | | | | | |
| | | | | | |
| **Grand Total** | | | | **10,015,016.10** | |
| | | | | | |
| | | | | | |
| | | | | 10,015,016.10 | |
| | | | | | |
| | | | Breakdown - Cheques : | 41,026.35 | |
| | | | EFT : | 9,973,989.75 | |

# 12.11 Monthly Financial Report for July 2026

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 32/009 Financial Operating Statements |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Corporate and Governance |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

To provide Council with relevant monthly financial information for the 2026-27 financial year.

## Summary and key issues

The following report includes a concise list of material variances for the month ending 31 July 2026.

| Officer Recommendation |
|---|
| That the Monthly Financial Reports as at 31 July 2026 as included in Attachment 12.11.1 be received. |

## Location

Not applicable.

## Consultation

There has been no specific consultation undertaken in respect to this matter.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

Section 6.4 of the *Local Government Act 1995 (WA)* (the Act) in conjunction with Regulations 34 (1) of the *Local Government (Financial Management) Regulations 1996 (WA)* (the Regulations) requires monthly financial reports to be presented to Council.

Regulation 34(1) requires a monthly Statement of Financial Activity reporting on revenue and expenditure.

Regulation 34(5) determines the mechanism required to ascertain the definition of material variances which are required to be reported to Council as a part of the monthly report.

## Background

The Regulations prescribe that a Local Government is to prepare each month a Statement of Financial Activity.

Regulation 34(2) requires the Statement of Financial Activity to be accompanied by documents containing:

1. Explanation for each material variance identified between year to date budgets and actuals
2. Any other supporting information considered relevant by the Local Government.

Regulation 34 (5) states that "Each financial year, a Local Government is to adopt a percentage or value, calculated in accordance with the Australian

Accounting Standards, to be used in statements of financial activity for reporting material variances."

This regulation requires Council to annually set a materiality threshold for the purpose of disclosing budget variances within monthly financial reporting.

The materiality threshold has been set by Council at $100,000 for the 2026-27 financial year.

## Report

At the June 2026 Ordinary Council Meeting, Council adopted the materiality threshold for the 2026-27 financial year as $100,000. The table below provides a summary of significant variances based on this materiality threshold. The detailed financial activity report is included at Attachment 12.11.1.

| Report Section | Budget YTD | Actual YTD | Report Comments |
|---|---|---|---|
| **OPERATING ACTIVITIES** | | | |
| **Revenue from operating activities** | | | |
| **Fees and charges** | | | |
| Works | Nil | 8,855,068 | Income from sanitation fees to be received via rates notices. |
| Safer Communities | 90,417 | 205,750 | Higher than anticipated income for month from pool levies, building applications and health related licence renewals. |
| **Interest earnings** | | | |
| Finance | 432,038 | 566,401 | Higher than anticipated closing balance for the previous financial year. |
| **Expenditure from operating activities** | | | |
| **Materials and contracts** | | | |
| Information Technology | (908,928) | (168,203) | Core Finance/ECM invoice for $493K currently being processed, with some end of year adjustments still pending. |
| Works | (142,726) | (23,331) | Invoices from contractors engaged to be received. |

| Report Section | Budget YTD | Actual YTD | Report Comments |
|---|---|---|---|
| City Facilities & Property | (283,296) | (112,504) | Variance arising from timing of invoices and Project Scheduling. |
| Economic & Community Development | (226,957) | (63,456) | Expenditure associated with several city funded Community and Economic programs has not yet occurred. |
| **Insurance Expenses** | | | |
| Governance, Strategy & Risk | 456,713 | 204,575 | First of 2 insurance instalments paid, with the second due in October. |
| **INVESTING ACTIVITIES** | | | |
| **Inflows from investing activities** | | | |
| **Non-Operating grants, subsidies and contributions** | | | |
| City Projects | 1,249,000 | 1,007,333 | Timing of Peet Park funding payments. |
| **Payments for construction of infrastructure** | | | |
| Works | (178,355) | (46,089) | Invoices for projects completed to be received. |
| City Projects | (1,290,420) | (950,719) | Peet Park lighting schedule amendment – works will commence in October. |
| Parks, Leisure & Environment | Nil | (393,953) | Works brought forward |

## Financial implications

The presentation of these reports to Council ensures compliance with the Act and associated Regulations, and also ensures that Council is regularly informed as to the status of its financial position.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
| --- |
| 1. Monthly Financial Report July 2026 [**12.11.1** - 12 pages] |

# CITY OF BELMONT

## MONTHLY FINANCIAL REPORT

**(Containing the required statement of financial activity and statement of financial position)**

**For the period ended 31 July 2026**

***LOCAL GOVERNMENT ACT 1995***
***LOCAL GOVERNMENT (FINANCIAL MANAGEMENT) REGULATIONS 1996***

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## CITY OF BELMONT
## STATEMENT OF FINANCIAL ACTIVITY
## FOR THE PERIOD ENDED 31 JULY 2026

| | Note | Adopted Budget Estimates (a) | YTD Budget Estimates (b) | YTD Actual (c) | Variance* $ (c) - (b) | Variance* % ((c) - (b))/(b) | Var. |
|---|---|---|---|---|---|---|---|
| | | $ | $ | $ | $ | % | |
| **OPERATING ACTIVITIES** | | | | | | | |
| **Revenue from operating activities** | | | | | | | |
| General rates | | 50,796,377 | 51,253,649 | **53,002,690** | 1,749,041 | 3.41% | ▲ |
| Rates excluding general rates | | 16,400,452 | 15,404,701 | **20,392,279** | 4,987,578 | 32.38% | ▲ |
| Grants, subsidies and contributions | | 2,922,034 | 28,894 | **127,644** | 98,750 | 341.77% | ▲ |
| Fees and charges | | 13,305,261 | 367,993 | **9,274,139** | 8,906,146 | 2420.19% | ▲ |
| Interest revenue | | 5,374,459 | 432,038 | **566,400** | 134,362 | 31.10% | ▲ |
| Other revenue | | 822,346 | 54,276 | **116,021** | 61,745 | 113.76% | ▲ |
| Profit on asset disposals | | 58,893 | 20,360 | **0** | (20,360) | (100.00%) | ▼ |
| | | **89,679,822** | **67,561,911** | **83,479,173** | **15,917,262** | 23.56% | |
| **Expenditure from operating activities** | | | | | | | |
| Employee costs | | (33,058,729) | (4,005,942) | **(3,596,507)** | 409,435 | 10.22% | ▲ |
| Materials and contracts | | (40,596,099) | (2,449,766) | **(1,085,148)** | 1,364,618 | 55.70% | ▲ |
| Utility charges | | (2,577,717) | (90,573) | **(92,458)** | (1,885) | (2.08%) | ▼ |
| Depreciation | | (12,939,021) | (1,072,832) | **(1,072,832)** | 0 | 0.00% | |
| Finance costs | | (457,771) | 0 | **0** | 0 | | |
| Insurance | | (716,966) | 67,140 | **(185,907)** | (253,047) | (376.89%) | ▼ |
| Other expenditure | | (1,655,514) | (115,192) | **(116,279)** | (1,087) | (0.94%) | ▼ |
| Loss on asset disposals | | (84,989) | (23,780) | **0** | 23,780 | 100.00% | ▲ |
| | | **(92,086,806)** | **(7,690,945)** | **(6,149,131)** | **1,541,814** | 20.05% | |
| Amounts excluded from operating activities | 2(c) | 12,965,117 | 1,076,252 | **1,088,764** | 12,512 | 1.16% | ▲ |
| **Amount attributable to operating activities** | | **10,558,133** | **60,947,218** | **78,418,806** | **17,471,588** | 28.67% | |
| **INVESTING ACTIVITIES** | | | | | | | |
| **Inflows from investing activities** | | | | | | | |
| Proceeds from capital grants, subsidies and contributions | | 8,650,508 | 1,253,167 | **1,044,271** | (208,896) | (16.67%) | ▼ |
| Proceeds from disposal of property, plant and equipment | | 596,547 | 0 | **0** | 0 | | |
| Proceeds from disposal financial assets at amortised cost - term deposits | | 0 | 0 | **5,745,808** | 5,745,808 | | ▲ |
| | | **9,247,055** | **1,253,167** | **6,790,079** | **5,536,912** | 441.83% | |
| **Outflows from investing activities** | | | | | | | |
| Acquisition of property, plant and equipment | | (6,470,360) | (92,493) | **(2,710)** | 89,783 | 97.07% | ▲ |
| Acquisition of infrastructure | | (25,959,394) | (1,468,776) | **(945,299)** | 523,477 | 35.64% | ▲ |
| | | **(32,429,754)** | **(1,561,269)** | **(948,009)** | **613,260** | 39.28% | |
| Amounts excluded from investing activities | 2(d) | 0 | 0 | **(5,745,808)** | (5,745,808) | | ▼ |
| **Amount attributable to investing activities** | | **(23,182,699)** | **(308,102)** | **96,262** | **404,364** | 131.24% | |
| **FINANCING ACTIVITIES** | | | | | | | |
| **Inflows from financing activities** | | | | | | | |
| Transfer from reserves | | 14,676,834 | 0 | **0** | 0 | | |
| | | **14,676,834** | **0** | **0** | **0** | | |
| **Outflows from financing activities** | | | | | | | |
| Repayment of borrowings | | (692,211) | 0 | **0** | 0 | | |
| Payments for principal portion of lease liabilities | | (44,713) | 0 | **0** | 0 | | |
| Transfer to reserves | | (4,136,463) | 0 | **0** | 0 | | |
| | | **(4,873,387)** | **0** | **0** | **0** | | |
| **Amount attributable to financing activities** | | **9,803,447** | **0** | **0** | **0** | | |
| **MOVEMENT IN SURPLUS OR DEFICIT** | | | | | | | |
| **Surplus or deficit at the start of the financial year** | 2(a) | 3,321,119 | 3,321,119 | **(5,051,036)** | (8,372,155) | (252.09%) | ▼ |
| Amount attributable to operating activities | | 10,558,133 | 60,947,218 | **78,418,806** | 17,471,588 | 28.67% | ▲ |
| Amount attributable to investing activities | | (23,182,699) | (308,102) | **96,262** | 404,364 | 131.24% | ▲ |
| Amount attributable to financing activities | | 9,803,447 | 0 | **0** | 0 | | |
| **Surplus or deficit after imposition of general rates** | | **500,000** | **63,960,235** | **73,464,032** | **9,503,797** | 14.86% | ▲ |

**KEY INFORMATION**

▲▼ Indicates a variance between Year to Date (YTD) Budget and YTD Actual data outside the adopted materiality threshold.

▲ Indicates a variance with a positive impact on the financial position.
▼ Indicates a variance with a negative impact on the financial position.

Refer to Note 3 for an explanation of the reasons for the variance.

This statement is to be read in conjunction with the accompanying notes.

## CITY OF BELMONT
## STATEMENT OF FINANCIAL POSITION
## FOR THE PERIOD ENDED 31 JULY 2026

| | Actual 30 June 2026 | Actual as at 31 July 2026 |
|---|---|---|
| | $ | $ |
| **CURRENT ASSETS** | | |
| Cash and cash equivalents | 78,789,448 | 76,612,282 |
| Trade and other receivables | 4,427,427 | 95,053,814 |
| Other financial assets | 6,666,791 | 920,983 |
| Inventories | 283,404 | 302,606 |
| Other assets | 3,706,661 | 3,983,802 |
| **TOTAL CURRENT ASSETS** | 93,873,731 | 176,873,487 |
| **NON-CURRENT ASSETS** | | |
| Trade and other receivables | 367,422 | 436,067 |
| Other financial assets | 387,945 | 387,945 |
| Property, plant and equipment | 339,426,923 | 339,506,816 |
| Infrastructure | 308,351,856 | 308,761,337 |
| Right-of-use assets | 123,658 | 123,658 |
| Intangible assets | 76,869 | 76,869 |
| **TOTAL NON-CURRENT ASSETS** | 648,734,673 | 649,292,692 |
| **TOTAL ASSETS** | 742,608,404 | 826,166,179 |
| **CURRENT LIABILITIES** | | |
| Trade and other payables | 11,446,995 | 6,061,437 |
| Other liabilities | 797,795 | 11,267,679 |
| Lease liabilities | 84,827 | 84,827 |
| Borrowings | 692,211 | 692,211 |
| Employee related provisions | 4,678,862 | 4,596,659 |
| **TOTAL CURRENT LIABILITIES** | 17,700,690 | 22,702,813 |
| **NON-CURRENT LIABILITIES** | | |
| Other liabilities | 62,642 | 130,052 |
| Lease liabilities | 62,809 | 62,809 |
| Borrowings | 9,617,583 | 9,617,583 |
| Employee related provisions | 553,045 | 553,045 |
| **TOTAL NON-CURRENT LIABILITIES** | 10,296,079 | 10,363,489 |
| **TOTAL LIABILITIES** | 27,996,769 | 33,066,302 |
| **NET ASSETS** | **714,611,635** | **793,099,877** |
| **EQUITY** | | |
| Retained surplus | 184,717,818 | 263,206,060 |
| Reserve accounts | 82,270,250 | 82,270,250 |
| Revaluation surplus | 447,623,567 | 447,623,567 |
| **TOTAL EQUITY** | **714,611,635** | **793,099,877** |

This statement is to be read in conjunction with the accompanying notes.

## CITY OF BELMONT
## NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
## FOR THE PERIOD ENDED 31 JULY 2026

### 1 BASIS OF PREPARATION AND MATERIAL ACCOUNTING POLICIES

#### BASIS OF PREPARATION

This prescribed financial report has been prepared in accordance with the *Local Government Act 1995* and accompanying regulations.

***Local Government Act 1995 requirements***
*Section 6.4(2) of the Local Government Act 1995* read with the *Local Government (Financial Management) Regulations 1996,* prescribe that the financial report be prepared in accordance with the *Local Government Act 1995* and, to the extent that they are not inconsistent with the Act, the Australian Accounting Standards. The Australian Accounting Standards (as they apply to local governments and not-for-profit entities) and Interpretations of the Australian Accounting Standards Board were applied with exception to the following:

The *Local Government (Financial Management) Regulations 1996* specify that vested land is a right-of-use asset to be measured at cost, and is considered a zero cost concessionary lease. All right-of-use assets under zero cost concessionary leases are measured at zero cost rather than at fair value, except for vested improvements on concessionary land leases such as roads, buildings or other infrastructure which continue to be reported at fair value, as opposed to the vested land which is measured at zero cost. The measurement of vested improvements at fair value is a departure from AASB 16 which would have required the City to measure any vested improvements at zero cost.

*Local Government (Financial Management) Regulations 1996,* regulation 34 prescribes contents of the financial report. Supplementary information does not form part of the financial report.

Accounting policies which have been adopted in the preparation of this financial report have been consistently applied unless stated otherwise. Except for cash flow and rate setting information, the financial report has been prepared on the accrual basis and is based on historical costs, modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and liabilities.

#### PREPARATION TIMING AND REVIEW
Date prepared: All known transactions up to 04 August 2026

**The local government reporting entity**
All funds through which the City controls resources to carry on its functions have been included in the financial statements forming part of this financial report.

All monies held in the Trust Fund are excluded from the financial statements.

**Material accounting policies**
Material accounting policies utilised in the preparation of these statements are as described within the 2026-27 Annual Budget. Please refer to the adopted budget document for details of these policies.

**Critical accounting estimates and judgements**
The preparation of a financial report in conformity with Australian Accounting Standards requires management to make judgements, estimates and assumptions that effect the application of policies and reported amounts of assets and liabilities, income and expenses.

The estimates and associated assumptions are based on historical experience and various other factors believed to be reasonable under the circumstances; the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

As with all estimates, the use of different assumptions could lead to material changes in the amounts reported in the financial report.

The following are estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year and further information on their nature and impact can be found in the relevant note:
- Fair value measurement of assets carried at reportable value including:
  - Property, plant and equipment
  - Infrastructure
- Impairment losses of non-financial assets
- Expected credit losses on financial assets
- Estimated useful life of intangible assets
- Measurement of employee benefits
- Estimation uncertainties and judgements made in relation to lease accounting

## CITY OF BELMONT
## NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
## FOR THE PERIOD ENDED 31 JULY 2026

### 2 NET CURRENT ASSETS INFORMATION

### (a) Net current assets used in the Statement of Financial Activity

| | Note | Adopted Budget Opening 1 July 2026 | Actual as at 30 June 2026 | Actual as at 31 July 2026 |
|---|---|---|---|---|
| **Current assets** | | **$** | **$** | **$** |
| Cash and cash equivalents | | 62,413,027 | 78,789,448 | 76,612,282 |
| Trade and other receivables | | 25,000,000 | 4,427,427 | 95,053,814 |
| Other financial assets | | 3,600,231 | 6,666,791 | 920,983 |
| Inventories | | 274,751 | 283,404 | 302,606 |
| Other assets | | 2,125,598 | 3,706,661 | 3,983,802 |
| | | 93,413,607 | 93,873,731 | 176,873,487 |
| **Less: current liabilities** | | | | |
| Trade and other payables | | (12,307,265) | (11,446,995) | (6,061,437) |
| Other liabilities | | (1,482,976) | (797,795) | (11,267,679) |
| Lease liabilities | | (44,713) | (84,827) | (84,827) |
| Borrowings | | (692,211) | (692,211) | (692,211) |
| Employee related provisions | | (8,216,259) | (4,678,862) | (4,596,659) |
| | | (22,743,424) | (17,700,690) | (22,702,813) |
| Net current assets | | 70,670,183 | 76,173,041 | 154,170,674 |
| Less: Total adjustments to net current assets | 2(b) | (67,349,064) | (81,224,077) | (80,706,642) |
| **Closing funding surplus / (deficit)** | | **3,321,119** | **(5,051,036)** | **73,464,032** |

### (b) Current assets and liabilities excluded from budgeted deficiency

| | | | | |
|---|---|---|---|---|
| **Adjustments to net current assets** | | | | |
| Less: Reserve accounts | | (70,231,111) | (82,270,250) | (82,270,250) |
| Less: Current assets not expected to be received at end of year | | | | |
| - Rates receivable | | 222,898 | 0 | |
| Add: Current liabilities not expected to be cleared at the end of the year | | | | |
| - Current portion of lease liabilities | | 44,713 | 84,827 | 84,827 |
| - Current portion of borrowings | | 692,211 | 692,211 | 692,211 |
| Add: Current liabilities covered by funds held in reserve account | | | | |
| - Current portion of employee benefit provisions | | 1,922,225 | 269,135 | 786,570 |
| **Total adjustments to net current assets** | 2(a) | **(67,349,064)** | **(81,224,077)** | **(80,706,642)** |

### (c) Amounts excluded from operating activities

| | Adopted Budget Estimates 30 June 2027 | YTD Budget Estimates 31 July 2026 | YTD Actual 31 July 2026 |
|---|---|---|---|
| | **$** | **$** | **$** |
| Less: Profit on asset disposals | (58,893) | (20,360) | 0 |
| Add: Loss on disposal of assets | 84,989 | 23,780 | 0 |
| Add: Depreciation | 12,939,021 | 1,072,832 | 1,072,832 |
| Non-cash movements in non-current assets and liabilities: | | | |
| - Pensioner deferred rates | 0 | 0 | 15,932 |
| **Total amounts excluded from operating activities** | **12,965,117** | **1,076,252** | **1,088,764** |

### (d) Amounts excluded from investing activities

| | | | |
|---|---|---|---|
| Reconciling item - movement between current assets | | | |
| - Financial assets at amortised cost - term deposits | 0 | 0 | (5,745,808) |
| **Total amounts excluded from investing activities** | **0** | **0** | **(5,745,808)** |

**CURRENT AND NON-CURRENT CLASSIFICATION**

In the determination of whether an asset or liability is current or non-current, consideration is given to the time when each asset or liability is expected to be settled. Unless otherwise stated assets or liabilities are classified as current if expected to be settled within the next 12 months, being the City's operational cycle.

## CITY OF BELMONT
## NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
## FOR THE PERIOD ENDED 31 JULY 2026

### 3 EXPLANATION OF MATERIAL VARIANCES

The material variance thresholds are adopted annually by Council as an indicator of whether the actual expenditure or revenue varies from the year to date actual materially.
The material variance adopted by Council for the 2026-27 year is $100,000.

| Description | Var. $ | Var. % | |
|---|---|---|---|
| | $ | % | |
| **Revenue from operating activities** | | | |
| **Fees and charges** | **8,906,146** | **2420.19%** | ▲ |
| Works - Income from sanitation fees to be received via rates notices issued in August.-($8,855,068) | | Timing | |
| Safer Communities - Higher than anticipated income for month from pool levies, building applications and health related licence renewals. ($115,333) | | Timing | |
| **Interest revenue** | **134,362** | **31.10%** | ▲ |
| Finance - Higher than anticipated closing balance for the previous financial year.- ($134,362) | | Timing | |
| **Expenditure from operating activities** | | | |
| **Materials and contracts** | **1,364,618** | **55.70%** | ▲ |
| Information Technology - TechnologyOne invoice for $493K currently being processed, with some end of year adjustments still pending.-$740,725 | | Timing | |
| Works - Invoices from contractors engaged to be received.-$119,395 | | Timing | |
| City Facilities & Property - Variance arising from Project Scheduling. $170,792 | | Timing | |
| Economic & Community Development - Expenditure associated with several city funded Community and Economic programs has not yet occured.-$163,501 | | Timing | |
| **Insurance** | **(253,047)** | **(376.89%)** | ▼ |
| Governance, Strategy & Risk - First of 2 insurance instalments paid, with the second due in October.-($252,138) | | Timing | |
| **Inflows from investing activities** | | | |
| **Proceeds from capital grants, subsidies and contributions** | **(208,896)** | **(16.67%)** | ▼ |
| City Projects - Peet Park funding yet to be received.-($241,667) | | Timing | |
| **Outflows from investing activities** | | | |
| **Acquisition of infrastructure** | **523,477** | **35.64%** | ▲ |
| Works - Invoices for projects completed to be received.-$132,266 | | Timing | |
| City Projects - Payments delayed as Peet Park lighting will commence in October.-$339,701 | | Timing | |
| Parks, Leisure & Environment - Works brought forward to take advantage of weather condition YTD budget will correct in coming months.-($393,953) | | Timing | |

# CITY OF BELMONT

## SUPPLEMENTARY INFORMATION

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BASIS OF PREPARATION - SUPPLEMENTARY INFORMATION

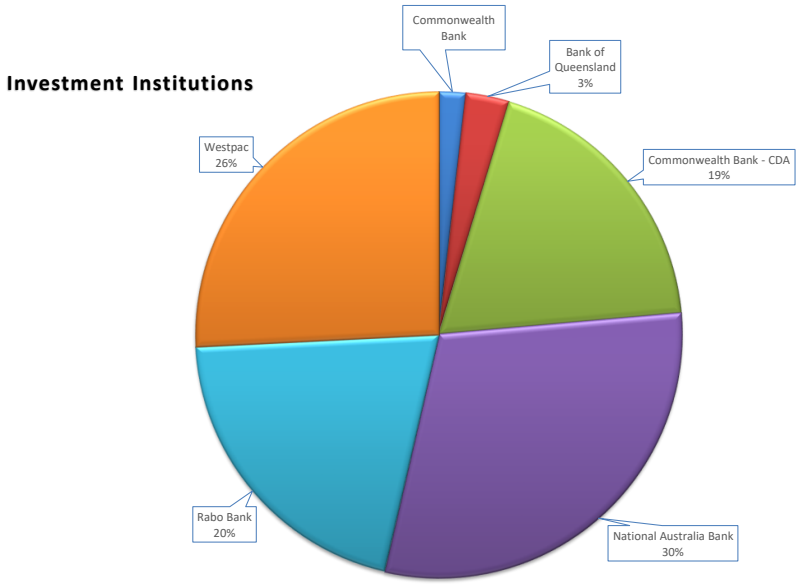
Supplementary information is presented for information purposes. The information does not comply with the disclosure requirements of the Australian Accounting Standards.

**CITY OF BELMONT**
**SUPPLEMENTARY INFORMATION**
**FOR THE PERIOD ENDED 31 JULY 2026**

## 1 CASH AND CASH EQUIVALENTS

| BY INVESTMENT HOLDINGS | Municipal $ | Reserve $ | Trust-Reserve $ | Total $ | Total % |
|---|---|---|---|---|---|
| Municipal Account | (103,976) | - | - | (103,976) | -0.13% |
| On-Call Account | 1,471,930 | 14,684,734 | - | 16,156,664 | 20.84% |
| Term Deposits | (0) | 61,475,527 | (0) | 61,475,527 | 79.29% |
| | 1,367,954 | 76,160,260 | (0) | 77,528,214 | 100% |

| BY INSTITUTION | Rating | Municipal $ | Reserve $ | Trust-Reserve $ | Total $ | Total % | Policy Max % |
|---|---|---|---|---|---|---|---|
| Commonwealth Bank | AA | 1,367,953.70 | - | - | 1,367,953.70 | 2% | 40% |
| Bank of Queensland | A | - | 2,248,407.49 | - | 2,248,407.49 | 3% | 25% |
| Commonwealth Bank - CDA | AA | - | 14,684,733.87 | - | 14,684,733.87 | 19% | 40% |
| ING Direct | AA | - | 23,255,395.64 | - | 23,255,395.64 | 30% | 40% |
| National Australia Bank | A | - | 15,971,715.39 | - | 15,971,715.39 | 21% | 25% |
| Rabo Bank | AA | - | 20,000,008.05 | - | 20,000,008.05 | 26% | 40% |
| Westpac | | | | | | | |
| | | 1,367,953.70 | 76,160,260.44 | - | 77,528,214.14 | 100% | |




## BY CREDIT RATINGS

| Rating | Municipal $ | Reserve $ | Trust Reserve $ | Total $ | Total % | Policy Max % |
|---|---|---|---|---|---|---|
| AAA | - | - | - | - | 0.00% | 100% |
| AA | 1,367,954 | 57,940,138 | - | 59,308,091 | 76.50% | 100% |
| A | - | 18,220,123 | - | 18,220,123 | 23.50% | 80% |
| BBB / NR | - | - | - | - | 0.00% | 60% |
| | 1,367,954 | 76,160,260 | - | 77,528,214 | 100% | |

**CITY OF BELMONT**
**SUPPLEMENTARY INFORMATION**
**FOR THE PERIOD ENDED 31 JULY 2026**

## 2 RESERVE ACCOUNTS

| | Budget | | | | Actual | | | |
|---|---|---|---|---|---|---|---|---|
| Reserve account name | Opening Balance | Transfers In (+) | Transfers Out (-) | Closing Balance | Opening Balance | Transfers In (+) | Transfers Out (-) | Closing Balance |
| | $ | $ | $ | $ | $ | $ | $ | $ |
| **Reserve accounts restricted by legislation** | | | | | | | | |
| Car Parking Reserve | 73,980 | 3,101 | 0 | 77,081 | 70,632 | 0 | 0 | 70,632 |
| Underground Power Reserve | 64,552 | 35,000 | 0 | 99,552 | 0 | 0 | 0 | 0 |
| **Reserve accounts restricted by Council** | | | | | | | | |
| Administration building Reserve | 0 | 0 | 0 | 0 | 269,135 | 0 | 0 | 269,135 |
| Aged Accommodation Reserve | 1,099,669 | 98,009 | (250,000) | 947,678 | 1,049,911 | 0 | 0 | 1,049,911 |
| Aged Community Care Reserve | 261,480 | 10,959 | 0 | 272,439 | 249,649 | 0 | 0 | 249,649 |
| Aged persons housing Reserve | 330,430 | 171,706 | (186,338) | 315,798 | 315,479 | 0 | 0 | 315,479 |
| Aged Services Reserve | 1,211,520 | 50,777 | (157,955) | 1,104,342 | 1,156,701 | 0 | 0 | 1,156,701 |
| Ascot Waters Marina Maintenance & Restoration | 1,160,577 | 50,738 | (50,000) | 1,161,315 | 1,155,801 | 0 | 0 | 1,155,801 |
| Belmont District Band Reserve | 0 | 0 | 0 | 0 | 53,561 | 0 | 0 | 53,561 |
| Belmont Oasis Refurbishment Reserve | 12,658,761 | 539,070 | (273,014) | 12,924,817 | 12,279,947 | 0 | 0 | 12,279,947 |
| Belmont Trust Reserve | 1,543,656 | 74,016 | (251,000) | 1,366,672 | 1,686,073 | 0 | 0 | 1,686,073 |
| Building Reserve | 9,743,107 | 442,780 | (2,492,644) | 7,693,243 | 9,764,967 | 0 | 0 | 9,764,967 |
| Capital Projects Reserve | 3,622,741 | 0 | (3,037,310) | 585,431 | 5,195,085 | 0 | 0 | 5,195,085 |
| Carry Forward Projects Reserve | 2,255,740 | 0 | (2,255,740) | 0 | 1,362,715 | 0 | 0 | 1,362,715 |
| District valuation Reserve | 0 | 105,257 | 0 | 105,257 | 119,745 | 0 | 0 | 119,745 |
| Election expenses Reserve | 4,706 | 78,682 | 0 | 83,388 | 83,879 | 0 | 0 | 83,879 |
| Employee Entitlements Reserve | 1,922,225 | 133,912 | (125,872) | 1,930,265 | 760,227 | 0 | 0 | 760,227 |
| Environment Reserve | 957,422 | 42,562 | (750,000) | 249,984 | 969,567 | 0 | 0 | 969,567 |
| Faulkner Park Retirement Village Buy Back Reserve | 3,179,936 | 536,983 | 0 | 3,716,919 | 3,036,050 | 0 | 0 | 3,036,050 |
| Faulkner Park Retirement Village Owners Maintenance Reserve | 388,776 | 24,677 | 0 | 413,453 | 562,135 | 0 | 0 | 562,135 |
| History Reserve | 0 | 0 | 0 | 0 | 189,628 | 0 | 0 | 189,628 |
| Information Technology Reserve | 1,441,006 | 69,129 | (325,400) | 1,184,735 | 1,574,755 | 0 | 0 | 1,574,755 |
| Infrastructure Reserve | 1,186,160 | 49,715 | (1,130,000) | 105,875 | 0 | 0 | 0 | 0 |
| Insurance Reserve | 1,551,865 | 65,042 | (61,507) | 1,555,400 | 1,481,646 | 0 | 0 | 1,481,646 |
| Land Acquisition Reserve | 0 | 0 | 0 | 0 | 11,535,626 | 0 | 0 | 11,535,626 |
| Long Service Leave Reserve - Salaries | 0 | 0 | 0 | 0 | 1,970,332 | 0 | 0 | 1,970,332 |
| Long Service Leave Reserve - Wages | 0 | 0 | 0 | 0 | 319,943 | 0 | 0 | 319,943 |
| Plant replacement Reserve | 794,359 | 79,924 | (453,149) | 421,134 | 1,820,649 | 0 | 0 | 1,820,649 |
| Property development Reserve | 17,199,826 | 1,174,463 | (2,816,905) | 15,557,384 | 15,218,474 | 0 | 0 | 15,218,474 |
| Public Art Reserve | 860,842 | 19,124 | (60,000) | 819,966 | 435,650 | 0 | 0 | 435,650 |
| Ruth Faulkner library Reserve | 0 | 0 | 0 | 0 | 52,366 | 0 | 0 | 52,366 |
| Urban Forest Strategy Management Reserve | 0 | 0 | 0 | 0 | 1,132,489 | 0 | 0 | 1,132,489 |
| Waste Management Reserve | 6,717,775 | 280,837 | 0 | 6,998,612 | 6,397,433 | 0 | 0 | 6,397,433 |
| | **70,231,111** | **4,136,463** | **(14,676,834)** | **59,690,740** | **82,270,250** | **0** | **0** | **82,270,250** |

## CITY OF BELMONT
## SUPPLEMENTARY INFORMATION
## FOR THE PERIOD ENDED 31 JULY 2026

### 3 CAPITAL ACQUISITIONS

| | Adopted Budget | YTD Budget | YTD Actual | YTD Variance |
|---|---|---|---|---|
| | $ | $ | $ | $ |
| **Capital acquisitions** | | | | |
| Buildings | 3,440,833 | 0 | 2,710 | 2,710 |
| Furniture and equipment | 1,812,333 | 0 | 0 | 0 |
| Plant and equipment | 1,217,194 | 92,493 | 0 | (92,493) |
| **Acquisition of property, plant and equipment** | **6,470,360** | **92,493** | **2,710** | **(89,783)** |
| | | | | Belv |
| Infrastructure - roads | 5,864,679 | 178,355 | 0 | (178,355) |
| Infrastructure - Reserve Improvements | 18,544,635 | 1,290,421 | 945,299 | (345,122) |
| Infrastructure - Footpath Network | 944,780 | 0 | 0 | 0 |
| Infrastructure - Drainage Network | 605,300 | 0 | 0 | 0 |
| **Acquisition of infrastructure** | **25,959,394** | **1,468,776** | **945,299** | **(523,477)** |
| **Total capital acquisitions** | **32,429,754** | **1,561,269** | **948,009** | **(613,260)** |
| **Capital Acquisitions Funded By:** | | | | |
| Capital grants and contributions | 8,650,508 | 1,253,167 | 0 | (1,253,167) |
| Other (disposals & C/Fwd) | 596,547 | 0 | 0 | 0 |
| Reserve accounts | | | | |
| Aged Accommodation Reserve | 250,000 | 0 | 0 | 0 |
| Aged persons housing Reserve | 186,338 | 0 | 0 | 0 |
| Aged Services Reserve | 157,955 | 0 | 0 | 0 |
| Ascot Waters Marina Maintenance & Restoration | 50,000 | 0 | 0 | 0 |
| Belmont Oasis Refurbishment Reserve | 273,014 | 0 | 0 | 0 |
| Belmont Trust Reserve | 251,000 | 0 | 0 | 0 |
| Building Reserve | 2,492,644 | 0 | 0 | 0 |
| Capital Projects Reserve | 3,037,310 | 0 | 0 | 0 |
| Carry Forward Projects Reserve | 2,255,740 | 0 | 0 | 0 |
| Employee Entitlements Reserve | 125,872 | 0 | 0 | 0 |
| Environment Reserve | 750,000 | 0 | 0 | 0 |
| Information Technology Reserve | 325,400 | 0 | 0 | 0 |
| Infrastructure Reserve | 1,130,000 | 0 | 0 | 0 |
| Insurance Reserve | 61,507 | 0 | 0 | 0 |
| Plant replacement Reserve | 453,149 | 0 | 0 | 0 |
| Property development Reserve | 2,816,905 | 0 | 0 | 0 |
| Public Art Reserve | 60,000 | 0 | 0 | 0 |
| Contribution - operations | 11,897,426 | 308,102 | 948,009 | 639,907 |
| **Capital funding total** | **35,821,315** | **1,561,269** | **948,009** | **(613,260)** |

## CITY OF BELMONT
## SUPPLEMENTARY INFORMATION
## FOR THE PERIOD ENDED 31 JULY 2026

### 3 CAPITAL ACQUISITIONS

**KEY INFORMATION**

**Initial recognition**

An item of property, plant and equipment or infrastructure that qualifies for recognition as an asset is measured at its cost.

Upon initial recognition, cost is determined as the amount paid (or other consideration given) to acquire the assets, plus costs incidental to the acquisition. The cost of non-current assets constructed by the City includes the cost of all materials used in construction, direct labour on the project and an appropriate proportion of variable and fixed overheads. For assets acquired at zero cost or otherwise significantly less than fair value, cost is determined as fair value at the date of acquisition.

Assets for which the fair value as at the date of acquisition is under $5,000 are not recognised as an asset in accordance with *Local Government (Financial Management) Regulation 17A(5).* These assets are expensed immediately.

Where multiple individual low value assets are purchased together as part of a larger asset or collectively forming a larger asset exceeding the threshold, the individual assets are recognised as one asset and capitalised.

Individual assets that are land, buildings and infrastructure acquired between scheduled revaluation dates of the asset class in accordance with the City's revaluation policy, are recognised at cost and disclosed as being at reportable value.

**Measurement after recognition**

Plant and equipment including furniture and equipment and right-of-use assets (other than vested improvements) are measured using the cost model as required under *Local Government (Financial Management) Regulation 17A(2).* Assets held under the cost model are carried at cost less accumulated depreciation and any impairment losses being their reportable value.

**Reportable Value**

In accordance with *Local Government (Financial Management) Regulation 17A(2),* the carrying amount of non-financial assets that are land and buildings classified as property, plant and equipment, investment properties, infrastructure or vested improvements that the local government controls.

Reportable value is for the purpose of *Local Government (Financial Management) Regulation 17A(4)* is the fair value of the asset at its last valuation date minus (to the extent applicable) the accumulated depreciation and any accumulated impairment losses in respect of the non-financial asset subsequent to its last valuation date.

**CITY OF BELMONT**
**SUPPLEMENTARY INFORMATION**
**FOR THE PERIOD ENDED 31 JULY 2026**

## 3 CAPITAL ACQUISITIONS (CONTINUED) - DETAILED

**Capital expenditure total**
**Level of completion indicators**

- 0%
- 20%
- 40%
- 60%
- 80%
- 100%
- Over 100%

Percentage Year to Date Actual to Annual Budget expenditure where the expenditure over budget highlighted in red.

| Description | Adopted Budget | YTD Budget | YTD Actual | Variance (Under)/Over |
|---|---|---|---|---|
| | $ | $ | $ | $ |
| City Projects | 14,554,923 | 1,290,421 | 950,719 | 339,702 |
| Parks and Environment | 5,311,573 | 0 | 393,954 | (393,954) |
| Buildings and facilities | 2,118,972 | 0 | 91,552 | (91,552) |
| Infrastructure Capital Works | 7,414,759 | 178,355 | 46,093 | 132,262 |
| Furniture and equipment | 1,812,333 | 0 | 25,495 | (25,495) |
| Plant and equipment | 1,217,194 | 92,493 | 56,712 | 35,781 |

# 12.12 Tender 24/2025 - Event Services Panel

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 114/2025-24 |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Corporate and Governance<br>Development and Communities |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

To seek Council approval to award Tender 24/2025 - Events Services Panel.

## Summary and key issues

- An opportunity was identified to consolidate the procurement of event-related services into a single panel arrangement, reducing the need to conduct multiple quotation processes for individual events and providing access to a range of pre-qualified suppliers.
- To support this objective, Tender T24/2025 – Events Services Panel was undertaken to establish a panel of suitably qualified and experienced suppliers across five service categories:
    - Event Infrastructure and Equipment;
    - Event Services;
    - Audio, Visual and Productions;
    - Catering Services; and
    - Theme and Décor.

- This report outlines the procurement process undertaken to invite and evaluate tender responses received for Tender 24/2025 - Events Services Panel accordance with the requirements of the *Local Government Act 1995 (WA).*
- Twenty (20) submissions were received and a full evaluation was completed against the advertised criteria and the City's procurement requirements.
- The City regularly procures a range of specialist services to support the delivery of community, civic and corporate events. These services include event production, security, lighting, audio visual and infrastructure hire, portable amenities, entertainment support, and associated event services.
- To provide a compliant, efficient and flexible procurement mechanism for future event requirements, the City undertook a public tender process to establish a panel of pre-qualified suppliers.

**Officer Recommendation**

That Council:

1. Accepts the tenders submitted for Tender 24/2025 - Events Services Panel by the preferred tenderers as specified in the price schedule detailed in Confidential Attachment 12.12.2.
2. Authorises the Chief Executive Officer to establish an Events Services Panel compromising the supplier in Confidential Attachment 12.12.2 for a period of three (3) years;
3. Authorises the Chief Executive Officer to negotiate contracts with the preferred tenderers, based on the terms and conditions provided in the Request for Tender documents;
4. Authorises the Chief Executive Officer to execute a contract with the preferred tenderers pursuant to Section 9.49A(4) of the *Local Government Act 1995 (WA)*;
5. Notes that no appointment is recommended for the Security Services sub-category under Category 2 – Events Services, as only one submission was received.

## Location

Not applicable.

## Consultation

There has been no specific consultation undertaken in respect to this matter.

## Strategic Community Plan implications

In accordance with the 2020 – 2040 Strategic Community Plan:

**Key Performance Area: People**
**Outcome:** 2. A strong sense of pride, belonging, and creativity.

**Key Performance Area: Place**
**Outcome:** 7. Attractive and welcoming places.

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

The City's Purchasing Policy aims to deliver a high level of accountability whilst providing a flexible, efficient, and effective procurement framework. The procurement process for this tender was undertaken in accordance with the requirements of the City's Purchasing Policy.

The City's Environmental Purchasing Policy provides environmental, social, and economic sustainability considerations to be embedded into all purchasing activities and to ensure that environmental purchasing is reflective of the ISO 14001 Environmental Management Systems standard. The procurement process for this tender was undertaken in accordance with the requirements of the City's Environmental Purchasing Policy.

## Statutory environment

Section 3.57 of the *Local Government Act 1995 (WA)* provides tenders for providing goods or services.

The tendering process and evaluation complied with the requirements of Part 4 of the *Local Government (Functions and General) Regulations 1996 (WA)*.

Regulation 24AC(1)(a) allows a local government to establish a panel of prequalified suppliers if there is a continuing need for the goods or services.

The establishment of this panel must comply with Regulation 24AD, which requires:

- 24AD (1) and (2): A Statewide public notice inviting applications to join the panel.
- 24AD (3): Written evaluation criteria established before applications are invited.
- 24AD (4) and (5): Provision of detailed information to applicants, including a description of the goods/services, panel operation details, the contract period, a statement that work is not guaranteed, and the intended number of suppliers.

## Background

The City regularly procures a range of specialist services to support the delivery of community, civic and corporate events. These services include event production, security, lighting, infrastructure hire, portable amenities, entertainment support, and associated event services.

To provide a compliant, efficient and flexible procurement mechanism for future event requirements, the City undertook a public tender process to establish a panel of pre-qualified suppliers across the following service categories:

| **Category** | **Description** |
|---|---|
| 1. Event Infrastructure and Equipment | Marquees, event structures, tables, chairs, staging, fencing, temporary power, portable amenities, and associated event infrastructure services. |
| 2. Event Services | Event crew, traffic management, parking management, security services and specialist event support services. |
| 3. Audio, Visual and Productions | Audio visual equipment, lighting, staging, LED screens, production management, technical operators and live event services. |
| 4. Catering Services | Catering services for civic, community and corporate events, including food and beverage services and associated equipment. |
| 5. Theme and Décor | Event styling, theming, décor, floral arrangements, signage, props and venue presentation services. |

## Report

Tender 24/2025 - Events Services Panel was publicly advertised in The West Australian on Saturday, 2 May 2026 and closed on Tuesday, 2 June 2026 at 2:00pm.

### Tender submissions

Twenty (20) tender submissions were received in response to the advertised tender. Details of the respondent(s) and the prices submitted are details in Confidential Attachment 12.12.1 and Confidential Attachment 12.12.2.

### Evaluation panel

The evaluation panel comprised four members, being:

- One with tender and contract preparation skills, and
- Three with the appropriate operational expertise and involvement in supervising contracts.

In addition, two subject matter experts participated in the evaluation process by reviewing submissions and providing technical advice within their respective fields of expertise. The subject matter experts acted in an advisory capacity and did not undertake scoring of tender submissions.

The City's Procurement and Contracts team facilitated the procurement process and provided probity oversight to ensure the evaluation was conducted in accordance with the Request for Tender documentation, the City's Purchasing Policy, and the principles of fairness, transparency and accountability.

The Evaluation Panel conducted the assessment of the submissions in accordance with the City's evaluation process in a fair and equitable manner.

### Compliance assessment

- Seventeen (17) submissions received were assessed as fully compliant.
- Three submissions received were assessed as non-compliant.

On this basis 17 out of the 20 submissions were considered for further evaluation.

**Evaluation method and weighting**

The standard minimum acceptable qualitative score for tenders at the City is 60%.

**Qualitative criteria**

The responses received were assessed on the selection criteria included with the request for tender, being:

| | Criteria | Weighting |
|---|---|---|
| 1 | Sustainability | 10% |
| 2 | Relevant Experience | 30% |
| 3 | Capacity to Deliver | 30% |
| 4 | Methodology | 30% |
| | **Total** | **100%** |

Of the 17 tender submissions received, 15 achieved the minimum qualitative threshold of 60%. However, only one submission was received for Sub-Category Security Services under Category 2 – Event Services, which was insufficient to establish a panel for that service category. Accordingly, 14 submissions progressed to Stage 2 of the evaluation process.

**Price assessment**

The assessment of prices submitted is outlines in Confidential Attachment 12.12.2 – Tender 24/2025 - Master Price Schedule.

**Evaluation summary**

An Evaluation Scorecard has been completed which details the Evaluation Panel's assessment of the tender submissions. Refer to Confidential Attachment 12.12.1 – Tender – 24/2025 - Events Services Panel – Evaluation Scorecard.

Temporary fencing and crowd control barriers formed part of Category 1 – Event Infrastructure and Equipment. As no respondents offering these services achieved the minimum qualitative pass mark, no suppliers are recommended for appointment for these services. In addition, no submissions were received for Traffic and Parking Management services under Category 2 – Event Services.

Furthermore, although one submission was received for Security Services under Category 2 – Event Services, it was insufficient to establish a Panel for this sub-category. Accordingly, Security Services did not progress to Stage2 of the evaluation process, and no appointment is recommended for this service.

The absence of services from the Panel is not expected to materially impact the City's operations, as they can be sourced independently of the Panel in accordance with the City's Purchasing Policy.

The remaining recommended respondents demonstrated the necessary experience, capability, capacity, and resources to deliver the required services. Collectively, they provide broad coverage across the event service categories and are considered suitably qualified to support the City's event delivery requirements throughout the term of the Panel.

Following a compliant and transparent procurement process undertaken in accordance with the requirements of the *Local Government Act 1995 (WA)* and the City's Purchasing Policy, the preferred tenderer meets the City's requirements for Tender 24/2025 - Events Services Panel and is recommended for acceptance.

## Financial implications

Confidential Attachment 12.12.2 - Tender 24/2025 - Master Price Schedule provides the lump sum and breakdown costs provided by the tenderers.

## Environmental implications

Environmental considerations formed part of the qualitative assessment process. There are no environmental implications associated with this report.

## Social implications

The Events Services Panel will support the delivery of community events, civic functions and activations that contribute to community participation, community connection, and a vibrant City.

## Attachment details

| Attachment No and title |
|---|
| 1. CONFIDENTIAL REDACTED - T24/2025 - Evaluation Scorecard (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(c)) [**12.12.1** - 6 pages] |
| 2. CONFIDENTIAL REDACTED - T24/2025 - Event Services Panel - Master Price Schedule (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(c)) [**12.12.2** - 9 pages] |

# 12.13 Tender 25/2025 - Provision of Subsurface Utilities Locate Services

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 114/2025-25 |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Infrastructure Services |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

To seek Council approval to award Tender 25/2025 – Provision of Subsurface Utilities Locate Services.

## Summary and key issues

- The City requires a suitably qualified and experienced subsurface utilities locate contractor to undertake location of subsurface utilities via ground penetrating radar and/or vacuum potholing within the City and, deliver the as-located information in .pdf and .dwg format to the City.
- This report outlines the procurement process undertaken to invite and evaluate tender responses received for Tender 25/2025 – Provision of Subsurface Utilities Locate Services in accordance with the requirements of the *Local Government Act 1995 (WA)*.
- Seven submissions were received and a full evaluation was completed against the advertised criteria and the City's procurement requirements.
- The preferred tenderer achieved the qualitative threshold, demonstrating the necessary technical capability, local government project experience, and

resource capacity required to deliver the scope. The preferred respondent confirmed full acceptance of the City's standard contract terms and conditions.

**Officer Recommendation**

That Council:

1. Accepts the tender submitted for Tender 25/2025 – Provision of Subsurface Utilities Locate Services by the preferred tenderer as specified in the price schedule detailed in Confidential Attachment 12.13.3.
2. Authorises the Chief Executive Officer to negotiate a contract with the preferred tenderer, based on the terms and conditions provided in the Request for Tender documents and as clarified with the preferred tenderer prior to Evaluation; and
3. Authorises the Chief Executive Officer to execute a contract with the preferred tenderer pursuant to section 9.49A(4) of the *Local Government Act 1995 (WA)*.

## Location

Various locations around City of Belmont.

## Consultation

There has been no specific consultation undertaken in respect to this matter.

## Strategic Community Plan implications

There are no Strategic Community Plan implications at this time.

## Policy implications

The City's Purchasing Policy aims to deliver a high level of accountability whilst providing a flexible, efficient, and effective procurement framework. The procurement process for this tender was undertaken in accordance with the requirements of the City's Purchasing Policy.

The City's Environmental Purchasing Policy provides environmental, social, and economic sustainability considerations to be embedded into all purchasing activities and to ensure that environmental purchasing is reflective of the ISO

14001 Environmental Management Systems standard. The procurement process for this tender was undertaken in accordance with the requirements of the City's Environmental Purchasing Policy.

## Statutory environment

Section 3.57 of the *Local Government Act 1995 (WA)* provides tenders for providing goods or services.

The tendering process and evaluation complied with the requirements of Part 4 of the *Local Government (Functions and General) Regulations 1996 (WA)*.

## Background

The City requires a suitably qualified and experienced subsurface utilities locate contractor to undertake location of subsurface utilities via ground penetrating radar and/or vacuum potholing within the City and, deliver the as-located information in .pdf and .dwg format to the City.

There is currently no existing contract in place for these services, with works previously undertaken on an as-needed basis.

The contract for the provision of subsurface utilities locate services is for a term of an initial period of three (3) years, with an option to extend to two (2) additional one-year periods (1+1), exercisable at the Principal’s discretion.

## Report

Tender 25/2025 – Provision of Subsurface Utilities Locate Services was publicly advertised in The West Australian on Saturday 28 February 2026 and closed on Tuesday 17 March 2026 at 2.00pm.

**Tender submissions**

Seven tender submissions were received in response to the advertised tender. Details of the respondent(s) and the prices submitted are detailed in Confidential Attachment 12.13.3.

**Evaluation panel**

The evaluation panel comprised three (3) members, being:

- One (1) with tender and contract preparation skills, and
- Two (2) with the appropriate operational expertise and involvement in supervising contracts.

The City's Procurement and Contracts team facilitated the procurement process and provided probity oversight to ensure the evaluation was conducted in accordance with the Request for Tender documentation, the City's Purchasing Policy, and the principles of fairness, transparency and accountability.

The evaluation panel conducted the assessment of the submissions in accordance with the City's evaluation process in a fair and equitable manner.

**Compliance assessment**

Five submission(s) received were assessed as fully compliant.

Two submission(s) received were assessed as non-compliant.

On this basis Five (5) out of the Seven (7) submissions were considered for further evaluation.

**Evaluation method and weighting**

The standard minimum acceptable qualitative score for tenders at the City is 60%.

**Qualitative criteria**

The responses received were assessed on the selection criteria included with the request for tender, being:

| | Criteria | Weighting |
|---|---|---|
| 1 | Relevant Experience | 25% |

| | | |
|---|---|---|
| 2 | Capacity to Deliver | 25% |
| 3 | Methodology | 25% |
| 4 | Value Adding | 25% |
| | **Total** | **100%** |

Of the five (5) tender submissions received, three (3) achieved the minimum qualitative threshold of 60% and subsequently progressed to Stage 2 of the evaluation process.

**Price assessment**

Refer to Confidential Attachment 12.13.3 – T25/2025 – Price Schedule.

**Value for money**

As detailed in Confidential Attachment 12.13.2 – Tender 25/2025 Case Study (Lump Sum), a case study was developed and applied to provide a consistent and equitable basis for comparing the varying pricing structures submitted by tenderers.

The pricing assessment demonstrated that the preferred tenderer submitted the lowest price of the three (3) conforming tenderers that progressed to Stage 2 of the evaluation process.

Having achieved the required qualitative standard and submitted the lowest price, the preferred tenderer represents the best value-for-money outcome for the City. The submission demonstrated the capability, experience, and capacity to deliver the required services while offering the most economically advantageous outcome when assessed against the evaluation criteria and pricing assessment methodology.

**Post tender clarifications**

As part of the evaluation process, consistent with Regulation 18(4a) of the *Local Government (Functions and General) Regulations 1996 (WA)*, a post-tender clarification was sought regarding the pricing of Ground Penetrating Radar (GPR) equipment included within one tender submission.

The clarification confirmed the pricing basis submitted by the tenderer and provided assurance regarding the applicability of the rates to the required services. No material changes were made to the tender submission as a result of the clarification.

The clarification provided the evaluation panel with assurance regarding the pricing structure and reduced the risk of pricing ambiguity during contract delivery.

**Evaluation summary**

An Evaluation Scorecard has been completed which details the evaluation panels' assessment of the tender submission(s). Refer to Confidential Attachment 12.13.1 - Tender 25/2025 – Provision of Subsurface Utilities Locate Services – Evaluation Scorecard.

The preferred tenderer achieved the minimum qualitative threshold, demonstrating the necessary technical capability, local government project experience, and resource capacity required to deliver the scope.

While the other two (2) tender submissions achieved marginally higher qualitative scores, the evaluation panel determined that the associated price premiums were not justified when compared to the preferred tenderer's submission. This assessment was further influenced by the contractual departures identified in those submissions, which introduced additional commercial and contractual risk to the City.

Having regard to the qualitative assessment outcomes, competitive pricing, and overall contractual risk profile, the evaluation panel determined that the preferred tenderer represents the best overall value-for-money outcome for the City.

Following a compliant and transparent procurement process undertaken in accordance with the requirements of the *Local Government Act 1995 (WA)* and the City's Purchasing Policy, the preferred tenderer meets the City's requirements for Tender 25/2025 – Provision of Subsurface Utilities Locate Services and is recommended for acceptance.

## Financial implications

The price submitted by the preferred tenderer is within the allocated budget.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
|---|
| 1. CONFIDENTIAL REDACTED - T25/2025 Evaluation Scorecard (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(c)) [**12.13.1** - 3 pages] |
| 2. CONFIDENTIAL REDACTED - T25/2025 Case Study (Lumpsum) (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(c)) [**12.13.2** - 1 page] |
| 3. CONFIDENTIAL REDACTED - T25/2025 Price Schedule (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(c)) [**12.13.3** - 1 page] |

# 12.14 Tender 28/2025 - Provision of Engineering Survey Services

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 114/2025-28 |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Infrastructure Services |

## Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

## Purpose of report

To seek Council approval to award Tender 28/2025 - Provision of Engineering Survey Services.

## Summary and key issues

- The City requires a suitably qualified and experienced engineering survey contractor to undertake topographical land surveys for its Capital Works Projects within the City. These projects primarily encompass the rehabilitation and/or upgrade to road, footpath, car park, reserves, and stormwater drainage. Survey data delivered by the surveyor will be utilised by the City's internal designers or external consultants to develop fit-for-construction designs.
- This report outlines the procurement process undertaken to invite and evaluate tender responses received for Tender 28/2025 - Provision of Engineering Survey Services in accordance with the requirements of the *Local Government Act 1995 (WA)*.

- Six submissions were received and a full evaluation was completed against the advertised criteria and the City's procurement requirements.
- The preferred tenderer performed strongly across all four of the qualitative evaluation criteria, achieving the highest overall score, with particular strengths noted in value adding and overall service offering.

**Officer Recommendation**

That Council:

1. Accepts the tender submitted for Tender 28/2025 - Provision of Engineering Survey Services by the preferred tenderer as specified in the price schedule detailed in Confidential Attachment 12.14.1.
2. Authorises to the Chief Executive Officer to negotiate a contract with the preferred tenderer, based on the terms and conditions provided in the Request for Tender documents and as clarified with the preferred tenderer prior to Evaluation; and
3. Authorises the Chief Executive Officer to execute a contract with the preferred tenderer pursuant to section 9.49A(4) of the *Local Government Act 1995 (WA)*.

## Location

Not applicable.

## Consultation

There has been no specific consultation undertaken in respect to this matter.

## Strategic Community Plan implications

In accordance with the 2020 – 2040 Strategic Community Plan:

**Key Performance Area: Place**
**Outcome:** 6. Sustainable population growth with responsible urban planning.

## Policy implications

The City’s Purchasing Policy aims to deliver a high level of accountability whilst providing a flexible, efficient, and effective procurement framework. The procurement process for this tender was undertaken in accordance with the requirements of the City's Purchasing Policy.

The City’s Environmental Purchasing Policy provides environmental, social, and economic sustainability considerations to be embedded into all purchasing activities and to ensure that environmental purchasing is reflective of the ISO 14001 Environmental Management Systems standard. The procurement process for this tender was undertaken in accordance with the requirements of the City's Environmental Purchasing Policy.

## Statutory environment

Section 3.57 of the *Local Government Act 1995 (WA)* provides tenders for providing goods or services.

The tendering process and evaluation complied with the requirements of Part 4 of the *Local Government (Functions and General) Regulations 1996 (WA)*.

## Background

The City requires a suitably qualified and experienced engineering survey contractor to undertake topographical land surveys for its Capital Works Projects within the City. These projects primarily encompass the rehabilitation and/or upgrade to road, footpath, car park, reserves, and stormwater drainage. Survey Data delivered by the surveyor will be utilised by City’s internal designers or external consultants to develop fit-for-construction designs.

There is currently no existing contract in place for these services, with works previously undertaken on an as-needed basis.

The contract for the provision of Engineering Survey Services is for a term of an initial period of three (3) years, with an option to extend to two (2) additional one-year periods (1 +1), exercisable at the Principal’s discretion.

## Report

Tender 25/2025 - Provision of Engineering Survey Services was publicly advertised in The West Australian on Saturday 28 February 2026 and closed on 17 March 2026 at 2.00pm.

**Tender submissions**

Six tender submissions were received in response to the advertised tender. Details of the respondent(s) and the prices submitted are detailed in Confidential Attachment 12.14.1.

**Evaluation panel**

The evaluation panel comprised seven (7) members, being:

- One (1) with tender and contract preparation skills, and
- Two (2) with the appropriate operational expertise and involvement in supervising contracts.

The City's Procurement and Contracts team facilitated the procurement process and provided probity oversight to ensure the evaluation was conducted in accordance with the Request for Tender documentation, the City's Purchasing Policy, and the principles of fairness, transparency and accountability.

The evaluation panel conducted the assessment of the submissions in accordance with the City's evaluation process in a fair and equitable manner.

**Compliance assessment**

Five submission(s) received were assessed as fully compliant.

One submission(s) received was assessed as non-compliant.

On this basis five (5) out of the six (6) submissions were considered for further evaluation.

**Evaluation method and weighting**

The standard minimum acceptable qualitative score for tenders at the City is 60%.

**Qualitative criteria**

The responses received were assessed on the selection criteria included with the request for tender, being:

| | Criteria | Weighting |
|---|---|---|
| 1 | Relevant Experience | 25% |
| 2 | Capacity to Deliver | 25% |
| 3 | Methodology | 25% |
| 4 | Value Adding | 25% |
| | **Total** | **100%** |

**Price Assessment**

Refer to Confidential Attachment 12.14.1 – Tender 28/2025 - Provision of Engineering Survey Services – Price Scheule.

**Value for Money**

As detailed in Confidential Attachment 12.14.2 – T25/2025 Case Study (Lump Sum), a case study was utilised to enable a consistent, like-for-like comparison across the varying rate structures submitted by tenderers.

The preferred tenderer achieved the highest overall qualitative score and demonstrated strong performance across all evaluation criteria, particularly in relation to methodology, resource capacity, and value-added service offerings.

The cost analysis shows that the preferred tenderer's offer resulted in the lowest overall cost to the City when the quantification of the value-added service is taken into consideration.

Having regard to the qualitative assessment outcomes, pricing evaluation, and value-added benefits, the Evaluation Panel determined that the preferred tenderer represents the best overall value-for-money outcome for the City.

**Post tender clarifications**

As part of the evaluation process, consistent with Regulation 18(4a) of the *Local Government (Functions and General) Regulations 1996 (WA)*, post tender clarifications were undertaken to confirm aspects of the submission(s).

Clarification was sought regarding pricing components and service inclusions relevant to the assessment of value for money.

The clarification provided assurance regarding the pricing methodologies and service inclusions contained within the relevant submissions, enabling a consistent and informed assessment of value for money.

**Evaluation summary**

An Evaluation Scorecard has been completed which details the evaluation panels assessment of the tender submission(s). Refer to Confidential Attachment 12.14.3 - Tender 28/2025 - Provision of Engineering Survey Services – Evaluation Scorecard.

The preferred tenderer demonstrated the capability, experience, and resources necessary to successfully deliver the required scope of works. The submission provided strong evidence of relevant experience in delivering projects of a similar size and complexity, together with a clear methodology and sufficient resource capacity to meet the City's requirements.

The preferred tenderer achieved the highest overall qualitative score and the highest score under the Value Adding criterion. The Evaluation Panel considered the proposed value-added service to provide ongoing operational efficiencies and long-term benefits to the City beyond the minimum requirements of the specification.

When the value-added service is taken into consideration the preferred tenderer’s offer resulted in the lowest overall cost to the City.

Having regard to the qualitative assessment outcomes, pricing evaluation, and value-added benefits, the Evaluation Panel determined that the preferred tenderer represents the best overall value-for-money outcome for the City.

Following a compliant and transparent procurement process undertaken in accordance with the requirements of the *Local Government Act 1995 (WA)* and the City’s Purchasing Policy, the preferred tenderer meets the City’s requirements for Tender 28/2025 - Provision of Engineering Survey Services and is recommended for acceptance.

## Financial implications

The price submitted by the preferred tenderer is within the allocated budget.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
| --- |
| 1. CONFIDENTIAL REDACTED - T28/2026 - Price Schedule (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(c)) [**12.14.1** - 1 page] |
| 2. CONFIDENTIAL REDACTED - T28/2025 - Case Study (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(c)) [**12.14.2** - 1 page] |
| 3. CONFIDENTIAL REDACTED - T28/2025 - Provision of Engineering Survey Services - Evaluation Scorecard (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(4)(c)) [**12.14.3** - 3 pages] |

# 13 Reports by the Chief Executive Officer

## 13.1 Request for leave of absence

## 13.2 Notice of motion

# 13.2.1 Notice of Motion - Trial of Novel Meeting Sequence

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | N/A |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Corporate and Governance |

### Council role

**Overseeing** Overseeing the allocation of the City's finances and resources e.g. setting the annual budget, accepting tenders, determining what services and facilities the City is to provide, annual reports, selecting the CEO and reviewing the CEO's performance.

### Purpose of report

To consider the Notice of Motion received from Councillor (Cr) Kulczycki proposing a six month trial of a novel meeting sequence.

### Summary and key issues

- A request has been received from Cr Kulczycki for Council to consider undertaking a trial for six months.
- The trial proposes that Agenda Briefing Forums would not be held during the trial period, and Public Statement Time would be introduced at Ordinary Council Meetings.
- Officers recommend that the Notice of Motion as received is not supported and Council retains the existing meeting cycle, format and procedures.

## Councillor Motion

That Council:

1. Conduct a six (6) month trial, commencing from the July 2026 meeting cycle, whereby:

   a) Agenda Briefing Forums will no longer be held.

   b) Introduce Public Statement Time to Ordinary Council Meetings.

2. Request the Chief Executive Officer to:

   a) Implement any necessary administrative changes arising from this trial;

   b) Organise meetings in the form of Information Forums in lieu of Agenda Briefing Forums consistent with Clause 18.1 of the City of Belmont *Standing Orders Local Law 2017*;

   c) Continue to issue Ordinary Council Meeting agendas in line with existing arrangements, provided to Elected Members and the general public via the City's website;

   d) Provide a report to Council at the first Ordinary Council Meeting following the conclusion of the six (6) month trial evaluating the effectiveness of the arrangement, including impacts on governance, meeting efficiency, Councillor engagement and the strategic utilisation of Information Forums.

**Reasons**

- Agenda Briefing Forums and Information Forums currently serve overlapping purposes, resulting in duplication within Council's monthly meeting cycle.
- The abolition of Agenda Briefing Forums will provide Council with an opportunity to evaluate whether a simplified meeting structure can deliver improved governance outcomes.
- Consolidating management presentations and briefing content into Information Forums may improve meeting efficiency by reducing the need for matters to be presented on multiple occasions.
- Contemporary corporate governance principles support the value of confidential discussion environments in enabling frank questioning, challenge, and strategic dialogue.
- The proposed arrangement may support more focused and strategic use of Information Forums by allowing sufficient time for both operational briefings and broader strategic discussions.
- Formal Council debate, decision-making, and voting will continue to occur at Ordinary Council Meetings conducted in accordance with legislative

requirements and available to the public through existing attendance and livestreaming arrangements.

- The introduction of Public Statement Time will provide an additional opportunity for members of the community to address Council and share their views on matters affecting the City.
- The proposed trial does not reduce public access to Council agendas, reports, minutes, Council resolutions, or other established avenues of community engagement.
- The proposed arrangement seeks to balance effective governance with community participation by introducing Public Statement Time while retaining public access to formal Council decision-making processes.
- A six (6) month trial will allow Council to objectively assess the governance, operational and strategic impacts of the arrangement before determining future conduct of Council business.

## Officer Recommendation

| Officer Recommendation |
| --- |
| That Council retains the existing meeting cycle, format and procedures. |

## Location

Not applicable.

## Consultation

Elected Members were provided with information relating to meeting procedures, public participation opportunities and the City's meeting cycle at an Information Forum held 14 July 2026.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

Part 5 of the *Local Government Act 1995 (WA)* and the *Local Government (Administration) Regulations 1996 (WA)* provide the requirements for legislated meetings.

Part 18 of the City's *Standing Orders Local Law 2017* provides the basis for briefings, workshops and informal meetings. It confirms that formal decisions cannot be made at these meetings. Both Agenda Briefing Forums and Information Forums operate within this framework, although not specifically titled/named in the local law.

### Order of Precedence

Council meetings are conducted in accordance with a hierarchy of legislative and governance documents, which provides an order of precedence. Legislation (e.g. the *Local Government Act 1995 (WA)* and associated regulations) and subsidiary legislation take precedence over policies and administrative practices. Anything adopted, endorsed or implemented by the City should be informed by, and align with, the requirements of the documents above it in the hierarchy.

Where legislation is silent, additional direction may be provided via a local law, Council-adopted policies and/or administrative practices. Information published on the City's website, forms and meeting documentation reflect the requirements of any Council adopted or endorsed documents.

## Background

A Notice of Motion received from Cr Kulczycki reads as follows:

That Council:

1. Conduct a six (6) month trial, commencing from the July 2026 meeting cycle, whereby:
    a) Agenda Briefing Forums will no longer be held.
    b) Introduce Public Statement Time to Ordinary Council Meetings.
2. Request the Chief Executive Officer to:
    a) Implement any necessary administrative changes arising from this trial;

b) Organise meetings in the form of Information Forums in lieu of Agenda Briefing Forums consistent with Clause 18.1 of the City of Belmont *Standing Orders Local Law 2017*;

c) Continue to issue Ordinary Council Meeting agendas in line with existing arrangements, provided to Elected Members and the general public via the City's website;

d) Provide a report to Council at the first Ordinary Council Meeting following the conclusion of the six (6) month trial evaluating the effectiveness of the arrangement, including impacts on governance, meeting efficiency, Councillor engagement and the strategic utilisation of Information Forums.

**Reasons**

- Agenda Briefing Forums and Information Forums currently serve overlapping purposes, resulting in duplication within Council's monthly meeting cycle.
- The abolition of Agenda Briefing Forums will provide Council with an opportunity to evaluate whether a simplified meeting structure can deliver improved governance outcomes.
- Consolidating management presentations and briefing content into Information Forums may improve meeting efficiency by reducing the need for matters to be presented on multiple occasions.
- Contemporary corporate governance principles support the value of confidential discussion environments in enabling frank questioning, challenge, and strategic dialogue.
- The proposed arrangement may support more focused and strategic use of Information Forums by allowing sufficient time for both operational briefings and broader strategic discussions.
- Formal Council debate, decision-making, and voting will continue to occur at Ordinary Council Meetings conducted in accordance with legislative requirements and available to the public through existing attendance and livestreaming arrangements.
- The introduction of Public Statement Time will provide an additional opportunity for members of the community to address Council and share their views on matters affecting the City.
- The proposed trial does not reduce public access to Council agendas, reports, minutes, Council resolutions, or other established avenues of community engagement.
- The proposed arrangement seeks to balance effective governance with community participation by introducing Public Statement Time while retaining public access to formal Council decision-making processes.

- A six (6) month trial will allow Council to objectively assess the governance, operational and strategic impacts of the arrangement before determining future conduct of Council business.

## Report

The matters raised within this Notice of Motion relate to the City's broader governance documents, including meeting procedures, public participation opportunities and the City’s meeting cycle.

### Current Meeting Cycle

Council meetings are legislative decision-making forums established under the *Local Government Act 1995 (WA)* with meeting procedures also governed by the City's *Standing Orders Local Law 2017*. It is at Council Meetings that formal decisions of Council are made. By comparison, Agenda Briefing Forums and Information Forums are not decision-making meetings.

The purpose of Agenda Briefing Forums is to provide an opportunity for Elected Members to ask questions and obtain additional information in respect to reports on the upcoming Council meeting agenda for informed decision making.

The purpose of Information Forums is to provide an opportunity for the Chief Executive Officer to inform Elected Members of significant and strategic matters/projects being progressed by the City. Information Forums also provide opportunities for Elected Members to identify matters for future discussion and potential consideration by Council and for the Administration to seek guidance on matters under development.

Given the differing purpose of these meeting types, it is important that any proposed changes to meeting procedures, public participation opportunities or the City’s meeting cycle are considered within the context of the City's broader governance documents.

### Current Public Participation Requirements

The City's *Standing Orders Local Law 2017* provides for forms of public participation:

- Public Question Time (as required by the *Local Government Act 1995 (WA)* and section 6.2 of the *Standing Orders Local Law 2017*)
- Deputations (section 6.6 of the *Standing Orders Local Law 2017*)
- Submission (section 6.7 of the *Standing Orders Local Law 2017*)

The Notice of Motion does not propose any changes to public question time.

The consequence of removing Agenda Briefing Forums will require Council to address how deputations and submissions are dealt with at Ordinary Council Meetings under the *Standing Orders Local Law 2017*.

**Administrative Changes Arising from the Proposed Trial**

Should Council resolve to proceed with the six month trial as proposed by this Notice of Motion, consistent with the direction provided, the CEO would implement necessary administrative changes.

Agenda Briefing Forums

Agenda Briefing Forums currently provide an opportunity for Elected Members to receive information and seek clarification on matters prior to Council consideration. Should Agenda Briefing Forums consistent with the current cycle and format no longer be held, alternative arrangements may need to be established to facilitate information sharing between officers and Elected Members on upcoming agenda items.

Any replacement meetings during the trial period, including their scheduling and administration would need to be considered in the context of Part 18 of the *Standing Orders Local Law 2017*.

To brief Elected Members on items to be presented at upcoming Council Meetings, an Elected Member Information Briefing could be held on the third week of each month's meeting cycle. This briefing could be chaired by the Mayor and provide an opportunity for Elected Members to receive information from officers and seek clarification on agenda items.

Public Statement Time

As submissions and deputations are provided for under section 6.6 and 6.7 of the *Standing Orders Local Law 2017*, should Council determine that a trial be undertaken, Council may resolve to suspend the operation of sections 6.6 and 6.7 of the *Standing Orders Local Law 2017* each meeting during the trial period, by absolute majority.

Due to the complexity of the current *Standing Orders Local Law 2017*, should an application be made before the meeting for a submission or deputation, and prior to Council's resolution to suspend sections 6.6 and 6.7 of the *Standing Orders Local Law 2017*, the CEO and Presiding Member will be required to make a determination in accordance with the *Standing Orders Local Law 2017*, whether the submission or deputation will be heard at that meeting.

Public Statement Time could be included on the Ordinary Council Meeting agenda following Public Question Time.

Should Council proceed with the trial, administrative actions may include:

- Development of rules governing Public Statement Time (with subsequent consideration and endorsement by the Presiding Member). Without limiting future consideration, rules for Public Statement Time may include:
    - An initial period of 15 minutes is provided for Public Statement Time. A simple majority is required to extend Public Statement Time beyond the initial 15 minute period with a maximum total duration of 30 minutes at each meeting.
    - A maximum of three minutes is provided for a person to make a Statement, with no extension of time permitted.
    - Priority is given to persons who have registered in advance and received approval from the Presiding Member to make a Statement.
    - Any remaining available time may, at the discretion of the Presiding Member, be allocated to persons who have not registered in advance.
    - Statements must relate to a matter listed on the Ordinary Council Meeting agenda.
    - Only one Statement may be made per person per meeting, and by individuals who are present at the meeting.
    - Statements are to be received without debate, discussion or response from Elected Members or City officers.
    - Minutes will include the name of the speaker and the relevant agenda item(s) their Statement relates to.
    - Statements submitted in advance of the meeting, in writing, may be included in the Minutes where the content is consistent with the Statement made at the meeting.
    - The Presiding Member has authority to rule a Statement out of order where it is offensive, objectionable, defamatory, repetitive, irrelevant to the agenda item, or otherwise inconsistent with the orderly conduct of the meeting.
    - During Public Statement Time, Elected Members may raise a point of order consistent with the *Standing Orders Local Law 2017*.
- Preparation of forms, guidance materials and website content for community members reflective of the rules endorsed by Council.
- Communication of the trial arrangements to community members.
- Ongoing monitoring and evaluation of the trial for subsequent reporting to Council.

Other Considerations

While the proposed trial could be implemented administratively, it would require the development of new procedures, communication materials and governance processes to support its operation. As the matters contemplated by the trial are closely linked to broader governance considerations, officers consider that a review of the *Standing Orders Local Law 2017* and associated governance documentation may provide a more comprehensive mechanism for considering changes to public participation and meeting arrangements before operational changes are introduced.

Should Council resolve to proceed with the Notice of Motion, the proposed July 2026 commencement date (having now passed) would require amendment. If Council determines to undertake a trial, it is recommended that the trial commence from the October 2026 meeting cycle. This would provide sufficient time for the development and implementation of the necessary administrative arrangements. Subject to Council's resolution, a six-month trial commencing in October 2026 would conclude following the March 2027 meeting cycle.

**Recommended Approach**

It is recommended that the Notice of Motion not be supported and that the existing meeting cycle, format and procedures be retained. Following an administrative review of the *Standing Orders Local Law 2017*, Council may consider and subsequently determine that changes to the meeting cycle, format and procedures are required.

Any changes will need to be appropriately coordinated, communicated to Elected Members and the community, and implemented in a manner that maintains the City's existing high standards of governance and statutory compliance obligations.

## Financial implications

The implementation of this Notice of Motion would require officer resources to undertake research, consultation, document preparation and communication to community members. Should the Notice of Motion proceed, additional resourcing requirements may arise.

Any significant financial implications identified during implementation would be considered through the City's normal budget review processes.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
| --- |
| **Nil** |

# 13.2.2 Notice of Motion - Information Forum Policy

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 76/008 |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Corporate and Governance |

## Council role

| | |
|---|---|
| **Legislative** | The making and adopting of local laws, local town planning schemes and Council policies. |

## Purpose of report

To consider the Notice of Motion received from Councillor (Cr) Harris for Council to consider drafting an Information Forum Policy.

## Summary and key issues

- A request has been received from Cr Harris for Council to consider drafting an Information Forum Policy.
- The policy as proposed by the Notice of Motion requests that an Elected Member chair Information Forums.
- Officers recommend that the Notice of Motion as received is not supported and that the existing Information Forum format and procedures are retained.

| Councillor Motion |
| --- |
| That Council:<br><br>Requests the Chief Executive Officer to arrange for a draft policy on Information Forums to be presented to Council by December of 2026.<br><br>**Reasons**<br><br>• Meetings of Council are not currently governed by Council Guidelines beyond their existence as noted in the Standing Orders.<br>• As these are meetings of Elected Members, a policy should be introduced to ensure they are governed by Council-approved guidance.<br>• Meetings of Elected Members should be chaired by an Elected Member to conform with State Government guidance and standard practice, and a policy can reflect this. |

## Officer Recommendation

| Officer Recommendation |
| --- |
| That Council retains the existing Information Forum format and procedures. |

## Location

Not applicable.

## Consultation

Elected Members were provided with information relating to meeting procedures, public participation opportunities and the City's meeting cycle at an Information Forum held 14 July 2026.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

If Council resolves to proceed with this Notice of Motion, and subsequently endorse a draft Information Forum policy, the City's website will be updated.

## Statutory environment

Section 2.7(2)(b) of the *Local Government Act 1995 (WA)* (the Act) provides that the role of Council is to determine Council policies.

While section 2.7 of that Act states that Council is responsible for determining policies and providing strategic direction to the Chief Executive Officer, section 5.41 of the Act states that the role of the Chief Executive Officer includes the responsibility of determining procedures and systems for implementing those policies.

Part 18 of the City's *Standing Orders Local Law 2017* provides the basis for briefings, workshops and informal meetings.

## Background

A Notice of Motion received from Cr Harris reads as follows:

That Council requests the Chief Executive Officer to arrange for a draft policy on Information Forums to be presented to Council by December of 2026.

**Reasons**

- Meetings of Council are not currently governed by Council Guidelines beyond their existence as noted in the Standing Orders.
- As these are meetings of Elected Members, a policy should be introduced to ensure they are governed by Council-approved guidance.
- Meetings of Elected Members should be chaired by an Elected Member to conform with State Government guidance and standard practice, and a policy can reflect this.

## Report

It is important to clarify that Information Forums are not solely meetings of Elected Members. Rather, they are informal sessions involving Elected Members, the Chief Executive Officer, members of the Executive Leadership Team, and officers from various service areas across the organisation.

The forums provide an opportunity for the Chief Executive Officer and the Executive Leadership Team to keep Elected Members informed on significant projects, strategic initiatives, emerging issues, major organisational activities, and future developments. They also provide a forum to discuss, other matters of operational importance that may have a significant impact on the City or community, including matters that may later be considered by Council.

Information Forums have historically been chaired by the Chief Executive Officer and the current format has been long established and has been working well as a mechanism to facilitate open and informal discussion on matters considered important for Elected Members to be aware of.

While Information Forums play an important role in supporting communication and the sharing of information between the administration and Elected Members, they are administrative in nature and are not decision-making meetings. They are intended to enhance Elected Members' understanding of complex or significant matters and provide context ahead of the formal decision-making processes prescribed under the *Local Government Act 1995 (WA).*

Through this forum, Elected Members have a channel to raise matters that may warrant future discussion or consideration by Council and provide strategic input during the development phase of projects and initiatives.

It should be noted that there is no legislative requirement under the *Local Government Act 1995 (WA)* or associated regulations for a local government to conduct Information Forums. The establishment, format, frequency, and operation of such forums are matters determined by each local government as an administrative and governance practice to support effective communication and informed decision-making.

### Current Framework for Information Forums

Information Forums are captured by part 18 of the City's *Standing Orders Local Law 2017*. This section of the local law provides the basis for briefings, workshops and informal meetings. It confirms that formal decisions cannot be made at these meetings. Information Forums operate within this framework, although not specifically titled/named.

Information Forums are held consistent with the *Standing Orders Local Law 2017* and the City's adopted Code of Conduct which establishes clear expectations for conduct. Confidentiality is managed consistent with section 5.93 of the Act.

Should the Notice of Motion proceed, a draft Information Forum Policy will be prepared and presented to the December 2026 Ordinary Council Meeting.

**Recommended Approach**

It is recommended that the Notice of Motion not be supported and that the existing Information Forum format and procedures be retained.

## Financial implications

The implementation of this Notice of Motion would require officer resources to undertake research, consultation and document preparation. Should the Notice of Motion proceed, additional resourcing requirements may arise.

Any significant financial implications identified during implementation would be considered through the City's normal budget review processes.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
| --- |
| **Nil** |

# 13.2.3 Notice of Motion - Administrative Review of Standing Orders Local Law 2017

| | | |
|---|---|---|
| Voting Requirement | : | Simple Majority |
| Subject Index | : | 76/008 |
| Location/Property Index | : | N/A |
| Application Index | : | N/A |
| Disclosure of any Interest | : | Nil |
| Previous Items | : | N/A |
| Applicant | : | N/A |
| Owner | : | N/A |
| Responsible Division | : | Corporate and Governance |

## Council role

| | |
|---|---|
| **Legislative** | The making and adopting of local laws, local town planning schemes and Council policies. |

## Purpose of report

To consider the Notice of Motion received from Councillor (Cr) Sessions for Council to direct the Chief Executive Officer to commence an administrative review of the City of Belmont's *Standing Orders Local Law 2017*.

## Summary and key issues

- A request has been received from Cr Sessions for Council to consider commencing an administrative review of the City of Belmont's *Standing Orders Local Law 2017.*
- The Notice of Motion directs the Chief Executive Officer to commence a review and prepare a draft local law to Elected Members for consideration in the 2026-27 financial year.
- Officers recommend that the Notice of Motion as received is supported and as a result of local government reform, an administrative review of the *Standing Orders Local Law 2017* is considered appropriate.

| Councillor Motion |
| --- |
| That Council directs the Chief Executive Officer to undertake an administrative review of the *Standing Orders Local Law 2017* and provide a draft local law and recommendations to an Information Forum during Quarter 2 of the 2026-27 financial year.<br><br>**Reasons**<br>• The Standing Orders have not been reviewed since their introduction in 2017.<br>• Noting the Local Government Reform process may take until 2028 a review should be initiated.<br>• An administrative review and presentation to an Information Forum will allow Elected Members to understand how the Standing Orders can be changed for an effective modern meeting process. |

## Officer Recommendation

| Officer Recommendation |
| --- |
| That Council supports an administrative review of the *Standing Orders Local Law 2017*. |

## Location

Not applicable.

## Consultation

Elected Members were provided with information relating to meeting procedures, public participation opportunities and the City's meeting cycle at an Information Forum held 14 July 2026.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

**Key Performance Area: Performance**
**Outcome:** 10. Effective leadership, governance and financial management.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

Part 5 of the *Local Government Act 1995 (WA)* and the *Local Government (Administration) Regulations 1996 (WA)* provide the requirements for legislated meetings.

Section 3.12 of the *Local Government Act 1995 (WA)* sets out the statutory procedure for making local laws, which also applies to the amendment or repeal of an existing local law. This provides the pathway for Council to progress any changes identified through a review of the *Standing Orders Local Law 2017*.

Section 3.16 of the *Local Government Act 1995 (WA)* sets out the requirement for a local government to carry out a review of local laws after 15 years from the commencement of the local law. As the City's *Standing Orders Local Law* was reviewed in 2017, review under section 3.16 is not required until 2032.

### Order of Precedence

Council meetings are conducted in accordance with a hierarchy of legislative and governance documents, which provides an order of precedence. Legislation (e.g. the *Local Government Act 1995 (WA)* and associated regulations) and subsidiary legislation take precedence over policies and administrative practices. Anything adopted, endorsed or implemented by the City should be informed by, and align with, the requirements of the documents above it in the hierarchy.

Where legislation is silent, additional direction may be provided via a local law, Council-adopted policies and/or administrative practices. Information published on the City's website, forms and meeting documentation reflect, the requirements of any Council adopted or endorsed documents.

## Background

A Notice of Motion received from Cr Sessions reads as follows:

That Council directs the CEO to undertake an administrative review of the *Standing Orders Local Law 2017* and provide a draft local law and recommendations to an Information Forum during Quarter 2 of the 2026/27 financial year.

**Reasons**

- The Standing Orders have not been reviewed since their introduction in 2017.
- Noting the Local Government Reform process may take until 2028 a review should be initiated.
- An administrative review and presentation to an Information Forum will allow Elected Members to understand how the Standing Orders can be changed for an effective modern meeting process.

## Report

Council meetings are legislative decision-making forums established under the *Local Government Act 1995 (WA)* with meeting procedures governed by the City's *Standing Orders Local Law 2017*. It is at Council Meetings that formal decisions of Council are made.

### Existing *Standing Orders Local Law 2017*

The City's *Standing Orders Local Law 2017* was made by Council on 27 June 2017.

The local law sets provisions for the management and procedures of Council meetings. State Government reforms and the amendment of the *Local Government Act 1995 (WA)* have resulted in changes to the provisions relating to confidentiality, the membership of committees and the Audit, Risk and Improvement Committees being held generally open to the public. It is noted that there is opportunity to align provisions of the City's existing Standing Orders with State Government reform, as well as contemporary governance practices.

### Local Government Reform

The State Government announced in November 2021, that as part of the local government reforms, standardised meeting procedures would be introduced to establish a consistent approach to all local government council meetings to make it easier for people to participate in and observe council meetings, wherever they are held.

The State Government has advised of its intent to make Regulations that apply to all local governments and that an order of the Governor under section 3.17 of the Act will repeal all existing local government meetings procedures, standing orders or council meeting local laws.

In February 2024, the Department of Local Government released a consultation paper as part of local government reform on standardised meeting procedures. Information received from the Department of Local Government since early 2024 indicated these reforms were expected to be implemented by October 2025. Subsequent advice from the Department of Local Government received in June 2026 suggests implementation of standardised meeting procedures may not occur until 2027–28.

As such, there is an opportunity for the City to undertake a review of the *Standing Orders Local Law 2017* prior to the implementation of anticipated State Government reforms. This would enable Council to consider meeting procedures and public participation arrangements in a comprehensive manner, while recognising that further adjustments may be required following the introduction of State Government standardised meeting procedures. Any future changes would need to be clearly communicated to Elected Members and the community to minimise potential confusion arising from multiple changes to meeting processes in a relatively short time frame.

Accordingly, and as a result of local government reform, an administrative review of the *Standing Orders Local Law 2017* is considered appropriate.

**Recommended Approach**

An administrative review of the *Standing Orders Local Law 2017* is supported. The *Standing Orders Local Law 2017* represents the highest-order governance mechanism through which Council may consider possible changes to the management of meetings.

Any changes will need to be appropriately coordinated, communicated to Elected Members and the community, and implemented in a manner that maintains the City's existing high standards of governance and statutory compliance obligations.

## Financial implications

The implementation of this Notice of Motion would require officer resources to undertake research, consultation, document preparation and, communication to community members. Should the Notice of Motion proceed, additional resourcing requirements may arise.

Any significant financial implications identified during implementation would be considered through the City's normal budget review processes.

## Environmental implications

There are no environmental implications associated with this report.

## Social implications

There are no social implications associated with this report.

## Attachment details

| Attachment No and title |
| --- |
| **Nil** |

# 14 Matters for which the meeting may be closed

## 14.1 Staff Matter - Chief Executive Officer Annual Performance Appraisal 2025-26

This report is included in the Ordinary Council Meeting – Confidential Matters Agenda in accordance with Section 5.23(2) of *the Local Government Act 1995 (WA)* which permits the meeting to be closed to the public for business relating to the following:

Section 5.23(2)(b)(ii) a matter relating to the recruitment or employment of the CEO or a senior employee; a review of performance under section 5.38.

# 15 Closure