



# Ordinary Council Meeting

# Agenda

25 February 2025



City of  
**Belmont**

# 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 February 2025**, commencing at 6:30pm.

**Wilmot Loh**  
**Acting Chief Executive Officer**

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# CITY OF BELMONT

## Ordinary Council Meeting

### Agenda

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## **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 hardcopy both in large and standard print and in other formats as requested. For further information please contact the Community Development team on (08) 9477 7219. For language assistance please contact TIS (Translating and Interpreting Service) on 131 450.

**Councillors 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.

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.

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

Cr J Powell (apology)

South Ward

### 3 Declarations of interest that might cause a conflict

Councillors/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

Councillors and staff are required (Code of Conduct), in addition to declaring any financial interest, to declare any interest that might cause a conflict. 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 – 26 November 2024 Ordinary Council Meeting

#### 5.1.1 Ms L Hollands on behalf of Belmont Resident and Ratepayer Action Group

The following questions were taken on notice at the 26 November 2024 Ordinary Council Meeting. Ms Hollands was provided with a response on 16 December 2024. The response from the City is recorded accordingly:

1. The town of Port Hedland recently passed a motion to suspend the COVID vaccinations. Documents related to this were sent to Councils nationwide, including the City of Belmont. Can the Mayor address whether the Council will take any action in relation to this?

#### **Response**

**Policies and guidelines in relation to vaccines are determined by the State Government and not Local Government. It is suggested you correspond with the Minister for Health, the Hon Amber-Jade Sanderson MLA or the Department of Health.**

2. Will Council get independent legal advice?

#### **Response**

**The Legal Representation Policy was reviewed by the City's solicitors prior to the policy being adopted by Council.**

3. When an email was sent from Belmont Resident and Ratepayer Action Group to Councillors at 6:00am on Monday 25 November 2024, a response was received from the Chief Executive Officer by 10:00am. Why weren't we getting proper answers from those we elect, rather than non-answers from the Chief Executive Officer who the Council appoints?

#### **Response**

**As confirmed by the Mayor at the November 2024 OCM, the Mayor and the CEO discussed the correspondence from BRRAG prior to an email being sent by the CEO before 10am on Monday 25 November 2024.**



### 5.1.2 Ms L Hollands, Redcliffe

The following questions were taken on notice at the 26 November 2024 Ordinary Council Meeting. Ms Hollands was provided with a response on 16 December 2024. The response from the City is recorded accordingly:

1. At the 22 October 2024 Ordinary Council Meeting, I asked a question asking where in the Standing Orders does it state that directly affected does not include affected as a result of the costs to the policy. Could the Mayor define his interpretation of 'directly affected', as it is not defined in the Standing Orders?

#### Response

**"Directly affected" is not defined in the Standing Orders or in either of the *Local Government Act 1995 (WA)* or the *Local Government (Administration) Regulations 1996 (WA)*. The Standing Orders confer to the Chief Executive Officer and the Presiding Member the discretion to make their own determination as to whether a person is directly affected by a matter before Council. A common-sense approach is required, having regard to the natural definition of the each of the constituent words "directly" and "affected" and the phrase "directly affected". The decision by either the CEO or Presiding Member as to whether a person is directly affected will also turn on the circumstances of the person in relation to the agenda item upon which they seek to make a submission or deputation.**

**The circumstances include but are not limited to the following:**

1. **Whether that person's interests are specifically adversely impacted by the matter: does the decision affect the person's legal, financial, or other substantial interests in a way which is material and specific when compared to the interests of others? If not, then the person is not directly affected.**
2. **Whether the person's rights or obligations are specifically altered by the matter: does the matter impose, remove, or alter rights or obligations directly tied to the individual in a way which is material and specific when compared to the rights and obligations of others? If not, then the person is not directly affected.**
3. **Is there a tangible and immediate connection between the decision and its effect on the person? If the impact of the decision is remote or only hypothetical, then the person is not directly affected.**

3. At the 22 October 2024 Ordinary Council Meeting, I attempted to ask a question on behalf of another resident who was not in attendance. The Mayor at this time advised of 'Rule f' that accompanies the Public Question Time Proforma, "When a member of the public submits a question and then does not attend the meeting in person, that question will be treated as an item of correspondence and will be answered in the normal course of business. The question and response will not be recorded in the minutes." This is not a part of the Standing Orders. Why does the Mayor try to use rules that are not a part of the Standing Orders, and why are we not using the Standing Orders so everyone is treated the same?

## **Response**

**The application of Rule (f) of the Rules for Question Time requires the person submitting the question to be present. If they are not present as is the case you cite, the question is treated as an item of correspondence. The Rules of Public Question Time arise from section 5.24 of the *Local Government Act 1995 (WA)*. Both the Rules of Public Question Time and part 6.2 of the Standing Orders apply.**

### **5.1.3 Mr M Cardozo, Redcliffe**

The following questions were taken on notice at the 26 November 2024 Ordinary Council Meeting. Mr Cardozo was provided with a response on 16 December 2024. The response from the City is recorded accordingly:

1. This question pertains to the process and criteria for determining "directly affected". Could the City outline the process and criteria it uses to determine whether an individual qualifies as 'directly affected' under Sections 6.6(1) and 6.7(1) of the Standing Orders, including how these criteria are communicated to applicants?

## **Response**

**"Directly affected" is not defined in the Standing Orders or in either of the *Local Government Act 1995 (WA)* or the *Local Government (Administration) Regulations 1996 (WA)*. The Standing Orders confer to the Chief Executive Officer and the Presiding Member the discretion to make their own determination as to whether a person is directly affected by a matter before Council. A common-sense approach is required, having regard to the natural definition of the each of the constituent words "directly" and "affected" and the phrase "directly affected". The decision by either the CEO or Presiding Member as to whether a person is directly affected will also turn on the circumstances of the person in relation to the agenda item upon which they seek to make a submission or deputation.**

**The circumstances include but are not limited to the following:**

- 1. Whether that person's interests are specifically adversely impacted by the matter: does the decision affect the person's legal, financial, or other substantial interests in a way which is material and specific when compared to the interests of others? If not, then the person is not directly affected.**
- 2. Whether the person's rights or obligations are specifically altered by the matter: does the matter impose, remove, or alter rights or obligations directly tied to the individual in a way which is material and specific when compared to the rights and obligations of others? If not, then the person is not directly affected.**
- 3. Is there a tangible and immediate connection between the decision and its effect on the person? If the impact of the decision is remote or only hypothetical, then the person is not directly affected.**

**As for how the criteria are communicated to applicants, a determination is made by either the CEO or Presiding Member at their discretion which may be based on their assessment of all factors pertaining to a questioner and the agenda item. The criteria are for the CEO or Presiding Member to consider as part of the exercise of their discretion to determine whether a person is directly affected or not, and the CEO or Presiding Member may request that the questioner demonstrates how they are directly affected by reference to any particular criterion or criteria.**

2. If "directly affected" determinations under Sections 6.6(2) and 6.7(2) of the Standing Orders are not considered formal decisions under Section 5.20 of the Local Government Act 1995 (WA), which requires decisions to be made by a simple majority of Council members at a formal meeting, could the City explain how the "directly affected" binding determinations at an Agenda Briefing Forum are procedurally distinct from formal decisions?

## **Response**

**Agenda Briefing Forums are not legislatively mandated and do not fall under the jurisdiction of the *Local Government Act 1995 (WA)*. Section 5.20 of the *Local Government Act 1995 (WA)* applies to (formal) Council Meetings (ordinary council meetings and committee meetings) and does not apply to ABF's.**

**ABF's are not "meetings" under the *Local Government Act 1995 (WA)* and are not subject to this legislation. The *Local Government Act 1995 (WA)* deals only with meetings at which formal decisions regarding the business and operation of the local authority by its Council are made, being formal (ordinary) council meetings and committee meetings.**

**As the ABF is not a decision-making forum under the *Local Government Act 1995 (WA)*, the Presiding Member is guided by the Standing Orders and may make a determination (or ruling) as permitted under the Standing Orders as to whether a person seeking to making a submission or deputation is directly affected. The Standing Orders convey this power/right on the Presiding Member during an ABF (and the CEO prior to an ABF).**

**The procedures that apply to an ABF are set by the Standing Orders and the Presiding Member in the exercise of their discretion.**

**Determinations made at ABF's – such as a ruling that a person is not directly affected – are not subject to the provisions of the *Local Government Act 1995 (WA)* or its regulations.**

3. With reference to Section 5.20 of the *Local Government Act 1995 (WA)* and Sections 6.6(2) and 6.7(2) of the Standing Orders, which state that requests referred by the CEO must be decided "by simple majority" of the Council, could the City confirm whether the current process at Agenda Briefing Forums aligns with these requirements, specifically are decisions on deputations and submissions consistently determined by a simple majority vote of Council members as outlined in the Standing Orders?

## **Response**

**Agenda Briefing Forums are not legislatively mandated and do not fall under the jurisdiction of the *Local Government Act 1995 (WA)*. Section 5.20 of the *Local Government Act 1995 (WA)* applies to (formal) Council Meetings (ordinary council meetings and committee meetings) and does not apply to ABF's.**

**As for Sections 6.6(2) and 6.7(2) of the Standing Orders, the use of the word "may" at each subsection referred, confers a discretion – not a requirement - on the CEO to refer the matter to Council.**

**As a discretion, it is entirely up to the CEO as to whether he refers the question of a person being directly affected by a matter to Council or not.**

4. Could the City provide data on the number of submissions and deputations approved or rejected at Agenda Briefing Forums (ABF) since February 2023? and,
  - i) confirm how these binding determinations align with the publication and transparency obligations under Section 5.96A(1)(f) of the *Local Government Act 1995 (WA)*?

## **Response**

**The ABF is not a decision-making forum governed by the *Local Government Act 1995 (WA)*. Determinations made at ABF's are not subject to the provisions of the *Local Government Act 1995 (WA)* or its regulations.**

**The information requested is available to the public and can be searched by reviewing the minutes on Council's website for the period in the question.**

**The City complies with the requirements to publish minutes in accordance with the *Local Government Act 1995 (WA)*.**

### **5.1.4 Mr M Cardozo on behalf of Belmont East Ward Connect**

The following questions were taken on notice at the 26 November 2024 Ordinary Council Meeting. Mr Cardozo was provided with a response on 17 December 2024. The response from the City is recorded accordingly:

1. At the 22 October 2024 Ordinary Council Meeting, the City indicated that a revised Stanton Low Cost Urban Road Safety Programme proposal would be presented to Council with the Redcliffe Traffic Study report for community consultation. Can the Council outline the full community engagement strategy or detailed consultation plan for the revised Stanton proposal, including the proposed catchment area and timeline?

## **Response**

**The timeline and high-level consultation plan for the Redcliffe Area Traffic Study, including possible updates to LCURS project, is outlined on Belmont Connect, Redcliffe Area Traffic Study.**

**The project includes two stages of consultation. Stage one was completed in August 2024. The second stage will be releasing the study recommendations on Belmont Connect for public comment.**

**As the traffic study has not been finalised, no timeframes are available at present. The CEO wrote to residents and ratepayers in Redcliffe with an update on the expected LCURS timeframes indicating early 2025 for the public comment period and including a QR code for information and study updates.**

**The City will be promoting the public comment period via City communication channels including Belmont Connect, City website, social media and BeNews newsletter as well as an email to everyone who participated in the first consultation stage for the project with a direct link to the Belmont Connect page.**

**This ensures everyone who has already actively engaged with the project at stage one is also engaged in stage two. Posters and flyers are planned to be delivered to local businesses and stakeholders and signage in the area to capture people who may not have provided a valid email address or engaged in the first consultation stage.**

4. Given that the *Local Government Act 1995 (WA)* emphasizes transparency, accountability, and community participation (Section 1.3), and no definition of 'directly affected' exists in the Act or the Standing Orders, can the City publish the rationale or reason for this specific decision to reject this applicant?

### **Response**

**The Presiding Member determined that the Party was not directly affected by the matter before Council and ruled the deputation could not proceed as the Presiding Member is entitled to do under the Standing Orders.**

## 5.2 Responses to questions taken on notice – 10 December 2024 Ordinary Council Meeting

### 5.2.1 Ms L Hollands on behalf of Belmont Resident and Ratepayer Action Group

The following question was taken on notice at the 10 December 2024 Ordinary Council Meeting. Ms Hollands was provided with a response on 20 December 2024. The response from the City is recorded accordingly:

2. Could I please get the amount of rates Perth Airport has paid yearly since 2020, as well as during the 2016-2017 period prior to the opening of the Direct Factory Outlet (DFO)?

#### Response

**The information sought by BRRAG is published in the Annual Budget and the Annual Report – Rating Information (as part of the financial notes accompanying the Annual Budget and Annual Report).**

Perth Airport Rates	
Financial Year	Budget
2024/25	\$15.01M
2023/24	\$14.23M
2022/23	\$12.56M
2021/22	\$12.19M
2020/21	\$11.98M
2019/20	\$11.47M
2016/17	\$9.32M

### 5.2.2 Ms J Gee, Cloverdale

The following question was taken on notice at the 10 December 2024 Ordinary Council Meeting. Ms Gee was provided with a response on 20 December 2024. The response from the City is recorded accordingly:

3. Is this a safe crossing for people if a car can go between the bollards?
  - i) Are the bollards too wide?
  - ii) Do they comply with regulations?

## **Response**

- i) **Water service conflicts and limited space required the bollards to be installed at the optimum location, between 1.2m and 1.5m apart. Bollards were not installed on the pram ramp as they would cause an obstruction for pedestrian movements.**
- ii) **The bollards were installed in line with the Citys' specifications and those able to be supplied by the industry.**

## **5.3 Questions from members of the public**

# **6 Confirmation of Minutes/receipt of Matrix**

## **6.1 Matrix for the Agenda Briefing Forum held 18 February 2025**

### **Officer Recommendation**

That the Matrix of the Agenda Briefing Forum held on 18 February 2025, as printed and circulated to all Elected Members, be received and noted.

## **6.2 Ordinary Council Meeting held 10 December 2024**

### **Officer Recommendation**

That the Minutes of the Ordinary Council Meeting held on 10 December 2024, as printed and 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**

**8.2 Questions by members without notice**

**9 New business of an urgent nature approved by the person presiding or by decision**

**10 Business adjourned from a previous meeting**

**11 Reports of committees**

Nil.

## 12 Reports of administration

### 12.1 Golden Gateway Local Structure Plan

Voting Requirement	:	Simple Majority
Subject Index	:	116/113
Location/Property Index	:	Various Lots
Application Index	:	N/A
Disclosure of any Interest	:	N/A
Previous Items	:	28 August 2018 Ordinary Council Meeting Item 12.1. 26 February 2019 Ordinary Council Meeting Item 12.6. 23 June 2020 Ordinary Council Meeting Item 12.2. 27 August 2024 Ordinary Council Meeting Item 12.2
Applicant	:	City of Belmont
Owner	:	State Government, Local Government and Various Private Landowners
Responsible Division	:	Development and Communities

#### Council role

<b>Legislative</b>	Includes adopting local laws, local planning schemes and policies.
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#### Purpose of report

For Council to make a recommendation to the WAPC on the draft Golden Gateway Local Structure Plan (LSP) following public advertising.

#### Summary and key issues

- The Golden Gateway LSP has been prepared to coordinate the future subdivision, zoning and development of a portion of land in Ascot.
- Council considered the draft LSP following public advertising at the 23 June 2020 Ordinary Council Meeting (OCM). At this meeting, Council resolved to investigate and make modifications to the draft LSP.
- Following investigations, the following aspects of the draft LSP were modified:
  - The road network;

- The Central Belmont Main Drain and Public Open Space;
  - Built form controls that consider current and future development feasibility; and
  - The designation of Perth Racing landholdings as subject to a separate planning process.
- At the 27 August 2024 OCM, Council resolved to readvertise the modified draft LSP.
- Advertising occurred for 42 days from 19 September 2024 to 1 November 2024. A total of 34 submissions were received.
- The submissions have been reviewed and there are no substantive changes recommended to the LSP to address the matters raised. However, several minor changes have been identified including:
  - Administrative corrections to table numbers and images;
  - Updates to sustainability provisions to allow alternative measures;
  - Refinements to pedestrian infrastructure investigations;
  - Adjustments to education planning details to address input from the Department of Education; and
  - Amendments to landscaping species.
- It is recommended that Council endorses the revised draft Golden Gateway LSP for approval by the Western Australian Planning Commission (WAPC).

### Officer Recommendation

That Council, pursuant to Schedule 2, Part 4, Clause 20 of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)*, recommend the draft Golden Gateway Local Structure Plan (Attachment 12.1.1) and supporting technical appendices (Attachments 12.1.2 through 12.1.6), incorporating the modifications detailed in Attachment 12.1.10, is approved by the Western Australian Planning Commission.

### Location

The draft Golden Gateway LSP encompasses land generally bound by Great Eastern Highway (GEH), the Swan River, Resolution Drive (north), Grandstand Road (north), the south-eastern boundary of Ascot Racecourse, Carbine Street and Hardey Road as reflected in Figure 1 below.

Although the Belmont Trust Land is not subject to development controls under the LSP, it is included within the precinct due to its potential for providing public open space and connectivity to the Swan River.



Figure 1: Golden Gateway Local Structure Plan Area (outlined red)

## Consultation

The draft Golden Gateway LSP was first advertised in October 2019. Following advertising and consideration of submissions, Council at the 23 June 2020 OCM, resolved to investigate and make modifications to the draft LSP and supporting reports.

At the 27 August 2024 OCM, Council endorsed readvertising of the modified draft LSP. The LSP was advertised for 42 days from 19 September 2024 to 1 November 2024 by:

- Sending letters to relevant State agencies, previous submitters, and landowners and occupiers of properties outlined in Figure 2. This area is consistent with the previous referral area.
- Publishing a public notice in the 19 September 2024 edition of the PerthNow newspaper.
- Displaying a public notice and information on the City's website, Belmont Connect and at the Civic Centre.
- Erecting one advertising sign along Stoneham Street and one along Resolution Drive; and



- Posting information on the City's Facebook page.



Figure 2: Referral Area

At the close of the advertising period, a total of 34 submissions were received. A summary of the submissions received, and the officer response are included in the Schedule of Submissions contained as Attachment 12.1.8 and Confidential Attachment 12.1.9.

Key matters raised in the submissions relate to:

- Movement network and parking
- Building heights
- Sustainability provisions
- The City's infill targets
- Public open space
- Landscaping
- Amenity
- Capacity of existing infrastructure to support development.

## 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.

### **Key Performance Area: Performance**

**Outcome:** 11. A happy, well informed and engaged community.

## Policy implications

There are no policy implications associated with this report.

## Statutory environment

### **Strategic Planning Framework**

Perth and Peel @ 3.5 Million

The State's 'Perth and Peel @ 3.5 Million' impacts upon the statutory direction for the City.

The Perth and Peel region will need to accommodate significant population growth by 2050 with an additional 1.5 million people requiring approximately 800,000 new homes. The 'Perth and Peel @ 3.5 million' strategic planning framework requires 47% of this growth to be delivered through infill developments. It identifies that the City of Belmont population will increase from 37,360 to 60,260 people by 2050 and to accommodate that increase an additional 10,410 dwellings will be required.

Perth and Peel @ 3.5 Million promotes the concept of 'urban corridors' as a way of achieving integrated land use and transport outcomes. Great Eastern Highway is identified as an 'urban corridor' and abuts the Golden Gateway LSP area. The framework suggests that land around urban corridors is appropriate for increased residential densities and mixed land uses.

### 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 Local Planning Scheme No. 15 (LPS 15). The key objectives of the Local Planning Strategy and its supporting sub-strategies as relevant to the Golden Gateway precinct are as follows:

- Enhance the north-west entrance to the City.
- Encourage landmark development.

- Produce a Structure Plan and Implementation Plan for the locality.
- Utilise the development process to rationalise and improve traffic access to commercial properties along GEH.
- Provide for higher density residential development along GEH, in addition to mixed use, landmark buildings that create an entry statement and a high standard of urban amenity.
- Acknowledge that Ascot Racecourse and the Swan River are 'strategic tourism sites' of State significance to benefit future tourism development.

Recognise the importance of the river for transport, commerce, tourism and leisure as well as its conservation values.

### Great Eastern Highway Urban Corridor Strategy

The GEH Urban Corridor Strategy was endorsed by Council at the 22 October 2024 OCM (Item 12.3). The Strategy establishes a 'vision' for the GEH corridor and proposes a series of implementation strategies to deliver this. It identifies four precincts along GEH and provides guidance on their development. Precinct 2 includes the section of GEH between Belmont Avenue and Hardey Road, of which the northern side of the highway falls within the Golden Gateway precinct.

The Strategy identifies this area as an 'activity node', which is envisioned to be developed as a creative hub comprising a mixture of commercial uses, civic spaces, offices, professional and technical service uses. Cafes and restaurants are also envisaged to emerge as the local workforce grows and will also be supported by higher density residential development.

### Activity Centre Planning Strategy

The Activity Centre Planning Strategy (ACPS) has been prepared to guide the future planning and coordination of activity centres within the City of Belmont. The ACPS identifies a future local centre within the Golden Gateway precinct, which includes a portion of Perth Racing's land.

## **Statutory Planning Framework**

### Metropolitan Region Scheme

Under the Metropolitan Region Scheme (MRS), the area is primarily zoned 'Urban', with a portion of land abutting the Swan River reserved for 'Parks and Recreation' and located within the Swan River Development Control Area. Great Eastern Highway, which abuts the precinct, is reserved as a 'Primary Regional Road' under the MRS and is controlled by Main Roads Western Australia (MRWA).

### *Planning and Development Act 2005 (WA)*

Part 10, Division 3, Section 153 of the *Planning and Development Act 2005* (WA) provides for the Commission to impose conditions as part of a subdivision approval for four lots or more which requires:

- A portion of land to be set aside for parks, recreation grounds or open space.
- A landowner to make a payment to the local government in lieu of providing public open space.

Section 154 of the Act requires money received by a local government to be paid into a separate reserve account established and maintained under the *Local Government Act 1995* (WA). The Act requires this money to be applied:

- For the purchase of land for parks, recreation grounds or open spaces by the local government in the vicinity of which it was received.
- In repaying any loans raised by the local government for the purchase of such land.
- With the approval of the Minister for the improvement or development as parks, recreation grounds or open spaces vested in or administered by the local government for those purposes.

### *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)*

Part 4, Schedule 2 – Deemed Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* (WA) (the Regulations) outlines the procedure for the preparation, advertising and consideration of a structure plan. The key requirements under Part 4 of the Regulations are as follows:

- The local government must advertise a structure plan for at least 42 days unless otherwise approved by the WAPC.
- Within 60 days (or an alternative date agreed to by Department of Planning, Lands and Heritage) from the last day for making submissions, the local government must consider all submissions made on the proposed structure plan and prepare a report for the WAPC which includes the following:
  - A list of the submissions considered by the local government;
  - Any comments by the local government in respect of those submissions;
  - A schedule of any proposed modifications to address issues raised in the submissions;
  - The local government's assessment of the proposal based on appropriate planning principles; and



- A recommendation by the local government on whether the proposed structure plan should be approved by the WAPC.
- If the WAPC is not given a report on a proposed structure plan they may make a decision on the proposed structure plan in the absence of a report. In making a decision, the WAPC may request technical advice or further information from the local government and if the local government fails to provide this, the WAPC may obtain the information themselves. If the WAPC incur any costs during this process, they may seek to recover these from the local government.
- The local government may advertise any modifications proposed to the structure plan to address issues raised by submissions; however it cannot advertise modifications on more than one occasion without approval from the WAPC.
- On receipt of a report on a proposed structure plan from the local government, the WAPC must within 120 days, consider the plan and determine whether to approve the structure plan, require the structure plan to be modified or refuse the structure plan.
- The WAPC may direct the local government to readvertise the structure plan where it considers that major modifications have been made; however, it cannot direct the local government to readvertise the structure plan on more than one occasion.

It should be noted that the Regulations stipulate that a local government cannot advertise modifications more than once without approval from the WAPC. Therefore, the LSP cannot be advertised again unless consent from the WAPC is provided.

#### Local Planning Scheme No. 15

Private landholdings within the precinct are predominantly zoned 'Mixed Use' under LPS 15, with parcels of Perth Racing land zoned 'Place of Public Assembly'. In addition, the open drain abutting Resolution Drive is reserved as 'Parks and Recreation' and various parcels of Crown land and road reserves are reserved as 'Local Roads' under LPS 15. Figure 3 illustrates the existing zoning of the precinct.

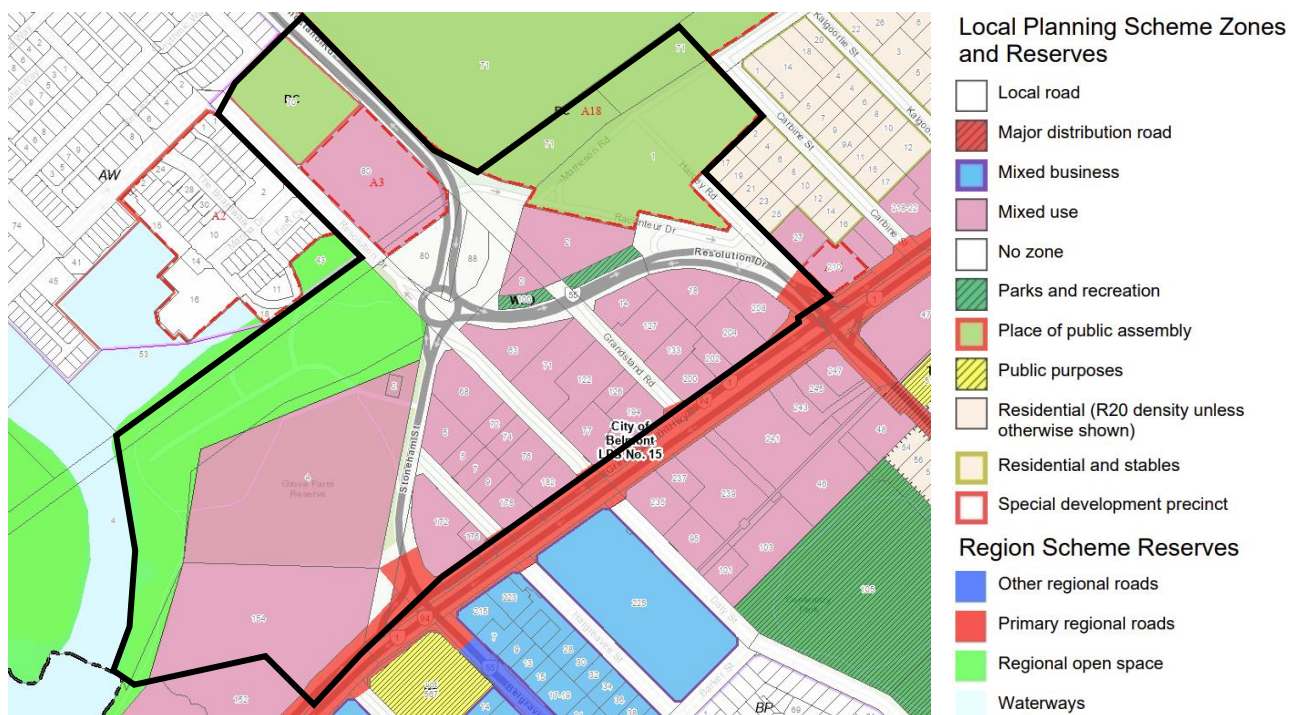


Figure 3: Extract of Scheme map

## 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.

## Liveable Neighbourhoods

Liveable Neighbourhoods is an operational policy that guides planning in greenfield and large urban infill areas. It provides guidance on the design of movement networks, activity centres, subdivision design and public open space provision.

Liveable Neighbourhoods typically requires a minimum contribution of 10% of the gross subdivisible area to be given up free of cost for public open space. However, in the case of mixed-use development, there is no minimum requirement for the provision of public open space. Instead, Liveable Neighbourhoods outlines that public open space contribution is to be determined by the WAPC on a case-by-case basis having regard to:

- The amount of mixed uses proposed and the potential number of residents;
- The amount of public open space available in 300m of the mixed-use area;

- The proportion of the mixed-use area likely to be used for non-residential purposes; and
- The level of innovation and quality of the resultant urban form in neighbourhood and town centres.

## **Background**

### **Golden Gateway Precinct**

In 2008, the Golden Gateway precinct was identified as a key strategic area due to its prominent position on GEH and at the north-western 'gateway' of the City of Belmont. It was recognised that there was significant potential for high quality mixed commercial and residential development in the location, however existing site access constraints and land fragmentation made it apparent that coordinated planning was required in the form of a structure plan.

### **Golden Gateway Local Structure Plan**

The LSP was prepared to address the following:

- The proposed zoning, reservation and density coding of land within the precinct, and prescribe the suitability of certain land uses.
- Built form controls including plot ratio, minimum and maximum building height, setbacks and car parking requirements.
- The provision of public open space and public realm improvements.
- The identification of a road hierarchy and movement network for vehicles, pedestrians and cyclists, as well as the consideration of street design and traffic management.
- Strategies for the management and treatment of stormwater runoff within the precinct.
- The identification of infrastructure and servicing requirements for the redevelopment of the precinct.
- Requirements to facilitate implementation of the draft LSP.

Council resolved to advertise the draft LSP at the 26 February 2019 OCM.

At the 23 June 2020 OCM, Council resolved to investigate various matters and undertake a number of modifications prior to readvertising. Following investigations, the draft LSP was revised with key modifications relating to:

- The road network;
- The Central Belmont Main Drain and Public Open Space;

- Built form controls that consider current and future development feasibility; and
- The designation of Perth Racing landholdings as subject to a separate planning process.

A detailed description of these modifications is included in the Minutes of the 27 August 2024 OCM (Attachment 12.1.7). At the August 2024 OCM, Council resolved to readvertise the modified draft LSP. Advertising occurred for 42 days from 19 September 2024 to 1 November 2024.

The following attachments are associated with this report:

- Attachment 12.1.1 contains a copy of the draft LSP.
- Attachments 12.1.2, 12.1.3, 12.1.4, 12.1.5, and 12.1.6 include the technical appendices.
- Attachment 12.1.7 contains a copy of the 27 August 2024 OCM Minutes.
- Attachment 12.1.8 contains a copy of the Schedule of Submissions.
- Attachment 12.1.9 is a confidential attachment and is a schedule of submissions with submitters names and addresses.
- Attachment 12.1.10 contains a copy of the Schedule of Modifications.
- Attachment 12.1.11 is a confidential attachment and is a consultant's feasibility study.

## **Report**

Several important aspects need to be considered, including procedural requirements, the current planning framework, and matters raised in submissions.

### **Procedural Considerations**

There are several key procedural considerations that are applicable to this matter. These are set out below.

#### Proper and Orderly decision making

It is important that the Council undertakes its role in providing a recommendation to the WAPC based on sound planning principles.

This approach is reiterated in the structure plan section of the Regulations, which outlines that the consideration of the matter is to be based on planning principles. The primary planning principle that applies to decision making in this context is that of proper and orderly planning.

This means decisions are approached in a manner that is disciplined, methodical, logical, and systematic, and not haphazard or capricious.

In the context of Council's role in making a recommendation, this principle highlights the importance of ensuring that decisions are based on well supported information, aligned with the broader planning framework and grounded in a strong planning rationale.

Taking a proper and orderly approach to reaching a recommendation ensures that the Council's recommendation cannot be easily dismissed.

### Timeframes

The City is required to consider all submissions and prepare a report for the WAPC within 60 days of the close of advertising, unless an extended timeframe has been granted. The WAPC has granted an extension to the City until 28 February 2025. Consequently, Council cannot defer this matter beyond the February OCM.

### Scope of role

It should be noted that the draft LSP cannot be advertised again unless directed by the WAPC. Therefore, the scope of Council's role at this stage is to provide a recommendation to the WAPC.

If no recommendation is made by Council, the WAPC can determine the matter without Council's input or views. Furthermore, the City may be liable for any costs incurred by the WAPC in finalising the matter.

## **Current Planning Framework**

When considering this LSP, it is important to note that the current planning framework under LPS 15 does not contain provisions relating to the following matters:

- Height
- Density
- Plot ratio
- Built form controls

While many submitters have raised concerns about the above matters, it is important to clarify that this plan seeks to provide guidance on these matters, as there are currently no prescribed limits under the existing planning framework. This context is helpful to consider when reviewing the matters raised in the submissions below.

## **Traffic**

Several submissions raised concerns regarding:

- Increased traffic congestion and delays at key intersections;
- Suitability of pedestrian crossing points on Stoneham Street and GEH;
- Reliance on alternative modes of transport; and
- The adequacy of parking provisions.

These matters are further discussed below.

### **Traffic Congestion**

Several submissions raised concerns about increased traffic and congestion, specifically roundabout safety and delays crossing GEH at Stoneham Street and Resolution Drive. In response, the following points are relevant:

- A Movement and Access Strategy has been prepared to assess the existing and proposed road network during weekday peak hours across various land use scenarios.
- The Stoneham Street/GEH/Belgravia Street and the Resolution Drive/GEH/Hardey Road intersections currently experience varying levels of congestion.
- The Stoneham Street intersection sees the GEH approaches operating with acceptable to moderate delays, with Belgravia/Stoneham Streets experiencing poor to very poor delays. The Resolution Drive intersection has the GEH approaches operating at moderate delays, with Hardey Road/Resolution Drive experiencing moderate to poor delays. By 2041, the level of service at both intersections is projected to decrease, irrespective of development within the Golden Gateway precinct. This is reflective of the regional level role of these intersections within the broader road network.
- Modelling indicates that the roundabout at Grandstand Road, Resolution Drive, and Stoneham Street will continue to operate satisfactorily. While the performance of the roundabout will decrease due to development within the Golden Gateway precinct, the intersection will maintain an acceptable level of service.





Figure 4: Recommended Pedestrian and Cyclist Facilities

- While the roundabout at Waterway Crescent, Garratt Road, and Grandstand Road lies outside the scope of this LSP, modelling shows that Grandstand Road will maintain adequate capacity in 2041.
- The precinct consists of both local and regional roads. The responsibility of regional roads and regional level traffic network functionality ultimately rests with MRWA.
- It is important to note that significant development can already occur within the precinct. The LSP is intended to coordinate this development, rather than provide for increased development potential.
- Dependant on size, scale and number of vehicle movements, future developments may require a Traffic Impact Assessment or Statement. This will allow the specific potential traffic impacts to be further considered.

In light of the above, no modifications are required to the LSP.

#### Pedestrian Crossing of Stoneham Street and Great Eastern Highway

The Movement and Access Strategy proposes several improvements to pedestrian infrastructure, including reducing traffic speeds, enhancing path connectivity, increasing tree canopy coverage to create a more pleasant walking environment, and upgrading crossing points (visualised in Figure 4).

Submitters raised concerns about pedestrian crossing points at Stoneham Street and GEH, as outlined further below.

### Stoneham Street

Several submitters raised concerns about crossing Stoneham Street, with some suggesting an overpass or underpass, and one proposing that Stoneham Street be converted into parkland. In response, the following points are relevant:

- Stoneham Street cannot be converted into parkland, as it is essential for efficient vehicle access through the precinct.
- The Movement and Access Strategy recommends improvements to pedestrian crossing points, which, in addition to the pedestrian crossing at the traffic lights of Stoneham Street and GEH, proposes a mid-block crossing on Stoneham Street.
- There may be an opportunity to establish a pedestrian overpass or underpass across Stoneham Street to improve connectivity. This infrastructure would require detailed design and further investigation, including the preparation of a funding strategy. The funding strategy could involve establishing a Development Contribution Area, enabling the inclusion of the overpass or underpass as an infrastructure item in a Development Contribution Plan, funded by future developers. Updates to the LSP and the Movement and Access Strategy are proposed to reflect this.

Having regard to the above, safe pedestrian crossing points on Stoneham Street are addressed by the LSP and proposed modifications.

### Great Eastern Highway

Currently, signalised pedestrian crossings on GEH are only available at the intersections with Resolution Drive/Hardey Road and Stoneham Street/Belgravia Street on the western approach. Several submissions requested improved pedestrian crossings along the GEH corridor, with one proposing an underpass and another advocating for an overpass. The Movement and Access Strategy recommends investigating additional protected crossings (traffic signals with refuge islands). Furthermore, the GEH Urban Corridor Strategy identifies a potential overpass near Daly Street. As such no modifications are required to the LSP. If the LSP is approved by the WAPC, the City will work with MRWA to explore options for improving pedestrian crossing points.

### Reliance on Alternative Modes of Transport



Several submissions raised concerns about relying on alternative modes of transport, with one questioning how the City will encourage the use of public transportation. In response, the following points regarding public transport are relevant:

- The Golden Gateway precinct is currently serviced by bus routes 293, 940, 998, and 999. Route 940 also operates at high frequency (every 10–15 minutes) along GEH, traveling between Elizabeth Quay Bus Station and Redcliffe Station. Bus Route 293 also operates along GEH, adjacent to the precinct providing a service between Belmont Forum and Redcliffe Station. Routes 998 and 999 form the Circle route, providing a high-frequency connection (typically every 10–15 minutes) around Perth, linking inner suburbs, major activity centres, key land uses, and public transport hubs.
- The precinct is adequately serviced by bus routes to and from key destinations. Bus stops for these routes are identified on Figure 5.

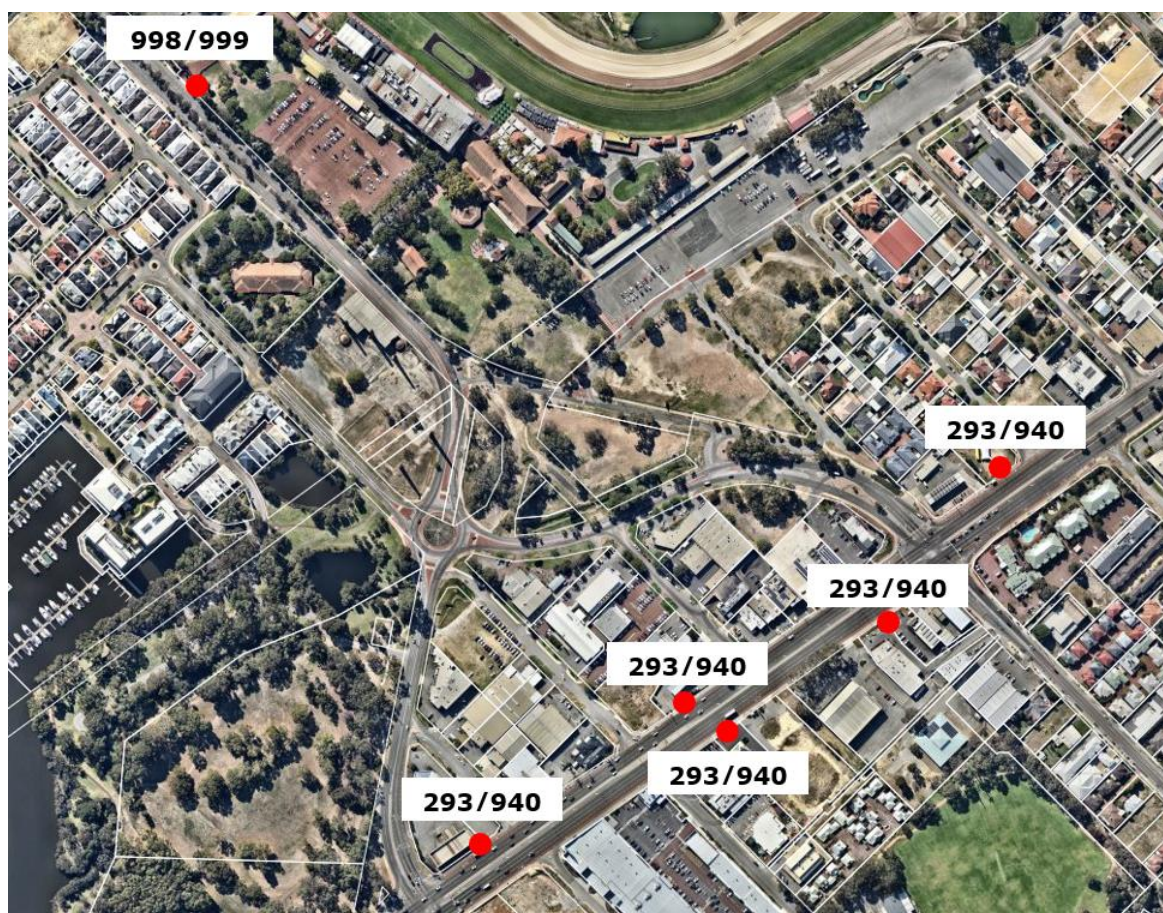


Figure 5: Bus Stop Locations

- There are opportunities for increased service levels in the future. Therefore, the LSP advocates for improved bus services and the exploration of other transit options, such as a superbuss or trackless tram. The City's ACPS also supports these initiatives, with actions to monitor land use and collaborate with the Public Transport Authority (PTA) to

assess the need for additional transport services as development progresses.

- The City's ACPS also includes an action to implement travel behaviour programs to encourage the use of alternative modes of transport.

Additionally, the draft LSP includes other measures to promote the use of alternative modes of transport which will be further investigated including:

- A 30km/h speed zone across the precinct (excluding Grandstand Road and Stoneham Street as main traffic routes) to enhance the walking and cycling environment.
- Raised zebra crossings for improved pedestrian safety.
- Completion of shared path networks and long-term cycling routes.
- Increased tree canopy coverage to create a more pleasant walking and cycling environment.
- Facilitating local amenities within a short and pleasant walking or cycling distance.
- Facilitating a bike/electric scooter and car share scheme for private developments.

These strategies aim to support a sustainable and well-connected precinct. Accordingly, no modifications to the LSP are required.

## Parking

The draft LSP contains minimum parking requirements. Submitters raised concerns about the adequacy and suitability of these standards, citing potential on-street parking issues within Ascot Waters and competition between commercial and residential bays. In response, the following points are relevant:

- The proposed residential parking standards are consistent with the State Planning Policy 7.3 - Residential Design Codes. As a State Planning Policy, a subservient planning instrument it is not appropriate for this LSP to exceed these requirements. It is considered that there are no factors in the precinct that present a reasonable planning basis to do so.
- The proposed non-residential parking standards are consistent with LPS 15. It is noted that these existing scheme standards exceed the recently WAPC endorsed, Non-Residential Car Parking Rates for Perth and Peel.
- The proposed parking standards are deemed appropriate given the proximity of future development to high-frequency transit routes.

- The draft LSP also aims to reduce reliance on private vehicles by enhancing pedestrian and cyclist connections and advocating for improvements to public transport.
- For mixed-use developments, the draft LSP requires residential parking above one bay per dwelling and at least 50% of non-residential parking to be unallocated communal bays, enabling shared use between residential and commercial needs. Developers must prepare a Car Parking Strategy to manage these bays, including access hours, signage, and monitoring.
- Developers may exceed the minimum parking provisions if additional spaces are designed for future conversion into habitable or usable space. This requirement may be waived if compliance is impractical or would result in a less desirable outcome.
- The City can monitor parking in the precinct and surrounding areas as development progresses.
- Development proposals will all require a planning application and parking will be assessed for each of these on a case-by-case basis.

Having regard to the above, the parking standards included within the draft LSP are considered appropriate and don't require modification.

## **Building Heights**

Following a review of the draft GEH Urban Corridor Strategy at the September 2023 OCM (Item 12.2), Council directed officers to investigate building scales to ensure they align with current market conditions and future trends. As detailed below, these investigations were completed, and the revised plan was advertised with 15-storeys along GEH and 10-storeys for the remaining land bound by Resolution Drive, Stoneham Street, and GEH, as visualised in Figure 6.





Figure 6: Building Height Plan

Several submissions raised the following concerns regarding the proposed building heights:

- They would be inconsistent with the character of the surrounding locality.
- Such development could occur elsewhere.
- The recent 8-storey development at 16 Marina Drive was referenced as setting a precedent, suggesting this should be the maximum height allowed.
- The 23 June 2020 Council decision to amend the LSP to include 6 and 9-storey heights was cited, with submitters advocating for these heights to be retained.
- The City may be prioritising developer profits over community benefits or acting in its own interests as a landowner in the precinct.

In response to these concerns, the following points are relevant:

- The LSP aims to guide and coordinate future development within the precinct, rather than drive intensification. Currently, there are no specific building height controls in place, apart from the height limits in relation to Perth Airport aircraft operations.
- The area subject to development controls under the draft LSP is a distinct precinct, located approximately 200m from Ascot Waters and well separated from the Residential and Stables area. Therefore, development

can occur within the precinct without impacting the amenity of the surrounding areas as discussed further in the Amenity section.

- Perth and Peel @ 3.5 Million encourages urban consolidation along key urban corridors, supporting increased density and development in areas like the Golden Gateway precinct.
- The proposed heights align with existing developments along the Great Eastern Highway Corridor, such as the 20-storey building at 31 Rowe Avenue and the previously approved 16-storey building at the corner of GEH and Belgravia Street. Additionally, the heights align with those for adjacent properties within the GEH Urban Corridor Strategy as illustrated in Figures 7 and 8.



Figure 7: Corridor Strategy building heights – Precinct 2



Figure 8: Corridor Strategy building heights – Precinct 3

- Investigations in line with Council's direction at the September 2023 OCM highlighted several important considerations including:
  - Feasibility is currently severely impacted by inflated construction costs and builder capacity constraints. As a result, the viability of apartment projects depends heavily on an increase in property values.
  - Although construction costs continue to rise, market values are not increasing at the same rate. Sites with higher density and building height provisions are likely to be feasible sooner.
  - Without realistic and feasible development controls, developers may submit proposals that exclude residential components or pursue land uses misaligned with the precinct's objectives, such as 'Service Station,' 'Warehouse (self-storage),' or 'Fast Food/Takeaway Outlet'.
- Based on these factors, heights of 10 and 15-storeys with plot ratios of 3:1 and 5:1, respectively, are recommended. These recommendations are supported by input from a property and economic consultant engaged by the City, and the consultant's report has been provided as Confidential Attachment 12.1.11).
- The controls in the draft LSP have been formed considering current and likely future development conditions and to facilitate development over the lifetime of the LSP. Not considering these factors and advancing a plan that

cannot realistically be implemented or facilitate development would serve no planning purpose.

In summary, the proposed building heights have been developed through a cogent and methodical process. Considering the above, no modifications are required to the LSP.

## **Sustainability**

The draft LSP promotes sustainability through initiatives such as expanding the urban tree canopy in line with the City's Urban Forest Strategy, retaining vegetation, using low-water plants, and encouraging water harvesting and passive irrigation. Additionally, the LSP includes the opportunity to achieve an additional 5-storeys in building height if certain sustainability and open space criteria are met.

The specific sustainability criteria for the additional building height include:

- Provision of an area of publicly accessible private open space.
- Double glazed windows for all dwellings.
- The planting of an additional native tree on site, with a pot size between 100L and 200L.
- Provision of conduits and capacity within the electrical distribution system and metering for future electric vehicle charging for each unit.
- A minimum of two electric vehicle charging bays within the development.
- Provision for shared sustainable transport measures, such as electric bikes, scooters, and vehicles.
- A minimum one-star above the energy efficiency requirements for the relevant class of building, as specified in the Nationwide House Energy Rating Scheme (NatHERS).
- Installation of a photovoltaic solar panel system that provides at least 1kW of energy per dwelling.

Several submissions raised concerns about the additional building height criteria, including:

- That all developments should feature excellent design and a high level of sustainability, not just those utilising the additional height.
- Questioning the adequacy of electric vehicle charging infrastructure and recommending that Level 1 charging be required for all bays. They also suggested the inclusion of solar battery storage.



- Requested flexibility in meeting the additional building height criteria, citing challenges in achieving 1kW of solar per dwelling and feasibility issues related to double glazing.

In response:

- All proposals within the precinct will be assessed against Volume 2 of the R-Codes, which includes requirements for tree canopy, deep soil areas, solar access, natural ventilation, energy efficiency, and water conservation. Proposals will also undergo review by the City's Design Review Panel to ensure alignment with the ten design principles of State Planning Policy 7.0, including sustainability. Sustainability will therefore be central to all proposals.
- As a State Planning Policy, a subservient planning instrument such as this LSP should not seek to exceed these requirements. It may only be reasonable if it is optional, and accompanied by a corresponding benefit or compromise. To encourage future development to incorporate these features, the LSP proposes the opportunity for an additional 5-storeys in building height. This approach is consistent with the way other local governments have structured their plans to deliver sustainability principles and encourage responsible urban development.
- The WAPC's Electric Vehicle Charging Infrastructure Position Statement supports the inclusion of Level 1 vehicle charging (standard household socket) for all dwellings. However, the installation of conduits and metering to enable future electric vehicle charging provides a greater long-term benefit, as it allows for easier upgrades to Level 2 or higher chargers. While Level 1 charging may meet basic needs, it is often insufficient for regular EV use due to slower charging times. Retrofitting a Level 1 system to accommodate Level 2 chargers can be complex and costly, making pre-installed Level 2 infrastructure a more practical option.
- A modification has been proposed to allow flexibility in sustainability requirements by permitting alternative or innovative measures that achieve equal or greater outcomes.
- While battery storage could enhance sustainability, officers note that it is an emerging technology in apartment complexes and presents complexities at this time. However, developers may consider it as an alternative measure.
- Adequate roof space is expected to accommodate 1kW of solar per dwelling. Standard solar panels typically require 5–7m<sup>2</sup> per kW, while high-efficiency panels require approximately 4–5 square metres per kW. For 100 dwellings, this equates to a maximum of 700m<sup>2</sup> of solar panels. For comparison, the 92-unit building at 5 Hawksburn Road, with 1,300m<sup>2</sup> of roof space, has more than enough capacity for 1kW of solar per dwelling and other plant equipment. It is also noted that the

requirement for 1kW of solar per dwelling is already required in The Springs under Local Planning Policy No. 7.

- Double glazing is considered a reasonable measure and is included as a standard feature in newly constructed apartments within The Springs.

In summary, the draft LSP incorporates robust sustainability measures to ensure that all proposals align with relevant State Planning Policies. A modification is proposed to allow flexibility, which may result in developers proposing other innovative sustainability measures.

## **Infill Targets**

The Perth and Peel @ 3.5 Million Central Sub Regional Planning Framework requires the City of Belmont to deliver an additional 6,100 dwellings by 2031 and 10,410 dwellings by 2050.

Several submissions have raised concerns about these targets and the level of development proposed within the area. One submitter suggested that the City should not bear sole responsibility for meeting regional infill targets, while another highlighted that density targets apply city-wide. This submitter also points to 16 Marina Drive in Ascot as a significant contributor to the City meeting its density targets. In response, the following points are relevant:

- While Perth and Peel @ 3.5 Million sets targets for each sub-region, it assigns specific targets to individual local governments, which are required to demonstrate how they will deliver additional housing. The City of Belmont is responsible for meeting its assigned targets.
- Although the density target applies city-wide, Perth and Peel @ 3.5 Million encourages urban consolidation in specific areas, including activity centres, urban corridors, and station precincts. The Golden Gateway precinct, located along the GEH corridor and near a future activity centre, is a suitable area for additional density.
- Infill development will continue gradually within traditional suburban areas through subdivision and land assembly.
- Whilst the City has been able to meet its density targets to date this is largely attributed to development within The Springs precinct.
- With most lots in The Springs now developed, the City of Belmont will need to ensure that strategic projects, such as the draft LSP, are in place to create additional housing opportunities and that incremental development of existing zoned land continues. Without this occurring, meeting its density targets may otherwise become challenging.
- 16 Marina Drive accounted for only 2% of dwellings delivered between 2011 and 2021, and Ascot as a whole contributed 7%. The majority of

Belmont's infill occurred in The Springs, and without it, the City would have fallen short of its targets.

While the City has successfully met infill targets to date, projects like the Golden Gateway LSP are necessary to ensure there is a long-term pathway to continue to do so. It is important to note that the Golden Gateway LSP is not the sole initiative to do this, and forms part of a broader approach that includes continued infill development and other projects across the City such as the Redcliffe Station Precinct and the broader GEH Corridor.

## **Public Open Space**

Several submissions raised concerns regarding public open space within the precinct, including a perceived lack of public open space to accommodate new residents and requests for a 10% contribution in line with Liveable Neighbourhoods. One submission requested the City retain existing parkland or create new areas while others expressed concern about relying on the Belmont Trust Land for public open space.

The following responses are provided to these comments:

- While Liveable Neighbourhoods typically requires a 10% public open space contribution, this standard does not apply to mixed-use precincts such as Golden Gateway. It requires consideration of existing public open space within 300m of the site. In this case, this includes the Swan River, Belmont Trust Land, and Ascot Kilns.
- In addition to the above, the closure of the Daly Street road reserve provides an opportunity to deliver 525m<sup>2</sup> of new public open space areas within the precinct.
- The Belmont Trust Land is governed by a Declaration of Trust, which requires its use for public enjoyment and recreation. The LSP acknowledges this as an opportunity, with the potential for cash-in-lieu contributions to enhance its function as public open space, subject to Ministerial approval.

In light of the above, no modifications are required to the LSP.

## **Landscaping**

Two submissions requested that the City consider native tree species within the precinct. One of these submissions also raised concerns about the species list in the Public Realm Strategy.

Officers reviewed the proposed species list and note that most species align with the City's *Street Tree Planting Palette 2024*, except for:

- *Corymbia calophylla* (Marri)
- *Phoenix canariensis* (Canary Palm)
- *Tipuana tipu* (South American Rosewood)
- *Corymbia ficifolia* (Red Flowering Gum)
- *Eucalyptus caesia*. (Gungurru)

The listed species are generally suitable, except for the Canary Palm, which requires a lengthy establishment period and high ongoing maintenance. Consequently, the schedule of modifications recommends removing the Canary Palm from the Public Realm Strategy's species list.

## Amenity Concerns

Submitters raised several concerns about amenity, including potential loss of character, noise, visual impact, overshadowing, and privacy. In response, the following points are relevant:

- The current amenity level within the Golden Gateway Precinct is relatively low, characterised by unkempt sites, fast food outlets, warehouses, service stations, motor vehicle wash, and open-air parking (see Figures 9-12). The precinct also lacks a distinctive character or sense of place that requires preservation.



Figure 9 – Open Air Vehicle Storage on the corner of Hargreaves Street, GEH and Stoneham Street





Figure 10 – Vacant Site at the Corner of Daly Street and Stoneham Street



Figure 11– Motor Vehicle Wash along Grandstand Road



Figure 12 – Service Station along Great Eastern Highway



- As shown in Figure 13, the precinct subject to development controls under the LSP is separated from Ascot Waters and the Residential and Stables area by Stoneham Street, Resolution Drive, and the Belmont Trust Land. As a result, development is not expected to negatively impact the character, sense of place, or amenity of these areas.



Figure 13 – Separation to Ascot Waters and the residential and stables area

- Noise and privacy concerns were non-specific. Given the separation between the precinct to Ascot Waters and the Residential and Stables area, in addition to the future controls that will be applicable to development, these concerns are not considered to be substantiated.
- Future overshadowing will be directed southward, ensuring no impact on Ascot Waters or the Residential and Stables area.
- Only a limited number of properties in Ascot Waters may have brief views of the future development in line with the proposed controls. However, it is a well-established planning principle that visibility alone does not equate to a detrimental impact on amenity.
- Individual proposals for future development will be subject to assessment, during which the specifics of the proposal, including any potential impacts, will be evaluated against the entire planning framework.



Overall, development within the precinct is expected to have minimal impact on the area's amenity and will likely enhance it. In light of this, no modifications are required to the LSP.

## **Infrastructure**

Several submissions raised concern that current infrastructure and services would be inadequate to service increased development. In response, it should be noted that an Infrastructure Assessment Report has been prepared in support of the draft LSP. The report clearly indicates that the necessary infrastructure to support future development is either already in place or can be located or provided as required. Additionally, Water Corporation has advised that required upgrades to water and wastewater infrastructure to service the extent of the LSP proposal have been captured in the Infrastructure Assessment Report.

Having regard to the above, infrastructure needs for the proposed development can be effectively met and no modifications are required to the LSP.

## **Administrative Modifications**

Following advertising and a review of the draft LSP, minor administrative changes are recommended as follows:

- Update table numbers and references throughout the LSP report.
- Update Section 3.3.8 to correctly label the cross-section images.
- Update Section 3.6 – Education Facilities to reflect advice received from the Department of Education.

## **Conclusion**

The Golden Gateway LSP has been prepared to coordinate the future subdivision, zoning, and development of land within the precinct. Development undertaken in accordance with the draft LSP is expected to be of high quality and enhance the amenity of the area.

The submissions have been reviewed, and there are no substantive changes recommended to LSP to address the matters raised. However, several minor changes have been identified, including:

- Administrative corrections to table numbers and images;
- Updates to sustainability provisions to allow alternative measures;
- Refinements to pedestrian infrastructure investigations;

- Adjustments to education planning details to address input from the Department of Education; and
- Amendments to landscaping species.

It is recommended that Council support the draft LSP with modifications, with a recommendation that it is approved by the WAPC.

## Financial implications

There are no financial implications evident at this time.

## Environmental implications

Environmental implications associated with the LSP are outlined in the Environmental Assessment Report (Attachment 12.1.3).

## Social implications

The LSP proposes a number of upgrades to the public realm which is intended to improve the overall amenity of the area.

## Attachment details

Attachment No and title	
1.	Golden Gateway Local Structure Plan [ <b>12.1.1</b> - 73 pages]
2.	Bushfire Management Plan [ <b>12.1.2</b> - 23 pages]
3.	Environmental Assessment Report [ <b>12.1.3</b> - 34 pages]
4.	Movement and Access Strategy [ <b>12.1.4</b> - 342 pages]
5.	Infrastructure Assessment Report [ <b>12.1.5</b> - 34 pages]
6.	Public Realm Strategy [ <b>12.1.6</b> - 26 pages]
7.	Extract of Ordinary Council Meeting 27 August 2024 Minutes [ <b>12.1.7</b> - 25 pages]
8.	Schedule of Submissions [ <b>12.1.8</b> - 31 pages]
9.	CONFIDENTIAL REDACTED - Schedule of Submissions (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(2)(b)) [ <b>12.1.9</b> - 31 pages]
10.	Schedule of Modifications [ <b>12.1.10</b> - 1 page]
11.	CONFIDENTIAL REDACTED - Consultant Report (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(2)(e)) [ <b>12.1.11</b> - 151 pages]



Prepared for **City of Belmont**  
Prepared by **Taylor Burrell Barnett**

# DOCUMENT HISTORY AND STATUS

Golden Gateway Structure Plan	Revision	Reviewer	Date Issued
	23/075	LB	09.08.2024
<b>Prepared By:</b> Taylor Burrell Barnett Town Planning and Design  Level 7, 160 St Georges Terrace PO Box 7130 Cloisters Square PERTH WA 6850 Phone: 9226 4276 Fax: 9322 7879 admin@tbbplanning.com.au			
<b>In association with:</b> Taylor Robinson Cardno EPCAD Flyt Essential Environmental Place Match			

# ENDORSEMENT

This Structure Plan is prepared under the provision of the **City of Belmont Local Planning Scheme No. 15**

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

..... Date

Signed for and on behalf of the Western Australian Planning Commission

.....

an officer of the Commission duly authorised by the Commission pursuant to section 16 of the Planning and Development Act 2005 for that purpose, in the presence of:

..... Witness

..... Date

..... Date of Expiry



# TABLE OF AMENDMENTS

Amendment No.	Summary of the Amendment	Amendment Type	Date Approved by WAPC



## EXECUTIVE SUMMARY

This Structure Plan is prepared to guide the subdivision and development of land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan map (hereafter referred to as 'Golden Gateway' or 'Structure Plan area').

The subject land is located:

- Within the municipality of the City of Belmont;
- Approximately 5 kilometres (km) north-east of the Perth Central Business District (CBD) 3km north of Belmont Forum and mixed business area and 5km north-east of Victoria Park entertainment precinct; and
- Approximately 2.5km east of Graham Farmer Freeway and 2km west of Tonkin Highway.

The subject land encompasses a mix of uses comprising mixed business, retail (food and beverage), public uses associated with the Western Australian Turf Club (WATC), Ascot Racecourse and Ascot Kilns, Belmont Charitable Trust Land and Swan River environs. The remainder of the subject land is largely undeveloped and devoid of vegetation.

The development of the Belmont Charitable Trust Land, Ascot Kilns and WATC sites are subject to separate planning processes.

The Ascot Kilns site is owned by the Western Australian Planning Commission (WAPC) and is the subject of a draft Local Development Plan (LDP) and draft Local Planning Policy (LPP) that was considered for final approval by Council at its meeting of 12 December 2017. The draft LDP and LPP details the intended future planning vision for this site with regards to proposed land uses, built form, development standards and the retention of the majority of the heritage listed kilns and chimney structures.

The Belmont Charitable Trust Land is owned by the City of Belmont and managed by the 'Belmont Trust'. This land is not subject to any formal statutory planning processes at this stage and nor is there a specific timeline for the future planning of this land. The future consideration for this land is dependent upon the 'Belmont Trust'.

Land owned by the WATC is subject to a separate planning process.

The Structure Plan proposes development of land for:

- Commercial/Retail uses;
- Residential purposes comprising medium and high residential densities;
- Public Open Space (POS) including foreshore reserve; and
- Access streets.

Item	Data	Structure Plan Ref. (Section No.)
Total area covered by the Structure Plan	30.9223 ha	1.2.3
Area subject to controls under this Structure Plan	22.8822 ha	1.2.3
Area subject to separate planning process	8.0401 ha	1.2.3
Area of each land use proposed:	<b>Hectares</b>	3.3
• Residential	4.2473 ha	
• Mixed Use	1.7578 ha	
Estimated No. of Dwellings	2,268	3.3.1.1
Estimated Residential Site Density	378 Dwellings per site/ha	4.1.2.1
Estimated Population	4,082 persons	3.3.1.1
No. of High Schools	N/A	3.6
No. of Primary Schools	N/A	3.6
Estimated Commercial Floor Space	6,979m <sup>2</sup> nett lettable area	3.3.2.2
Estimated Retail Floor Space	1,200m <sup>2</sup> nett lettable area	3.3.2.2
Estimated area and percentage of Public Open Space (Local Parks)	0.2% 0.0525ha      1 park	3.3.7
Estimated area of natural area (existing Parks and Recreation Reservation)	4.5556 ha	3.3.7





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# PART ONE IMPLEMENTATION

# 1 STRUCTURE PLAN AREA

This Structure Plan shall apply to the Golden Gateway Precinct, being the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan map (**Plan 1**). The provisions of this Structure Plan apply to all land within this area, except for land designated as subject to a separate planning process on **Plan 1**.

# 2 OPERATION

This Structure Plan commences operation on the date it is approved by the Western Australian Planning Commission (WAPC).

# 3 STAGING

The staging of subdivision and development will be primarily influenced by the timing of land rationalisation. As most of the developable land is fragmented and privately owned, the actual timing and sequence of development will be subject to market demand and individual development intentions. Land within the northern section of the subject land is less constrained by land ownership, with the WA Turf Club (WATC) and WAPC owning the majority of this land, however is subject to a separate planning process.

Servicing infrastructure required to support future development of the subject land is either in place or can be relocated/provided to service the subject land and as such is not regarded as an impediment to staging.

The modification of Daly Street into a cul-de-sac will be a trigger to enable development within the Daly Street Precinct.

**Table 1** below provides an outline of the key triggers for enabling development within various parts of the Structure Plan area.

TABLE 1: STAGING TRIGGERS

STAGING TRIGGERS	PRECINCTS	COMMENT
1. Planning Framework implementation - Scheme Rezoning, Structure Plan approval	<ul style="list-style-type: none"><li>Ascot Kilns</li></ul>	No subdivision or development to be approved until the planning framework is in effect.
2. Closure of Daly Street	<ul style="list-style-type: none"><li>Daly Street</li></ul>	The connection of Daly Street and Stoneham Street will be closed and redundant road reserve converted to public open space
3. Progressive rationalisation of private landholdings	<ul style="list-style-type: none"><li>Great Eastern Highway, Stoneham Street, Daly Street and Resolution Drive</li></ul>	
4. Progressive upgrade to roads and adjacent verges	<ul style="list-style-type: none"><li>Great Eastern Highway, Stoneham Street, Daly Street and Resolution Drive</li></ul>	Development may be permitted to occur prior to upgrades subject to contribution towards upgrade works in cash or in kind (where appropriate).



## 4 SUBDIVISION AND DEVELOPMENT REQUIREMENTS

This Structure Plan comprises the plans outlined below:

- **Plan 1 – Structure Plan Map**  
Outlines the zones, reserves and residential densities applicable within the Structure Plan area.
- **Plan 2 – Precinct Plan**  
Identifies development precincts within the Structure Plan area, for the purpose of defining specific development criteria.
- **Plan 3 – Building Height Plan**  
Depicts the intended building heights within the Structure Plan area. All development should demonstrate compliance with the Building Height Plan.

### 4.1 LAND USE ZONES/RESERVES

The Structure Plan Map (**Plan 1**) outlines the following zones and reserves applicable within the Structure Plan area:

- Mixed use.
- Local roads.
- Parks and Recreation.

Land use permissibility within the subject land shall accord with the land use permissibility of the corresponding zone/reserve listed above, as specified in Table 1 of the City of Belmont Local Planning Scheme No. 15 (LPS 15) to the extent that the zoning of the land under LPS 15 permits. The Responsible Authority should also have due regard for the uses listed as “Unacceptable” under the following zoning statements.

#### 4.1.1 MIXED USE (R-AC0)

The Mixed Use zone is intended to facilitate the development of a mix of varied, but compatible, land uses including residential, offices, retail, commercial, civic and entertainment uses, in a highly integrated built form environment.

The objectives of the Mixed Use area are to:

- Provide a diversity of land uses and housing types.
- Provide for development that contributes to the creation of a high quality public realm and creates a sense of identity and character.
- Provide local retail/commercial facilities to the subject land as well as the broader locality.

It is envisaged that the Mixed Use zone will predominantly accommodate residential development in the form of multiple dwellings With non-residential development comprising of active land uses (i.e. restaurant, café, shop) on ground level. The ‘mixed use’ designation provides the flexibility for land uses to change and evolve over time in response to market conditions.

##### 4.1.1.1 LAND USE PERMISSIBILITY

Land use permissibility shall generally be in accordance with the corresponding zone in the Zoning Table in LPS 15. However, having regard for the amenity for future residents the following uses are considered to be Unacceptable in the subject land and should not be approved:

- Auction Mart
- Caretakers Dwelling
- Fast Food Outlet / Lunch Bar
- Home Store
- Garden Centre
- Industry - Light
- Industry - Service

- Motor Vehicle Repair
- Night Club
- Radio or TV Installation
- Restricted Premises
- Service Station
- Single House
- Vet Hospital
- Warehouse

Furthermore, 'Shop' is an Additional Use in the Mixed Use zone within the subject land.

Residential development within the Mixed Use zone shall be in accordance with the 'R-AC0' code and associated standards as set out in **Table 2: Precinct Development Table** for the relevant Precinct.

#### 4.1.1.2 DWELLING TARGET

The dwelling targets for the Mixed Use zone is/are:

378 dwellings per site/ha

#### 4.1.1.3 DENSITY

**Plan 1** (Structure Plan) assigns a R-AC0 density code to the subject area.

### 4.1.2 PARKS AND RECREATION

The foreshore reserve and Belmont Charitable Trust Land are included in the Structure Plan Area for context only. No specific works or requirements are required under the Structure Plan for these areas. The Belmont Trust Land is for public recreation and enjoyment, further planning work will need to be undertaken to ensure adequate access to the site, and an appropriate interface with surrounding development.

Acknowledging the role that the Belmont Charitable Trust plays within the Structure Plan area, the Structure Plan provides for the collection of cash-in-lieu to be used for the upgrading of the Belmont Charitable Trust Land. The City can then make an application to the Minister for Planning under s.154(2)(c) of the *Planning and Development Act 2005* for approval to do this.

This does not preclude consideration being given to the allocation of land for additional POS where a developer chooses to do so at subdivision stage. The amount of cash or land to be provided would likely be based on the equivalent value of land which would otherwise be required, however this will ultimately be determined by the City of Belmont and the WAPC.

Within the balance of the Structure Plan Area, Public Open Space (POS) is to be provided generally in accordance with **Plan 1** and should be vested in the Crown and managed by the Local Government. POS within the Structure Plan area will be provided by the closure of Daly Street and the conversion of closed land, primarily serving a passive recreation and pedestrian connectivity function. The development of land included within the Swan and Canning River Development Control Area will be subject to the approval of the Department of Biodiversity, Conservation and Attractions (DBCA).

### 4.1.3 LOCAL ROADS

#### 4.1.3.1 EXISTING ROADS

Existing local roads are to be upgraded to reflect an inner urban street character, featuring on-street parking, high quality landscape and pedestrian facilities. The existing 20m reserve width shall be maintained to ensure that the street serves a high quality public realm function in addition to facilitating local traffic movement.

It is not anticipated that additional roads will be required, however the introduction of additional roads within the Structure Plan Area may occur through possible future subdivision and in accordance with Part 10 of the Planning & Development Act 2005. Any new roads are to be designed to a residential standard in accordance with the requirements of the Local Government. Road reserve widths shall be 20m, to reflect similar characteristics to the existing road system, unless an alternative design is supported by the Local Government and approved by the WAPC.

Daly Street will be partially closed and converted to a cul-de-sac consistent with the Main Roads Western Australia Access Strategy for Great Eastern Highway. Redundant road reserve will be converted to POS.

### 4.2 DEVELOPMENT REQUIREMENTS

#### 4.2.1 PRECINCT DEVELOPMENT REQUIREMENTS

The following precincts have been established to ensure that the Structure Plan Area is developed in a comprehensive and integrated manner having regard to desired character, preferred land uses, residential density, built form and public realm design principles:

- Precinct 1: Great Eastern Highway
- Precinct 2: Stoneham Street
- Precinct 3: Daly Street
- Precinct 4: Resolution Drive
- Precinct 5: Ascot Kilns

##### 4.2.1.1 STATEMENTS OF INTENT

#### Precinct 1: Great Eastern Highway

The Great Eastern Highway Precinct will present itself as a strong, unified commercial and mixed-use edge. Active, commercial uses shall be provided at ground level and above with residential development to occupy upper storeys.

The visual prominence of the Great Eastern Highway frontage will require sensitive architectural treatment to ensure that the built form contributes positively to the aesthetic quality of the area. Two landmark sites are located at the eastern and western ends of the Precinct and these should seek to optimise the intrinsic benefits of a gateway position that responds to existing view corridors along Great Eastern Highway.

#### Precinct 2: Stoneham Street

The Stoneham Street Precinct, whilst still remote from the river front, will be the primary interface between the Golden Gateway development and the river.

Understanding that planning for Belmont Charitable Trust Land is yet to be undertaken, it is recommended that any future planning should maintain strong physical links between the river and the future Golden Gateway population and workforce.

Development addressing Stoneham Street is to provide an appropriate interface to the Belmont Charitable Trust Land to ensure a high standard of visual amenity and surveillance within a mixed use environment. The aspect towards the river may be attractive for food and beverage uses, which should be accommodated. Active, commercial uses shall be provided at ground level and above with residential development to occupy upper storeys.

A tree-lined promenade along Hargreaves Street will create a unique vista with the Belmont Charitable Trust Land and the Swan River.

#### Precinct 3: Daly Street

The Daly Street Precinct will perform an important connective function between the remaining precincts adjacent to Great Eastern Highway. Mixed use development is encouraged; however, the ultimate land use mix should not rely upon passing traffic given the planned closure of the Daly Street and Stoneham Street intersection.

Daly Street is defined by numerous disparate landholdings that could be amalgamated to unlock the development potential of this precinct, and proposals for development should investigate the highest and best use of land.

#### Precinct 4: Resolution Drive

Buildings at the intersection of Resolution Drive and Stoneham Street should leverage its location as the northern 'arrival' point to Golden Gateway.

Active, commercial uses shall be provided at ground level and above with residential development to occupy upper storeys. Trees will line either side of the southern portion of Grandstand Road (between Great Eastern Highway and Resolution Drive) to create an attractive pedestrian environment.

#### Precinct 5: Ascot Kilns

This precinct is characterised by the historic kilns and landmark chimney stacks that are of considerable State heritage significance. Development will therefore have a strong heritage and landscape focus, using built form to celebrate and frame the historic structures, and to secure their ongoing preservation.

## Attachment 12.1.1 Golden Gateway Local Structure Plan

This precinct is the subject of separate Local Planning Policy (LPP) and Local Development Plan (LDP).

### 4.2.1.2 PRECINCT STANDARDS AND REQUIREMENTS

**Table 2:** Precinct Development Table outlines the standards and requirements for subdivision and development in the corresponding precincts designated on **Plan 2** Precinct Plan. Building height requirements should be read in conjunction with **Plan 3** Building Height Plan.

In addition to the Precinct Development Table, Design Guidelines may be adopted to provide further guidance for subdivision and development of the precinct pursuant to Section 5.1.

In relation to Precinct 5 Ascot Kilns, development standards and requirements in this Structure Plan should be read in conjunction with the Ascot Kilns Design Guidelines and LDP. The Ascot Kilns LDP should identify the requirement for a minimum of 10% POS to be delivered on site.

TABLE 2: PRECINCT DEVELOPMENT TABLE

Precinct	R-Code	Min. height	Max. height	Min. boundary setback	Min. street setback	Max. street setback	Plot ratio (Plot Ratio with Additional Height)
1 Great Eastern Highway	R-AC0	Podium: 2 storeys Tower: 7 storeys	Podium: 5 storeys Tower: 15 storeys	Podium: Nil Tower: as per State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments	Podium: Nil Tower: 3m	Podium: Nil Tower: N/A	5.0:1 (6.5:1)
2 Stoneham Street	R-AC0	Podium: 2 storeys Tower: 5 storeys	Podium: 3 storeys Tower: 10 storeys	Podium: Nil Tower: as per State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments	Podium: Nil Tower: 3m	Podium: Nil Tower: N/A	3.0:1 (5.0:1)
3 Daly Street	R-AC0	Podium: 2 storeys Tower: 5 storeys	Podium: 3 storeys Tower: 10 storeys	Podium: Nil Tower: as per State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments	Podium: Nil Tower: 3m	Podium: Nil Tower: N/A	3.0:1 (5.0:1)
4 Resolution Drive	R-AC0	Podium: 2 storeys Tower: 5 storeys	Podium: 3 storeys Tower: 10 storeys	Podium: Nil Tower: as per State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments	Podium: Nil Tower: 3m	Podium: Nil Tower: N/A	3.0:1 (5.0:1)
5 Ascot Kilns	R-AC0	Refer to Ascot Kilns Design Guidelines and Local Development Plan	Refer to Ascot Kilns Design Guidelines and Local Development Plan	Refer to Ascot Kilns Design Guidelines and Local Development Plan	Refer to Ascot Kilns Design Guidelines and Local Development Plan	Refer to Ascot Kilns Design Guidelines and Local Development Plan	N/A

#### Notes:



Golden Gateway | Structure Plan



## Attachment 12.1.1 Golden Gateway Local Structure Plan

1. *Minimum and maximum building heights specified for tower components are inclusive of podium levels.*
2. *An additional 5 storeys in height can be considered subject to satisfying development requirements in section 4.2.2.2*
3. *This table is to be read in conjunction with the more detailed provisions of a LPP, where relevant.*
4. *In relation to Precinct 5 Ascot Kilns, this table is to be read in conjunction with the Ascot Kilns Design Guidelines and LDP.*

### 4.2.2 GENERAL DEVELOPMENT REQUIREMENTS

Development within the subject precinct shall be generally in accordance with the standards and requirements of the City's Local Planning Scheme and any relevant State Planning Policy, Local Development Plan and Local Planning Policy, having regard to the provisions contained within this structure plan.

Proposed variations to the standards and requirements of the City's Local Planning Scheme, any relevant State Planning Policy, Local Planning Policy, Local Development Plan or the provisions of this structure plan are to be outlined within a development application and will be considered by the Responsible Authority with due regard to the intent and purpose of the standards.

#### 4.2.2.1 PARKING

Car parking should be provided in accordance with LPS 15 and the relevant R-Codes subject to the following variations:

1. The Local Government wishes to encourage innovative approaches to car parking provision, such as reciprocity, car-pooling programs or other innovations, that may result in reduced parking provision where appropriate.

The Responsible Authority will consider approving a reduced parking provision where it can be demonstrated that an alternative parking proposal is sound and will result in a reduction in parking demand. Any proposed variation should be supported by a parking demand assessment undertaken by a suitably qualified professional.

2. The following specific requirements apply:

- a) For Mixed Use development, all residential parking in excess of 1 bay per dwelling, and at least 50% of the minimum required parking for non-residential uses shall be made available for general use of either residential or non-residential uses (these bays represent unallocated communal parking bays).
- b) Mixed Use development that proposes parking as outlined in 2a) above should be required, as a condition of Development Approval, to prepare a Car Parking Strategy that addresses the management of the unallocated communal parking provision, including:
  - i. The hours during which parking bays shall be made available for general public access.
  - ii. Location, signage and monitoring of usage of the unallocated communal parking bays.

The provision of car parking that is in excess of the minimum required for the site will only be approved where it is designed to be adaptable for future conversion into habitable floor space, or other useable space for communal or private usage. In order for parking to be considered adaptable, it must be shown as located in a position that is suitable for an alternative use, not included in individual strata titles and constructed to comply with habitable floorspace standards.

This requirement may be waived if it can be demonstrated that complying with the requirement would not be practical or would result in a less desirable outcome.

#### 4.2.2.2 BUILDING HEIGHT

Minimum and maximum building heights within the Structure Plan Area are to be in accordance with the ranges identified in **Table 2** and on **Plan 3**.



## Attachment 12.1.1 Golden Gateway Local Structure Plan

All sites within the Structure Plan area may incorporate an additional 5 storeys in height, above the maximum identified in **Table 2** at the discretion of the decision maker subject to the following:

- The production of an exceptionally high quality of design, as determined by the appointed design review panel; and
- Incorporate the following:
  - An area of publicly accessible private open space; and
  - 100% of windows containing double glazing; and
  - Provide an additional tree on-site above what is required by State Planning Policy 7.3 Volume 2 – Apartment Design Code. The tree must be a native species with a pot size of between 100L – 200L; and
  - Provide conduits and capacity within the electrical distribution system and metering or future provision of electric car charging for each unit within the development; and
  - Provide a minimum of two electric vehicle charging bays within the development; and
  - Provide shared sustainable transport measures for the development that may include the provision of electric bikes, scooters and vehicle/s; and

- Achieve a Nationwide House Energy rating Scheme (NatHERS) star rating of a minimum of one star in excess of the current energy efficiency rating for the dwelling shall be certified by a suitably qualified and accredited energy assessor using accredited software and shall be provided at the development application stage; and
- Install a photovoltaic solar panel system that can provide the equivalent of at least 1Kw energy per dwelling.

Notwithstanding the provisions of **Table 2** and **Plan 3**, maximum building heights are subject to compliance with the Airports (Protection of Airspace) Regulations 1996.

Information on Obstacle Limitation Surfaces is available at <https://www.perthairport.com.au/Home/corporate/planning-and-projects/airspace-protection>.

### 4.2.2.3 LANDMARK SITES

Landmark site locations have been identified on **Plan 3**. These sites have been located in response to priority view lines and public vistas. They define local character and maximise legibility through high quality pedestrian scale, development of these sites is strongly recommended to respond to existing sight lines and maximise street presence.

Elements of design that should be investigated include articulation adjacent to, and above, the street level, building proportion that maximises the perception of bulk from a distance, intrinsic quality of materials that produce interest for pedestrians, detail that is revealed in proximity to the development and interesting distribution of mass.



## 5 OTHER REQUIREMENTS

### 5.1 SCHEME AMENDMENT

An amendment to the City of Belmont's LPS 15 will be required to apply the R-AC0 density code over the subject land and to exclude land uses that would be permissible within the Mixed Use zone as identified in section 4.1.1.1. This will also need to provide for the 'Shop' land use as an additional use.

### 5.2 INFRASTRUCTURE FUNDING STRATEGY

The City of Belmont may establish an appropriate funding strategy for the provision of infrastructure within the Structure Plan Area. The strategy may include the introduction of a Development Contribution Area (DCA) through LPS 15, under which a Development Contribution Plan (DCP) can be implemented to contribute to the funding of public infrastructure necessary to facilitate development in the Structure Plan Area.

Infrastructure items that would be eligible to be funded under a DCP should be in accordance with State Planning Policy 3.6 Development Contributions for Infrastructure (SPP 3.6).

### 5.3 BUSHFIRE MANAGEMENT

This Structure Plan is supported by a Bushfire Management Plan (BMP), which is contained at **Appendix A**.

Where appropriate, development will have regard to the Bushfire Attack Level (BAL) Assessment contained in this Report and be determined in accordance with Schedule 2, Part 10A of the Planning and Development (Local Planning Schemes) Regulations 2015 and section 6.3 of SPP 3.7 Planning in Bushfire Prone Areas (SPP 3.7).

An LDP is required to be prepared for all lots with a BAL of 12.5 or greater.

Where a subdivision application includes land with a BAL of 12.5 or greater, the Local Government shall recommend to the WAPC that a condition be imposed on the grant of subdivision approval for a notification to be placed on the Certificate of Title to suitably respond to the following:

*"That a lot with a bushfire attack level BAL rating of 12.5 or higher is subject to a BMP."*

### 5.4 ABORIGINAL HERITAGE

A search of the Department of Planning, Lands & Heritage (DPLH) Aboriginal Heritage Enquiry System identifies one site within the northern/western portion of the subject land (Site ID 3753).

Should the Aboriginal Heritage Site identified as meeting the requirements of section 5 of the Aboriginal Heritage Act 1972 (AHA) be proposed to be disturbed in any way, an application must first be made and consent granted under section 18 of the AHA.

Furthermore, where applicable, an Aboriginal Heritage Management Plan shall be prepared and implemented prior to subdivision of any land affecting the identified site.

### 5.5 NOISE ATTENUATION

An acoustic assessment shall be undertaken and included as part of any application to demonstrate that the proposed design will meet the internal noise level requirements of State Planning Policy 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning (SPP 5.4).

In accordance with SPP 5.4 a notification shall be required to be placed on the Certificate of Title for lots where dwellings are exposed to traffic noise that exceeds the outdoor "Noise Target" as defined in SPP 5.4.

### 5.6 DESIGN REVIEW PANEL

Any application for development within the Structure Plan area will be referred to the City's Design Review Panel for evaluation.

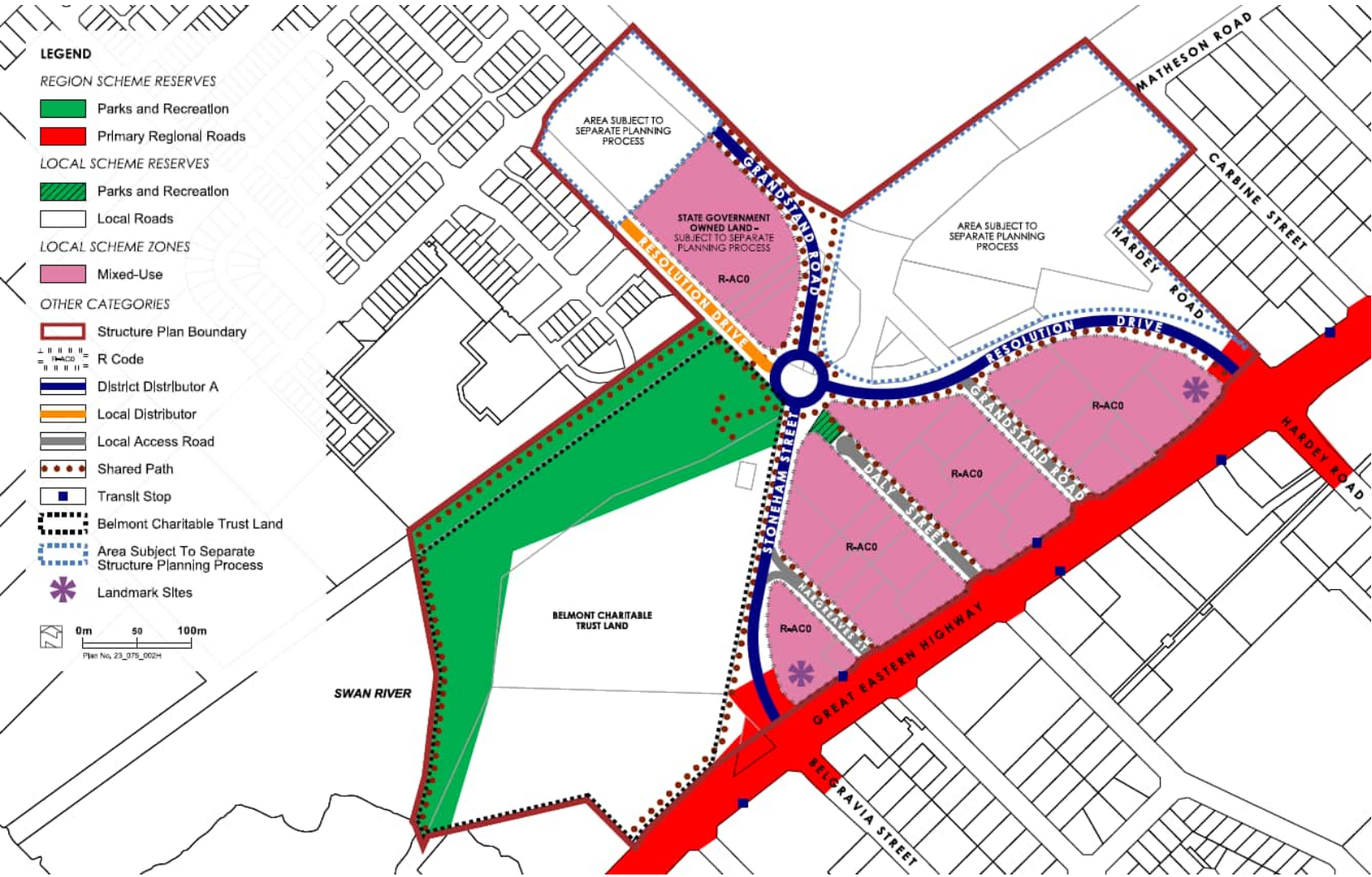
## 6 ADDITIONAL INFORMATION

**Table 4** below outlines additional information that will be required at future approval stages. Additional information requirements may not be limited to those listed; the City or WAPC may require other information in relation to particular proposals.

TABLE 4: MANAGEMENT PLANS, REPORTS AND STRATEGIES

Additional information	Approval stage	Approving Authority
<b>Water Management</b>		
Local Water Management Strategy (LWMS)	Documented in Structure Plan and to be considered as part of Structure Plan process. Implementation as part of UWMP	WAPC, City, DWER
Urban Water Management Plan (UWMP)	Condition of subdivision	WAPC, City, DWER
<b>Environment</b>		
Environmental Assessment Report	Documented in Structure Plan Implementation via Subdivision	WAPC, City, OEPA,
Fire Management Plan	Condition of subdivision	WAPC, City
Foreshore Management Plan	Condition of Subdivision	WAPC, City, DBCA
Landscape Management Plan	Condition of subdivision	City
Aboriginal Heritage Management Plan	Condition of subdivision	DPLH
Acoustic Report (Noise Attenuation)	Condition of planning approval	City
Acid Sulphate Soils	Condition of Subdivision	DWER
Investigation for soil and groundwater contamination	Condition of Subdivision	WAPC, City
Identification and protection of vegetation worthy of protection	Condition of Subdivision	WAPC, City

Additional information	Approval stage	Approving Authority
Erosion and Sediment Management Plan	Condition of Subdivision	WAPC, City
<b>Engineering</b>		
Servicing Report	Documented in Structure Plan Condition of Subdivision	City, Water Corp, Western Power, ATCO Gas
Geotechnical	Condition of Subdivision	City
<b>Other</b>		
Local Development Plan(s)	Condition of subdivision if deemed necessary by City	City



Plan 1- Structure Plan





Plan 2 - Precinct Plan





Pan 3 - Building Height Plan

# PART TWO EXPLANATORY INFORMATION

# 1 PLANNING BACKGROUND

## 1.1 INTRODUCTION AND PURPOSE

This report has been prepared to provide a technical explanation for the provisions contained in Part 1- Implementation of the Golden Gateway Structure Plan.

The Structure Plan outlines the development vision for the ultimate development of the Golden Gateway Precinct (the subject land) and establishes key requirements. The Structure Plan also includes information regarding the development of the public realm and assesses the proposed development in context with the surrounding physical and natural environment.

The Project Team, responsible for preparing the information contained within this report, (in consultation with the City of Belmont and relevant Service Authorities) include those detailed in **Table 1**.

TABLE 1: PROJECT TEAM RESPONSIBILITIES

Project Role	Consultant
Town Planning and Urban Design	Taylor Burrell Barnett
Architectural	Taylor Robinson Chaney Broderick
Civil Engineering	Cardno
Environment Management and Hydrology	Urbaqua
Traffic and Transport	Flyt
Landscape	EPCAD
Community Engagement	Place Match
Bush Fire Management	Urbaqua

## 1.2 LAND DESCRIPTION

### 1.2.1 LOCATION

The location and extent of the subject land is outlined in **Figure 1**. The subject land is located at the axis of the key movement corridors of Great Eastern Highway, Stoneham Street, Grandstand Road and Resolution Drive and includes key strategic sites such as Belmont Charitable Trust Land, Ascot Kilns and Western Australian Turf Club (WATC) headquarters and associated land.

**Figure 2** shows the subject land’s district context. The land is located approximately 5 kilometres (km) north-east of the Perth Central Business District (CBD), 3km north of Belmont Forum and mixed business area, and 5km north-east of Victoria Park entertainment precinct. Within its immediate context, the subject land is located adjacent the Swan River and Ascot Racecourse.

It is also well connected to regional movement networks such as the Graham Farmer Freeway and Tonkin Highway. The Garratt Road Bridge also provides a key connection to the north across the Swan River.

Within the local context, the subject land can be regarded as lacking in basic convenience shopping facilities. The BP Service Station located on the corner of Great Eastern Highway and Resolution Drive and delicatessen located at Epsom Avenue approximately 2km south-east of the subject land provide the nearest local conveniences. However, the nearest neighbourhood centres (supermarkets) are Eastgate Commercial Centre, Kooyong Road, approximately 2.5km to the south-west, or Belvidere Street approximately 2.5km to the south. Additional services are located approximately 3km to the north-west of the subject land at Maylands Shopping Centre (neighbourhood centre) or 3km to the south at Belmont Forum (Secondary Centre).



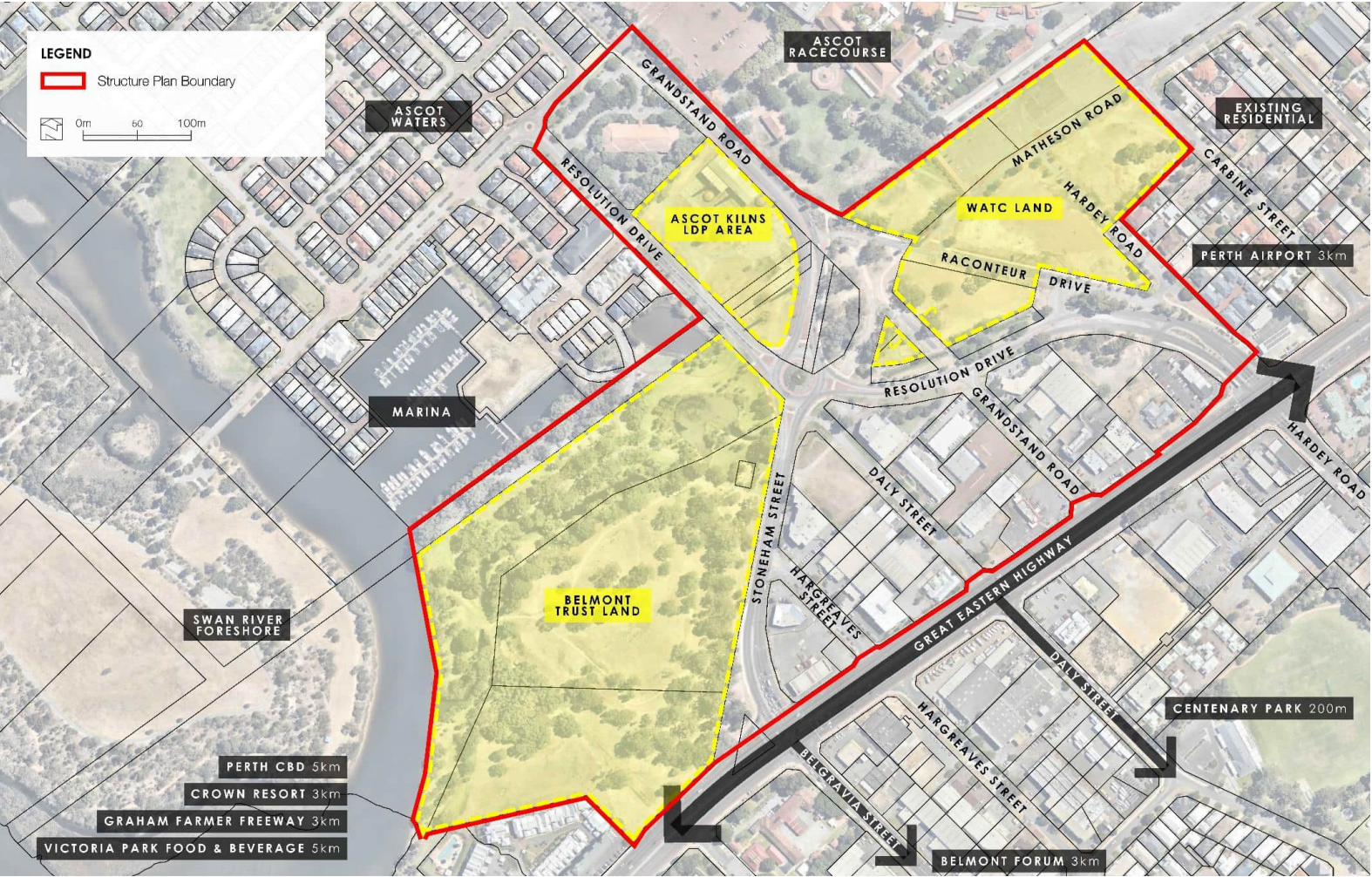


Figure 1 – Location Plan



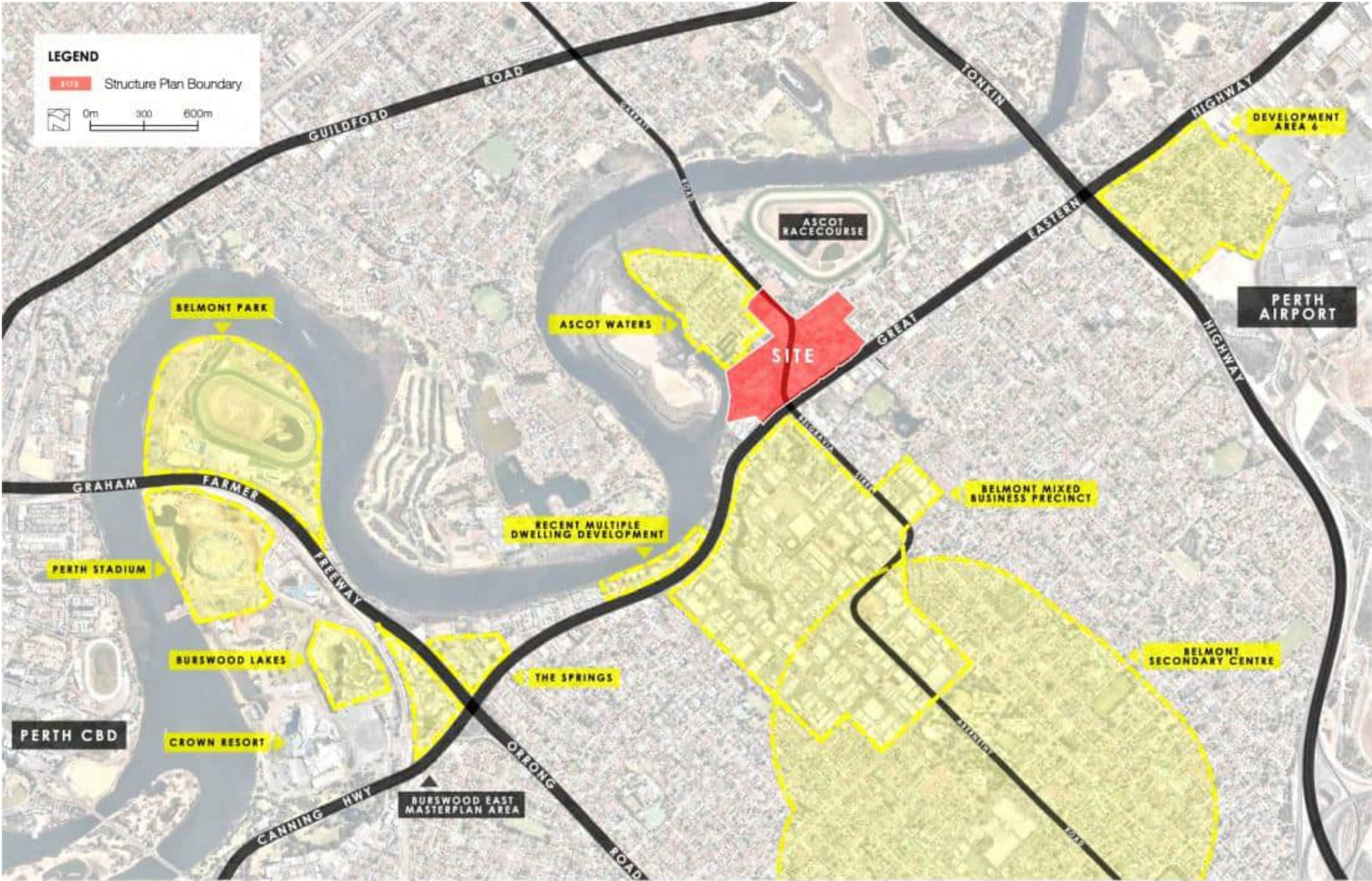


Figure 2 – District Context Plan

1.2.2 LAND USE

The subject land can be divided into four areas based on existing uses (refer **Figure 3**):

- 1. The area bounded by Great Eastern Highway, Stoneham Street and Resolution Drive is characterised by predominately mixed business development and small pockets of retail (food and beverage) uses along Great Eastern Highway;
- 2. The western portion of the subject land encompassing the Belmont Charitable Trust Land is largely cleared within the central portion with mature vegetation around the periphery. The site was historically used as a baseball field;
- 3. The northern portion of the subject land is partially developed with the WATC Headquarters and Ascot kilns and chimney stacks; and
- 4. The remainder of the subject land within the north-eastern corner is largely undeveloped and comprises a number of existing road reserves and WATC-owned land used for overflow parking on racing event days.

The development of the Belmont Charitable Trust Land, Ascot Kilns sites and the WATC land are subject to separate planning processes.



Figure 3 – Site Plan



## Attachment 12.1.1 Golden Gateway Local Structure Plan

### 1.2.3 LEGAL DESCRIPTION AND OWNERSHIP

The subject land is approximately 23.9871 hectares (ha) in area comprising the land identified in **Table 2** and **Figure 4**.

TABLE 2: LAND TENURE

Lot/Reserve	Landowner	Plan Number	Volume/Folio	Area (ha)
1 Resolution Drive	City of Belmont	P76257	2835/27	0.3642
5 Resolution Drive	City of Belmont	D64041	1776/785	4.1919
642 Great Eastern Highway	City of Belmont	P66341	2763/431	2.6481
950 Marina Drive / R52200	State of WA (City of Belmont)	P73752	LR3165/863	0.5843
512 Marina Drive / R51911	State of WA (City of Belmont)	P39786	LR3025/38	0.7749
513 The Boardwalk / R51911	State of WA (City of Belmont)	P32861	LR3025/39	0.2621
10417 Grandstand Road / R38783	State of WA (Water Corporation)	P185797	LR3048/920	0.1059
12645 Grandstand Road / R45069	State of WA (Water Corporation)	P15104	LR3064/783	0.2181
3 Grandstand Road	The Chairman of the Committee of the Western Aus Turf Club	D55346	1742/278	0.0351
13 Grandstand Road	The Chairman of the Committee of the Western Aus Turf Club	D26760	1883/670	0.7316
51Raconteur Drive	The Chairman of the Committee of the Western Aus Turf Club	P15104	1883/668	0.6940
100 Raconteur Drive	The Chairman of the Committee of the Western Aus Turf Club	P60341	2723/304	2.5726
452 Grandstand Road	The Chairman of the Committee of the Western Aus Turf Club	P60339	2723/355	1.1441
7705 Matheson Road	The Chairman of the Committee of the Western Aus Turf Club	P209359	1789/567	
1 Grandstand Road	State Planning Commission	D55346	1742/276	0.2452
197 Grandstand Road	State Planning Commission	P2635	1754/354	0.3927
236 Grandstand Road	State Planning Commission	P2635	1754/354	0.8925
237 Grandstand Road	WA Planning Commission	P2635	2117/791	0.9796
713 Grandstand Road	WA Planning Commission	D93557	2117/790	1.2806
707 Great Eastern Highway	Eurokars Australia Holdings Pty Ltd	P67257	2750/217	0.4767
709 Great Eastern Highway	Australian Postal Commission	P67258	1122/816	0.0551
1 Stoneham Street	5 Stoneham Road Belmont (Strata Scheme)	D41222	SP20374	0.2373
43 Hargreaves Street	Tarfield Holdings Pty Ltd	P2294	1582/988	0.1012
44 Hargreaves Street	Tarfield Holdings Pty Ltd	P2294	1582/989	0.1012

## Attachment 12.1.1 Golden Gateway Local Structure Plan

Lot/Reserve	Landowner	Plan Number	Volume/Folio	Area (ha)
45 Hargreaves Street	Jones, ED & Moore, JR	P2294	1977/545	0.1012
1 Great Eastern Highway	Ascot Grove (Strata Scheme)	P72552	SP65435	0.1966
60 Daly Street	Qube Ascot Development Ltd	D73791	1801/608	0.3934
36 Daly Street	Motwil Pty Ltd	P2294	1582/987	0.1012
35 Daly Street	Motwil Pty Ltd	P2294	1582/986	0.1012
650 Daly Street	76, 78 Daly Street, Belmont (Strata Scheme)	D59457	SP10988	0.2024
714 Great Eastern Highway	TLC Carousel Holdings Pty Ltd	P67260	2753/447	0.2033
52 Daly Street	SMC Pneumatics Australia Pty Ltd	D68380	1839/787	0.3798
801 Daly Street	Capital Growth Holdings Pty Ltd	P403687	2907/899	0.2440
21 Daly Street	Ashguard Pty Ltd	D78708	1892/169	0.2332
22 Grandstand Road	Ashguard Pty Ltd	D78708	1892/170	0.2031
23 Grandstand Road	Starttime Pty Ltd	D78708	1892/171	0.3731
11 Grandstand Road	The Easter Investment Pty Ltd	D17872	1182/103	0.1011
800 Great Eastern Highway	F&S Enterprises Pty Ltd	P403687	2907/898	0.2833
100 Resolution Drive	Dening Zhou Management Pty Ltd	D73202	1800/401	0.2071
101 Grandstand Road	127-129 Grandstand Street Belmont (Strata Scheme)	D73202	SP15951	0.3126
500 Grandstand Road	Kwik 'N' Kleen Pty Ltd	D90797	2076/935	0.3568
501 Great Eastern Highway	Sunlight Food Pty Ltd	D90797	2076/937	0.1063
502 Great Eastern Highway	Worldfirst Enterprises Pty Ltd	D90797	2076/938	0.1788
730 Great Eastern Highway	Novell Properties Pty Ltd	P67267	2753/474	0.3574
100 Great Eastern Highway	Selden Pty Ltd	P73087	2840/325	0.2622





Figure 4 - Land Tenure

1.3 PLANNING FRAMEWORK

1.3.1 ZONING AND RESERVATIONS

1.3.1.1 METROPOLITAN REGION SCHEME

The subject land is predominately zoned ‘Urban’ under the Metropolitan Region Scheme (MRS) (refer **Figure 5**).

Land abutting the Swan River within the subject land is reserved ‘Parks and Recreation’ and is situated within the ‘Swan and Canning River Development Control Trust’ area.

The south-eastern boundary abuts ‘Primary Regional Roads’ (PRR) reservation (Great Eastern Highway) directly to the south. This PRR reservation also extends north into the subject land at Stoneham Street and Grandstand Road.

The majority of the surrounding area is zoned ‘Urban’, whilst Ascot Racecourse is zoned ‘Private Recreation’.

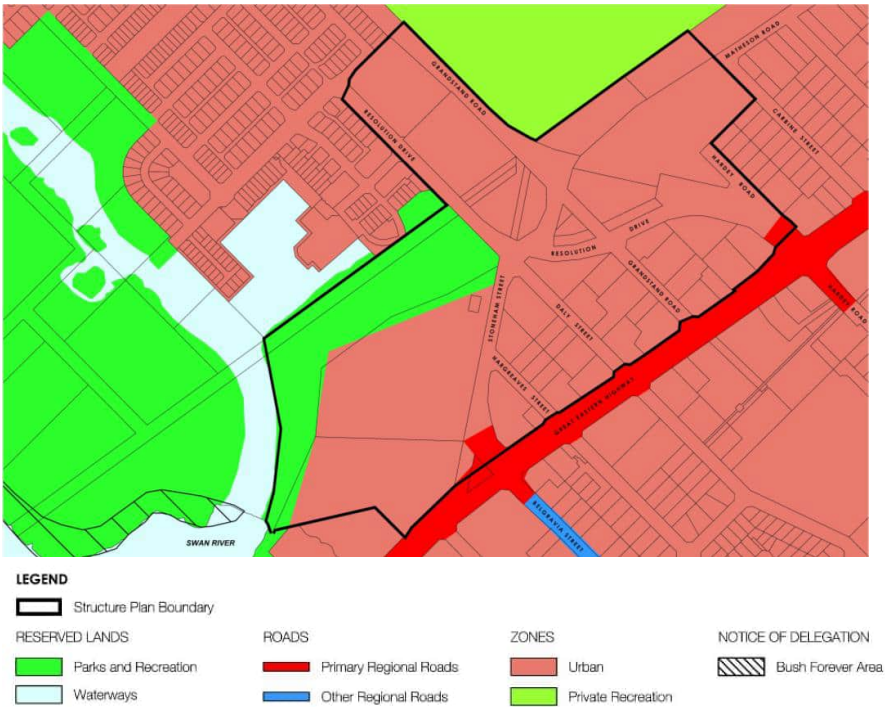


Figure 5 - MRS Zoning

1.3.1.2 CITY OF BELMONT LOCAL PLANNING SCHEME NO. 15

The subject land is predominantly zoned ‘Mixed Use’ under the City of Belmont’s Local Planning Scheme No. 15 (LPS 15) (refer **Figure 6**).

Land within the north-eastern portion associated with Ascot Racecourse is zoned ‘Place of Public Assembly – Racecourse’ and identified with an ‘Additional Use (A18)’. Land within the north-western portion of the subject land is also zoned ‘Place of Public Assembly – Racecourse’ associated with the WATC Headquarters (Lee-Steere House).

Consistent with the reservations under the MRS, the western portion of land abutting the Swan River is reserved ‘Parks and Recreation’ and Great Eastern Highway is reserved ‘Primary Regional Roads’ along with connecting sections of Stoneham Street and Hargreaves Street.

A stretch of land along Resolution Drive is reserved as Local Scheme Reserve - ‘Parks and Recreation: Water supply sewerage and drainage’. This land contains a Water Corporation drain.

Land to the south of Great Eastern Highway, within proximity to Belgravia Street is predominantly zoned ‘Mixed Business’ with portions also zoned ‘Mixed Use’.

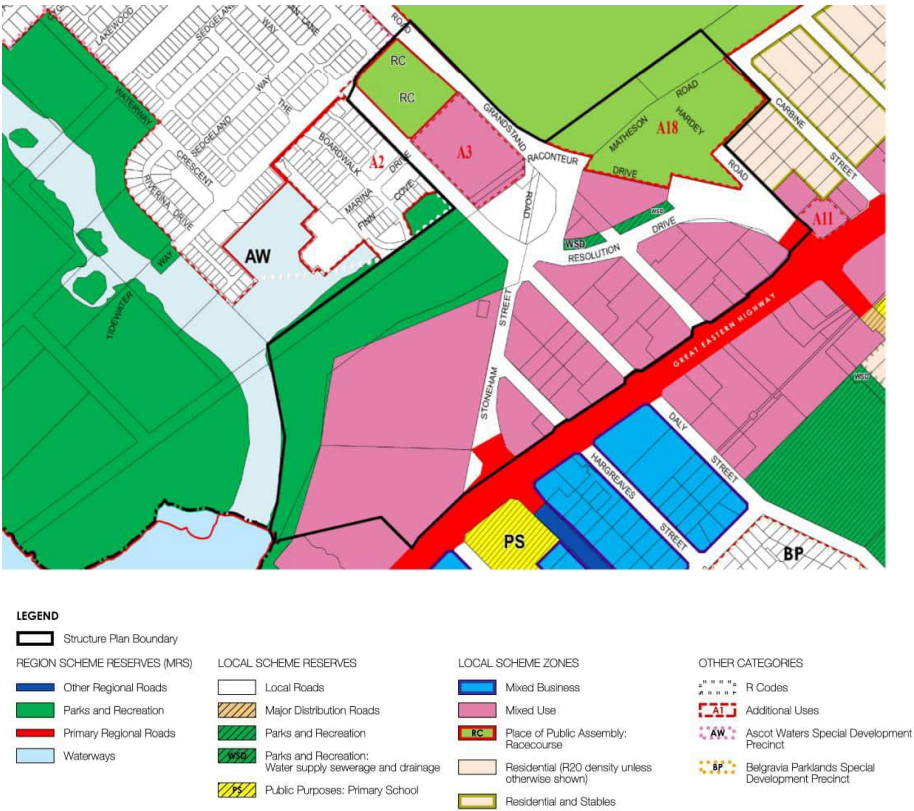


Figure 6 – LPS 15 Zoning



1.3.2 PLANNING STRATEGIES

1.3.2.1 PERTH AND PEEL@3.5MILLION

*Perth and Peel@3.5million Planning Framework* is a strategic suite of documents to guide future land uses through urban consolidation, integrated infrastructure and development, co-location of services and the strategic location of employment opportunities.

The subject land is located in the Central sub-region of the *Perth and Peel @3.5million Planning Framework* document.

The population in the Central sub-region is projected to grow by more than 468,000 people between 2011 and 2050 — from around 783,000 to nearly 1.2 million people. It is expected that more than 285,000 additional jobs will be accommodated in the Central subregion up to 2050.

The Central sub-region is expected to supply an additional 215,000 dwellings under the Framework, with 10,410 dwellings to be provided within the City of Belmont.

The Framework identifies Great Eastern Highway as an ‘urban corridor’ and Grandstand Road-Stoneham Street continuing into Hardey Road as a ‘high frequency public transit’ (refer **Figure 7**).

The Framework states that corridors should be the focus for investigating increased densities, with potential for mixed land uses where appropriate. The presence of existing or planned high-quality public transport is an important consideration in determining whether a corridor is suitable for a more-compact and diverse urban form.

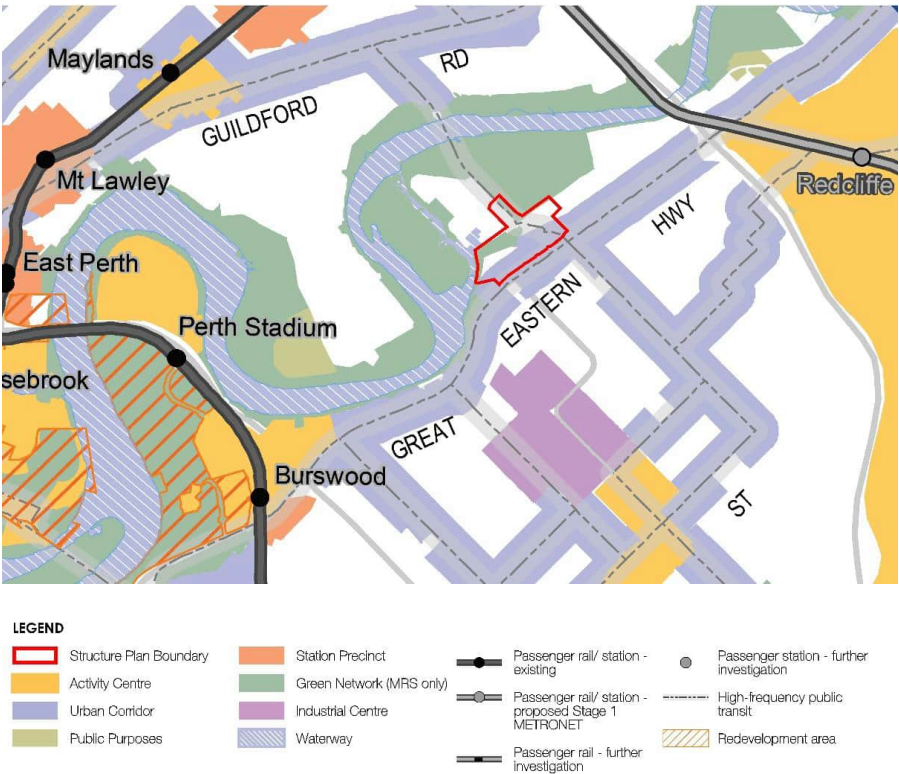


Figure 7 – Central Sub-regional Planning Framework



### 1.3.3 PLANNING POLICIES

#### 1.3.3.1 STATE PLANNING POLICIES

#### SPP 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning

*State Planning Policy 5.4 – Road and Rail Transport Noise and Freight Considerations in Land Use Planning* (SPP 5.4) seeks to minimise the adverse impact of transport noise, without placing unreasonable restrictions on noise-sensitive residential development. SPP 5.4 is applied where the proposal includes:

- A proposed new noise-sensitive development in the vicinity of an existing or future major road, rail or freight handling facility.
- A proposed new major road or rail infrastructure project in the vicinity of existing or future noise sensitive and uses.
- A proposed major redevelopment of existing major road or rail infrastructure in the vicinity of existing or future noise-sensitive land uses.
- A proposed new freight handling facility.

Great Eastern Highway is identified as a 'primary freight road' under SPP 5.4. Therefore, for any subdivision or development proposed within the threshold distance of Great Eastern Highway (200m) an acoustic report is required to be prepared and submitted with a development application.

#### Ascot Kilns Local Development Plan (Draft)

The draft Ascot Kilns Local Development Plan (LDP) and draft Local Planning Policy (LPP) was considered by Council for final approval at its Ordinary Council meeting of 12 December 2017.

The draft Ascot Kilns LDP and draft LPP proposes a vision to guide and coordinate future development across the 1.6ha former Bristle Kiln site. The draft LDP proposes the following outcomes:

- Creation of two development sites for residential apartments and some commercial uses within proposed building envelopes.
- Provision of an active edge component fronting onto the kilns cluster (promoting small-scale retail and hospitality).
- Development scale influenced by the surrounding lower scale residential context and the chimney stacks.
- Maintaining physical and visual access to the heritage structures from key aspects.
- Potential for integration of the heritage structures within future development sites to maximise opportunities for adaptive reuse and innovative design solutions.

#### Local Planning Policy 11 Public Art Contribution Policy

The City of Belmont's Local Planning Policy No. 11 (LPP 11) outlines the requirements for the provision of public art by the developer to protect and enhance the utility, amenity and identity of the public domain.

The City of Belmont requires all development proposals within the Policy Area of a value greater than \$4.5 million to provide public art in accordance with the described method for determining public art contributions. The cost of any public art shall be no less than one percent of the value of the eligible proposal and provided in kind or alternatively, the Council may accept a cash-in-lieu payment.

A portion of the subject land falls within Precinct 4 – Great Eastern Highway Precinct of LPP 11 with the balance (excluding Ascot Kilns LDP area) situated within Precinct 5 – Swan River Foreshore.

### 1.3.4 PRE LODGEMENT CONSULTATION

A key component of the concept planning for the subject land has been stakeholder and community consultation and engagement. The DPLH has also been a key stakeholder in the concept planning process given the presence of the Ascot Kilns site within the Golden Gateway Precinct. The WATC have also been consulted separately given its significant landholding within the subject land, albeit subject to a separate planning process.

## Attachment 12.1.1 Golden Gateway Local Structure Plan

As part of the consultation and engagement strategy, three workshops were held during May 2016 and a fourth workshop in November 2016:

1. City of Belmont Council Staff Workshop (6 May 2016 – 22 participants)
2. Business and Landowners Workshop (26 May 2016 – 5 participants)
3. Community and Residents Workshop (31 May – 32 participants).
4. Combined Business/Landowners and Community/Residents Workshop (7 November 2016).

In addition to the above workshops, two online surveys were conducted by the City of Belmont (May and November 2016) to provide the community with the opportunity to provide additional comments. Feedback received was consistent with feedback provided at the various workshops as summarised below.

### 1.3.4.1 STAKEHOLDER WORKSHOPS

Overall, the overwhelming priority was the preservation and enhancement of POS both within Belmont Charitable Trust Land and throughout the remainder of the development. The emphasis was placed on the enhancement of active POS supported by recreational amenity and infrastructure.

Overall, residential development within the Golden Gateway Precinct was supported with varying degrees of density and height, however careful integration with existing residential to the north and east is paramount.

Other priorities included the creation of a destination / attraction for the City of Belmont and identification of 'place' qualities that will need to be considered in subsequent planning stages.



## 2 SITE CONDITIONS AND CONSTRAINTS

An Environmental Assessment Report was prepared by Urbaqua to support the Structure Plan. This report is included as **Appendix B**.

### 2.1 ENVIRONMENTAL ASSETS AND CONSTRAINTS

#### 2.1.1 VEGETATION

No vegetation of conservation significance is located within the subject land. Due to historic clearing, commercial and recreational activities, the vegetation within the subject land is largely degraded. The subject land does contain some mature trees and these will be retained where possible.

Bush Forever Area 313 (Swan River Salt Marshes) is located to the north and west of the subject land. Surrounding this area, the Department of Water and Environmental Regulation (DWER) has mapped an Environmentally Sensitive Area described as 'Temperate Saltmarsh' and listed as 'vulnerable' under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This area is an important habitat for local and migratory bird species, however is largely disconnected from the subject land.

#### 2.1.2 FLORA

A search of the EPBC Protected Matters Database was undertaken to identify flora species of conservation significance potentially occurring within a 2km radius of the subject land.

The search identified two 'endangered' species under the EPBC Act (*Caladenia huegelii* King Spider-orchid and *Lepidosperma rostratum* Beaked Lepidosperma) and one critically endangered species (*Darwinia foetida* Muchea Bell).

#### 2.1.3 FAUNA

A search of the EPBC Protected Matters Database was undertaken to identify fauna species of conservation significance potentially occurring within a 2km radius of the subject land.

The search identified three species of 'endangered' status under the EPBC Act and seven 'vulnerable' species.

As a result of existing uses, the subject land supports limited or no remnant vegetation with a lack of intact understorey vegetation. The subject land therefore provides little, to no, fauna habitat of significant value to native fauna. The vegetation within Belmont Trust Land may provide important habitat for local and migratory birds.

### 2.2 LANDFORM AND SOILS

#### 2.2.1 LANDSCAPE AND TOPOGRAPHY

The subject land is generally flat and grades gently from 6 metres (m) Australian Height Datum (AHD) in the south-east to 3mAHD in the west. A few low points exist within the centre of the subject land at approximately 1-2mAHD.

The surface geology is described broadly as Guildford formation: Alluvial sand and clay with shallow-marine and estuarine lenses and local basal conglomerate. Two-thirds of the north-western portion of the subject land is classified as Ms2 – Sandy Silt, which has a low permeability, and eastern third as S8 – Sand.

#### 2.2.2 ACID SULFATE SOILS

A review of DWER acid sulfate soils (ASS) risk mapping identifies approximately two-thirds of the subject land, predominantly the area coinciding with surface geology Ms2-Sandy Silt, as containing a Class I 'high to moderate' risk of ASS and the remainder, coinciding with S8-Sand, classified as Class II 'moderate to low' risk occurring within 3m of the natural soil surface.

Given the Class I classification, an ASS investigation will be carried out where works are proposed in these areas consistent with the DWER Guidelines. Should ASS be present within the subject land, all site works must be carried out in accordance with an ASS management plan approved by DWER.

### 2.2.3 CONTAMINATED SITES

A search of the DWER Contaminated Sites database found a portion of the subject land as 'Possibly Contaminated – Investigation Required'.

## 2.3 GROUNDWATER AND SURFACE WATER

### 2.3.1 GROUNDWATER

Based on the DWER Ground Water Atlas, maximum groundwater levels are within 3m of the natural surface through the northern and central portions of the subject land, with groundwater flowing in a north-westerly direction toward the Swan River. As this drain is located adjacent to land owned by Perth Racing, they may explore opportunities for integration of the drain with future development as part of the planning they are progressing for their landholdings.

### 2.3.2 SURFACE WATER

A Water Corporation open drain is located within the centre of the subject land. The open drain is approximately 150m in length and directs flows of runoff from the eastern urban and industrial areas to piped drainage under the Stoneham Street / Resolution Drive roundabout to a compensation basin to the west of the subject land before travelling through a further 350m of open drain to the Swan River.

The Swan River is located adjacent to the western portion of the subject land. The DWER Floodway mapping indicates that a large area in the northern portion of the subject land lies within the Swan River 100 year average reoccurrence interval (ARI) flood fringe. Protection of the Swan River's environmental attributes will require the provision of a 50m buffer to the banks of the River consistent with its designation as an environmentally protected area and conservation category wetland (CCW) is generally applied.

The subject land also abuts the Swan and Canning River Development Control Area. The Department of Biodiversity, Conservation and Attractions Corporate Policy 49: Planning for Stormwater Affecting the Swan Canning Development Control Area provides further planning provisions to improve water quality, habitat, community benefits and amenity of the river system through stormwater management.

## 2.4 BUSHFIRE HAZARD

A very small portion of the subject land is identified as being located within a 'Bush Fire Prone Area' adjacent the Swan River and as such, a BMP has been prepared by Urbaqua in support of the Structure Plan (refer **Appendix A**). The BMP is a strategic level plan which identifies the bushfire protection measures to be applied to development on the subject site to accommodate compliance with:

- State Planning Policy 3.7 Planning in Bushfire Prone Areas;
- Guidelines for Planning in Bushfire Prone Areas; and
- Australian Standard for the construction of buildings in bushfire-prone areas (AS3959-2009).

As part of the BMP, a Bushfire Attack Level (BAL) Contour Map has been prepared which identifies the worst case BAL in relation to the subject land. The BAL Contour Map identifies a BAL of 'Low' across the majority of the subject land and a small portion of BAL-12.5 within the Belmont Charitable Trust Land. Given the Structure Plan does not propose development within the foreshore area subject to BAL-12.5 (or wider Belmont Charitable Trust Land), it is anticipated that any bushfire hazards can be appropriately managed.

It is expected that bushfire hazard assessment will be further refined as part of future subdivision or development stages in order to accurately assess the bushfire risk posed by surrounding classified vegetation and determine specific radiant heat exposure levels (and associated BAL) for future lots created within the Structure Plan area, as required.

## 2.5 HERITAGE

### 2.5.1 ABORIGINAL

A search of the Department of Planning, Lands & Heritage (DPLH) Aboriginal Heritage Enquiry System identifies one site occurring within the northern/western portion of the subject land.

Site ID 3753 – Registered site, Name: Perth, Type: Historical, mythological, hunting place, named place, natural feature.

Prior to disturbance of the above site, an application is to be made for consent to use the land under section 18 of the AHA.

### 2.5.2 EUROPEAN

The Ascot Kilns and chimneys were included on the State Heritage List in 2003 and are also included on the City's Local Heritage Survey and List. The Kilns were first built in 1930, manufacturing terracotta, stoneware and steel products. The draft Ascot Kilns LDP celebrates and enhances the site's heritage significance and maintenance.

The old Matheson Road railway line has historic value for its association with the rail link which connected Belmont to Perth and Guildford. This site is contained on the City's Local Heritage Survey. Where possible, development should recognise and interpret its significance.

## 2.6 EXISTING MOVEMENT NETWORK

The subject land benefits from a surrounding movement network that features access to key regional road connections, a high frequency public transport corridor and high-quality shared path cycling links.

### 2.6.1 GREAT EASTERN HIGHWAY

The subject land is bounded by Great Eastern Highway to the south which provides access to the west towards the Perth CBD, Graham Farmer Freeway and onto South Perth, Melville and Fremantle via Canning Highway. To the east, Great Eastern Highway provides access to Perth Airport, Tonkin/Roe Highway and onto Guildford, Midland and the Swan Valley.

Great Eastern Highway is classified as a 'Primary Distributor' under the Main Roads WA (MRWA) Functional Road Hierarchy and is regarded as one of the State's principal transport corridors carrying over 54,000 vpd, based on 2018 traffic counts.

Great Eastern Highway (between Kooyong Road in Rivervale to Tonkin Highway in Redcliffe) was subject to significant upgrade works between June 2011 and February 2013. These works included:

- Widening Great Eastern Highway, from four to six lanes, between Kooyong Road (Rivervale) and Tonkin Highway (Redcliffe) – a distance of 4.2 km;
- Constructing a central median for the full length of the project;
- Upgrading all major intersections to include dedicated turning movements;

- Providing U-turn facilities at key locations in order to maintain access to businesses fronting the Highway;
- Incorporating bus priority lanes into key intersections;
- Providing dedicated on-road cycling facilities;
- Constructing footpaths for pedestrians; and
- Relocating, replacing and protecting service utilities such as telecommunications, water, power and gas.

### 2.6.2 INTERNAL ROADS

The localised road network includes a network of local distributor and access roads providing access to key regional and district roads such as Great Eastern Highway and the Garret Road bridge. Grandstand Road, Resolution Drive and Stoneham Street are classified as 'District Distributor A' roads under the MRWA Functional Road Hierarchy. These are generally described as follows:

- Grandstand Road (20m road reserve) – a four lane road with a central median, running north-south within the subject land, connecting the Garratt Road crossing of the Swan River with Great Eastern Highway via Stoneham Street or Resolution Drive;
- Stoneham Street (20-25m road reserve) – a four lane road without a central median, running north-south within the subject land, connecting Grandstand Road/Resolution Drive with Great Eastern Highway and Belgravia Street; and
- Resolution Drive (22-47m road reserve) – a two lane with a central median, running east-west within the subject land, connecting Grandstand Road/Stoneham Street with Great Eastern Highway and Hardey Road.

All of these roads are under the control of the City of Belmont. The following roads are classified as 'Local Roads' under the MRWA Functional Road Hierarchy and are also under the control of the City of Belmont.

## Attachment 12.1.1 Golden Gateway Local Structure Plan

- Hargreaves Street (20m road reserve) – a two lane road without a central median, running north-west to south-east within the subject land, providing a connection between Stoneham Street (no right turn out) and Great Eastern Highway (left in/left out only);
- Daly Street (20m road reserve) – a two lane road without a central median, running north-west to south-east within the subject land, providing a connection between Stoneham Street (left out only onto Stoneham Street) and Great Eastern Highway (left in/left out only);
- Grandstand Road (south) (20m road reserve) – a two lane road without a central median, running north-west to south-east within the subject land, providing a connection between Resolution Drive and Great Eastern Highway (left in/left out only); and
- Raconteur Drive (20m road reserve) – operates as a one-way road from Grandstand Road to Matheson Road and is currently closed at the Grandstand Road intersection outside of event periods at Ascot Racecourse. Two-way access between Resolution Drive and Matheson Road is possible via the eastern extent of Resolution Drive.

### 2.6.3 PEDESTRIAN NETWORK AND CYCLING

#### 2.6.3.1 PEDESTRIAN NETWORK

The extent and quality of the existing pedestrian infrastructure within, and surrounding, the subject land (with the exception of Great Eastern Highway) is poor and of a standard commensurate with the nature of existing development across the subject land (i.e. primarily light industrial/commercial unit style development).

However, Great Eastern Highway bordering the subject land to the south features good quality footpaths on both sides of the corridor. Within the vicinity of the subject land, the safe crossing of Great Eastern Highway by pedestrians is facilitated via traffic signal-controlled intersections at both Stoneham Street/Belgravia Street and Resolution Drive/Harvey Road intersections with Great Eastern Highway.

Each of the major road corridors running through the subject land (Grandstand Road, Resolution Drive and Stoneham Street) include footpaths along one side of the street – Grandstand Road along the eastern side adjacent to the Ascot Racecourse, Raconteur Drive along the northern side to connect to Grandstand Road, Resolution Drive along the eastern side adjacent to the Ascot Waters development and Stoneham Street along the western side adjacent to the Belmont Charitable Trust Land. There is an existing gap in pedestrian connectivity along Resolution Drive, opportunities to enhance connectivity may be explored by the City as part of a broader approach to infrastructure upgrade.

Local access streets (Hargreaves Street and southern section of Grandstand Road) providing access in a northerly direction from Great Eastern Highway are car dominated with no existing footpaths present. A footpath is located on Daly Street.

#### 2.6.3.2 CYCLING

A number of existing shared paths and cycling connections are located within the subject land along primary routes, including Stoneham Street, Raconteur Drive and Grandstand Road. There is demand to upgrade facilities on Stoneham Street and Resolution Drive. Protected bicycle lanes and a shared path on Resolution Drive is essential, however the provision of 'on street' bicycle lanes on Stoneham Street will require further investigation dependent on the ultimate form of the road reserve.

A number of shared paths are also located within the Ascot Waters development directly to the north of the subject land. The Graham Farmer Freeway Principal Shared Path (PSP) is also located within close proximity to the subject land providing regional cycling connections and can be accessed via the shared path along the southern side of the Swan River.

The extent and quality of the existing cycling infrastructure within and surrounding the subject land is of a high standard, largely as a result of the Great Eastern Highway upgrades. Local connections are provided along Stoneham Street, Resolution Drive and Grandstand Road and further to the north within the Ascot Waters development. Regional connections are provided via high quality shared use paths along the Swan River Foreshore (via Belmont Charitable Trust Land towards the Graham Farmer Freeway PSP to access Perth CBD).





### 2.6.4 PUBLIC TRANSPORT

A number of existing bus routes operate within, or in close proximity to, the subject land. These include the Circle Route (998/999) via Raconteur Drive/Grandstand Road providing connections north to destinations including Bayswater Station, Morley Bus Station/Shopping Centre and south to destinations including Belmont Forum Shopping Centre, Oats Street Station and Curtin University.

In addition, existing bus routes (293 and 940) operate along high frequency bus corridor of Great Eastern Highway, providing connections east to destinations including Redcliffe Train Station, Perth Airport, Guildford, Midland and to the west to destinations including Victoria Park Transfer Station and Perth CBD.

Pedestrian access to existing public transport facilities is considered average with no bus stops currently located within the subject land. The closest bus stops are located on Grandstand Road immediately to the north of the subject land (close to the main pedestrian entry/exit to Ascot Racecourse). There are options to make improvements to public transport access if land uses within the subject land change over time to support additional public transport patronage.

### 2.7 ROAD TRAFFIC NOISE

As discussed in section 1.3.3.1, SPP 5.4 sets out specific requirements for addressing potential noise impacts from major transport arteries on adjacent noise-sensitive uses.

It has been identified that Great Eastern Highway, Resolution Drive and Grandstand Road are all likely to require consideration under SPP 5.4. In this respect any subdivision or development proposed adjacent to these roads will require an acoustic assessment to be undertaken and included as part of any application to demonstrate that the proposed design will meet the internal noise level requirements of SPP 5.4.

## 2.8 EXISTING INFRASTRUCTURE AND SERVICING

### 2.8.1 WATER SUPPLY

The Serpentine Trunk Main is located along Grandstand Road and Daly Street. A 915 steel distribution main is also located along Grandstand Road through the subject land. Existing development within the subject land is well serviced with a mixture of 100, 150 and 200 dia reticulation pipes made of asbestos cement, cast iron, PVC and steel.

### 2.8.2 WASTEWATER

Wastewater infrastructure general to the Ascot area is serviced by gravity style wastewater drainage infrastructure. A mixture of concrete and plastic arterial pipes on grade service all areas to local pump stations throughout the City of Belmont.

Lots within, and surrounding, the subject land are serviced by two main arterial sewer routes; a 225mm collector flowing north to south and a 225mm collector flowing east to west. Both collectors flow to the Redcliffe Pump Station 5 located on Stoneham Street. The Redcliffe Pump Station 5 collects all sewerage west of the Ascot Racecourse within the Ascot suburb and discharges it to the Redcliffe Pump Station 2 located on Abernethy Road.

### 2.8.3 POWER SUPPLY

Data obtained from the Western Power Network Mapping Tool indicates that the subject land is serviced by the Belmont Substation and the forecast network capacity for 2015 is >30MVA. There are High and Low Voltage power lines in the vicinity of the subject land.

### 2.8.4 GAS SUPPLY

Correspondence from ATCO Gas identifies Medium Pressure (MLP) gas mains (pressure indicated at 70kPa) along the majority of roads within the subject land.

### 2.8.5 TELECOMMUNICATIONS

The subject land is well serviced by telecommunications infrastructure with optical fibre running in or adjacent to the subject land. This infrastructure is owned by various telecommunications providers including Telstra, Optus and others. The National Broadband Network (NBN) has been rolled out in the subject area.



## 3 STRUCTURE PLAN

### 3.1 VISION AND OBJECTIVES

#### 3.1.1 VISION

The objectives and design principles underpinning the Golden Gateway Structure Plan have been formulated around the following vision:

*“The development of the Golden Gateway will transform this degraded and fragmented area into a vibrant precinct of residential and mixed use development, with strengthened connections to the Swan River and Ascot Waters, that derive best value from these attributes while respecting the area’s rich culture and heritage.”*

#### 3.1.2 OBJECTIVES

The overarching objectives for the Golden Gateway Precinct as established by the project team and reinforced through stakeholder engagement are as follows:

1. Improve **self-containment of facilities** – reduce car dependence
2. Improve people’s connection to the **Swan River**
3. Create accessible, quality **public realm** within the precinct
4. Ensure **heritage values** are retained
5. Identify **appropriate uses/densities** in conjunction with **infrastructure improvement**
6. Optimise value of strategic sites – **planning certainty**

### 3.2 DESIGN PREPARATION

The Structure Plan design has been informed by a thorough analysis of the existing site conditions and the potential opportunities and issues offered by the location. The key outcomes of this analysis are noted in **Figures 8 and 9** and described overleaf:

### 3.2.1 OPPORTUNITIES

#### Land use

1. Opportunity for residential development to be accommodated in the precinct given the accessibility to high amenity riverside amenity.
2. Opportunity for retail convenience and food and beverage land uses to be integrated into development outcomes.
3. Potential for higher density development given precinct location, proximity to high amenity open space destinations, Perth CBD, localised employment and high frequency public transport.
4. Existing primary school adjacent the precinct offers opportunity to attract a diverse demographic, including young families.
5. Consider mixed use development in core area to broaden activity opportunities and long term transition of the precinct, and to offer improved amenities for the existing Ascot community.

#### Built form

1. Opportunity for landmark building form and massing to inner core areas to perform key gateway functions.
2. Future building form to appropriately interface with adjacent public realm.
3. Local activity hub potential within the precinct providing local centre retail, cafe/mini main street offerings in a shared street atmosphere.
4. Existing street block depths south of Resolution Drive are well suited for typical multiple dwelling apartment development parcels.

#### Public realm

1. Existing character and destination status of adjacent Swan River open space provides significant public amenity and recreation opportunities for future residents.
2. Promote pedestrian and cycle network connectivity through the site to strengthen access to the Swan River for both the existing Ascot community as well as future residents in the Golden Gateway Precinct.
3. Significant tree canopies within the Belmont Charitable Trust Land and peripheral open space offer significant 'green horizon' views to the precinct.
4. Opportunity to provide strong open space 'cross-link' as a 'green ribbon' link to the Swan River.
5. Celebrate the heritage significance of the Ascot Kilns and the potential for integration of the heritage structures to maximise amenity for residents.

#### Movement

1. Utilise existing local street network of Hargreaves Street, Daly Street and Grandstand Road to deliver a robust structure for future development access and vehicle circulation.
2. Generous existing road reserve dimensions provide ability for reconfigured pedestrian friendly streetscapes offering shade trees, soft landscaping and convenient on-street parking embayments.
3. Potential for alteration to the priority road network of Stoneham Street and Resolution Drive for the benefits of precinct consolidation and integration, in particular, the potential to downgrade priority of Stoneham Street for benefits to foster a stronger relationship between the Ascot community and the Swan River.
4. Investigate alternative road alignments that celebrate key view lines of surrounding visual features and future gateway elements.

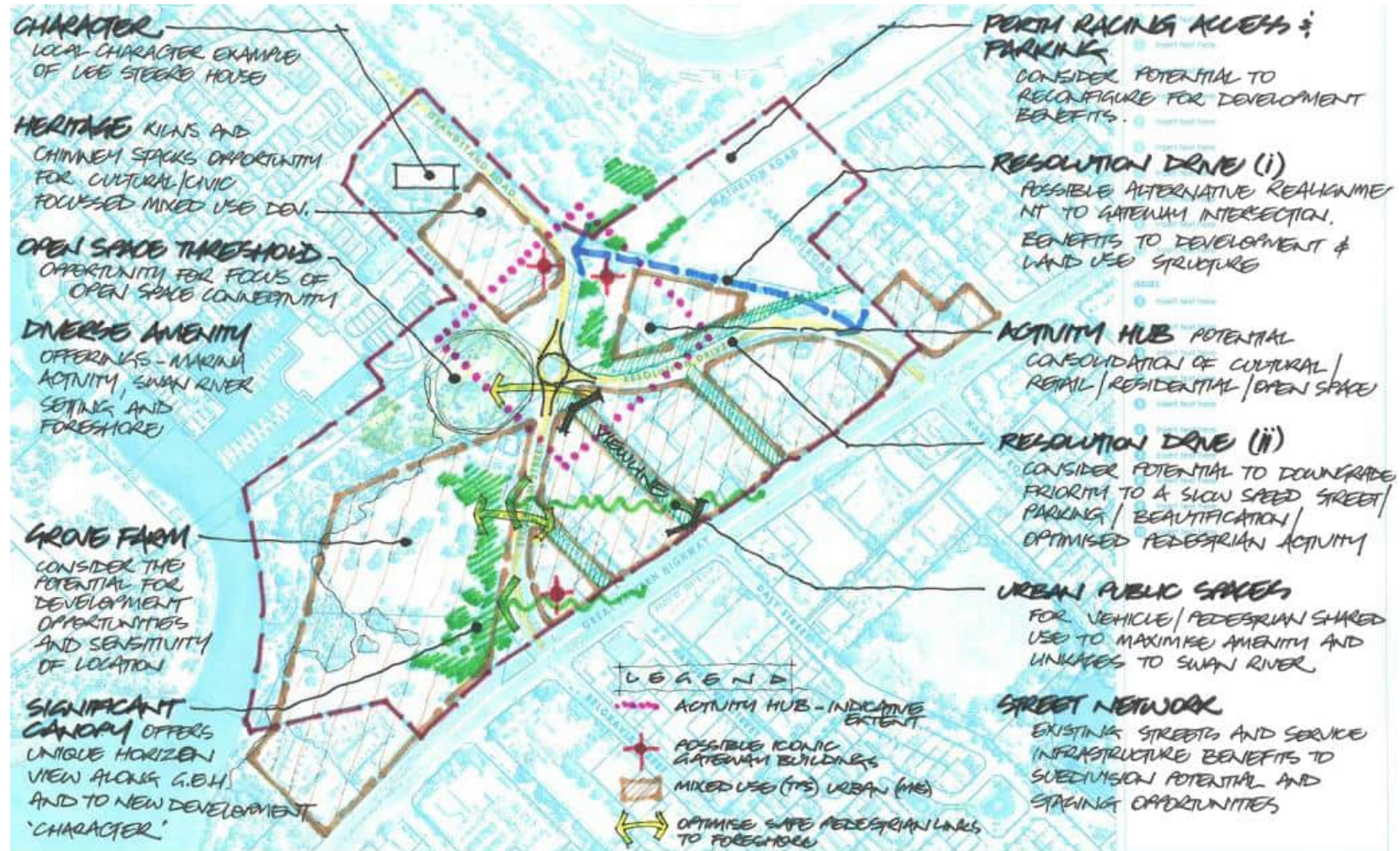


Figure 8 - Opportunities

### 3.2.2 ISSUES AND CONSTRAINTS

#### Land use

1. Service corridor extends northwards through Grandstand Road alignment.
2. Overland stormwater drainage, controlled by Water Corporation, extends east- west through the subject land located immediately north of Resolution Drive.
3. Careful consideration of existing residential development on periphery of precinct area.
4. Development adjacent Great Eastern Highway may be subject to noise attenuation.

#### Built form

1. Proposed development of Kilns area, which is subject to a Local Development Plan, to be considered in surrounding built form design.
2. Perth Airport restrictions based on flight path contours will potentially limit maximum building height.
3. Existing development is largely commercial and is located on a fractured land tenure base of multiple cadastral parcels.
4. Some future development may require land assembly to maximise development potential and desirable outcomes, and to rationalise redundant public reserves.

#### Public realm

1. Chimney locations in the Ascot Kilns area to be considered, surrounding public spaces and view lines should respect and celebrate these historic features.
2. Existing significant trees to be considered for integration into public realm, where appropriate.
3. Informal open space node to Hardey Road (east) to be considered, recognising relative disconnection of this area from other POS to the south of Resolution Drive.
4. Limited or no availability of suitable quality water from the superficial aquifer for the purpose of irrigation within the Golden Gateway area.

#### Movement

1. Existing roundabout impinges on precinct assimilation for all adjoining land quadrants.
2. Limited connection opportunities available to residents north of Resolution Drive.
3. Stoneham Street and its multi-lane configuration acts as a pedestrian barrier for development to interact with the POS area.



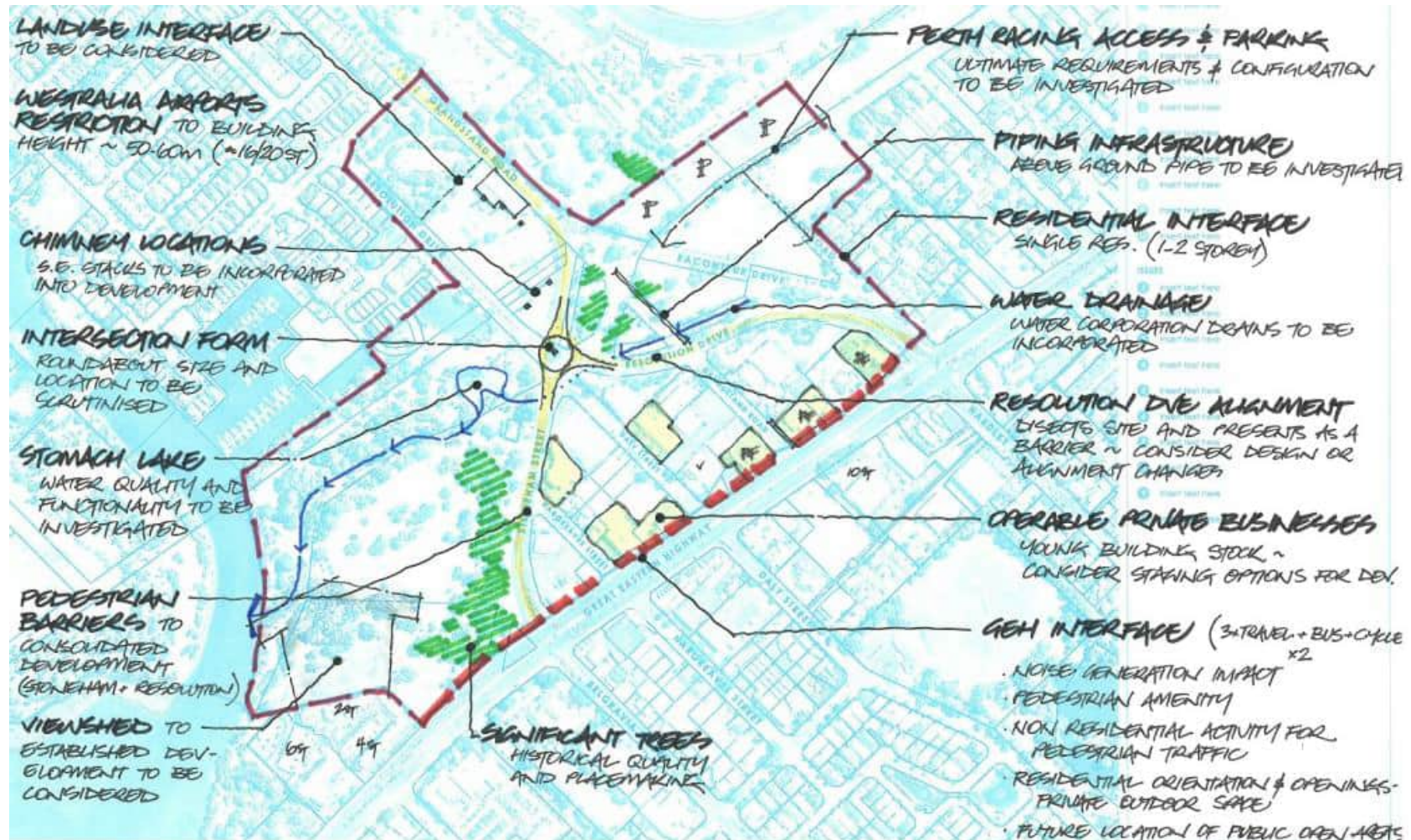


Figure 9 – Issues and Constraints



3.2.2.1 CONCEPT PLAN DEVELOPMENT – SITE ANALYSIS

One of the main challenges in testing development scenarios was to address the significant disunification of the precinct created by the heavily engineered road system, and the impact this has on local connectivity between the Precinct and the areas main natural attribute – the Swan River.

Figures 10 and 11 below were produced to stimulate discussion, during the stakeholder engagement process, about ways in which the physical barrier to the Swan River could be removed, or at least, reduced. The stakeholder engagement process produced a number of specific considerations for the initial design phase to develop scenarios (refer Figure 12).



Figure 10 - Existing access and connectivity summary

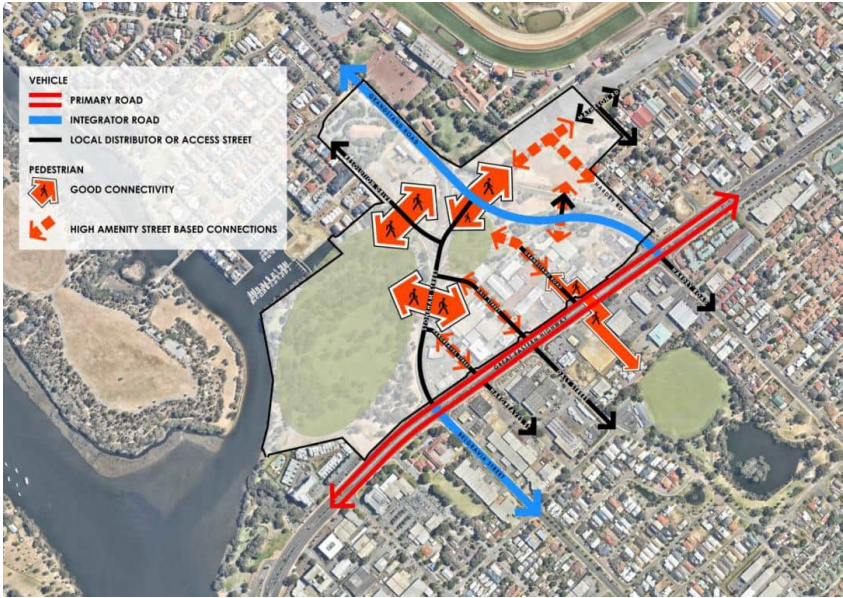


Figure 11 - Opportunity through altered vehicle priority for improved connectivity and access – to be considered further in design scenario testing





Figure 12 - Community engagement design feedback (summarised)

### 3.2.3 CONCEPT SCENARIO FORMULATION

Analysis of the subject land and key design principles resulted in the preparation of three development scenarios for testing and stakeholder discussion (refer **Figure 13**). The initial phase of high level scenario testing involved the preparation of Framework Diagrams, exploring structural opportunities and benefits to the following:

- **Landuse** – preferred structure and location.
- **Circulation** – enhancing connections, preferred hierarchy with future flexibility & rigour.
- **Character** – celebrating local qualities for unique place setting and to enhance the existing amenity.

#### Preliminary sketches exploring alternative land use and movement structures

The Framework Diagrams were discussed and analysed with the community and Council technical officers as key elements for the next phase of scenario evaluation. Various scenarios achieved the project objectives better than others, particularly with regard to public amenity and community integration with the Swan River foreshore.

#### Preliminary sketches developing framework scenarios

The next phase of scenario refinement resulted in the examination of appropriate land uses, building forms and public realm to test the structural opportunities and benefits for each of the scenarios. These were then evaluated by the project team and the community via design workshops and web based consultation sessions.

### Preliminary design scenarios

In summary, Scenario A evaluates the development opportunities for the precinct whilst maintaining the existing road network. This scenario highlights the limitations this has on development consolidation and for connectivity of future residents with the foreshore amenity.

Scenario B evaluates the development outcome where the existing road priorities of Stoneham Street and Resolution Drive are modified to improve integration of the precinct's residents with the adjacent public amenity.

Scenario C evaluates an outcome where the original road alignment of Raconteur Drive is used to maximise future integration opportunities for development west of this road and consolidation of the precinct's future residents.

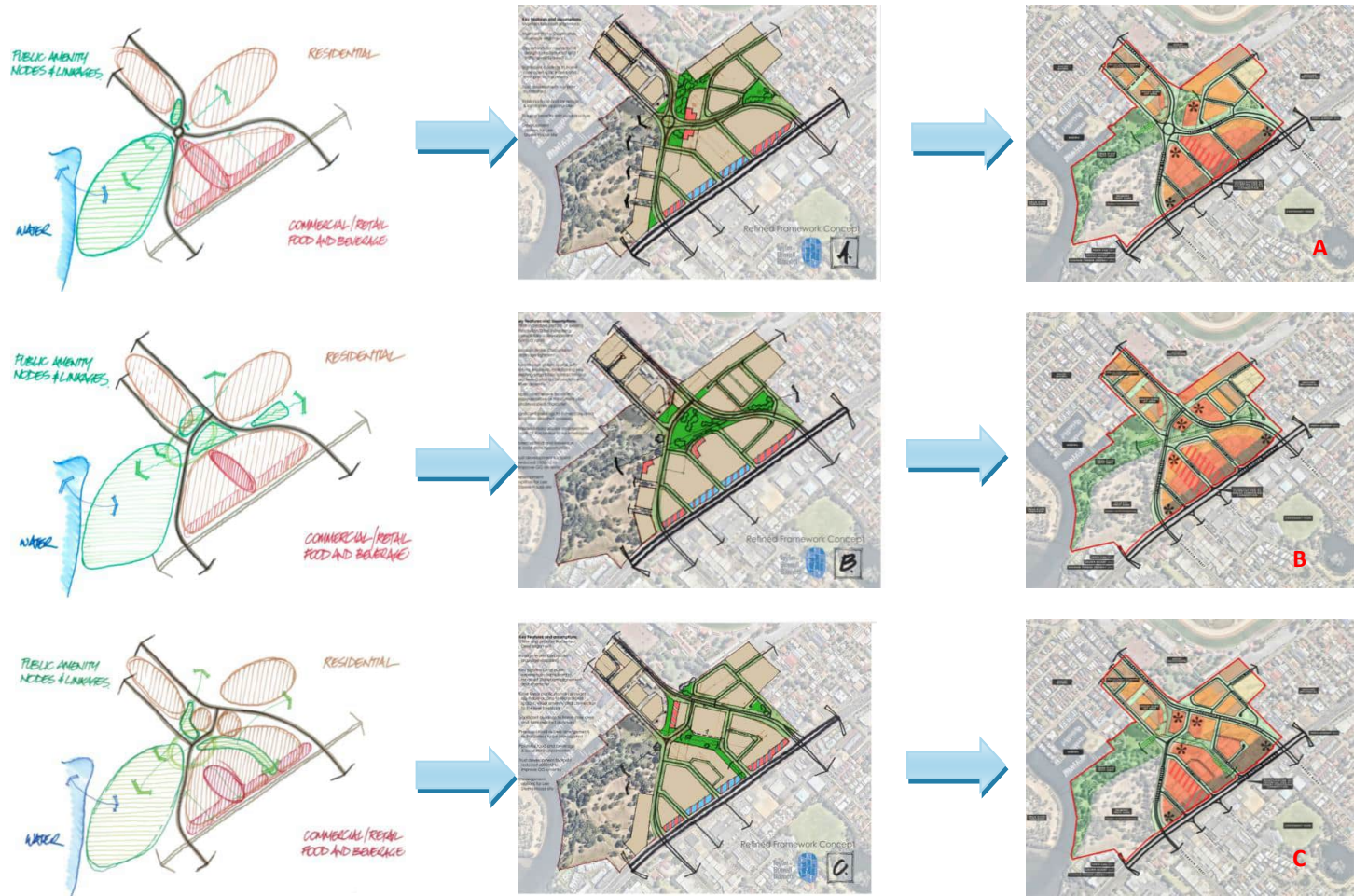
### Scenario evaluation outcome

This scenario evaluation process led to the refined design outcome produced in the preferred scenario.

The preferred scenario was informed by detailed public response to the preliminary scenarios at the community workshops, and through other stakeholder contribution. That preferred scenario was further tested and developed into the preferred Golden Gateway concept, described in detail in section 3.2.4.

It should be noted that through the preparation of the Structure Plan, further assessment of the proposed movement network was undertaken in relation to the potential impacts on the Stoneham Street-Belgravia Street and Resolution Drive-Hardey Road corridors. Based on this assessment and in conjunction with MRWA, it was considered that any modifications to the redistribution of traffic flows (i.e. via Resolution Drive) would not be supported.





Preliminary sketches exploring alternative land use and movement structures  
Figure 13 – Evolution of Design Scenarios

Preliminary sketches developing framework scenarios

Preliminary design scenarios



### 3.2.4 DEVELOPMENT CONCEPT PLAN

To support the formal Structure Plan included in Part 1 – Implementation, a Development Concept Plan was prepared to illustrate the development intent. The original Development Concept Plan that formed part of the advertised version of the Structure Plan document (**Figure 14**) was based on the preferred scenario that evolved from the Scenario Evaluation process.

## Post-advertising Design Review

Following the public comment period, and having regard to the comments received from the community and government agencies, the City commissioned a review of the Movement and Access Strategy. The revised strategy (contained in **Appendix C**) recommended an amended movement network that is more closely aligned with the existing infrastructure. As a consequence of this, and other feedback received, the following key changes are proposed to the structure plan:

1. Adopting the movement network modifications recommended in the revised Movement and Access Strategy;
2. Removal of planning detail from land owned by the Western Australian Turf Club;
3. Removal of the linear open space proposed over the Water Corporation drainage alignment; and
4. Alteration of building height provisions.

In accordance with this direction the Development Concept has also been revised to maintain consistency with the Structure Plan (refer **Figure 15**). It should be noted that this graphical representation is indicative only and serves to illustrate a long term, mature development scenario. Its primary purpose is to graphically communicate the ultimate vision and intent underpinning the Structure Plan.



Figure 14 – Original Development Concept Plan



Figure 15 – Development Concept Plan

### Key concept features

The key features of the Development Concept Plan are outlined as follows:

#### Access and connectivity

- Integrate Golden Gateway with the broader Belmont catchment.
- Minimise the barrier of Stoneham Street by formalising pedestrian movement opportunities.
- Enhance vehicle accessibility and circulation benefits offered by the existing movement framework.
- Reconfigure road network for enhanced development consolidation and precinct character benefits.

#### Planning and land use

- Sensitively integrate residential development of increased density with the surrounding area.
- Convenience retail, shops, restaurants and cafes located 'parkside', and within a pedestrian friendly street environment, to take advantage of the unique amenity and population growth of the location.
- Moderate building height and density to the residential interfaces of the precinct, providing an appropriate transition to existing development.
- Provide flexibility for commercial mixed-use development along Great Eastern Highway.
- Contemplate development controls to foster appropriate multi-level development to support denser living options.
- Opportunity for diversification of uses – facilities, amenity, destination uses and attractions.

#### Built Form

- The height and scale of new buildings will form an appropriate relationship with their environment and context, including adjacent residents.
- Use building form to create a more comfortable and characterful environment, enhancing the gateway location, particularly adjacent the public realm.
- Consider suitable building form and locations to enhance the precinct's outcomes.
- Retail opportunities promoted for improved sustainability outcomes of the precinct and adjacent residents.

#### Public realm

- Enhancement of existing public streets, utilising the wide reserve widths to produce unique character and pedestrian comfort.
- Prioritise the retention of established tree canopies where achievable.

#### Destination Planning

- Capitalise on the opportunity to leverage subject land's exceptional destination qualities.
- Creation of framework / strategies to support detailed place planning, investment attraction and place management.
- Creation of framework / strategies that will attract a diverse mix of uses, attracting visitors across different times of the day and week.



Images: Building Form Inspiration Images



Above: Introduce transitional building height to development edges.



Above: Corner site development addressing both street frontages, with 3 storey podium height to building edges and mixed height elsewhere on site.



Above: Example of a 4 storey residential building detailing an appropriate level of articulation and surveillance through the use of balconies and architectural elements. Also illustrates an acceptable treatment to site retaining at lot edges.



Above: Example of 5 storey mixed use building featuring retail/food and beverage uses at the ground level and residential living above producing a sustainable and active development outcome. In addition, this illustrates the beneficial outcome for buildings to interact with key mature trees available within the proposed Golden Gateway public realm.



Left: Example of 8 storey buildings with suitable levels of architectural detail, material and artwork to achieve an appropriate response for Golden Gateway.  
Right: Example of 10 storey building illustrating an appropriate podium design detail and landscape amenity.



Left: A 15 storey buildings providing an outstanding response to its corner location.  
Right: A 8 storey building examples incorporating desirable podium design and setback to tower element(s).



Above: Landmark buildings providing exceptional architectural gateways into the Golden Gateway precinct.



Above: Example of appropriate response to podium requirements to achieve active and enjoyable streetscapes with building mass setback into the site.



### 3.3 LAND USE

Golden Gateway will provide for a diverse range of land uses. The primary land use within the Structure Plan Area is residential, supplemented by commercial uses and local open space. A summary of the land uses and areas is provided in **Table 3**.

TABLE 3: LAND USE

Zone / Reserve	Area (Ha)
Mixed Use	1.7578
Residential	4.2473
Parks and Recreation	4.5556
Public Open Space	0.0525
Local Roads	4.7542

As outlined in Part 1 and **Plan 2**, the subject land has been divided into Precincts.

A statement of intent for each Precinct is described in Part 1 together with development standards to ensure that the intent of each Precinct is achieved.

#### 3.3.1 RESIDENTIAL

Due to the proximity of high amenity areas such as POS and future areas of activity such as Great Eastern Highway, Stoneham Street and Resolution Drive, a density code of R-AC0 is proposed.

The R-AC0 coding has been applied to all land within the Mixed Use zone and it is considered that the Structure Plan and the R-Codes provides sufficient guidance on built form outcomes.

Part 1 – Implementation also stipulates maximum plot ratios applicable within the Mixed Use zone.

##### 3.3.1.1 DWELLING PRODUCT TYPE, MIX AND YIELD

It is envisaged that Golden Gateway will accommodate primarily multiple dwellings to contribute to the desired scale and density of the development.

The estimated yield is indicative only, based on the build-out potential under the Structure Plan. With respect to dwellings, the ultimate yield and product mix will be determined by the type of development pursued by proponents and will be subject to the market conditions at the time, although the Structure Plan does impose minimum development parameters (for setbacks and heights) as well as maximums. The ultimate yield and product mix will be determined during the construction and development phase.

The Development Concept Plan suggests a potential yield of at least 2,268 dwellings. This could accommodate a total population of up to 4,082 assuming an average household size of 1.8 people.

#### 3.3.2 OTHER LAND USES

##### 3.3.2.1 COMMERCIAL

Commercial development in Golden Gateway will service the surrounding residential catchment and racing activities and optimise the value of the precinct's highly visible and connected location. The anticipated yield for the precinct estimates a total of 6979m<sup>2</sup> commercial (non-retail) floorspace (GFA).

It is envisaged that commercial activity will be mostly focused within the Great Eastern Highway Precinct (Precinct 1) and will likely occupy the first 1-2 levels of buildings across the precinct.

Development of commercial space is only likely to proceed based on its commercial feasibility and the prevailing market conditions at the time of development.

In order to foster the progressive and timely development of the precinct, it is not intended that commercial uses will be mandated within the Mixed Use areas; however ground level design should be adaptable to enable land use to change over time.

##### 3.3.2.2 RETAIL

The existing residential areas of Ascot Waters and the stables area presently suffer a lack of local shopping facilities, with the BP Service Station on the corner of Resolution Drive and Great Eastern Highway providing the only nearby outlet for basic convenience items. Development of the Golden Gateway Precinct provides an opportunity to establish a local centre for the benefit of the precinct as well as the broader local catchment.

The Mixed Use zone permits non-residential development and this is encouraged at ground level, it is anticipated that some discrete retail development will occur to service the local population.

The City of Belmont has prepared an Activity Centre Planning Strategy (ACPS) to guide the future planning and coordination of activity centres. The ACPS states that a new local centre is proposed to be established within the Golden Gateway precinct with 1,200m<sup>2</sup> of retail floor space and that its location will be guided by future detailed planning. Due to land fragmentation within the Structure Plan area it may be appropriate to locate the local centre on WATC land. This would however be subject to further detailed planning. Given this, a specific local centre location has not been designated within the Structure Plan area.

### 3.3.3 LAND USES

Part 1 – Implementation of this Structure Plan refers to corresponding zones within the Zoning Table of LPS 15 to determine land use permissibility within the various precincts. It does, however, stipulate some exclusions (uses that are considered Unacceptable, notwithstanding that they are listed as a discretionary use in the Zoning Table). Having regard for the amenity of future residents the unacceptable uses include:

- Auction Mart
- Caretakers Dwelling
- Fast Food Outlet / Lunch Bar
- Home Store
- Garden Centre
- Industry - Light
- Motor Vehicle Repair
- Night Club
- Radio or TV Installation
- Restricted Premises
- Service Station
- Single House
- Vet Hospital
- Warehouse

These uses have been excluded as they are considered to be inconsistent with the vision and objectives of the Structure Plan, and approval of such uses would compromise the urban fabric envisaged for the area.

Furthermore, 'Shop' is an Additional Use in the Mixed Use zone within the subject land.

### 3.3.4 BUILDING HEIGHT

Maximum building height limits apply to satisfy relevant protection of airspace, airport facilities and surfaces regulations due to the proximity of Perth Airport. Development must comply with maximum building height limitations as indicated on the Obstacle Limitations Surfaces (OLS) Ultimate Surfaces Map – maximum height of 61mAH within the majority of the subject land, equating to approximately 19 storey buildings. The remainder of the subject land is located within the 'conical surface', being the 5% slope to 61mAH.

Cygnets West were engaged to investigate development feasibility and built form controls along Great Eastern Highway and within the Structure Plan area. The building heights have been informed by their input and recommendations. Accordingly, a maximum building height of 15 storeys is encouraged along Great Eastern Highway given the prominence of this location and level of commercial activity envisaged for this precinct, with a maximum height of 10 storeys elsewhere. All sites within the Structure Plan area may incorporate an additional 5 storeys in height, above the maximum identified in **Table 2**. Achievement of additional height is subject to the discretion of the decision maker and will need to:

- The production of an exceptionally high quality of design, as determined by the appointed design review panel; and
- Incorporate the following:
  - An area of publicly accessible private open space; and
  - 100% of windows containing double glazing; and
  - Provide an additional tree on-site above what is required by State Planning Policy 7.3 Volume 2 – Apartment Design Code. The tree must be a native species with a pot size of between 100L – 200L; and

## Attachment 12.1.1 Golden Gateway Local Structure Plan

- Provide conduits and capacity within the electrical distribution system and metering or future provision of electric car charging for each unit within the development; and
- Provide a minimum of two electric vehicle charging bays within the development; and
- Provide shared sustainable transport measures for the development that may include the provision of electric bikes, scooters and vehicle/s; and
- Achieve a Nationwide House Energy rating Scheme (NatHERS) star rating of a minimum of one star in excess of the current energy efficiency rating for the dwelling shall be certified by a suitably qualified and accredited energy assessor using accredited software and shall be provided a the development application stage; and
- Install a photovoltaic solar panel system that can provide the equivalent of at least 1Kw energy per dwelling.

In order to ensure development is built to a sufficient scale to facilitate the density envisaged for Golden Gateway, and to achieve the desired urban design outcomes, it is also considered appropriate to set minimum building heights. Priority should be given to the relationship of ground floor uses and building design with the public domain to ensure that considerations such as activation, passive surveillance and appropriate combination of uses are optimised.

A maximum podium height of 3 storeys applies (2 storey minimum) unless within the Great Eastern Highway Precinct, in which case a maximum podium height of 5 storeys applies. Podium elements are encouraged to relate to and activate the street, with the levels above the podium to be sufficiently setback.

Minimum and maximum building heights for podium and tower elements across the subject land are shown on **Plan 3** (Part 1).

### 3.3.5 LANDMARK SITES

There are two key locations situated at the termination of key view lines and sites highly visible from outside of Golden Gateway, thereby acting as landmarks for the development. These sites will also act as key nodes located along important pedestrian movement connections and will assist in linking these sites with the public realm.

Landmark sites have been identified as shown in **Plan 3** taking into consideration view corridors, overshadowing impacts and amenity considerations. In this regard, higher buildings are located at key corners of Great Eastern Highway and Stoneham Street and Resolution Drive.

Landmark sites should also be designed incorporating architectural or sculptural features with a point of difference, and will be reviewed by the City's Design Review Panel as a component of a Development Application.

### 3.3.6 CAR PARKING

The City wishes to encourage innovative approaches to car parking provision, such as reciprocity, carpooling programs or other innovations, that may result in reduced parking provision where appropriate, consistent with contemporary State Planning Policy. In this respect, the Structure Plan applies the car parking rates that are set out in the relevant R-Codes, and will also enable the Responsible Authority to consider approving a reduced parking provision where it can be demonstrated that an alternative parking proposal is sound and will result in a reduction in parking demand. Any proposed variation should be supported by a parking demand assessment undertaken by a suitably qualified professional.

An integrated approach to parking provision will be encouraged within Mixed Use and Multiple Dwelling development, in order to make the most efficient use of parking provision and to encourage use of alternative (public) transport modes where appropriate. In this respect special provisions are proposed to challenge the 'business-as-usual' approach to car parking design. The proposed parking provision is consistent with State Planning Policy 7.3 Volume 2 – Apartment Design. The following specific requirements are to be applied:

- a) For Mixed Use development, all residential parking in excess of 1 bay per dwelling, and at least 50% of the minimum required parking for non-residential uses shall be made available for general use of either residential or non-residential uses (these bays represent unallocated communal parking bays).
- b) Mixed Use development that proposed parking as outlined in 2a) above should be required, as a condition of Development Approval, to prepare a Car Parking Strategy that addresses the management of the unallocated communal parking provision, including:
  - I. The hours during which parking bays shall be made available for general public access; and

- II. Location, signage and monitoring of usage of the unallocated communal parking bays.
- c) The provision of car parking that is in excess of the minimum required for the site will only be approved where it is designed to be adaptable for future conversion into habitable floor space, or other useable space communal or private usage. In order for parking to be considered adaptable, it must be shown as located in a position that is suitable for an alternative use, not included in individual strata titles and constructed to comply with habitable floorspace standards.

This requirement may be waived if it can be demonstrated that complying with the requirement would not be practical or would result in a less desirable outcome.

### 3.3.7 PUBLIC OPEN SPACE

The total POS provision is commensurate with the composition of land uses and having regard to the surrounding site context.

It should be noted that the subject land is well located within an existing urban context comprising of significant public parkland associated with the Swan River and portion of the Belmont Charitable Trust Land provided for public recreational value. As the subject land is generally constrained from providing more functional POS, and as there is a significant existing provision, it is proposed that contributions be sought for the upgrade of POS already supplied within the Belmont Charitable Trust Land.

A POS calculation has been prepared in accordance with Liveable Neighbourhoods (LN), as detailed in **Table 5**, including applicable deductions. In accordance with LN, a total of 1.5186ha of Open Space is required to be provided (**Figure 16**).

In the case of mixed use development, there is no minimum requirement for the provision of POS under LN. LN states that the appropriate POS contribution for mixed use development will be determined by the WAPC on a case by case basis.

It is proposed that approximately 0.0525ha of local public open space be provided as result of the closure of Daly Street. The proposed provision is less than the standard POS requirement of 10% POS for residential development under LN, however the proposed provision is considered appropriate for a mixed-use precinct. Furthermore, the City's POS Strategy also sets out minimum standards of land area provision for POS based on current best practice and ease of accessibility to available open space for both residential and non-residential areas. The subject land falls within the Ascot study area of the Strategy which concludes that whilst active open space provision is considered low, the area is well equipped for passive recreational activities largely as a result of the Regional Open Space associated with the Swan River foreshore to service its local needs.

Consistent with the assessment provided in the City's POS Strategy, the subject land is well located within an existing urban context allowing the future residents to take advantage of a variety of established recreation and leisure opportunities associated with the nearby Swan River and environs.

There is also the potential for the cash-in-lieu to be collected for the upgrade of the Belmont Charitable Trust Land, subject to the approval of the Minister for Planning under s154(2)(c) of the *Planning and Development Act 2005*.

Although subject to a separate planning process, the Ascot Kilns LDP will identify and provide for 10% of gross subdivisible area as POS. There may also be opportunities for public open space on a portion of Perth Racing's landholdings. This may be investigated as part of the separate planning work they are undertaking.



Figure 16 – Open Space Provision

TABLE 5: PUBLIC OPEN SPACE SCHEDULE

PUBLIC OPEN SPACE (ha)		
Gross Site Area		23.9871
DEDUCTIONS		
D1 Parks and Recreation Reservation (existing)	4.5556	
D2 Road reserves (existing)	4.1930	
Total Deductions		8.7486
Gross Subdivisible Area		15.2385
Creditable Public Open Space Required @ 10%		1.52385
PUBLIC OPEN SPACE PROVISION		
Unrestricted Public Open Space		
POS 1	0.0525	
Total Unrestricted Public Open Space		0.0525
Restricted Public Open Space		Nil
TOTAL CREDITED PUBLIC OPEN SPACE		0.0525
PERCENTAGE OF PUBLIC OPEN SPACE PROVIDED		0.2%



3.3.8 PUBLIC REALM PROVISION

A Public Realm Strategy was prepared in support of the Structure Plan (refer **Appendix E**) to develop a clear vision, principles and objectives to inform development of the public realm.

Existing local streetscapes are predominantly reflective of the commercial environment, particularly within the commercial ‘triangle’. The standard of verge maintenance ranges from good quality reticulated lawns through to poorly maintained verges damaged by random, uncontrolled, overflow parking. The extent and quality of the existing pedestrian infrastructure within, and surrounding, the Structure Plan is of a standard commensurate with the nature of existing development across the Structure Plan area (i.e. primarily light industrial/commercial unit style development). The extent and quality of the existing cycling infrastructure within and surrounding the site is of a high standard, partly as a result of the Great Eastern Highway upgrades.

The Public Realm Strategy sets out to provide a high quality urban framework that promotes pedestrian circulation, accommodates vehicles in a safe and logical manner and is an environment that presents a desirable destination to live, work and recreate. Placemaking should inform the detailed design of spaces throughout the precinct. The spaces need to be able to facilitate and accommodate diverse uses that may emerge from community social investment. Places across the site will achieve a successful balance between physical attributes, the vehicle circulation and dynamic social, cultural and economic vitality. Its inherent qualities are strongly related to its proximity to the Swan River and its heritage related to the Ascot Kilns.

The key public realm areas are set out in the following pages.



Examples of Public Art, Rain Gardens & Swale Designs in an Urban Context (Jolimont Parkside Walk)

Road and street treatments

Road hierarchies and overall legibility of the subject land will be reinforced by the type of tree planting associated with the scale of the road. The paving treatments within all streets and roads will feature a consistent material palette to reinforce the distinctive character of the area.

Resolution Drive and Stoneham Street.

Whilst Resolution Drive and Stoneham Street will be largely vehicle dominated, the landscape aesthetic will be dominated by tree planting of larger species, creating a canopy boulevard along its length. Verge and median planting will create a formalised sinuous corridor of canopy trees that are recognisably different to the scale and nature of other landscapes in the area (refer **Figure 17**). Street trees will be planted to create a boulevard aesthetic the length of the street, aiding in wayfinding.



Figure 17 – Resolution Drive and Stoneham Street (Plan Extract and Indicative Section)

Central Streets

Hargreaves Street, Daly Street and Grandstand Road will comprise street tree planting that is not monoculture but uses a mix of street trees in varying combinations, to provide a dynamic and varied street tree canopy (refer to Section 10.3 of the Public Realm Strategy for proposed tree species). These streets will extend the overall public realm character established within the precinct but in a simpler manner. Street tree planting is proposed to create a canopied streetscape and to be positioned abutting the parallel parking embayments (refer to **Figure 18**).

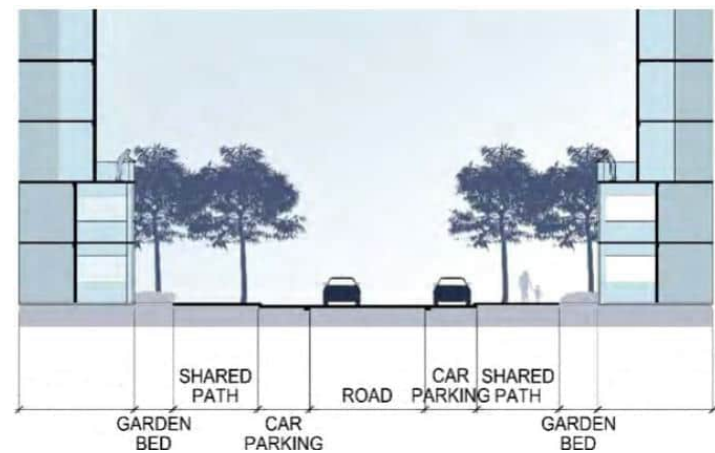


Figure 18 – Central Streets (Plan Extract and Indicative Section

### 3.3.9 LANDSCAPE DESIGN

#### 3.3.9.1 DESIGN OBJECTIVES—AN URBAN LANDSCAPE

As a busy location, the public realm offers the opportunity to be transformative, linking uses and people to the nearby valued Swan River, its parklands and the heritage and interest of the Ascot Kilns.

The public realm spaces made up of streets and a park, combine to be a defining element of this location, that importantly the users, employees and residents will experiences and define the qualities of the public realm.

The overall landscape design objectives for the public spaces are set out below:

#### Identifiable character

- Create a contemporary urban environment that promotes safe and easy pedestrian experiences.
- Create new diverse urban landscapes that reflect the subject land's unique characteristics and close links to the river parklands.
- Create spaces that encourage and accommodate local community use and engagement.
- Establish an aesthetic that promotes positive development and investment in the location.
- Celebrate the heritage significance of the Ascot Kilns.

#### Valuable Landscapes

- Create a microclimate in public realm spaces and streets which encourages use and enjoyment.
- Provide key views and relationships that assist in orientation and legibility.
- Create highly utilised and valued public realm streets and spaces.

#### Environmental/Sustainability

- Create a durable urban landscape.
- Reduce urban heat sink characteristics.

- Create urban tree canopy (in compliance with the City of Belmont's Urban Forest Strategy 2014 and the The Canopy Plan 2019-2024).
- Retain vegetation wherever practical.
- Promote the use of low water demand plants.
- Pursue water harvesting, passive irrigation and integrated urban water management.

#### 3.3.9.2 INTEGRATED DRAINAGE MANAGEMENT

The use and promotion of Water Sensitive Urban Design (WSUD) techniques and approaches are to be utilised wherever possible throughout the subject land. The space for nutrient stripping is limited. As the urban area is not producing a nutrient load, the focus is on slowing runoff and reducing hydrocarbons. The use of linear and incidental 'rain gardens' and 'nutrient sinks' can be implemented discretely within paving in streets and areas of open space. These devices should be fully integrated with the road drainage promoting passive irrigation of street tree vegetation and controlling hydrocarbon runoff.

Within the context of a dense inner urban area, the design of these WSUD devices need not be natural in appearance but can be incorporated within the urban public realm infrastructure as a contemporary feature.

It is intended that the POS space within the redundant portion of the Daly Street road reserve will contain soft landscape areas. These areas present an opportunity to accommodate local drainage that is managed through swale type structures that infiltrate water and passively irrigate trees and other vegetation used in the public realm. This will be subject to further investigation and more detailed design at a later stage.

The use of permeable pavements and porous asphalt treatments in key locations is recommended, possibly associated with lower level threshold treatments of road junctions, should be incorporated as a component of the approach to integrated drainage management.

In order to deliver wider environmental sustainability objectives, as well as providing attractive places in which residents and visitors can enjoy, consideration should be given to the conservation of water resources and quality of groundwater. The use of water efficiency measures is encouraged and should promote the investigation of best management practices for irrigation of public open space.

The availability and quality of groundwater within the LSP area is limited at this stage. This will affect the ability of the City of Belmont to irrigate the proposed vegetation within the public realm areas. Therefore, due to the limitation of groundwater for irrigation purposes, the future irrigation of vegetation within the POS and public realm areas will need to be supplied by other sources. This may include scheme water, stormwater, irrigation (by agreement) from the Western Australian Turf Club's (now operating as Perth Racing) artesian groundwater licence, a new irrigation lake or other irrigation strategies will need to be investigated in the future. The City may encourage developers to consider the irrigation of abutting verge vegetation and street trees to ensure the high quality natural amenity of the public realm is maintained. Alternatively, non-irrigated (dry) landscape may need to be considered for the public realm areas.

### 3.4 MOVEMENT NETWORK

A Movement and Access Strategy was prepared by Flyt in support of the Structure Plan (refer **Appendix C**). This Strategy has been prepared using the requirements set out within the WAPC Transport Impact Assessment Guidelines (August 2016) Volume 2 – Planning Schemes, Structure Plans and Activity Centre Plans.

#### 3.4.1 ROAD NETWORK AND TRAFFIC MANAGEMENT DEVICES

As outlined within this report, the Structure Plan proposes to retain the broad framework of the existing road network and primary traffic flows in order to achieve the desired development outcome, apart from Daly Street that will become a cul-de-sac. The remainder of Daly Street will be identified as POS.

The proposed changes to the existing road network and associated road hierarchy are outlined in **Figure 19** overleaf.

#### 3.4.2 TRAFFIC FORECASTS

As outlined in the Movement and Access Strategy, the following new vehicle trips are anticipated to be generated by the proposed development:

- **AM peak hour traffic:**
  - Inbound 259 vehicles
  - Outbound 480 vehicles

- **TOTAL 739 vehicles**
- **PM peak hour traffic:**
  - Inbound 405 vehicles
  - Outbound 334 vehicles
  - **TOTAL 739 vehicles**

In summary, based on the application of standard assessment techniques as outlined in the report, the proposed development results in a slight reduction in road network performance in 2041 in the PM peak period at the Resolution Drive - Great Eastern Highway intersection.

The Stoneham Street - Great Eastern Highway modelling shows that by 2041 under the base scenario (i.e. without Golden Gateway development), all approaches (other than Belgravia Street approach) would operate over capacity during the AM peak and during the PM peak at all approaches. Factoring in the proposed Golden Gateway development, the degree of saturation on the Stoneham Street and Great Eastern Highway approach increases, however the level of service remains unchanged.

Acknowledging the current and existing background traffic growth rates the focus of the Structure Plan is to facilitate the enhancement of pedestrian and cycle connections. The increase in resident population can also serve as a catalyst in a step change in public transport use in the local area.





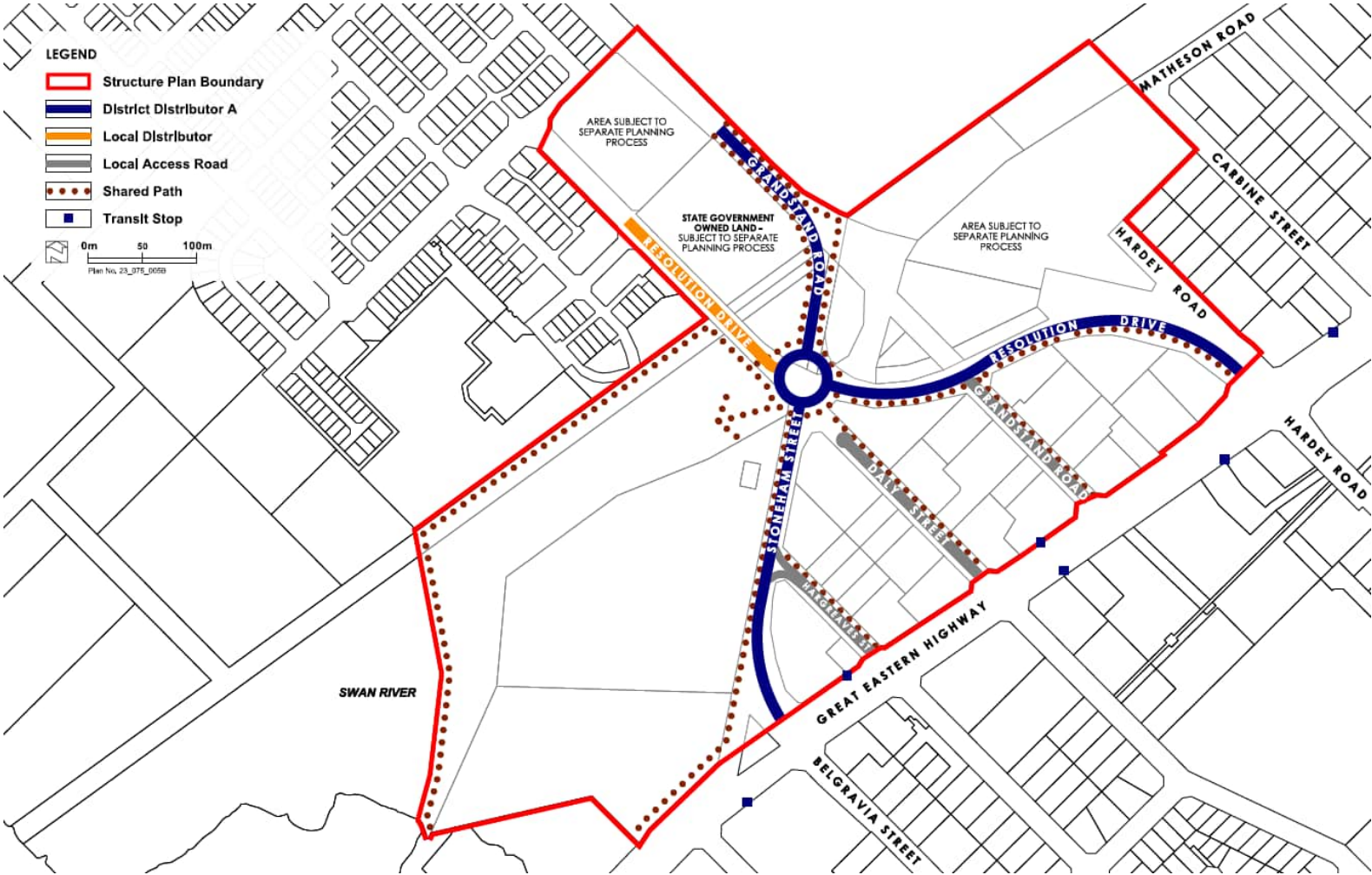


Figure 19 - Movement Network

### 3.4.3 PEDESTRIAN AND CYCLING NETWORK

All existing shared paths surrounding and through the subject land will be maintained, furthermore a 20% reduction in car driver and car passenger mode share is sought. Strategies to affect this change include:

- Implementation of a precinct wide 30km/h speed zone (excluding Grandstand and Stoneham Street as the main through route for traffic) to improve the environment for walking and cycling.
- Raised zebra crossings, with the crossing at footpath level creating a raised plateau speed hump for vehicles.
- Completing gaps in the shared path network and implementing the long term cycle network routes through the precinct.
- Increasing the tree canopy coverage along all roads within the precinct to create a pleasant environment for walking and cycling.
- Ensuring there are a variety of local amenities within a short and pleasant walking or biking distance.
- The introduction of a bike or electric scooter share scheme.
- The introduction of a car share scheme.
- The imposition of a parking cap for residential and commercial uses
- Lobby the Public Transport Authority to improve bus services to the Structure Plan area and explore the potential of other transit options such as a superbus or trackless tram.

### 3.4.4 PUBLIC TRANSPORT

High level discussions with the Public Transport Authority (PTA) has informed the proposed changes anticipated for the existing public transport network as discussed below. The introduction of the rail connection from central Perth to High Wycombe, including a park 'n' ride station at Redcliffe Train Station, resulted in the removal of four of the five existing bus routes operating along the Great Eastern Highway corridor. These were replaced with bus routes 293 and 940.

Currently the only bus routes that pass through the Structure Plan area are the circle route bus services 998 and 999 which are high frequency routes that travel along Grandstand Road and Resolution Drive, and then continue to Hardey Road. There are currently no bus stops for the circle route within the Structure Plan area, with the closest bus stops located on Grandstand Road immediately to the north of the Structure Plan area close to main pedestrian access for Ascot Racecourse.

High frequency bus route 940 operates along Great Eastern Highway which forms the southern boundary of the Structure Plan area and operates between Elizabeth Quay Bus Station and Redcliffe Station. Bus route 293 between Redcliffe Station and High Wycombe Station also travels along Great Eastern Highway (east of Belgravia Street) and along Belgravia Street.

The PTA has indicated that, if sufficient public transport demand was generated by large scale development of the subject land, they would consider the option of operating a bus service which connected the subject land and Perth CBD with a bus service that utilised the internal road network. However this would be contingent upon the proposed development generating the requisite public transport demand to warrant the investment in such a service.

## 3.5 WATER MANAGEMENT

### 3.5.1 STORMWATER MANAGEMENT

The key objectives for stormwater management are:

- Protection of wetlands and waterways (receiving environments) from the impacts of urban runoff.
- Protection of infrastructure and assets from flooding and inundation.

The following planning measures are adopted to achieve the above objectives:

- Residential, industrial or commercial premises in existing or proposed areas must maintain floor levels at 500 mm above the 100yr ARI in the Swan River and 300 mm above the 100yr ARI in the local drainage system.
- Runoff from events greater than the 1yr ARI interval event and up to the 5yr ARI event in residential areas and 10yr ARI event in commercial/industrial areas are to be managed in accordance with the serviceability requirements of Australian Rainfall and Runoff (Engineers Australia, 2001) minor/major system.
- Stormwater in excess of the capacity of on-site retention systems will be conveyed through the existing drainage system consisting of local road drainage, Central Belmont Main Drain Basin and compensating basin.
- Major flood runoff (1% AEP) will be conveyed via overland flow within the road reserve to the compensating basin and drain prior to discharging to the Swan River.

- The design of the redeveloped urban areas should incorporate current best practice in WSUD to mitigate the potential impacts on regional water quantity and quality from redevelopment and the legacy conditions within the catchment.
- Retrofitting of stormwater management systems to achieve improved water quality outcomes should be maximised through the installation of biofilters (raingardens), amended soils and the use of structural controls to address litter, sediment and vegetative materials at source.
- Modification of the existing Central Belmont Main Drain and local drainage systems to suit the urban form whilst maintaining drainage capacity and peak flow rates.
- WSUD and best management practices promoting on-site retention of the first 15mm of rainfall for small rainfall events.

### 3.5.2 GROUNDWATER MANAGEMENT

The key objectives for groundwater management are:

- Protecting infrastructure and assets from flooding and inundation by high seasonal groundwater levels, perching and/or soil moisture.
- Protecting groundwater dependent ecosystems from the impacts of urban runoff.
- Managing and minimising changes in groundwater levels and groundwater quality following redevelopment.

The following planning measures are adopted to achieve the above objectives:

- Retain existing surface levels as a minimum to ensure adequate separation.
- Limit basements in areas of shallow groundwater.
- Use of subsoil drainage below bio-retention areas, raingardens and tree pits to minimise local groundwater rise.

Groundwater levels provide potential clearance for basements to be installed, with two storey basements possible closer to Great Eastern Highway. Detailed designs of any infrastructure below the existing surface level (such as basements) may include tanking or other forms of damp-proofing. Any temporary lowering groundwater for construction, either for basements or sewer, may require dewatering licences from DWER.

### 3.6 EDUCATION FACILITIES

Existing education facilities located within close proximity to the subject land include the following:

- Belmont Primary School is located at the intersection of Great Eastern Highway and Belgravia Street.
- Redcliffe Primary School is located approximately 3km to the east.
- St Maria Goretti's Catholic School is located approximately 2.5km to the east.
- Maylands Peninsula Primary School is located approximately 2.5km to the north.
- Belmont City College is located approximately 3km to the south.

Given the nature of the development and anticipated demographic it is anticipated that there will be limited additional demand for education facilities generated in the precinct. The Golden Gateway Precinct is well located within an existing urban context allowing future residents to take advantage of existing education facilities.

### 3.7 EMPLOYMENT

Given the subject land's strategic location close to existing employment opportunities in the Belmont mixed business area, proximity to Perth CBD and commercial land uses along Great Eastern Highway, the area already enjoys a high rate of employment self-sufficiency, therefore additional employment generating land uses are not considered necessary to improve local employment opportunity. The non-residential uses anticipated for the Golden Gateway Precinct will generate a small amount of locally-based employment; however, the main purpose of these uses is to provide local services and to optimise the value of its highly visible and connected location.

### 3.8 INFRASTRUCTURE COORDINATION, SERVICING AND STAGING

An Infrastructure Assessment Report was prepared by Cardno in support of the Structure Plan (refer **Appendix D**).

### 3.8.1 WATER SUPPLY

Water Corporation does not foresee any issues with servicing the proposed scheme with potable water. Initial advice from the Water Corporation has confirmed the following with regards to required upgrades:

- Water Corporation will upgrade the headworks, pipe equal to or greater than 300mm diameter and pump stations, as and when required.
- Water Corporation recommends a consolidated approach to the requesting and programming of works to minimise disruptions and maximise cost efficiencies. Water Corporation recommends any reticulation reinforcement or new work should be managed by the City of Belmont due to the fractured land ownership within the area. It is recommended that a working group between the City of Belmont and Water Corporation is set up in order to help plan and coordinate precinct development and staging with any Water Corporation trunk infrastructure capital works.

### 3.8.2 WASTEWATER

The proposed development will have significant impacts to the current wastewater infrastructure. It is not envisaged the existing Redcliffe Pump Station 5 will have sufficient capacity with a shortfall of 9.09 L/s to service the proposed development and will require a significant upgrade. This would require the upgrade of the existing pumping station to a larger type 40. A type 40 pumping station is a station capable of a 40 L/s service consisting of two pump-sets located in a common wet-well constructed from 2500mm internal diameter precast concrete pipes. Redcliffe Pump Station 2 will likely have capacity, however further planning should be coordinated with the Water Corporation to ascertain other timing of other developments in the area.

### 3.8.3 POWER SUPPLY

The Belmont substation servicing the subject land falls under the Cannington load area. Western Power's Annual Planning Report 2015/16 states "no substation capacity shortfall is forecast in the Cannington load area over the next five years." This takes into account committed, and most likely to occur, network expansion plans for the area. The Western Power Network Mapping Tool indicates that there is >30MVA spare capacity in the network until at least 2036 based on current and forecast demand.

### 3.8.4 GAS SUPPLY

Correspondence received from ATCO Gas advised that the existing infrastructure can support the proposed development.

### 3.8.5 TELECOMMUNICATIONS

The infrastructure within a development will be installed by the developer. Alternatively, Telstra can be engaged to install infrastructure within a development at the developer's expense.

Telstra's commercial pit and pipe service will generally not be offered in developments where NBN Co has confirmed agreement to install NBN Co fibre within a development stage.

### 3.8.6 WATER CORPORATION MAIN DRAIN

Stormwater in excess of the capacity of on-site retention systems will be conveyed through the existing drainage system consisting of local road drainage, Central Belmont Main Drain Basin and compensating basin. No changes to the Central Belmont Main Drain are proposed.

Future planning of the WATC land should provide for an appropriate interface with the Central Belmont Main Drain.

## 3.9 IMPLEMENTATION

### 3.9.1 SCHEME AMENDMENT TO FACILITATE STRUCTURE PLAN

An amendment to the City of Belmont's LPS 15 will be required to apply the R-AC0 density code over the subject land and to exclude land uses that would be permissible within the Mixed Use zone and identified in section 4.1.1.1. This Amendment will also need to provide for the 'Shop' land use as an additional use.



### 3.9.2 INFRASTRUCTURE FUNDING STRATEGY

The City of Belmont may establish an appropriate funding strategy for the Structure Plan Area. As part of the strategy, a Development Contribution Area (DCA) within LPS 15, under which a Development Contribution Plan (DCP) may be implemented to contribute to the funding of the public infrastructure requirements to facilitate development in the Structure Plan Area will be considered.

Infrastructure items that would be eligible to be funded under a DCP should be in accordance with State Planning Policy 3.6 Development Contributions for Infrastructure (SPP 3.6) and may include:

- Great Eastern Highway pedestrian crossing.
- Land for public open space and community facilities.
- Landscape treatment for all public realm areas, including local roads.

This Structure Plan will inform any future DCP, particularly in relation to the proposed upgrades to roads and intersection treatments as determined by the Movement and Access Strategy contained at **Appendix C** and the Public Realm Strategy contained at **Appendix E**.

### 3.9.3 LAND ASSEMBLY

There are various statutory processes required to deliver and facilitate development of the subject land, including amendments to LPS 15. Following adoption of the Structure Plan, subdivision and amalgamation applications can be lodged with the WAPC in the normal manner to assemble the land appropriately. Amalgamation is also likely to occur to enable land rationalisation. The subdivision/amalgamation process may be necessary to create some key elements of the project, primarily for the amalgamation of land parcels as shown on **Figure 20** overleaf.



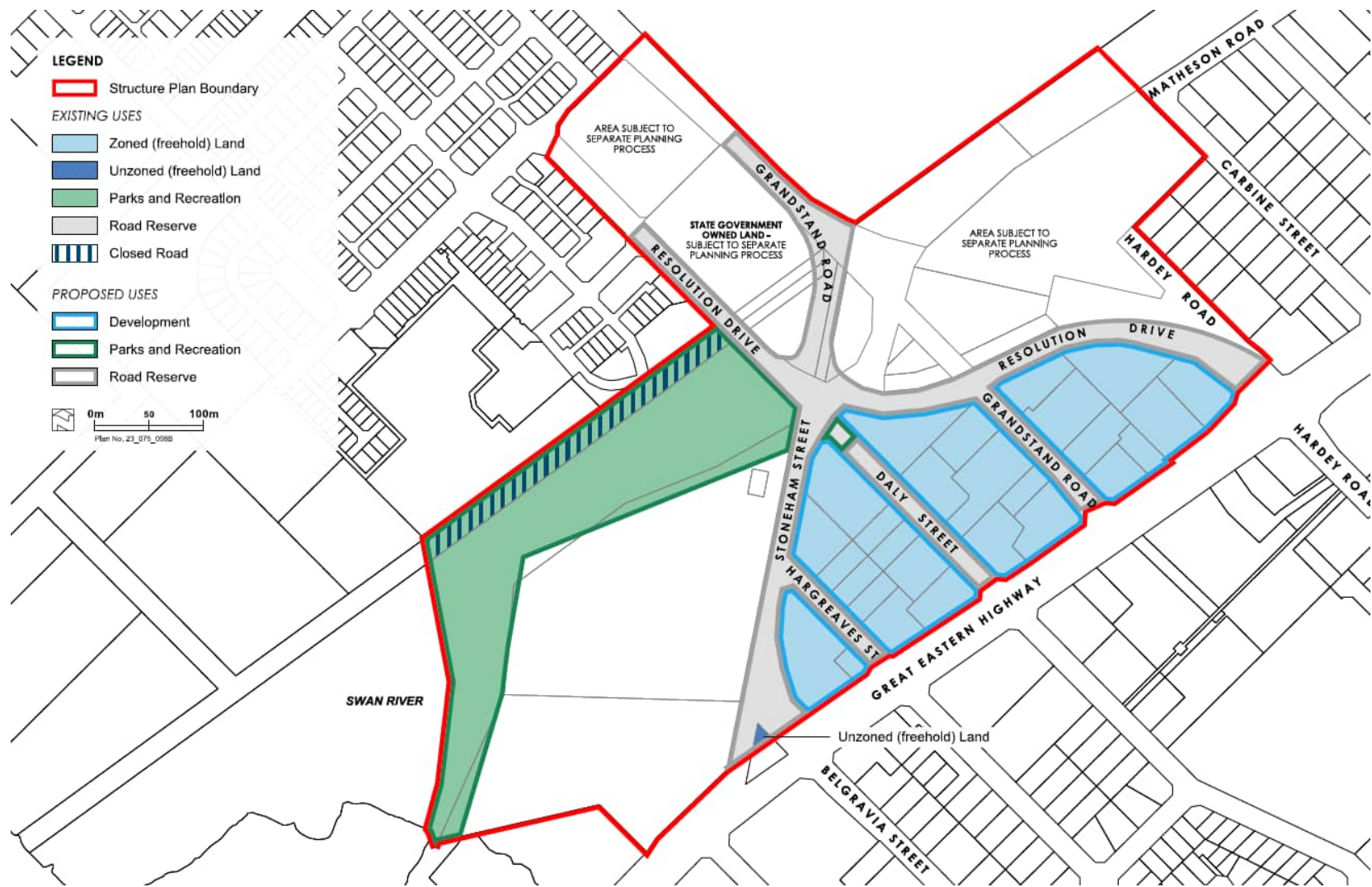


Figure 20 – Implementation

# APPENDIX A BUSHFIRE MANAGEMENT PLAN

# APPENDIX B ENVIRONMENTAL ASSESSMENT REPORT

# APPENDIX C MOVEMENT AND ACCESS STRATEGY

# APPENDIX D INFRASTRUCTURE ASSESSMENT REPORT



# APPENDIX E PUBLIC REALM STRATEGY

# Golden Gateway Structure Plan

## Bushfire Management Plan

Prepared for City of Belmont

By Urbaqua

June 2018

**urbaqua**  
land and water solutions

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This Bushfire Management Plan provides strategic assessment of the subject site only. A subsequent Bushfire Management Plan and/or Bushfire Attack Level (BAL) Assessment may be required to support future development applications. The recommendations contained in this report are considered to be prudent minimum standards only, based on the author's experience as well as standards prescribed by relevant authorities. It is expressly stated that Urbaqua and the author do not guarantee that if such standards are complied with or if a property owner exercises prudence, that a building or property will not be damaged or that lives will not be lost in a bush fire.

Fire is an extremely unpredictable force of nature. Changing climatic factors (whether predictable or otherwise) either before or at the time of a fire can also significantly affect the nature of a fire and in a bushfire prone area it is not possible to completely guard against bushfire.

Further, the growth, planting or removal of vegetation; poor maintenance of any fire prevention measures; addition of structures not included in this report; or other activity can and will change the bushfire threat to all properties detailed in the report. The achievement of the level of implementation of fire precautions will depend on the actions of the landowner or occupiers of the land, over which Urbaqua has no control. If the proponent becomes concerned about changing factors then a Bushfire Management Plan should be requested.

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## EXECUTIVE SUMMARY

This bushfire management plan has been undertaken to support structure planning for the Golden Gateway Precinct in the City of Belmont (Figure 1).

A small portion of the subject land is identified as a bush fire prone area, designated by the Fire and Emergency Services (FES) Commissioner. This report has been prepared to meet the requirements of *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) (2015) and the *Guidelines for Planning in Bushfire Prone Areas*, Version 1.1 (WAPC, 2017).

This plan provides advice consistent with the nature of a strategic proposal. Details in this report are consistent with *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (WAPC, 2015) and the *Guidelines for Planning in Bush Fire Prone Areas* and associated appendices (V1.3, WAPC, 2017).

A vegetation class assessment was conducted for the subject land and adjacent areas for a minimum of 150 metres. As the road and lot layout is known, a bushfire attack level (BAL) assessment was undertaken and a BAL contour plan has been developed to show the indicative future BALs. This information may be used to guide the future development of the site, consistent with *AS3959 Construction of buildings in Bushfire Prone Areas*.

Bushfire risk to the areas proposed for future development is BAL-LOW. There is insufficient risk to warrant specific construction requirements.

The bushfire mitigation and management strategies outlined in this management plan comply with the acceptable solutions of control for each of the Bushfire Protection Criteria detailed in *Guidelines for Planning in Bushfire Prone Areas* (2017).

It is therefore considered that this bushfire management plan demonstrates compliance with the objectives and provisions of *State Planning Policy 3.7: Planning in Bushfire Prone Areas*.

This bushfire management plan is to be endorsed by the City of Belmont and is required to be reviewed and updated where necessary.

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## 1 INTRODUCTION

The City of Belmont has engaged Urbaqua to prepare a Bushfire management plan to support preparation of a local structure plan for the Golden Gateway project area (Figure 1) in the City of Belmont (Figure 2).

A portion of the subject land is identified as a bush fire prone area, designated by the Fire and Emergency Services (FES) Commissioner (Figure 3). This report has been prepared to meet the requirements of *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) (2015) and the *Guidelines for Planning in Bushfire Prone Areas* (V1.3, WAPC, 2017).

Any identified bushfire risk will be addressed as part of the future development approvals process, consistent with the requirements of *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) (2015), the Building Code of Australia and *Australian Standards* (AS3959-2009): *Construction of buildings in bushfire prone area* where these apply.

### 1.1 Proposal details

The subject land consists of approximately 31.8 hectares of land in the vicinity of Great Eastern Hwy, Resolution Dr, Grandstand Rd and Stoneham St in Ascot.

The Golden Gateway Precinct includes a large portion of 'Mixed use' land, which encompasses the historical Ascot's Bristle beehive kilns and chimney stacks and portions of the Ascot Racecourse. The precinct also contains approximately 5.3 ha of Parks and Recreation reserve which covers Belmont Trust Land. There is also a small portion of Parks and Recreation: water supply sewerage and drainage reserve, which is under the control of the Water Corporation.

The Golden Gateway Precinct will provide for a diverse range of land uses. The primary land use within the Structure Plan area is residential, supplemented by commercial uses and local open space

#### 1.1.1 Planning background

The majority of the study area is zoned 'Urban' under the Metropolitan Region Scheme, with a portion zoned for 'Mixed use' and reserved for 'Parks and Recreation' under City of Belmont Local Planning Scheme No. 15.

## Golden Gateway Local Structure Plan - Bushfire management plan



Figure 1: Development concept plan and proposed zoning (Source: TBB)



Figure 2: Subject land



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Scale 1: 7,000 @ A4

0 140 m







Figure 3: Map of Bushfire Prone Areas for the subject site (Source: DFES, 2018)

## 1.2 Bushfire management guidelines, specifications and minimum standards

Specifications or standards relevant to this bushfire management plan are derived from and consistent with:

- *Fire and Emergency Services Act 1998*
- *Bush Fires Act 1954*
- *Planning and Development (local planning Scheme amendment) Regulations 2015*
- *State Planning Policy 3.7: Planning in Bushfire Prone Areas (WAPC, 2015);*
- *Guidelines for Planning for Bushfire Prone Areas and appendices, Version 1.3 (WAPC, 2017)*
- *Australian Standards (AS3959-2009): Construction of buildings in bushfire prone areas;* and
- *City of Belmont Fire Break Notice 2017-2018.*

## 2 ENVIRONMENTAL CONSIDERATIONS

The subject land has been used predominantly for commercial purposes for over 50 years. The Golden Gateway Precinct includes the historical Ascot's Bristle beehive kilns and chimney stacks and portions of the Ascot Racecourse. The subject land also contains a large proportion of managed parkland which borders the Swan River. The Belmont Trust Land in the western portion of the study area was historically used for sporting purposes such as baseball fields and is now maintained as parkland by the City. There are no significant environmental values located within the subject land.

Bush Forever site 313, Swan River Salt Marshes is located within the 150m assessment area. This area is separated from the subject land by the Swan River, which is approximately 70m wide at this point. The remaining areas within 150m of the subject land have no significant environmental values. They include Ascot Racecourse, Belmont Park Primary school, residential housing and commercial areas.

### 2.1 Native Vegetation – modification and clearing

The vegetation in the study area has been highly modified. Although mature trees remain in many parts of the subject land, the undergrowth has been cleared and is maintained in a modified landscaped, parkland state.

Although the grassland which covers the Belmont Trust land is managed and maintained by the City of Belmont, a small portion of regrowth exists where the tree trunks are too close together to permit mowing. This land is proposed to be developed in the future, although the development concept is not yet known. The City will continue to maintain the Belmont Trust Land in a low fire hazard state.

Some bushfire risk exists as a result of vegetation within and adjacent to Bush Forever Area 313 (Swan River Salt Marshes) located to the north west of the subject land. This vegetation is separated from the subject land; however, by a branch of the Swan River. It is also noted that the majority of vegetation on the island is maintained in a low fuel state. Where shrubs and trees exist, there is no understory and the fine fuel load is less than 2tonnes/ha.




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**Plate 1: Fine fuel load less than 2 tonnes/ha on the island adjacent the subject land**

Vegetation also exists around a drain on the south-western side of the Ascot Quays Apartment Hotel. This vegetation is outside the subject land but within 150m of the structure plan area. The



Golden Gateway Local Structure Plan - Bushfire management plan

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vegetation is less than 20m in width on each side of the drain and the understory is managed (irrigated) grassland. This vegetation is not considered to represent a bushfire hazard.

## 2.2 Re-vegetation/Landscape Plans

No revegetation is proposed within the subject land.

Some landscaping of road reserves, open space and car parks is proposed. This will consist of individual trees without understory or managed parkland and as such is not considered to have the potential to create a fire hazard.

### 3 BUSHFIRE ASSESSMENT RESULTS

#### 3.1 Assessment Inputs

In order to identify the potential bushfire risks, it is necessary to describe the bushfire problem associated with the subject land. The assessment takes into consideration the:

- the topography and slope of the subject land;
- type and classification of vegetation present on and adjacent to the subject land;
- distances between the classifiable vegetation; and
- current and proposed future land use.

##### 3.1.1 Slope

The study area has generally flat topography and grades gently from 6mAH in the south-east to 3mAH in the west. The study area has a few low points of approximately 1-2mAH through the centre of the study area, as shown in Figure 4.

The effective slope (that is the slope that will affect the behaviour of an approaching bushfire) underneath the vegetation across the River to the west is upslope.

Slope is therefore not considered to be a factor in terms of increasing bushfire hazard.

##### 3.1.2 Current and future land use

The subject land comprises four key precincts:

- The area bounded by Great Eastern Highway, Stoneham Street and Resolution Drive is characterised by predominately mixed business development and small pockets of retail (food and beverage) uses along Great Eastern Highway;
- The western portion of the subject land encompassing the Belmont Trust Land (Grove Farm Reserve) is previously cleared with large mature trees sparsely located around the reserve. Grove Farm Reserve was historically used for recreation purposes, specifically a baseball field;
- The northern portion of the subject land is partially developed with the WA Turf Club Headquarters and Ascot kilns and chimney stacks; and
- The remainder of the subject land within the north-eastern corner is largely undeveloped and comprises a number of existing road reserves and WA Turf Club owned land used for overflow parking on racing event days.

The Golden Gateway Precinct will provide for a diverse range of land uses. The primary land use within the Structure Plan area is residential, supplemented by commercial uses and local open space.

##### 3.1.3 Vegetation types

On the basis of a site visit on 13 March 2018, vegetation at the site and within 150m was assessed. Vegetation within 100m was classified according to the descriptions provided in AS 3959 – 2009, and includes the following three vegetation types:

## Golden Gateway Local Structure Plan - Bushfire management plan





- Class B Woodland – Low woodland (B7): Low trees and shrubs 2-10m high; foliage cover less than 10%. Dominated by eucalypts and Acacias. Often have a grassy understorey or low shrubs. Acacias and Casuarina woodlands grade to Atriplex shrublands in the arid and semi-arid zones.
- Low threat vegetation – AS3959 2.2.3.2(b) - Single area of vegetation less than 1ha and not within 100m of other areas of vegetation being classified.
- Low threat vegetation – AS3959 2.2.3.2(f) - grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.

The vegetation within the subject land and 150m surrounding is shown in Table 1 and Figure 4.

**Table 1: Vegetation classification**





Photo point	Vegetation class	Vegetation type	Description
1 Plot 1 	Low Threat Exclusion Clause 2.2.3.2 (f)	Ascot Racecourse	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks
2 Plot 2 	Low Threat Exclusion Clause 2.2.3.2 (f)	Ascot Racecourse	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks
3 Plot 3 	Low Threat Exclusion Clause 2.2.3.2 (f)	Managed parkland	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks

## Golden Gateway Local Structure Plan - Bushfire management plan

Photo point		Vegetation class	Vegetation type	Description
4 Plot 3		Low Threat Exclusion Clause 2.2.3.2 (f)	Managed parkland	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks
5 Plot 3		Low Threat Exclusion Clause 2.2.3.2 (f)	Managed parkland	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks
6 Plot 4		Low Threat Exclusion Clause 2.2.3.2 (f)	Public reserve maintained in low threat state	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks
7 Plot 4		Low Threat Exclusion Clause 2.2.3.2 (f)		Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks





## Golden Gateway Local Structure Plan - Bushfire management plan

Photo point		Vegetation class	Vegetation type	Description
8 Plot 8		Low Threat Exclusion Clause 2.2.3.2(b)	Regrowth	Single area of vegetation less than 1ha and not within 100m of other areas of vegetation being classified
9 Plot 5		Class B: Woodland	B07 - Low Woodland	Low trees and shrubs 2-10m high; foliage cover less than 10%. Dominated by eucalypts and Acacias. Often have a grassy understorey or low shrubs. Acacias and Casuarina woodlands grade to Atriplex shrublands in the arid and semi-arid zones.
10 Plot 6		Low Threat Exclusion Clause 2.2.3.2 (f)	Drain	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks
11 Plot 6		Low Threat Exclusion Clause 2.2.3.2 (f)	Managed parkland	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks



## Golden Gateway Local Structure Plan - Bushfire management plan

Photo point		Vegetation class	Vegetation type	Description
12 Plot 7		Low Threat Exclusion Clause 2.2.3.2 (f)	Commercial office landscaping	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks
13 Plot 8		Low Threat Exclusion Clause 2.2.3.2 (f)	Primary school	Grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks

### 3.2 Assessment outputs

Consistent with Appendix Two of the *Guidelines for Planning in Bushfire Prone Areas* (V1.3, WAPC, 2017), as this bushfire management plan is to support an application where the indicative development footprint is known, a Bushfire Attack Level (BAL) assessment has been undertaken in accordance with Method 1 of AS3959: Construction of buildings in bushfire prone areas. Table 2 provides a summary of the assessment.

**Table 2: BAL assessment summary**

Plot	Vegetation Classification	Effective Slope	Separation Distance to the Classified Vegetation (m)	Hazard Level
6	Woodland (B)	Upslope	70m to the edge of the Parks and Recreation Reserve and 108m to the edge of the proposed development area (Belmont Trust Land)	BAL-LOW

A BAL contour map has been created for the proposed development which shows indicative BAL ratings for the site (Figure 5) consistent with Appendix 3 of the *Guidelines for Planning in Bushfire Prone Areas* (V1.3, WAPC, 2017). The BAL contour map was prepared on the basis of FDI 80; the vegetation classification shown in Table 1; and slope shown on Figure 4. An excerpt from AS3959 is provided in Table 3.

Golden Gateway Local Structure Plan - Bushfire management plan

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Table 3: Excerpt from AS 3959, Table 2.4.3, Distance (m) of the site from the predominant vegetation class

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FDI 80 (1090 K)	Vegetation classification and slope
Bushfire attack levels (BALs)	Class B: Woodland - Upslope and flat land
BAL-FZ	<10 m
BAL-40	10-<14
BAL-29	14-<20
BAL-19	20-<29
BAL-12.5	29-<100
BAL-LOW	Beyond 100m



City of Belmont: Golden Gateway - Bushfire Management Plan  
Figure 4: Post-development vegetation classification



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Scale 1: 7,000 @ A4

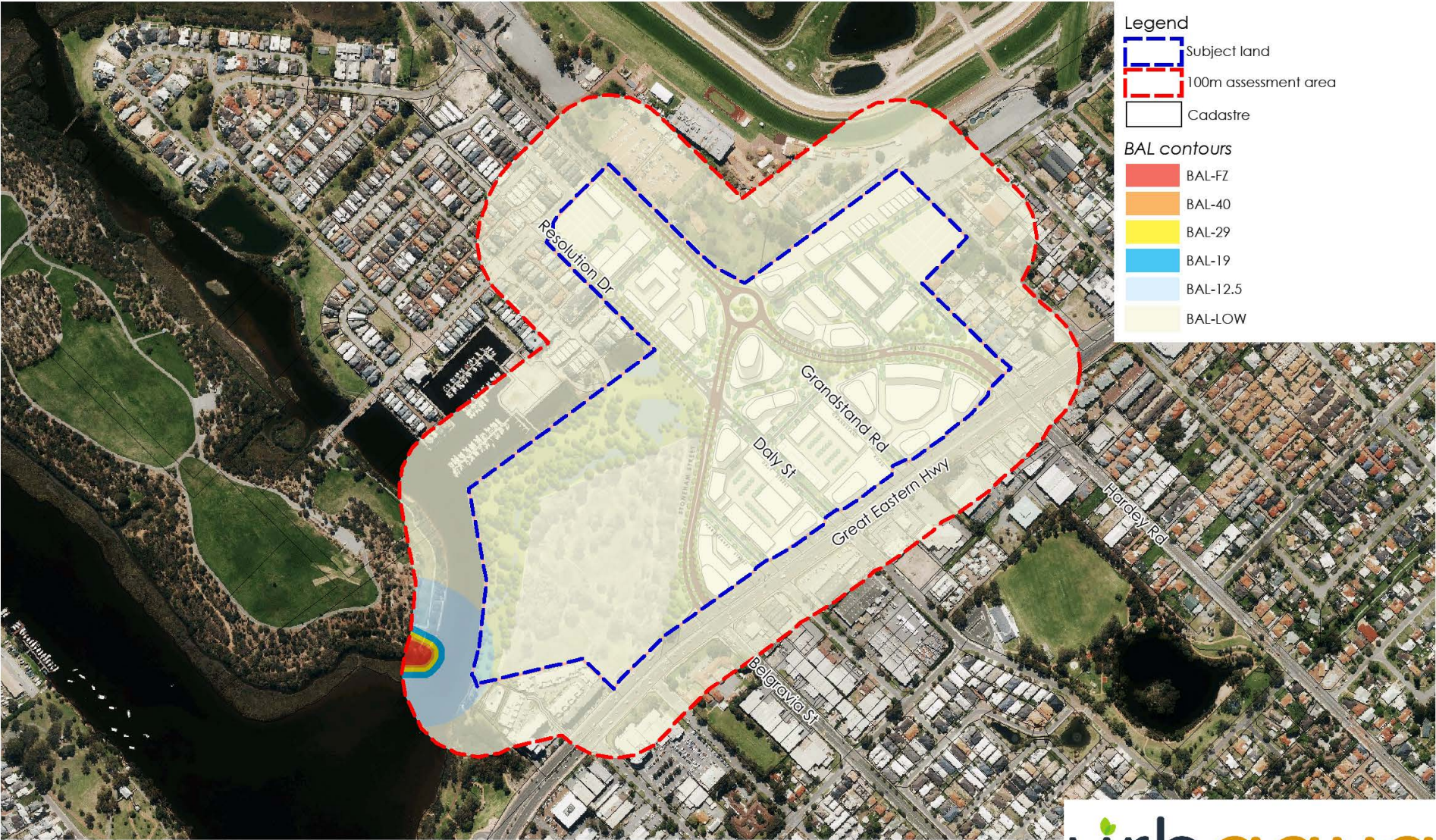
0 140 m



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Figure 5: BAL contour map



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Scale 1: 7,000 @ A4

0 140 m





## 4 IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

The subject land is adjacent to an area of vegetation which has the potential to create a bushfire risk.

It is considered that the bushfire risk to the proposed development can be adequately managed through appropriate location and siting and design of development, as well as necessary vehicular access and water supply which will be provided to the development.

Bushfire hazard to the proposed development is therefore considered to be low. This conclusion is substantiated further below.

### 4.1 Location

After development, the subject land will not contain any vegetation that is considered to be a bushfire hazard.

Although fire risk exists from vegetation adjacent to the subject land, the subject land is not subject to BAL-40 or BAL-FZ and therefore this proposal does not result in the intensification of any development in areas that are subject to extreme hazard.

### 4.2 Siting and design of development

Bushfire risk from vegetation outside the subject land is likely to remain as this vegetation is associated with significant environmental values (Bush Forever Site 313). It is noted that the Swan River establishes sufficient separation between the bushfire hazard and the edge of subject land to achieve BAL ratings of BAL-12.5 and less, consistent with Method 1 of AS3959. It is noted that the public open space reserve provides a further separation such that the land to be developed in the future (the Belmont Trust Land) is rated at BAL-LOW.

As no proposed areas of development will be subject to BAL-40 or BAL-FZ, it is considered that development has been sited to avoid areas of extreme bushfire risk. All habitable dwellings will be constructed to meet the requirements of *AS3959 Construction of buildings in Bushfire Prone Areas* where necessary.

### 4.3 Vehicular access

The subject site is afforded excellent access from an integrated regional (existing and future) road network. The subject land is bounded by Great Eastern Highway to the south which provides access to the west towards the Perth CBD, Graham Farmer Freeway and onto South Perth, Melville and Fremantle via Canning Highway. To the east, Great Eastern Highway provides access to Perth Airport, Tonkin/Roe Highway and onto Guildford, Midland and the Swan Valley. These networks provide excellent access to and egress from the subject land.

The proposed local road network provides for at least two different access and egress routes to the proposed residential and commercial areas. The localised road network includes a network of local distributor and access roads providing access to key regional and district roads such as Great Eastern Highway and the Garret Road bridge which include Grandstand Road, Resolution Drive and Stoneham Street.



## Golden Gateway Local Structure Plan - Bushfire management plan

All roads and transport infrastructure will be designed and constructed to meet the requirements of the *Guidelines for Planning in Bushfire Prone Areas* (Version 1.3 WAPC, 2017) Appendix Four, Table 4, as replicated in Table 4 below.

**Table 4: Vehicular access technical requirements (WAPC, 2017)**

Technical Requirement	Public road	Cul-de-sac	Private driveway	Emergency access way	Fire service access routes
Minimum trafficable surface (m)	6	6	4	6	6
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4	N/A	4.5	4.5	4.5
Maximum grade over <50m	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum cross fall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5
Additional specialist requirements					

#### 4.4 Water

The proposed development is currently serviced by a reticulated water supply, together with fire hydrants, in accordance with the specifications of the Water Corporation and Department of Fire and Emergency Services (DFES).

Contractors or others carrying out building or other works at the site must not cover hydrants and/or the markings indicating their location. In the event activities occur that do result in hydrants or markings being covered, damaged, or removed, it will be the responsibility of the relevant contractor to rectify the situation.

## 5 ASSESSMENT AGAINST THE BUSHFIRE PROTECTION CRITERIA

The subject land is adjacent to an area of bushfire risk. Bushfire risk mitigation and management measures have been identified to reduce bushfire risk to achieve the objectives of SPP3.7, as previously outlined in Section 3.

The bushfire risk mitigation strategies proposed comply with the acceptable solutions for each of the Bushfire Protection Criteria detailed in *Guidelines for Planning in Bushfire Prone Areas* (2017). They are summarised in Table 5.

### 5.1 Compliance Table

**Table 5: Bushfire protection criteria assessment**

Element	Acceptable solution	Compliance
1. Location	A1.1 Development location	<input checked="" type="checkbox"/> No development is proposed in areas subject to BAL-40 or BAL-FZ.
2. Siting and design of development	A2.2 Asset Protection Zone	<input checked="" type="checkbox"/> No development will be subject to BAL-40 or BAL-FZ. Habitable buildings will be constructed in accordance with AS3959.
3. Vehicular Access	A3.1 Two access routes	<input checked="" type="checkbox"/> Short and long term public access is provided which ensures a minimum 2 access routes are provided at all times.
	A3.2 Public road	<input checked="" type="checkbox"/> All public roads meet the requirements of Table 4 of Appendix 4 of the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2017)
	A3.3 Cul-de-sac	<input checked="" type="checkbox"/> N/A – no cul-de-sacs are proposed.
	A3.4 Battle-axe	<input checked="" type="checkbox"/> N/A - No battle-axe lots are proposed.
	A3.5 Private driveway longer than 50m	<input checked="" type="checkbox"/> N/A - No lots have driveways greater than 50m in length.
	A3.6 Emergency access way	<input checked="" type="checkbox"/> N/A – No emergency access ways are proposed
	A3.7 Fire service access routes	<input checked="" type="checkbox"/> The existing road network provides appropriate fire service access routes.
	A3.8 Firebreak widths	<input checked="" type="checkbox"/> N/A
4. Water	A4.1 Reticulated areas	<input checked="" type="checkbox"/> The development is currently serviced by reticulated water and fire hydrants which meet Water Corporation and DFES specifications
	A4.2 Non-reticulated areas	<input checked="" type="checkbox"/> N/A
	A4.3 Individual lots within non-reticulated areas	<input checked="" type="checkbox"/> N/A

### 5.2 Bushfire management strategies

As the area proposed for development is greater than 100m from any classifiable vegetation (due to the presence of the Parks and Recreation Reserve), no bushfire management strategies are considered necessary.

There is insufficient risk to warrant specific construction requirements.

It is noted that any new roads will be constructed to meet Main Roads and Local Government requirements and that water and hydrants are provided to DFES and Water Corporation standards.

### 5.3 Certification by Bushfire Consultant

I, Shelley Shepherd, certify that at the time of inspection, the BAL ratings contained within this BMP are correct.

The Bushfire Attack Level to the proposed development area is BAL-LOW. There is insufficient risk to warrant specific construction requirements and no specific management actions are required to mitigate bushfire risk to the proposed development area.

Signature:  Date: 2 May 2018



Client: City of Belmont

Report	Version	Prepared by	Reviewed by	Submitted to Client	
				Copies	Date
Draft report	V1	SSh	HBr	Electronic	2 May 2018
Final Report	V2	SSh	HBr	Electronic	21 June 2018

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# Environmental Report: Golden Gateway

Prepared for City of Belmont

By Essential Environmental

June 2018



**essential**  
environmental

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## EXECUTIVE SUMMARY

The City of Belmont has engaged Essential Environmental to prepare an environmental report to support structure planning vicinity of Great Eastern Hwy, Resolution Dr, Grandstand Rd and Stoneham St, Ascot, within the City of Belmont.

This report provides an analysis of the environmental constraints and considerations to development and proposes broad approaches to mitigate any impacts and/or constraints on the basis of future land use.

The majority of the site has been historically cleared, although a number of significant trees have been established predominantly along driveways and boundaries and within the Grove Farm Reserve. The study area abuts a small section of the Swan River, which is a Bush Forever site, a conservation category wetland, and an environmentally sensitive area. Development of the study area will require adequate management of bushfire risk (the subject of a separate management plan) and potential impacts on fauna species.

In addition, a range of management strategies have been proposed to effectively manage or mitigate potential environmental impacts caused as a result of the development. Proposed management actions are summarised in the table below. It is considered that urban development of the site is an acceptable land use given the current environmental condition and lack of significance of the site, and in consideration of the proposed management strategies outlined in this report.

Issue	Action	Frequency	Responsibility
<b>Preconstruction phase</b>			
Contamination	Complete preliminary site investigation for contamination in accordance with Contaminated Sites Act 2003 should areas of known contamination be disturbed.	Once	Developer
Acid sulfate soils	Complete self-assessment checklist and consider need for a preliminary site assessment.	Once	Developer Consistent with DPLH and DWER guidelines
Vegetation and flora	Clearly delineate POS areas and trees to be retained.	Once	Licensed Surveyor (Developer)
Fauna and habitat	All site staff to participate in Environment, Health and Safety inductions which provide requirements for management of significant fauna and reporting procedures for environmental incidents.	Once	Developer and Construction contractor

## Golden Gateway local structure plan – Environmental Report

Issue	Action	Frequency	Responsibility
Water management	Refer the local structure plan to the Department of Biodiversity, Conservation and Attractions as it contains a portion of land within and abutting the Swan River Trust Development Control Area.  A Local water management strategy will be completed and used as the basis for detailed design.  Following approval of the LWMS, UWMP(s) will be prepared prior to subdivision for approval by City of Belmont.	Once	Developer/City of Belmont   Developer, in accordance with SPP 2.9: Water Resources
Bushfire	A Bushfire Management Plan will be prepared to support the LSP.  The Bushfire Management Plan will be revised and implemented at subdivision.	Once	Developer, in accordance with SPP 3.7: Planning in Bushfire Prone Areas
<b>Construction phase</b>			
Soils and topography	Ground disturbing activities should be kept to a minimum and carried out 'as required' (in stages) immediately prior to lots being released for sale as part of a 'staged' development of the site.	Ongoing during construction phase.	Construction Contractor (Developer)
Contamination	Management of any identified contamination in accordance with the Contaminated Sites Act 2003.	Ongoing during construction phase.	Construction Contractor (Developer)
Acid sulfate soils	Management of any identified ASS consistent with DPLH and DWER guidelines.	Ongoing during construction phase.	Construction Contractor (Developer)
Vegetation and flora	Maintain markings and fencing around vegetation and trees to be retained. Cleared vegetation to be mulched and stored on site.	Ongoing during construction phase.	Construction Contractor (Developer)
Fauna and habitat	Undertake clearing in the direction of the river to allow fauna to escape.	Ongoing during construction phase.	Construction Contractor (Developer)
Water management	Manage sediment transport to waterways and drainage systems consistent with the LWMS.	Ongoing during construction phase.	Construction Contractor (Developer)



## Golden Gateway local structure plan – Environmental Report

Issue	Action	Frequency	Responsibility
Aboriginal heritage	In the event a site is discovered, all work in the area will cease and the Department of Planning, Lands and Heritage will be contacted.	Ongoing during construction phase.	Construction Contractor (Developer)
Construction impacts	Ensure dust and sediment runoff is adequately managed. Ensure appropriate waste disposal of building materials.	Ongoing during construction phase.	Construction Contractor (Developer)
Post construction phase			
Soils and topography	Landscape or stabilise cleared areas immediately.	Once	Construction Contractor (Developer)
Vegetation and flora	Inspect fencing (if applicable) and replace if required.	6 months	Developer until hand over to City of Belmont
	Ensure ongoing maintenance of retained vegetation and any revegetation areas / native landscaping prior to handover.	Ongoing until handover.	

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## 1 INTRODUCTION

The City of Belmont has engaged Essential Environmental to prepare an environmental report to support structure planning in the vicinity of Great Eastern Hwy, Resolution Dr, Grandstand Rd and Stoneham St, Ascot, within the City of Belmont.

This report provides an analysis of the environmental constraints and considerations to development and proposes broad approaches to mitigate any impacts and/or constraints on the basis of likely future commercial, mixed use and residential land use.

### 1.1 Study area

The study area consists of approximately 31.8 hectares of land in the vicinity of Great Eastern Hwy, Resolution Dr, Grandstand Rd and Stoneham St in Ascot. The study area currently comprises of a mixture of commercial lots, the heritage listed Ascot Brick Works and public open space (Figure 1).

The study area has 4 distinct regions: (i) the south-eastern commercial area, bound by Great Eastern Hwy, Resolution Dr and Stoneham St; (ii) west where Grove Farm Reserve is bound by Great Eastern Hwy and public open space adjacent to the Swan River; (iii) largely undeveloped land, with exception of local distributor roads, through the centre of the study area; and (iv) most northern portion within which is located the Perth Racing Administration Office.

### 1.2 Methodology

This report considers the following environmental aspects of the study area to inform preparation of a local structure plan and the future development of the area:

- Topography, soils (including acid sulfate soils), contamination;
- Vegetation, flora and fauna and bushfire risk;
- Water resources; and
- Heritage.

The following information has been provided on the basis of a desktop investigation only, using data and information that is publically available. No attempt has been made to ground-truth the information at this stage.

### 1.3 Previous environmental assessments and key requirements

Limited environmental assessment has been undertaken for the site to date.

The following City of Belmont strategic and planning documents are considered relevant to this environmental report:

- City of Belmont Environmental Plan 2010-2016;
- City of Belmont Local Planning Scheme No. 15 scheme report supporting document: Environment;
- City of Belmont Local Planning Scheme No. 15 scheme report supporting document: Heritage.



## Golden Gateway local structure plan – Environmental Report

- City of Belmont Local Planning Scheme No. 15 scheme report supporting document: Public Open Space.
- Belmont Foreshore Precinct Plan
- City of Belmont Street Trees Plan 2013.

There are a number of pieces of legislation, which govern management of the environment and have been considered as part of this assessment. These are listed in Table 1.

**Table 1: Relevant environmental legislation**

Legislation	Summary of relevant intent
Aboriginal Heritage Act 1972	Protects significant Aboriginal heritage, registered or unregistered.
Biosecurity and Agriculture Management Act 2007	Provides for the management of declared pests.
Contaminated Sites Act 2003	Requires the reporting of potential contaminated sites to the Department of Water and Environment Regulation.
Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) (EPBC Act)	Provides protection for Matters of National Environmental Significance (MNES).
Environmental Protection Act 1986	Provides protection for the environment as well as the licencing of prescribed premises and regulation of the clearing of remnant vegetation.
Fire and Emergency Services Act 1998	Provides for the management of bushfire risk.
Heritage of Western Australia Act 1990	Protection of places listed by the Heritage Council of WA.
Swan and Canning Rivers Management Act 2006	Establishes the Swan Canning River park and provides for the assessment of planning proposals within this area by the Swan River Trust Board.
Wildlife Conservation Act 1950 (WC Act)	Protects species of flora & fauna and communities that are listed.

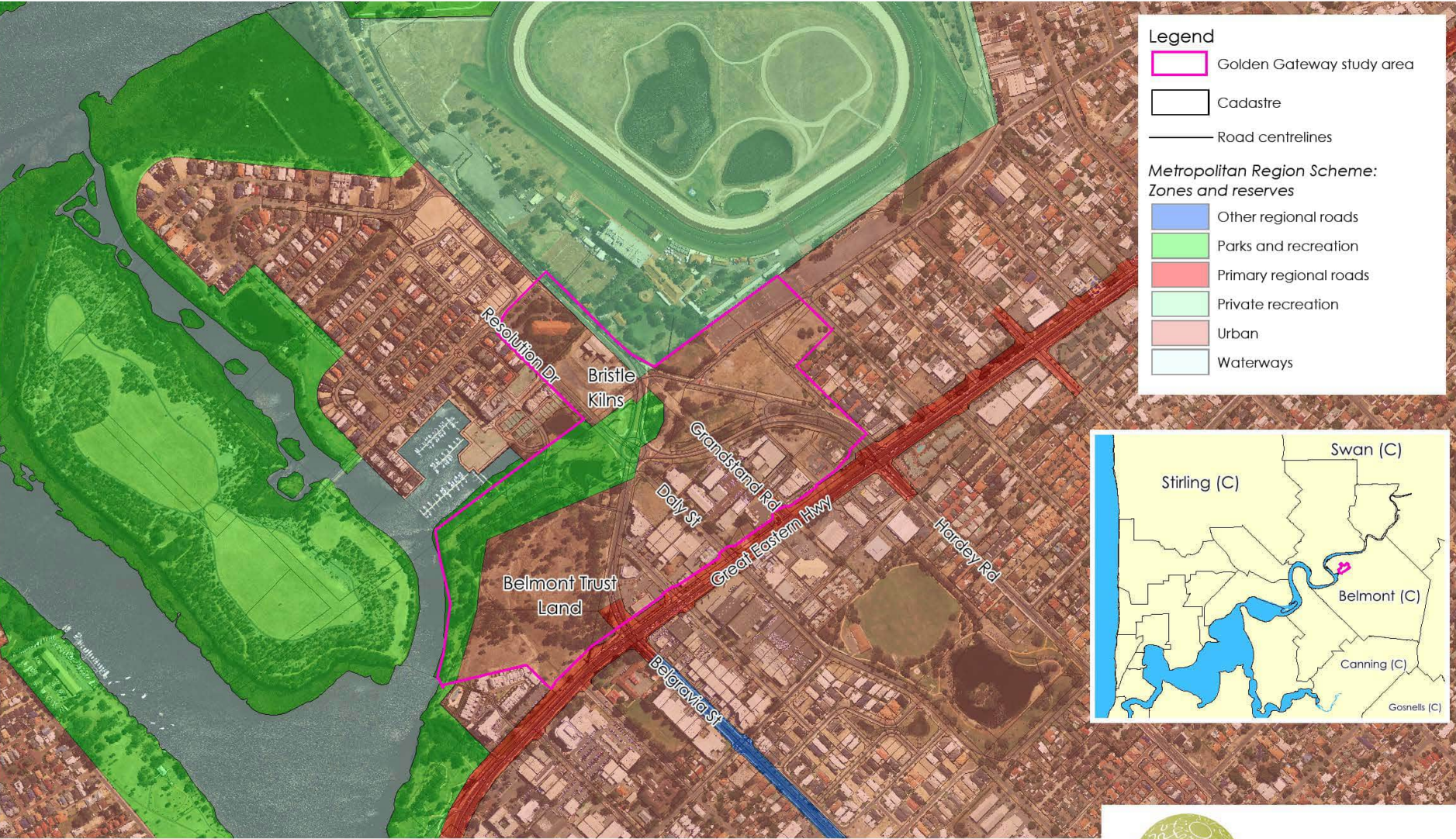
The following environmental policies are also considered relevant to the management of potential environmental impacts on the site:

- EPA Guidance Statement No. 33 – Environmental Guidance for Land Development (EPA, 2008);
- Better Urban Water Management (WAPC, 2008); and
- Liveable Neighbourhoods (WAPC, 2011).



City of Belmont: Golden Gateway - Desktop environmental report  
Figure 1: Study area location

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## 2 PROPOSED DEVELOPMENT

### 2.1 Planning context

The majority of the study area is zoned 'Urban' under the Metropolitan Region Scheme, with a portion zoned for 'Mixed use' and reserved for 'Parks and Recreation' under the City of Belmont Local Planning Scheme No. 15 (Figure 2).

The City of Belmont Local Planning Scheme No. 15, adopted in December 2011, provides a district level framework to guide more detailed planning for the City. It requires local structure plans to be prepared to provide the level of detailed planning required to facilitate subdivision and development within the scheme area. The Western Australian Planning Commission and the City of Belmont are preparing a local structure plan to guide land use and development outcomes for the Golden Gateway precinct, the subject land.

The Golden Gateway Precinct includes a large portion of 'Mixed use' land, which encompasses the historical Ascot's Bristle beehive kilns and chimney stacks and portions of the Ascot Racecourse. The precinct also contains approximately 5.3 ha of Parks and Recreation reserve which covers the Belmont Trust Land. There is also a small portion of Parks and Recreation: water supply sewerage and drainage reserve, which is under the control of the Water Corporation.

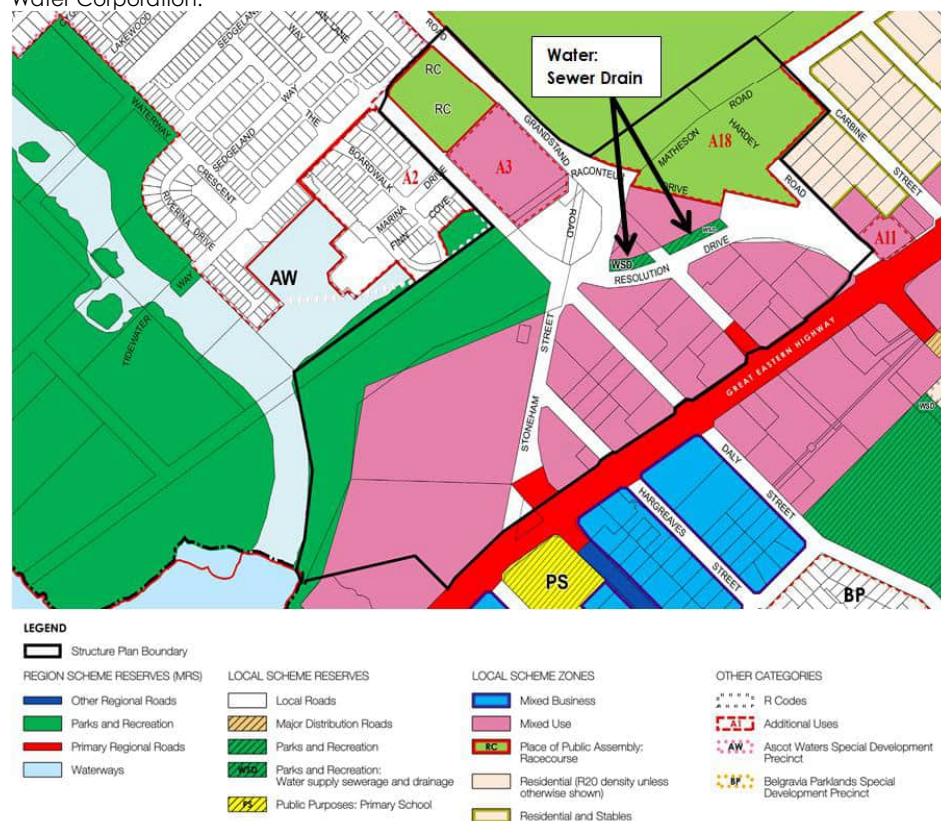


Figure 2: Local Planning Scheme

### 3 EXISTING ENVIRONMENT

A desktop environmental investigation of the study area has been undertaken, the findings of which are presented below.

#### 3.1 Land use context

##### 3.1.1 Historical land use

Historical aerial photography from Landgate suggests the land has been used for commercial purposes for over 50 years, with the majority of lots being approximately 1/3 hectare, accommodating warehouse facilities and such, predominantly adjacent to Great Eastern Hwy. The northern portion of the study area contains the Bristle kilns and Brick Works, which were established in 1929 and ceased operation in 1982 (Heritage Council, WA). The western portion of the study area, over the Belmont Trust Land, was historically used for sporting purposes such as baseball fields (Clark, 1952), and more recently as a temporary worksite for development in the area, such as the widening of the Great Eastern Hwy.

##### 3.1.2 Current land use

Commercial property still exists adjacent to Great Eastern Hwy south of Resolution Dr and Stoneham St. East of Stoneham St, the Belmont Trust Land is largely cleared and vacant with large mature trees sparsely located though the middle of the reserve. The perimeter of the reserve is lined with small to large mature trees such as *Brachychiton acerifolius* (Illawarra Flame Tree) and *Eucalyptus grandis* (Flooded Gum).

The north and east of Resolution Dr contains a parcel of land approximately 5 hectares in size that is largely vacant, with the exception of a few mature trees, used as overflow parking servicing the Ascot Racecourse. This portion of land, as shown in Figure 2, also accommodates a 150 m Water Corporation open channel drain, which discharges via piped drainage under the Stoneham St/Resolution Drive roundabout into the Ascot Waters compensation basin on the north-western boundary of the study area. North of the Ascot Waters Compensation Basin is a second compensation basin servicing the Ascot Waters development. This compensation basin is herein referred to as 'Northern Drainage Lake'. The northern portion of the site contains the Perth Racing Administration Offices.

The Belmont Foreshore Precinct Plan (City of Belmont, 2014) was prepared to guide development and landuse within the river setting and ensure that the landscape values of the river system are conserved or enhanced. The study area, particularly Belmont Trust Land and public open space contains areas identified as parkland within the precinct plan, characterised by open lawns surrounding large individual trees. The precinct plan outlines strategic recommendations that will need to be incorporated into future planning of the Belmont Trust Land.

#### 3.2 Topography, geology and soils

The study area has generally flat topography and grades gently from 6mAHD in the south-east to 3mAHD in the west. The study area has a few low points of approximately 1-2mAHD through the centre of the study area, as shown in Figure 3.



City of Belmont: Golden Gateway - Desktop environmental report  
Figure 3: Topography and surface geology

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### 3.2.1 Geology

The surface geology is described broadly as Guildford formation: Alluvial sand and clay with shallow-marine and estuarine lenses and local basal conglomerate (WA surface geology 1:250,000 scale geological maps, Geological Survey of WA, and Geoscience Australia).

As shown in Figure 3, two-thirds of the north-western portion of the study area is classified as Ms2 – Sandy Silt, and the eastern third is classified as S8 – Sand, with a small portion of peaty clay adjacent to the Ascot Waters marina, described as follows:

- Ms2 – Sandy Silt: strong brown to mild grey, mottled, blocky, disseminated fine sand, hard when dry, variable clay content. This soil type is historically resourced for clay bricks and tile manufacture. It has a low permeability and low potential for erosion. Sandy Silt has a low shrink swell potential, however is prone to flooding.
- S8 – Sand: very light grey at surface, yellow at depth, fine to medium grained, sub rounded quartz, moderately well sorted. Sand of eolian origin is used for construction purposes with a high permeability and low erosion potential. Well drained given a low water table.
- Cps – Peaty Clay: dark grey and black with variable sand content of lacustrine origin. This soil has low permeability, high erosion potential, and is prone to flooding.

### 3.2.2 Acid sulfate soils

A review of Department of Water and Environmental Regulation acid sulfate soils (ASS) risk mapping identifies two-thirds of the study area, predominantly the area coinciding with surface geology Ms2-Sandy Silt (see 3.2.1), as containing a Class I 'high to moderate' risk of ASS and the remainder, coinciding with S8-Sand, classified as Class II 'moderate to low' risk occurring within 3 m of the natural soil surface (Figure 3).

In 2009, Douglas Partners undertook an Acid Sulfate Soil investigation and Waste Classification investigation to assess the soil conditions of the Ascot Water Compensation Basin because the City intended to increase the size of the basin. The results of the investigation indicate the basin contains ASS, which are generally located at and below the groundwater table (approximately 1.5 m below ground level) (Douglas Partners, 2009). Should the soil below the groundwater table be exposed or groundwater be lowered for future development, further investigation of ASS is likely to be required.

Consistent with Department of Water and Environmental Regulation guidelines, sites should be investigated for ASS if any of the following works are proposed:

- ASS disturbing subdivision or development that is subject to conditional approval requiring the investigation and management of ASS;
- soil or sediment disturbance of 100 m<sup>3</sup> or more in an area depicted on an ASS risk map as Class I 'high to moderate risk of ASS occurring within 3 m of natural soil surface' (e.g. construction of roads, foundations, installation of underground infrastructure, drainage works, land forming works, dams and aquaculture ponds or sand or gravel extraction);
- soil or sediment disturbance of 100 m<sup>3</sup> or more with excavation from below the natural watertable in an area depicted on an ASS risk map as Class II 'moderate to low risk of ASS occurring within 3 m of natural soil surface but high to moderate risk of ASS beyond 3 m of natural soil surface';
- lowering of the watertable, whether temporary or permanent (e.g. for groundwater abstraction, dewatering, installation of new drainage, modification to existing drainage), in areas depicted in an ASS risk map as Class I 'high to moderate risk of



## Golden Gateway local structure plan – Environmental Report

actual acid sulfate soils (AASS) or potential acid sulfate soils (PASS) occurrence' or Class II 'moderate to low risk of AASS or PASS occurrence within 3 m of natural soil surface';

- any dredging operations;
- extractive industry works (e.g. mineral sand mining) in any of the areas listed in Table 1 of the guidelines; and
- flood mitigation works, including construction of levees and flood gates in any of the areas listed in Table 1 of the guideline.

Given the Class I classification for ASS, it is recommended that a self-assessment checklist is completed for the study area. Some investigation for ASS will be required if any of the above works are proposed in Class 1 areas. Investigations should be undertaken consistent with Department of Water and Environmental Regulation guidelines: *Identification and investigation of acid sulfate soils and acidic landscapes* (DER, 2015).

If ASS is found to be present at the site, all site works must be carried out in accordance with a Department of Water and Environmental Regulation-approved ASS management plan.

### 3.2.3 Contaminated sites

#### DWER Contaminated sites database

A search of the Department of Water and Environmental Regulation Contaminated Sites database found no contaminated sites within the study area. Lot 5 Resolution Drive (160 Stoneham Street) is listed as "Possibly Contaminated, Investigation Required".

#### Ascot Water compensation basin

In 2009, Douglas Partners undertook a waste classification assessment at Lot 5 Stoneham St, corner of Resolution Dr and Stoneham St to assess the occurrence of acid sulphate soils; assess the nature and suitability of the soil for re-use; and assess the waste classification of the soil to be excavated, as the City of Belmont intended to increase the size of the current Ascot Waters Basin by approximately 4000 m<sup>2</sup>.

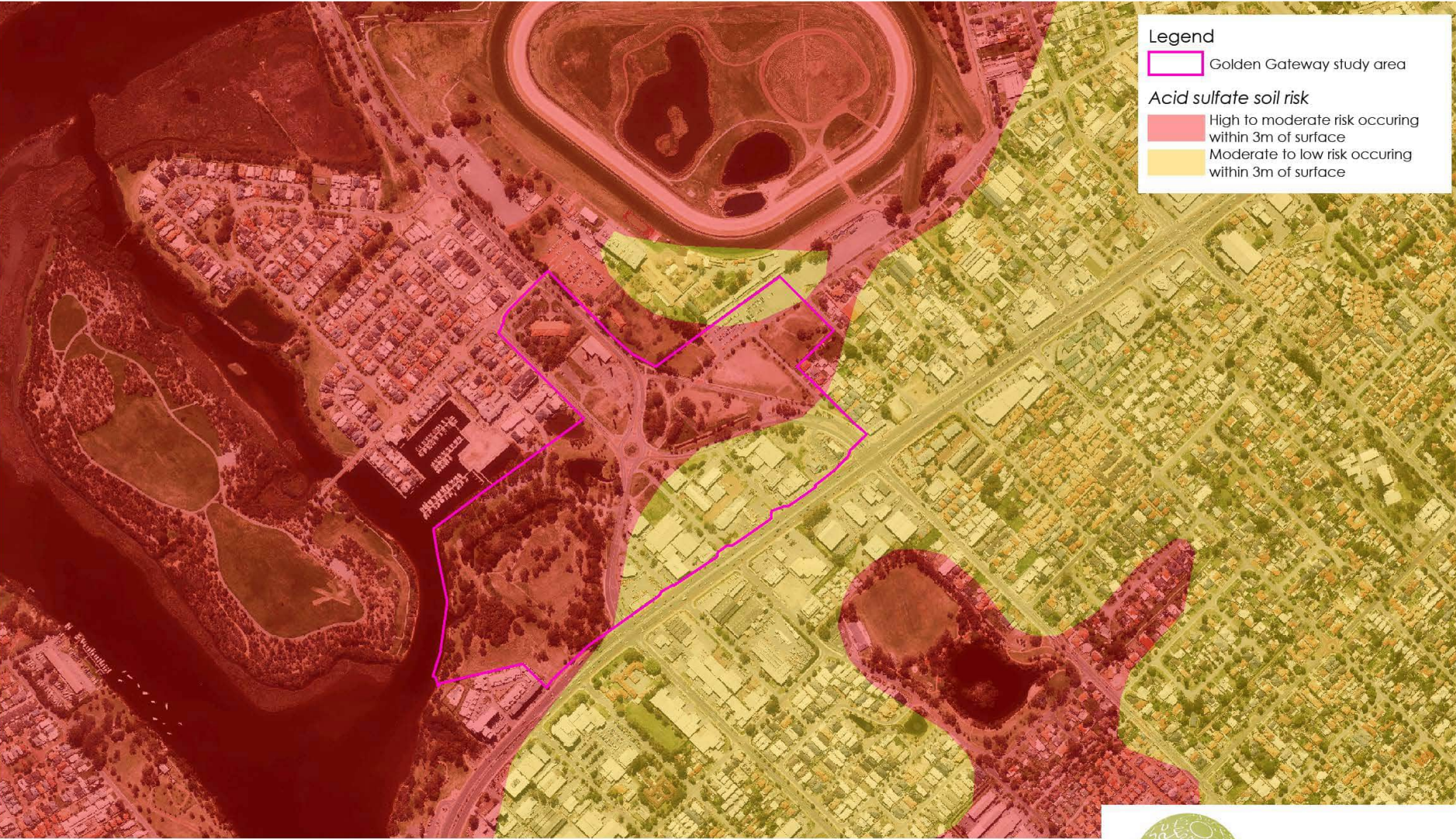
A Preliminary and Detailed Site Investigation (PSI/DSI) was also undertaken in 2012 (GHD, 2013), and a subsequent Site Management Plan was developed. Soil and groundwater contamination were investigated to assess risk to ecological and human receptors in accordance with the Department of Water and Environment Regulation. A summary of the contamination issues identified through these investigations are as follows:

- Soil - Inorganic
  - Samples were tested for metals (As, Ca, Mn, Hg, Ni, Pb, Zn, Al, Fe). Exceedances of Ecological Investigation Levels (EIL, as per DER guidelines) were minimal, so metals were considered to be low risk to ecological receptors in the basin's current state. Metals were also below Health Investigation Levels (HIL-E), with the exception of lead. Further sampling indicated this was a localised test result.
  - Douglas Partners reported Asbestos Containing Materials (ACM) at several bores from 0 to 2 m below ground level (BGL). ACM was also found in samples collected at greater than 0.5 m BGL. However, no samples were taken near the surface profile (less than 0.3 m BGL) and the exposure pathway for the community or workers is considered incomplete. Overall, asbestos is considered low risk in its current state, however, further investigation needs to be undertaken.



City of Belmont: Golden Gateway - Desktop environmental report  
Figure 4: Acid sulfate soil risk

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- Organic
    - Both Douglas Partners and GHD reports indicate that encountered hydrocarbons were localised in nature and not considered to pose a risk to ecological or human receptors. However, works such as excavation would increase risk, and appropriate precautions should be taken.
- Groundwater
  - Inorganic
    - Three groundwater bores were sampled to test for Fe, Zn, Ni, NH<sub>3</sub>, NO<sub>2</sub>, Total Nitrogen and Total Phosphorous. Concentrations of Zn, NH<sub>3</sub>, and Ni were reported marginally above ANZECC guidelines in all bores, and Fe concentrations were recorded 20 times above ANZECC guidelines. The exceedances are considered characteristic of winter conditions in the Swan River and natural soils in the locality (e.g. iron). Therefore, these results are not considered to reflect any potential risk to ecological or human receptors.
  - Organic
    - All samples were analysed for BTEX, Total Recoverable Hydrocarbons (TRH) and Polycyclic Aromatic Hydrocarbons (PAH). These were all reported below the DER Domestic Non-potable water criteria (GHD, 2013).

Based on these results, it is understood that the basin in its current state does not propose a risk to ecological or human receptors. Management guidelines provided in the Site Management Plan are effectively for the management of the basin expansion works and the City of Belmont have not proceeded with increasing the basin size.

### 3.3 Flora, fauna and vegetation

#### 3.3.1 Conservation areas

There are no Bush Forever sites within the study area.

Bush Forever site 313, Swan River Salt Marshes, exists to the north and west of the study area, as shown on Figure 5. The closest proximity of the Bush Forever site to the study area is adjacent to the Belmont Trust Land at the south-western boundary. Apart from this point, the study area is largely disconnected from the Bush Forever site.

An environmentally sensitive area, as mapped by the Department of Water and Environmental Regulation surrounds the Bush Forever site as described above. This area is described as 'Temperate Saltmarsh' and listed as 'vulnerable' under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Temperate salt marshes are an important habitat for local and migratory bird species (Department of Environment, 2015).

#### 3.3.2 Flora

Searches of the EPBC Protected Matters Search Tool and the former Department of Parks and Wildlife (now Department of Biodiversity, Conservation and Attractions) NatureMap database were undertaken to identify flora species of conservation significance potentially occurring within a 2 km buffer of the study area. Results are outlined in Table 2.

Golden Gateway local structure plan – Environmental Report

**Table 2: Conservation significant flora likely to occur in the study area**

Taxa	Common name	Conservation status	
		WC Act	EPBC Act
<i>Dillwynia dillwynioides</i>	-	Priority 3	
<i>Johnsonia sericea</i>	Waldjumi	Priority 4	
<i>Caladenia huegelii</i>	King Spider-orchid		Endangered
<i>Darwinia foetida</i>	Muchea Bell		Critically endangered
<i>Lepidosperma rostratum</i>	Beaked Lepidosperma		Endangered

### 3.3.3 Fauna

Searches of the EPBC Protected Matters Search Tool and the Department of Biodiversity, Conservation and Attractions NatureMap database were undertaken to identify fauna species of conservation significance potentially occurring within a 2 km buffer of the study area. Results are outlined in Table 3.

**Table 3: Conservation significant fauna known or likely to occur in the study area**

Taxa	Common name	Conservation status	
		WC Act	EPBC Act
<i>Calyptorhynchus latirostris</i>	Carnaby's Black Cockatoo	Rare or likely to become extinct	Endangered
<i>Calidris ferruginea</i>	Curlew Sandpiper	Rare or likely to become extinct	-
<i>Caretta caretta</i>	Loggerhead Turtle	-	Endangered
<i>Chelonia mydas</i>	Green Turtle	-	Vulnerable
<i>Dermochelys coriacea</i>	Leatherback Turtle	-	Endangered
<i>Natator depressus</i>	Flatback Turtle	-	Vulnerable
<i>Diomedea epomophora epomophora</i>	Southern Royal Albatross	-	Vulnerable
<i>Dioedeia exulans (sensu lato)</i>	Wandering Albatross	-	Vulnerable
<i>Pachyptila turtur subantarctica</i>	Fairy Prion	-	Vulnerable
<i>Thalassarche cauta steadi</i>	White-capped Albatross	-	Vulnerable
<i>Dasyurus georgianus</i>	Chuditch	-	Vulnerable
<i>Actitis hypoleucos</i>	Common Sandpiper	Protected under international agreement	-
<i>Ardea modesta</i>	Eastern Great Egret	Protected under international agreement	-
<i>Merops ornatus</i>	Rainbow Bee-eater	Protected under international agreement	-
<i>Tringa nebularia</i>	Common Greenshank	Protected under international agreement	-
<i>Falco peregrinus</i>	Peregrine Falcon	Specially protected fauna	-
<i>Oxyura australis</i>	Blue-billed Duck	Priority 4	

WC=Wildlife Conservation Act 1950

EPBC=Environmental Protection and Biodiversity Conservation 1999





City of Belmont: Golden Gateway - Desktop environmental report  
Figure 5: Vegetation



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### 3.3.4 Bushfire risk

A portion of the study area along the banks of the Swan River is identified as a Bush Fire Prone Area (Figure 5), as designated by the Fire and Emergency Services (FES) Commissioner. Accordingly, any planning and development in the area must consider bushfire risk and the requirements of *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) (2015).

The *Guidelines for Planning in Bushfire Prone Areas* (WAPC, 2015) refer to the need for a Bushfire Hazard Level assessment and Bushfire Attack Level Contour Map where possible to support strategic planning proposals in Bushfire Prone Areas. It is understood that this is being addressed separately from this report for the structure plan area.

## 3.4 Water resources

### 3.4.1 Public Drinking Water Source Area

There are no Public Drinking Water Source Areas within the study area.

### 3.4.2 Surface water resources

The Swan River is adjacent to the western portion of the study area (Belmont Trust Land). The Swan River holds significant ecological value because it provides habitat for local and migratory birds and other fauna, with the majority of the River being identified as a conservation category wetland and environmentally protected area. Furthermore, the Swan River provides important social value for visual amenity, and recreation on the river and its reserves. The Swan River also holds significant Aboriginal and European heritage values.

The Department of Water and Environmental Regulation Floodway mapping indicates that a large area in the northern portion of the study area lies within the Swan River 100 year average reoccurrence interval (ARI) flood fringe (Figure 6).

A Water Corporation open drain exists at the centre of the study area. The open drain is approximately 150 m in length and directs runoff flows from the eastern urban and industrial areas to piped drainage under the Stoneham St/Resolution Drive roundabout to the Ascot Waters compensation basin (Figure 6). The compensation basin allows for dissipation of energy, mixing of water for oxygenation and sediment control before flowing through a further 350 m of open drain to the Swan River. A contaminated sites investigation was conducted by GHD and a Site Management Plan was subsequently developed in 2013 for the expansion of the compensation basin. The investigation identified issues of leachable metals, PAH and TPH fractions, and asbestos (see section 3.2.4).

North of the Ascot Waters Compensation Basin is a second compensation basin servicing the Ascot Water development, the Northern Drainage Lake. The Northern Drainage Lake has experienced water quality issues in the past with two fish kill incidents occurring during July and September 2012. The first incident involved approximately 300 fish deaths and the latter 100-150 fish deaths. No incidents have occurred since 2012. No water quality monitoring was undertaken by the City (pers. comm. Nicole Davey – City of Belmont coordinator-environment, 1 August 2016). However, investigations were undertaken by the Swan River Trust in 2012 in response to the fish kills. Water quality testing indicated low concentrations of algae, and higher concentrations of organic matter resulting in oxygen-depleted water. In addition, it was identified that fish often become trapped in backwaters such as this lake. It was concluded

## Golden Gateway local structure plan – Environmental Report

that a combination of the above factors resulted in the fish kill incidents (pers. comms. Swan River Trust: Rivers Systems Branch, 23 August 2016).

A portion of the site is located within the Swan River Trust Development Control area (Figure 6). Land use planning and development within the Development Control Area is subject to approval of the Department of Biodiversity, Conservation and Attractions under Part 5 of the [Swan and Canning Rivers Management Act 2006](#) and the [Swan and Canning Rivers Management Regulations 2007](#). This area includes the waterways of the Swan and Canning rivers and the adjoining parks and recreation reserves.

All development plans and applications for this area should be referred to Parks and Wildlife for advice in accordance with Clause 30A of the Metropolitan Region Scheme.

### 3.4.3 Groundwater resources

The study area is within the Perth groundwater area and City of Belmont sub-area. The Department of Water and Environmental Regulation's Water Register shows no available allocation within the study area, as shown in Table 4.

**Table 4: Groundwater resource allocation and availability (as of January 2016)**

Management Area	Management Sub Area	Resource	Allocation Limit	Allocated Volume	Remaining Volume
Perth	City of Belmont	Perth - Superficial Swan	1,497,000	2,243,830	-746,830

The City of Belmont currently has a groundwater licence allocation of 1,171,200 kL (licence no. 157042) located south-west of the study area along the Swan River.

It can be inferred from the groundwater levels in the Department of Water and Environmental Regulation's Perth Ground Water Atlas that maximum groundwater levels are within 3 m of the natural surface through the northern and central portions of the study area, with groundwater flowing in a north-westerly direction toward the Swan River.

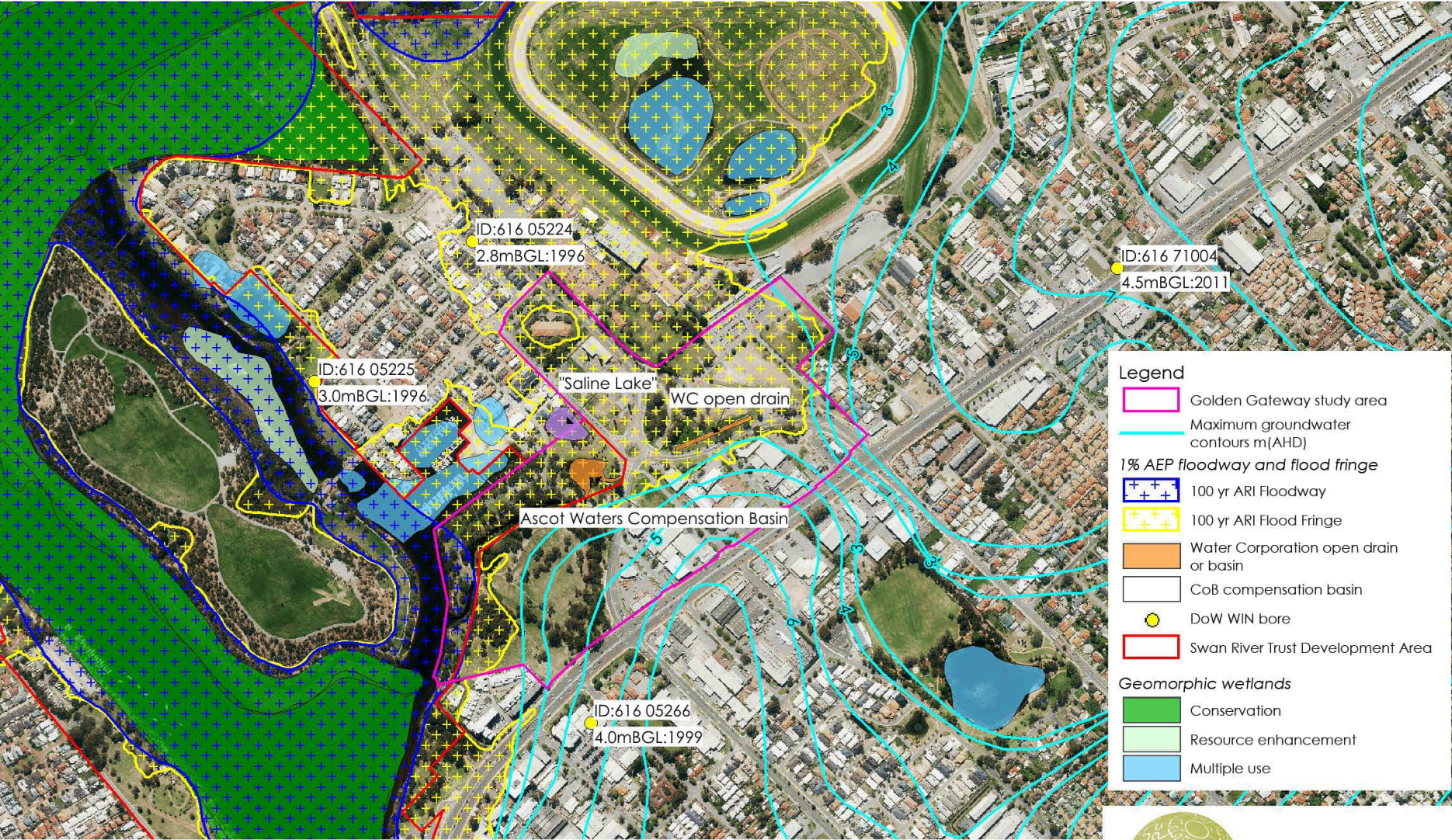
A search of the Department of Water and Environmental Regulation Water Information Network (WIN) bores showed a few bores located within the vicinity of the study area; however, none of the bores have current monitoring data. The most recently sampled bore was in 2011 (ID: 616 71004) situated 500 m east and hydrologically upstream of the study area showing a groundwater level 4.5 m below ground level (BGL). Consideration of this information together with that of another bore closer to the study area (ID: 616 05266), which has last recorded data from 1999 of 4 m BGL, indicates that the groundwater level may be lower than the mapped groundwater atlas level. Two other bores located north of the study area (ID: 616 05225 and ID: 616 05224), which have data from 1996 record groundwater at approximately 3 m BGL. These bores are part of the Ascot Waters development, which topographically sits approximately 2 m higher than the northern section of the study area and has been built-up for the purposes of the development. Therefore, it is reasonable to conclude that the groundwater level of these bores is less likely to be representative of the groundwater level within the study area than the surrounding locations.

It is noted that water resources and urban water management will be specifically addressed by the local water management strategy, which is being prepared to support the structure plan.





City of Belmont: Golden Gateway - Desktop environmental report  
Figure 6: Water resources



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### 3.5 Heritage

#### 3.5.1 Aboriginal heritage

A search of the Department of Planning, Lands and Heritage aboriginal heritage enquiry system showed one site overlaying the study area (Figure 7):

- Site ID 3753 – Registered site, Name: Perth, Type: Historical, mythological, hunting place, named place, natural feature.

One other site is adjacent to the study area, however not within the boundary, site ID 3536 - Registered site, Name: Swan River, Type: mythological.

#### 3.5.2 European heritage

The Bristle Kilns are beehive and tunnel kilns, with associated chimney and floor ducts, located at 197 Grandstand Rd Ascot. The Kilns were first built in 1930, manufacturing terracotta, stoneware and steel products. Production ceased in 1982 (Heritage Council, 2012). The Kilns and chimneys remain and were placed on the State Heritage List in 2003. The Bristle Kilns are a visually striking feature of the area and are viewed as an asset for restoration by the community (Strutt, 2015).





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Data source: DAA, Heritage Council, Landgate. Created by: RM. Projection: MGA: zone 50.

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## 4 FINDINGS AND RECOMMENDATIONS

The following section presents findings of the desktop environmental assessment of the study area. It highlights a number of environmental issues, which should be considered as part of the preparation of the local structure plan and future development of the site. These relate primarily to:

- A portion of the site being within the Swan River Trust Development Control Area;
- Proximity to the Swan River and potential for offsite impacts on values;
- Bushfire risk;
- Contamination and water quality management in the compensating basins; and
- Soils and acid sulfate soils.

Key recommendations to address these issues are provided below.

### 4.1 Soils and topography

The north-western portion, approximately two-thirds of the largely undeveloped area, is classified as Sandy Silt (Ms2), which has a low permeability and will need to be considered with regards to runoff and stormwater disposal.

In order to reduce the potential for erosion and sediment transport to drains and the River, ground disturbing activities should be kept to a minimum and carried out 'as required' (in stages) immediately prior to lots being released for sale as part of a 'staged' development of the site. Where land is cleared, the area should be stabilised (e.g. through landscaping/stabilising materials/dust suppression) as soon as possible.

### 4.2 Acid Sulfate Soils

Approximately two-thirds of the study area is mapped as being High to Moderate ASS Risk (<3 m from the surface). The WAPC *Acid Sulfate Soils Planning Guidelines* (WAPC, 2008) indicates that "acid sulphate soils are technically manageable in the majority of cases".

It is recommended that a self-assessment checklist is completed for the study area. ASS Investigation and, if required, Management Plans should be prepared at subdivision stage once the detailed design of the site is finalised. This should be undertaken in accordance with the Acid Sulphate Soils Guideline Series: *Identification and Investigation of Acid Sulphate Soils and Acidic Landscapes* (DER, 2015a) and *Treatment and Management of Soils and Water in Acid Sulphate Soil Landscapes* (DER, 2015b).

### 4.3 Surrounding land use and buffer requirements

The Swan River is the most important environmental attribute in proximity to the study area. Protection of the environmental values associated with the River requires consideration of compatible adjacent land uses that limit impacts. The provision of a 50 m buffer to the banks of the Swan River consistent with its designation as an environmentally protected area and conservation category wetland is generally applied.

Any proposal within the Swan River Trust Development Control Area that is likely to impact on the water quality and/or values of the Swan River should be referred to the Department of Biodiversity, Conservation and Attractions. It is recommended that consultation occur with the

Department of Biodiversity, Conservation and Attractions, Rivers and Estuaries Branch as part of the preparation of the local structure plan.

#### 4.4 Vegetation and flora

The vegetation on the site is degraded and the site does not contain any areas with an intact understorey. No Declared Rare Flora are likely to be on the site and no priority species are likely to be present. It is recommended that no further vegetation assessment of the site is required and therefore, protected flora is not an impediment to the development of the area.

It is recommended that, as part of the detailed design process, any trees that can be retained in street verges, landscaped areas, parking areas and in road/entry areas should be identified and included in the detailed design plans for the area. Mature trees to be retained must be identified and clearly marked prior to commencement of any pre-construction activities.

#### 4.5 Fauna and habitat

Due to historic clearing, urbanisation activities, and lack of native remnant vegetation across the majority of the study area, particularly the understorey, any fauna habitat is considered of low value to native fauna. This is with the exception of the portion of the study area that abuts the Swan River, where the foreshore area may provide important habitat for local and migratory birds.

To minimise impacts to fauna resulting from any clearing activities, the following management strategies are proposed:

- During construction, the extent of authorised clearing will be clearly defined and demarcated to avoid accidental clearing;
- Loud noises (e.g. air horns) will be made just prior to commencement of clearing;
- Clearing works will occur in the direction of a conservation area where possible, to allow animals time to escape;
- If any injured or distressed fauna are encountered during site works the Site Supervisor will be instructed to immediately call the Department of Biodiversity, Conservation and Attractions' Wildcare Hotline (08) 9474 9055, to allow for the closest appropriate registered wildlife rehabilitator to attend the site; and
- Where possible, local native species will be planted along road verges and median strips in and near conservation areas and strategic ecological linkages to enhance the value of the linkage to fauna.

#### 4.6 Flood protection, groundwater and water quality management

As the development is partly within the Swan River Trust Development Control Area, planning and development should consider Department of Biodiversity, Conservation and Attractions' *Corporate policy statement no. 42: Planning for land use, development and permitting affecting the Swan Canning Development Control Area* (June 2016) and other relevant policies. Development may be subject to a Part 5; Clause 30A(2)a or Clause 30A(2)b application process.

A portion of the study area is also within the 100 year ARI flood fringe. Any development in the flood fringe should not impact on the risk of upstream flooding.



Limited assessment of groundwater levels has been undertaken at this stage. As shown on Figure 6, the maximum groundwater contours from the Department of Water and Environmental Regulation's Perth Groundwater Atlas (2004) only extends to the southern portion of the study area and local groundwater bores have limited information. It is recommended to further investigate groundwater levels.

Surface water and groundwater management will be described in the Local Water Management Strategy and any future Urban Water Management Plans that will be prepared for each stage of development. Therefore, potential impacts on surface water and groundwater can be mitigated and managed in order to achieve the objectives of *State Planning Policy 2.9: Water Resources* (WAPC, 2006).

A Local Water Management Strategy is being prepared in accordance with *Better Urban Water Management* (WAPC, 2008) to address the following:

- Identification of the site's current hydrological regime and existing environment;
- Identification of the constraints within the development area which may affect the design of the development with respect to urban stormwater drainage and management of groundwater;
- A description of the stormwater management strategy for minor and major events, including details on the proposed management practices to be employed;
- Identification and description of mechanisms to protect the water regime, including water quality and water levels. This will include a discussion of the overarching engineering principles that will be employed to mitigate any impact from run-off, groundwater and water quality issues, and ensure that the environment and the development will not be adversely impacted upon;
- Identification of the proposed water supply (including irrigation requirements) and wastewater disposal;
- Identification of monitoring requirements and derivation of agreed performance criteria for the urban water management system; and
- Identification of contingency measures to be implemented in the event that the system is not achieving agreed performance targets.

#### 4.7 Heritage

A buffer area of a site of Aboriginal heritage has been identified to cross the boundary of the study area. All contractors working on the development will need to be made aware of their responsibilities under the *Aboriginal Heritage Act 1972* with regard to finding potential archaeological sites. In the event that a site is discovered, all work in the area will cease and the Department of Planning, Lands and Heritage will be contacted.

The Bristle Kilns are on the State Heritage list and future land use planning will need to take this into consideration.

#### 4.8 Construction impacts

Construction activities need to be managed to minimise the impact to nearby Swan River, surrounding residents and the retained vegetation on-site. Impacts can include:

- Nuisance dust generation during bulk earthworks;
- Disturbance of ASS during earthworks and/or installation of services;

- Silt and sediment runoff to waterways and drains from uncontrolled runoff during site works;
- Inadvertent damage to trees and other vegetation earmarked for retention;
- Impacts to new stormwater drainage systems and existing environmentally sensitive areas from wind- and water-borne sediment during construction; and
- Inappropriate disposal of waste building material and poor housekeeping on building sites leading to wind-blown litter.

All of these potential impacts are manageable through appropriate engineering design and/or good site management practices.

#### 4.9 Conclusion, constraints and opportunities

Several significant environmental constraints to the proposed development have been identified as follows:

- risks associated with urban stormwater runoff to the Swan River (sections 3 and 4);
- contamination risks associated with Ascot Water Compensation Basin, which will need to be considered if future work on the basin is to be undertaken (section 3.2.4);
- contamination risks associated with the Northern Drainage Lake, which may need to be considered because of previous fish kills in the lake (section 3.4.2); and
- the associated bushfire risk of the north-western portion of the study area, which will need to consider the requirements of *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) (2015) (section 3).

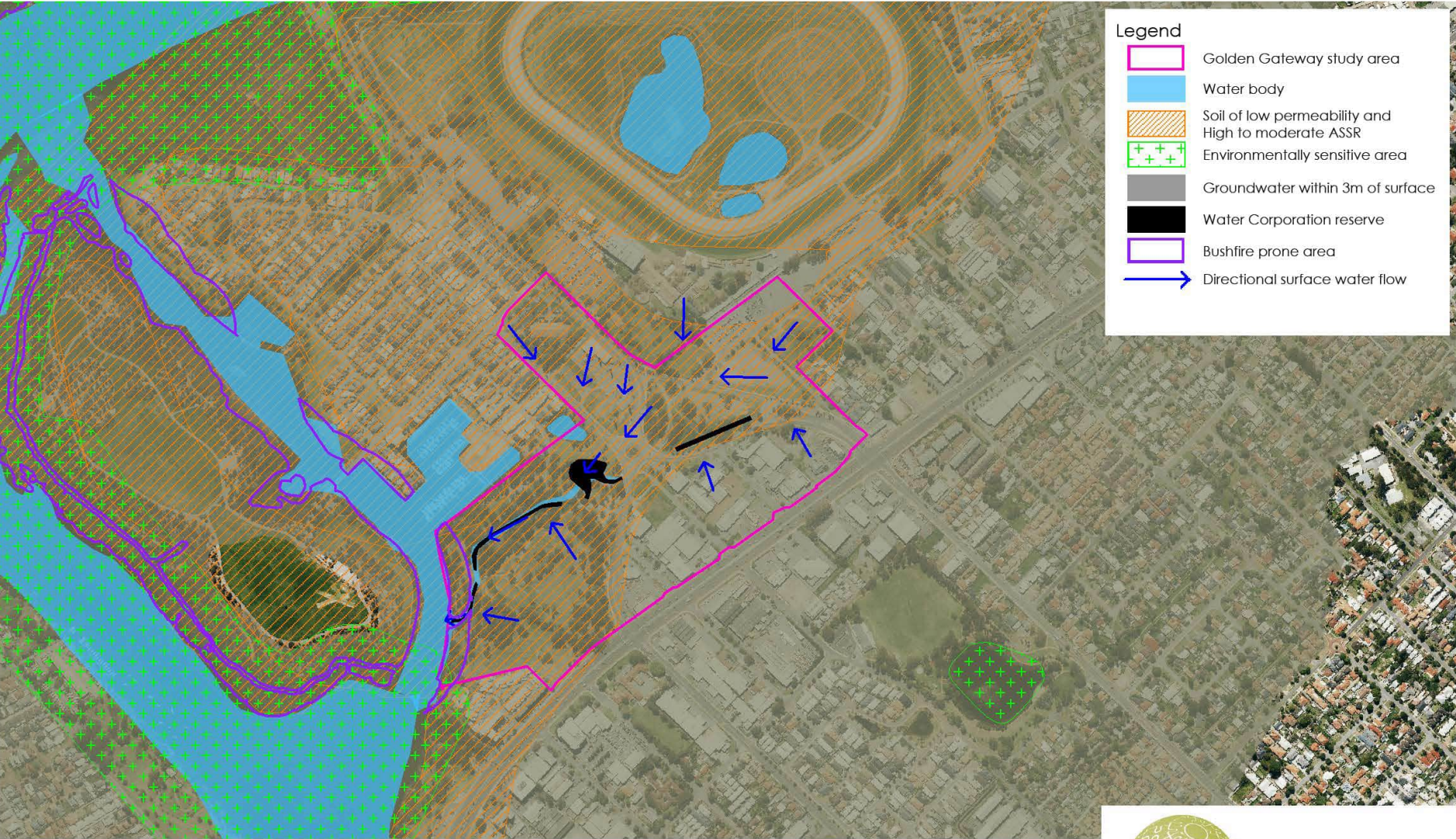
Two figures have been developed to show the environmental constraints (Figure 8) and environmental opportunities (Figure 9). As summarised above, the environmental constraints include soil of low permeability and ASS risk to the majority of the study area. Further to this, the geology of the site may have created a perched groundwater table, and in conjunction with the close proximity of the study area to the receiving water body, groundwater levels are inferred to be close to the surface. The topography of the study area generally directs surface water flows toward the centre and south-westerly toward the Swan River, an environmentally sensitive area and conservation category wetland.

Although the Swan River is identified as an environmental constraint due to its protection requirements, the opportunities the River provides to the study area are of exceptional significance. The Swan River has long been valued for its social, recreational and visual amenity and would provide a substantial opportunity for increased land value. This can also be said for the mature trees within the study area, which provide visual amenity and urban heat island mitigation. Furthermore, deep rooted trees help maintain hydraulic control of the groundwater table by reducing recharge and using groundwater via transpiration, and promote soil stability and erosion control, especially at the river banks and at any other points where a water body receives inundation. The compensation basins identified in Figure 9 are also an opportunity for rehabilitation for improved visual amenity, flora and fauna habitat and upstream pre-treatment of surface and/or groundwater before discharge to the Swan River.



City of Belmont: Golden Gateway - Desktop environmental report  
Figure 8: Environmental constraints

A350



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## 5 IMPLEMENTATION STRATEGY

Table 5 provides a preliminary schedule of activities, which should be undertaken at Preconstruction, Construction and Post-construction phases of the project to mitigate and manage potential impacts to the environment. This advice is based on the current predominantly desktop assessment contained within this report. More detailed management measures should be determined as part of more detailed investigation and planning as the proposed development progresses.

**Table 5: Implementation strategy**

Issue	Action	Frequency	Responsibility
<b>Preconstruction phase</b>			
Contamination	Complete preliminary site investigation for contamination in accordance with Contaminated Sites Act 2003 should areas of known contamination be disturbed.	Once	Developer
Acid sulfate soils	Complete self-assessment checklist and consider need for a preliminary site assessment.	Once	Developer - Consistent with DPLH and DWER guidelines
Vegetation and flora	Clearly delineate POS areas and trees to be retained.	Once	Licensed Surveyor (Developer)
Fauna and habitat	All site staff to participate in Environment, Health and Safety inductions, which provide requirements for management of significant fauna and reporting procedures for environmental incidents.	Once	Developer and Construction contractor
Water management	Refer the local structure plan to the Department of Biodiversity, Conservation and Attractions as it contains a portion of land within and abutting the Swan River Trust Development Control Area.  A Local water management strategy will be completed and used as the basis for detailed design.  Following approval of the LWMS, UWMP(s) will be prepared prior to subdivision for approval by City of Belmont.	Once	Developer/City of Belmont  Developer, in accordance with SPP 2.9: Water Resources
Bushfire	A Bushfire Management Plan will be prepared to support the LSP.  The Bushfire Management Plan will be revised and implemented at subdivision.	Once	Developer, in accordance with SPP 3.7: Planning in Bushfire Prone Areas

## Golden Gateway local structure plan – Environmental Report

Issue	Action	Frequency	Responsibility
<b>Construction phase</b>			
Soils and topography	Ground disturbing activities should be kept to a minimum and carried out 'as required' (in stages) immediately prior to lots being released for sale as part of a 'staged' development of the site.	Ongoing during construction phase.	Construction Contractor (Developer)
Contamination	Management of any identified contamination in accordance with the Contaminated Sites Act 2003.	Ongoing during construction phase.	Construction Contractor (Developer)
Acid sulfate soils	Management of any identified ASS consistent with DPLH and DWER guidelines.	Ongoing during construction phase.	Construction Contractor (Developer)
Vegetation and flora	Maintain markings and fencing around vegetation and trees to be retained. Cleared vegetation to be mulched and stored on site.	Ongoing during construction phase.	Construction Contractor (Developer)
Fauna and habitat	Undertake clearing in the direction of the river to allow fauna to escape.	Ongoing during construction phase.	Construction Contractor (Developer)
Water management	Manage sediment transport to waterways and drainage systems consistent with the LWMS.	Ongoing during construction phase.	Construction Contractor (Developer)
Aboriginal heritage	In the event a site is discovered, all work in the area will cease and the Department of Planning, Lands and Heritage will be contacted.	Ongoing during construction phase.	Construction Contractor (Developer)
Construction impacts	Ensure dust and sediment runoff is adequately managed. Ensure appropriate waste disposal of building materials.	Ongoing during construction phase.	Construction Contractor (Developer)
<b>Post construction phase</b>			
Soils and topography	Landscape or stabilise cleared areas immediately.	Once	Construction Contractor (Developer)
Vegetation and flora	Inspect fencing (if applicable) and replace if required.	6 months	Developer until hand over to City of Belmont
	Ensure ongoing maintenance of retained vegetation and any revegetation areas / native landscaping prior to handover.	Ongoing until handover.	

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**Client: City of Belmont**

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				Copies	Date
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Draft – amendments to study area	V2	RM	SSh	Electronic	31 August 2016
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Amended Final	V4	SSh	HBr	Electronic	21 May 2018
Final Amendments	V5	SSh	HBr	Electronic	25 June 2018

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## Golden Gateway Local Structure Plan Movement and Access Strategy

### FINAL REPORT

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PROJECT	81113-581-FLYT-REP-0005 Modelling and Amendments to Golden Gateway LSP Movement and Access Strategy			
Revision	Description	Originator	Review	Date
0	Draft	CXS	MDR	24/11/2022
1	Issue	CXS	MDR	20/12/2022
2	Revised Structure Plan	CXS	MDR	1/07/2024
3	Addressed City of Belmont comments	CXS	MDR	2/08/2024



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## EXECUTIVE SUMMARY

This Movement and Access Strategy has been prepared by Flyt in support of a Local Structure Plan (LSP) which has been prepared for the Golden Gateway Precinct in the City of Belmont.

The Golden Gateway Precinct is bounded by Ascot Racecourse to the north/northeast, Hardey Road to the east, Great Eastern Highway to the south, Swan River to the west and Ascot Waters residential estate to the west/northwest. The Local Structure Plan boundary includes Ascot Kilns and the Belmont Trust land and a portion of the Perth Racing landholdings.



Perth Racing commissioned PJA to prepare a Traffic Impact Assessment to support the Ascot Racecourse Local Structure Plan. Output from that report (including land uses, road network and forecast traffic volumes) has been used to inform this Movement and Access Strategy.

The Golden Gateway Precinct Movement Network retains the road alignment in its existing configuration apart from Daly Street which will become a cul-de-sac. The remainder of Daly Street will be identified as Public Open Space (POS).



### Role and Performance of Key Roads

#### Great Eastern Highway

Great Eastern Highway will remain in its current form. No changes are proposed to the existing road connections with Great Eastern Highway nor the forms of intersections between Great Eastern Highway and connecting roads.

#### Stoneham Street

Stoneham Street will be the primary interface between the Golden Gateway precinct and the Swan River. Stoneham Street will continue to be a major district road corridor and provide for high capacity traffic movements. Stoneham Street will be retained as a four lane divided road (two lanes in each direction).

The intersection of Stoneham Street with Resolution Drive and Grandstand Road will remain as a two-lane roundabout. The intersection of Stoneham Street with Hargreaves Street will remain in its current configuration and there will be no intersection with Daly Street as it will become a cul-de-sac.

#### Resolution Drive

Resolution Drive will remain on its existing alignment. The form of Resolution Drive as a two lane divided road (one lane in each direction) will be retained, however additional lanes will develop on the approach and exit from the Great Eastern Highway intersection, as per the existing lane arrangement.

#### Grandstand Road (north)

Grandstand Road (north) will remain in its current alignment and configuration as a four lane divided road (with two lanes in each direction). The roundabout controlled intersection with Stoneham Street and Resolution Drive will remain.

#### Hargreaves Street

Hargreaves Street will continue along its existing alignment providing a connection between Great Eastern Highway (permitting left in left out movements only) and Stoneham Street. The intersection with Stoneham Street will remain.





Hargreaves Street is proposed as a two-lane road with on-street parking where appropriate. Its current width of 12.5m should be reduced to 7m, with embayed parking.

### Daly Street

Daly Street will continue along its existing alignment however it will become a cul-de-sac south of Stoneham Street, with the remainder of Daly Street to be identified as Public Open Space. The intersection with Great Eastern Highway (permitting left in left out movements only) will remain.

Daly Street is proposed as a two-lane road with on-street parking where appropriate. Daly Street's current width is 8m; this could be reduced to 7m. On-street parking would need to be embayed. Daly Street has been identified as a secondary route under the Long Term Cycle Network, which could take the form of a shared path, protected bike path or safe active street. The bike path should continue through the public open space.

### Grandstand Road (south)

Grandstand Road will continue along its existing alignment providing a connection between Great Eastern Highway (permitting left in left out movements only) and Resolution Drive where it has a full movement intersection.

Grandstand Road is proposed as a two-lane road with on-street parking where appropriate. It is currently 12.5m wide and should be reduced to 7m, with embayed parking.

### Memorial Drive

Memorial Drive and its intersection with Stoneham Street will remain unchanged.

## Road Network Performance

SIDRA modelling of the existing road network under existing traffic volumes demonstrates that the signalised intersections along the Great Eastern Highway corridor are congested in each of the peak hours. While Great Eastern Highway currently operates at a level of service C and D, the side roads, particularly Stoneham Street, Belgravia Street, and Hardey Road currently operate at a level of service E or F in the peak periods. The Resolution Drive approach currently operates at a level of service D. The side roads experience congestion as more than half of the traffic signal green time is allocated to Great Eastern Highway. This congestion is expected to continue as traffic volumes increase.

The SIDRA Network modelling for the road network demonstrates that the level of congestion in 2021 and 2031 is generally consistent with the congestion predicted for the 2021 and 2031 existing road network scenarios. The internal roads are predicted to operate well within their capacity.

Similarly, the SIDRA Network modelling for build out of the Golden Gateway precinct demonstrates that the level of congestion along Great Eastern Highway in 2041 is consistent with the congestion predicted for the 2041 existing road network scenarios. Congestion along the Resolution Drive approach to Great Eastern Highway is predicted to increase in the AM peak period, while congestion along the Stoneham Street approach to Great Eastern Highway will increase in the PM peak period. Internal roads and intersections are predicted to operate within their capacity.

To understand how the road network performs under an Ascot event, the existing road network was evaluated using 2021 traffic volumes plus Melbourne Cup event traffic. The proposed road network was tested using 2021 traffic volumes plus Melbourne Cup event traffic, 2031 traffic volumes with development traffic plus Melbourne Cup event traffic and 2041 traffic volumes with development traffic plus Melbourne Cup event traffic.

The addition of Ascot event traffic to this busy PM peak increases the congestion in this period. Traffic exiting an event at Ascot is predicted to cause local congestion where this traffic joins the external road network, at the intersection of Raconteur Drive and Resolution Drive.





## 1. INTRODUCTION

### 1.1 Movement and Access Strategy

This Movement and Access Strategy has been prepared by Flyt in support of a Local Structure Plan (LSP) which has been prepared for the Golden Gateway Precinct in the City of Belmont.

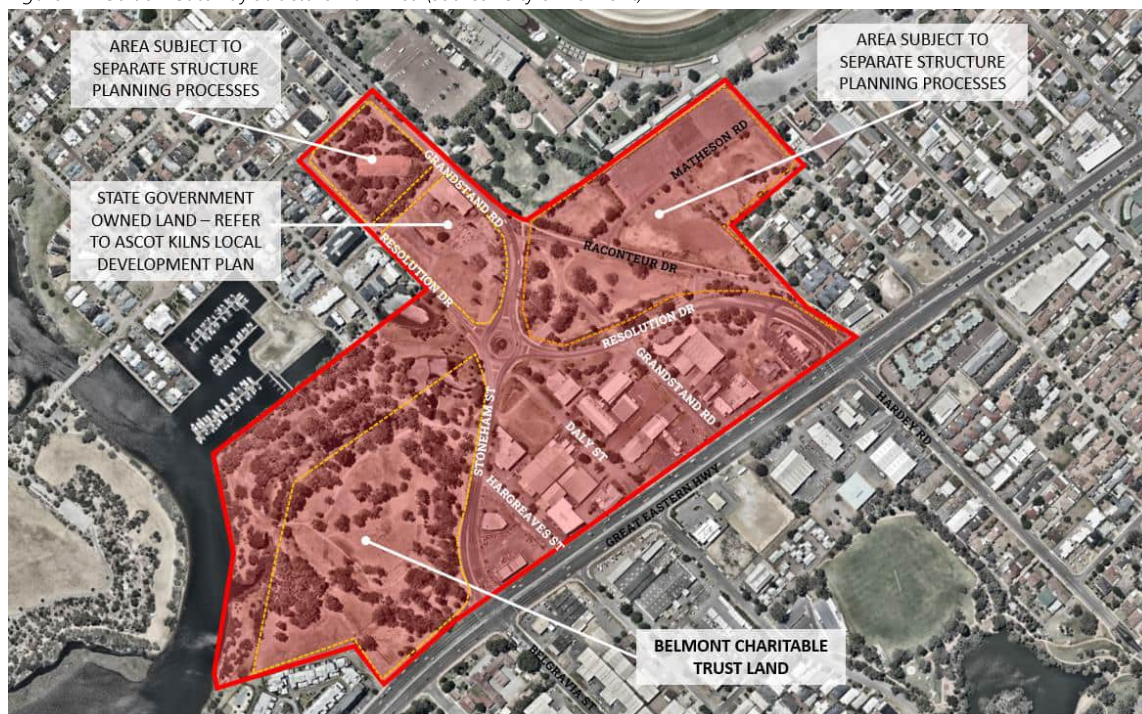
This Strategy has been prepared using the requirements set out within the Western Australian Planning Commission (WAPC) Transport Impact Assessment Guidelines (August 2016) Volume 2 – Planning Schemes, Structure Plans and Activity Centre Plans.

The Local Structure Plan boundary includes the Belmont Trust land, Ascot Kilns and a portion of the Perth Racing landholdings. Ascot Kilns and the Perth Racing landholdings are subject to separate planning processes. Future traffic associated with redevelopment of the Perth Racing landholdings (as documented by PJA in their May 2024 Traffic Impact Assessment to support the Ascot Racecourse Local Structure Plan) has been considered in this Movement and Access Strategy.

### 1.2 Structure Plan

The Golden Gateway Precinct is located within the City of Belmont and the Local Structure Plan area is bounded by Ascot Racecourse to the north/northeast, Hardey Road to the east, Great Eastern Highway to the south, Swan River to the west and Ascot Waters residential estate to the west/northwest. The Local Structure Plan boundary is shown in Figure 1 and includes Ascot Kilns, Belmont Trust land and a portion of the Perth Racing landholdings. The Golden Gateway Structure Plan doesn't include controls for land subject to separate planning processes. This Movement and Access Strategy has made a distinction between the structure plan area and the subject land area.

Figure 1 – Golden Gateway Structure Plan Area (source: City of Belmont)



The draft Local Structure Plan is shown in Figure 2, with the proposed land uses outlined in Table 1.

Figure 2 – Golden Gateway Structure Plan (source: City of Belmont)

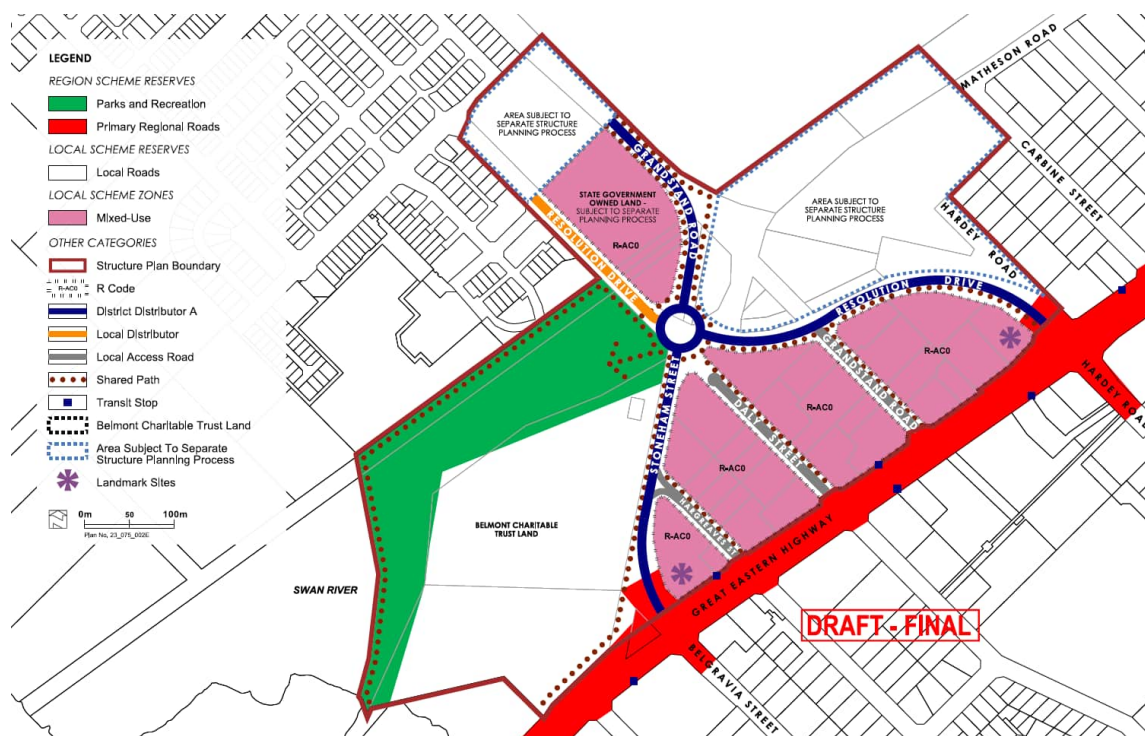


Table 1 – Proposed Structure Plan Land Uses

Land Use	Yield
Residential - Multiple dwelling	2,268 dwellings
Non Residential - Commercial	6,979 m <sup>2</sup> NLA
No Residential - Retail	1,200 m <sup>2</sup> NLA

This Structure Plan shall apply to the Golden Gateway Precinct, being the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan map. The provisions of this Structure Plan apply to all land within this area, except for land designated as subject to a separate planning process.

### 1.3 Key Issues

The issues examined within this Movement and Access Strategy are:

- The impact of the Structure Plan on the local transport network based on the requirements set out in the Western Australian Planning Commission (WAPC) Transport Impact Assessment Guidelines (August 2016) Volume 2 – Planning Schemes, Structure Plans and Activity Centre Plans.
- Addressing issues set out within the Structure Plan report and the form of development of the site; and
- Consideration of the impact of development based on existing and future transport networks in the Golden Gateway locality.

### 1.4 Background Information

In 2008, the Golden Gateway precinct was identified as a key strategic area due to its prominent position on Great Eastern Highway at the north-western 'gateway' to the City of Belmont. It was recognised this location had significant potential for high quality mixed commercial and residential development.

The precinct is impacted by access constraints and land fragmentation, making it apparent that coordinated planning was required. The draft Golden Gateway Local Structure Plan was therefore prepared to coordinate the future subdivision, zoning, and development of the area.

The draft Golden Gateway LSP was considered by the Belmont Council at an Ordinary Council Meeting held on June 23<sup>rd</sup>, 2020. In response to submissions received, Council resolved to require several modifications to the LSP, including to the road network.

### 1.5 Report Structure

This Movement and Access Strategy has been structured to conform to the requirements of the WAPC Transport Impact Assessment Guidelines for the assessment of Structure Plan proposals. This introduction section forms the first of nine sections in this Movement and Access Strategy. The remaining sections cover:

- Structure Plan Outline
- Existing Transport Environment.
- Movement Network
- Analysis of Transport Network
- Conclusions

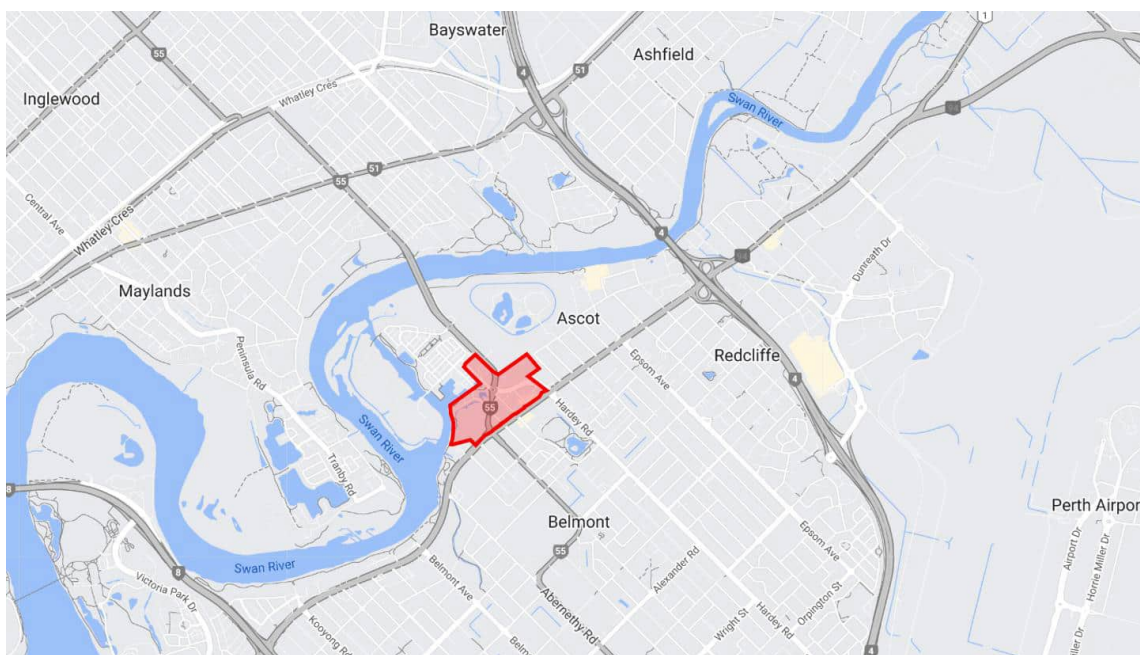


## 2. STRUCTURE PLAN OUTLINE

### 2.1 Regional Context

The Golden Gateway Precinct is located within the City of Belmont and the Local Structure Plan area is bounded by Ascot Racecourse to the north/northeast, Hardey Road to the east, Great Eastern Highway to the south, Swan River to the west and Ascot Waters residential estate to the west/northwest. The Local Structure Plan boundary is shown in Figure 3. The LSP site includes the Belmont Trust Land, which currently consists of open parkland with a foreshore along the Swan River and includes the Ascot Kilns Local Development Plan (LDP) area.

Figure 3 – Golden Gateway LSP Area Regional Context (source: Google Maps)



The site is located approximately 8km to the east of the Perth CBD, along the southern foreshore of the Swan River. It is 4km from Perth Airport Domestic Terminal (Qantas), 9km from Perth International/Domestic Terminals and 3.5km from Belmont Forum Shopping Centre.

The movement network surrounding the site features key regional road connections, a high frequency public transport corridor and high-quality shared path pedestrian and cycling links.

The site benefits from good access to the regional road network, with Great Eastern Highway along the southern boundary of the site. To the west Great Eastern Highway provides access to the Perth CBD and onto South Perth, Melville, and Fremantle via Canning Highway. To the east Great Eastern Highway provides access to Perth Airport and onto Guildford, Midland, and the Swan Valley. The site is close to the Garratt Road bridge crossing of the Swan River (approximately 1km north of the site), which provides access to Bayswater, Maylands, Mount Lawley, and suburbs north of Perth CBD.

Ascot Racecourse is located immediately to the northeast of the site. The racecourse is regarded as Perth's premier racecourse and holds several featured Group Race meetings annually. These race meetings attract crowds of varying sizes and on key race days such as the Melbourne Cup and Perth Cup, vehicle access to and from the racecourse can cause local congestion.



Existing shared path cycling connections run through the LSP site alongside Stoneham Street, Raconteur Drive and Grandstand Road. Both shared paths and local bicycle friendly routes run through the Ascot Waters development to the north of the LSP site. The site is located close to regional cycling connections with the Graham Farmer Freeway Principal Shared Path (PSP) easily accessed via the shared path along the southern side of the Swan River.

Existing bus routes operate close to or through the LSP site. These include the Circle Route (via Resolution Drive and Grandstand Road) providing connections north to destinations including Bayswater Station, Morley Bus Station/Shopping Centre and south to destinations including Belmont Forum Shopping Centre, Oats Street Station, and Curtin University. In addition, existing bus routes operate along Great Eastern Highway providing connections east to destinations including Redcliffe Station and High Wycombe Station and to the west to destinations including the Victoria Park Transfer Station and Elizabeth Quay Bus Station.

## 2.2 Proposed Land Uses

The Golden Gateway LSP is comprised of three overarching land uses, residential dwellings, commercial space, and retail space. It is proposed that the three land uses will primarily be provided in mixed-use development sites across the Golden Gateway LSP area. The split of the three land uses is shown in Table 2.

Table 2 - Proposed Structure Plan Land Uses

Land Use	Yield
Residential - Multiple dwelling	2,268 dwellings
Non Residential - Commercial	6,979 m <sup>2</sup> NLA
No Residential - Retail	1,200 m <sup>2</sup> NLA

As noted in the Structure Plan Report, the LSP has been formulated around the following vision:

*"The development of the Golden Gateway will transform this degraded and fragmented area into a vibrant precinct of residential and mixed use development, with strengthened connections to the Swan River and Ascot Waters, with uses, density and built form that derive best value from these attributes while respecting the area's rich culture and heritage."*

The overarching objectives for the Golden Gateway Precinct as established by the project team and reinforced through stakeholder engagement include:

- Improve self-containment of facilities – reduce car dependence;
- Improve people's connection to the Swan River;
- Create accessible, quality public realm within the precinct; and
- Identify appropriate uses/densities in conjunction with infrastructure improvements.

To achieve the above objectives, the project team identified several opportunities that the Golden Gateway precinct presents, they include:

- Land use:
  - Opportunity for residential development to be accommodated in the precinct given the accessibility to high quality riverside amenity;
  - Opportunity for retail convenience and food and beverage land uses to be integrated into development outcomes;
  - Potential for higher density development given precinct location, proximity to high amenity open space destinations, Perth central business district, localised employment, and high frequency public transport;



- An existing primary school adjacent the precinct offers opportunity for family friendly dwelling diversity; and
- Opportunities to consider mixed use land use for development in core area to broaden activity opportunities and long term transition of the precinct.
- Movement:
  - Opportunity to utilise existing local street network of Hargreaves Street, Daly Street and Grandstand Road (south) to deliver a robust structure for future development access and vehicle circulation; and
  - Generous existing road reserve dimensions provide ability for reconfigured pedestrian friendly streetscapes offering shade trees, soft landscaping, and convenient on-street parking embayments;



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### 3. EXISTING TRANSPORT ENVIRONMENT

#### 3.1 Existing Land Uses

The Golden Gateway Precinct is bounded by Ascot Racecourse to the north/northeast, Hardey Road and Carbine Street to the east, Great Eastern Highway to the south, Swan River to the west and Ascot Waters residential estate to the west/northwest, as shown in Figure 4.

Figure 4 – Golden Gateway LSP Area in Context to Surrounding Development (source: Google Maps)



The developed section of the site, between Great Eastern Highway, Stoneham Street and Resolution Drive, consists of a range of light industrial and commercial units, and various fast-food outlets and service stations fronting Great Eastern Highway. Other areas of the precinct generally consist of undeveloped land.

The Ascot Kilns area between Resolution Drive and Grandstand Road is subject to a separate Local Development Plan (LDP) process, however traffic generated from the proposed Ascot Kilns LDP area has been considered within this assessment.

#### 3.2 Pedestrian Network

The extent and quality of the existing pedestrian infrastructure within and surrounding the Golden Gateway precinct is of a standard commensurate with the extent of existing development and form of land uses across the site, i.e., there are several existing undeveloped lots and those that are developed primarily accommodate light industrial/commercial unit style development. The existing local pedestrian infrastructure can be summarised as follows for the major road network and minor road network.

### 3.2.1 Pedestrian Infrastructure along Major Corridors

Great Eastern Highway runs along the southern boundary of the LSP area and is a significant regional road connection within the Perth metropolitan road network. There are 2.5m wide footpaths on both sides of Great Eastern Highway. Within the vicinity of the LSP site, crossing of Great Eastern Highway by pedestrians is facilitated via traffic signal controlled intersections at both Stoneham Street/Belgravia Street and Resolution Drive/Hardey Road intersections with Great Eastern Highway. At both signalised intersections, the protected crossing of Great Eastern Highway is only available on the western approach. Pedestrians wishing to cross Great Eastern Highway from the eastern approaches will have to cross 3 sides of the intersection in order to do so.

Three of the four major road corridors running through the Golden Gateway precinct (Grandstand Road, Raconteur Drive, and Stoneham Street) have footpaths along one side of the street – Grandstand Road along the eastern side of the street adjacent to the Ascot Racecourse, Raconteur Drive along the northern side of the street to connect to Grandstand Road, and Stoneham Street along the western side of the street adjacent to the Belmont Trust Land.

There is a footpath along some sections of Resolution Drive. The section adjacent to the Ascot Waters development has a footpath along the southwestern side, and the section immediately north of Great Eastern Highway has a footpath on each side. Between the roundabout controlled intersection of Stoneham Street, Grandstand Road, and Resolution Drive and 100m north of the signalised intersection with Great Eastern Highway, Resolution Drive has no footpaths on either side.

### 3.2.2 Pedestrian Infrastructure along Minor Road Corridors

The minor roads within the LSP site (Hargreaves Street, Daly Street, and the southern section of Grandstand Road) are located between Great Eastern Highway and Resolution Drive/Stoneham Street and provide access to the light industrial/commercial units in this area of the LSP.

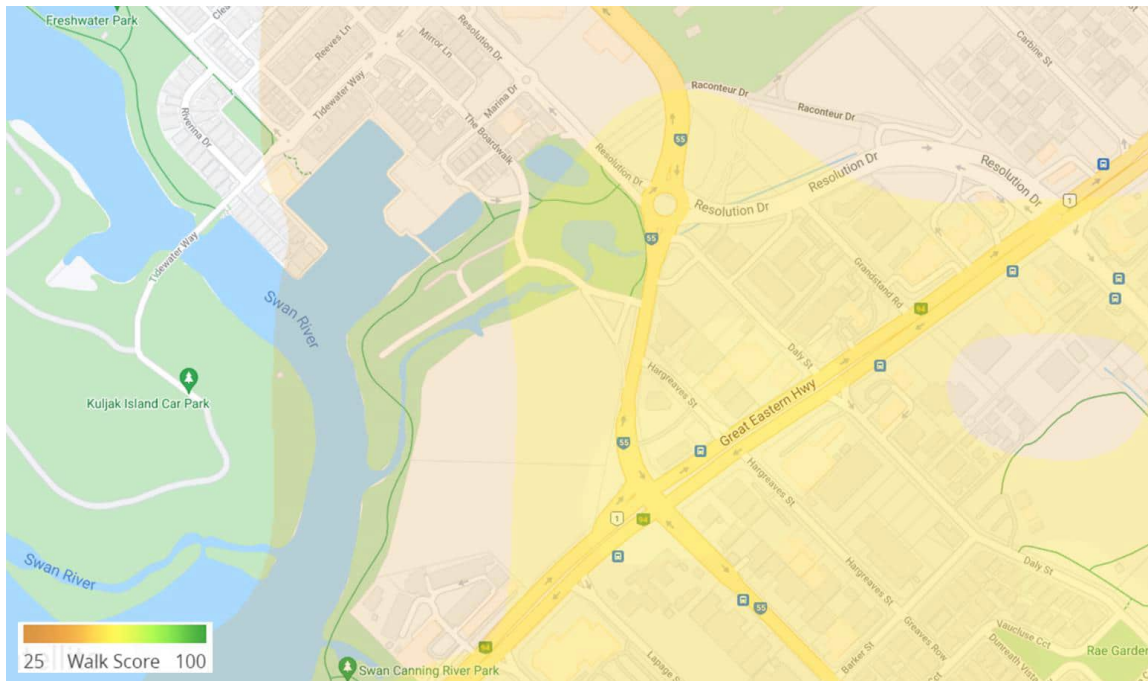
Most of these minor streets do not have footpaths, which reinforces the dominance of the private car. Daly Street is the exception and has a footpath on the eastern side.

### 3.2.3 Pedestrian Accessibility

Walk Score is a commercial product that measures the walkability of a location based on the distance to nearby amenities and pedestrian facilities. The Walk Score walkability assessment tool considers the development site to be “car dependent” where most daily errands require a car, with a walk score ranging between 43-48 out of 100, as shown in Figure 5.



Figure 5 – Walk Score Rating for Golden Gateway LSP Site (source: walkscore.com)



### 3.3 Cycling Network

The extent and quality of the existing cycling infrastructure within and surrounding the Golden Gateway LSP site is of a high standard with local and regional links. The local and regional cycling network is shown in Figure 6.

Good on road cycling routes for experienced and confident cyclists are located along Great Eastern Highway adjacent to the Golden Gateway precinct. High quality shared use paths are located along one side of Stoneham Street, Raconteur Drive, and the northern section of Grandstand Road although there are gaps in the connectivity.

High quality shared use paths are also located along the Swan River Foreshore (via the Belmont Trust Land towards the Graham Farmer Freeway PSP to access Perth City), and along the shoreline within the Ascot Waters development. Some streets within the Ascot Waters development have been identified as local cycle friendly routes.

Figure 6 – Existing Cycling Network in Relation to the Golden Gateway LSP Site (source: DoT / City of Belmont)

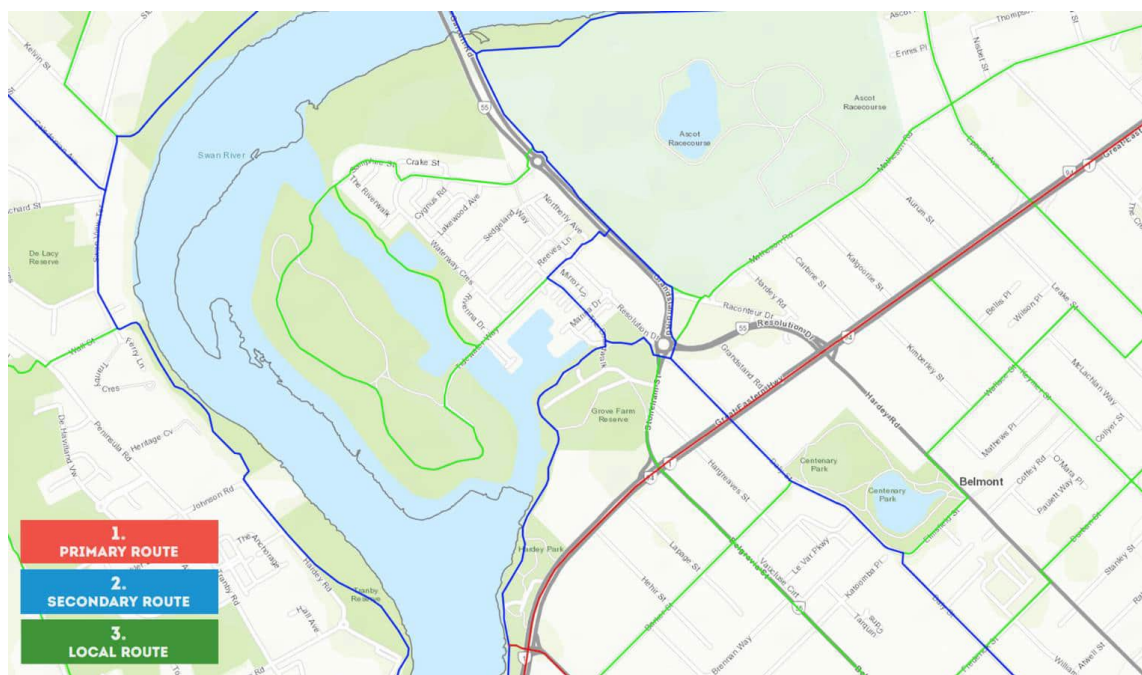


The Long Term Cycle Network (LTCN) in the vicinity of the Golden Gateway precinct is shown in Figure 7. The LTCN identifies the function of a route (primary, secondary, or local) instead of dictating what form (shared paths, bicycle only lanes, protected on-street bicycle lane or safe active streets) it should take. Function considers the type of activities that take place along a route, and the level of existing and potential demand. A route's built form is based on the characteristics of the environment, including space availability, topography, traffic conditions (speed, volumes), primary users, and so on.

Primary routes form the spine of the cycle network, connecting major destinations of regional importance. Secondary routes are those with a moderate level of demand, providing connections between primary routes and major activity centres. Local Routes are located in local residential areas and provide access between higher order routes and local amenities).

Within the LSP site, Great Eastern Highway is identified as a future Primary Route, Daly Street and Grandstand Road north are both future Secondary Routes while Belgravia Street, Stoneham Street and Matheson Road form a future Local Route.

Figure 7 – Long Term Cycling Network in vicinity of Golden Gateway (source: DoT)

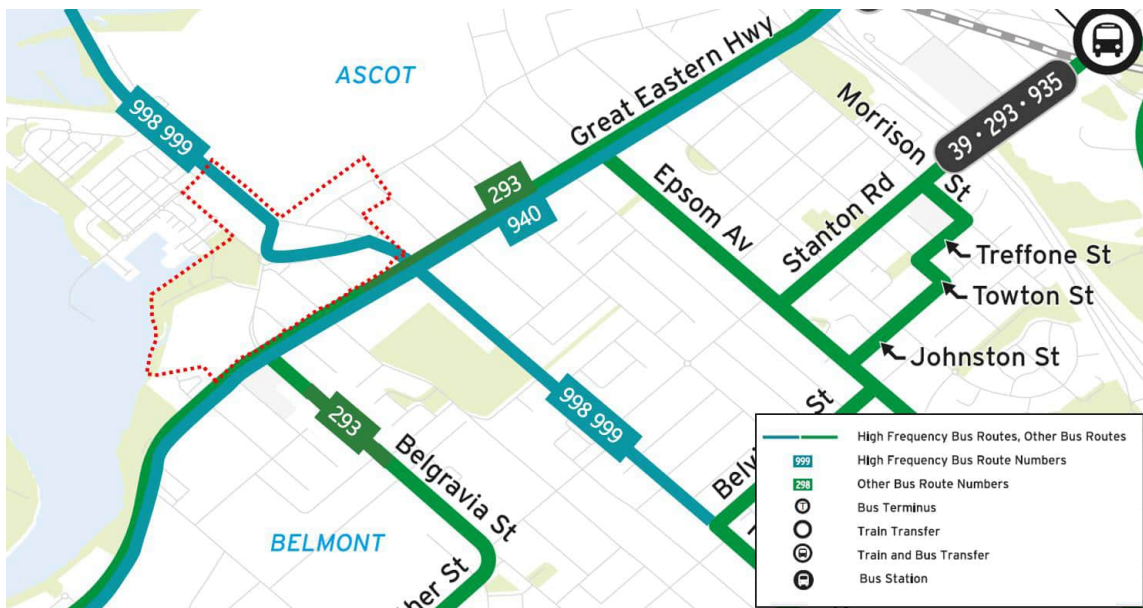




### 3.4 Public Transport

There is an average level of public transport accessibility for roads around the periphery of the Golden Gateway precinct. Great Eastern Highway and Grandstand Road/Resolution Drive are serviced by regular bus services, as shown in Figure 8. Additional bus services and stops along local roads may be implemented in the future if land uses within the Golden Gateway site intensify over time.

Figure 8 – Existing Public Transport Network in Relation to the Golden Gateway LSP Site (source: Transperth / City of Belmont)



Currently the only bus routes that pass through the site are the circle route bus services 998 and 999 which are high frequency routes that travel along Grandstand Road (northern section) and Resolution Drive, and then continue to Hardey Road. There are 128 circle route bus services per weekday which travel through the site. There are currently no bus stops for the circle route within the Golden Gateway precinct, with the closest bus stops located on Grandstand Road immediately to the north of the LSP area close to the main pedestrian access for Ascot Racecourse. Bus stops are also located on Hardey Road, 50m to the south of Great Eastern Highway.

Circle route services provide a high frequency orbital connection around Perth, linking inner suburbs, major activity centres, key land uses and public transport hubs including Belmont Forum, Oats Street Station, Curtin University, Murdoch Activity Centre, Fremantle, Cottesloe, Claremont, UWA, QEII Medical Centre, Stirling Station, and Morley.

High frequency bus route 940 operates along Great Eastern Highway which forms the southern boundary of the site, with a total of 101 daily services to Perth and 103 services to Redcliffe. This bus route operates between Elizabeth Quay Bus Station and Redcliffe Station, travelling along St Georges/Adelaide Terrace, Victoria Park Transfer Station, and Great Eastern Highway adjacent to the Golden Gateway LSP site.

Bus route 293 between Redcliffe Station and High Wycombe Station also travels along Great Eastern Highway (east of Belgravia Street) and along Belgravia Street. There are 18 services in each direction per day.

More detail of bus route services and frequencies is provided in Table 3.



Table 3 – Bus frequency and service numbers (source: Transperth)

Weekday Summary					
Route	Direction	No. Services	AM / PM Peak Frequency	Saturday Summary	Sunday / Public Holiday Summary
998	CircleRoute - clockwise	64 services 6.06am to 10.11pm	AM peak every 12 mins PM peak every 15 mins	47 services, every 15 mins from 7.15am to 6.59pm	23 services, half hourly from 7.47am to 6.45pm
998	CircleRoute - anticlockwise	60 services 6.53am to 9.53pm	AM peak every 12 mins PM peak every 15 mins	43 services, every 15 mins from 7.40am to 5.37pm, then half hourly until 7.36pm	22 services, half hourly from 8.40am to 7.10pm
940	To Perth	101 services 4.54am to 11.37pm	AM peak every 10 mins PM peak every 10 mins	59 services, every 15 mins from 7.15am to 6.47pm, then half hourly	53 services, every 15 mins from 9.15am to 6.44pm, half hourly until 10.21
	To Redcliffe	103 services 5.25am to 11.51pm	AM peak every 10 mins PM peak every 10 mins	59 services, every 15 mins from 8.04am to 8.04pm, then half hourly	53 services, every 15 mins from 8.53am to 7.07pm, half hourly until 10.41
293	To High Wycombe	18 services 5.32am to 5.37pm	AM peak every 30 mins PM peak every 20 mins	No services	No services
	To Redcliffe	18 services 5.53am to 5.33pm	AM peak every 20 mins PM peak every 30 mins	No services	No services

### 3.5 Road Network

The road network in the vicinity of the Golden Gateway precinct includes the major regional through route of Great Eastern Highway and a network of district and local roads on either side of the Great Eastern Highway corridor, as shown in Figure 9.

Figure 9 – Road Network in vicinity of Golden Gateway Precinct (source: MRWA)



The Main Roads WA (MRWA) Functional Road Hierarchy surrounding the Golden Gateway precinct is shown in Figure 10. Details of each road hierarchy type are set out in Table 4. The speed zoning in the vicinity of the Golden Gateway precinct is shown in Figure 11.

Table 4 - MRWA Road Hierarchy Criteria (source: MRWA)

	CRITERIA AND ACTIVITY	ROAD TYPES				
		PRIMARY DISTRIBUTOR	DISTRICT DISTRIBUTOR CATEGORY "A"	DISTRICT DISTRIBUTOR CATEGORY "B"	LOCAL DISTRIBUTOR/ INDUSTRIAL ROAD	ACCESS ROAD
1	Predominant Activity	Major networks e.g. freeways	Important network	Less important network	Minor network	Limited access to traffic. Forms part of local distribution network
2	Intersections	Controlled with appropriate measures e.g. grade separation, high speed traffic management measures	Controlled with appropriate measures E.g. traffic signals	Controlled with appropriate Local Area Traffic Management	Controlled with minor Local Area Traffic Management	Self controlling with minor measures
3	Indicative Traffic Volume (except semi-rural areas)	Above 15 000 vehicles per day	Above 8000 vehicles per day	Above 6000 vehicles per day	Maximum desirable volume: 6000 vehicles per day	Maximum desirable volume: 3000 vehicles per day
4	Frontage Access Allowed	None on Controlled Access Hwys Limited on other routes	Prefer not to have residential access and limited commercial access, generally via service roads	Residential and commercial access due to its historic status Prefer to limit when and where possible	Yes, except at intersections where side entry is preferred and traffic signals are involved	Yes
5	Pedestrians Allowed	Preferably none at grade. Crossing should be controlled	With positive measures for control and safety e.g. pedestrian signals	With appropriate measures for control and safety e.g. median/islands refuges	With minor safety measures	Yes
6	Recommended Operating Speed	60 - 110 km/h (depending on design characteristics)	60 - 80 km/h	60 - 70 km/h	50 - 60 km/h	50 km/h (desired speed)
7	Buses Allowed	Yes	Yes	Yes	Yes	If required
8	Parking Allowed	No	Generally no. Clearways where necessary	Not preferred. Clearways where necessary	Yes	Yes
9	Truck Routes	Yes	Yes	Yes	Only to service properties	Only to service properties
10	Responsibility	Main Roads Western Australia	Local Government	Local Government	Local Government	Local Government

Ideally, every road should meet all the criteria of one RH type. However, many roads meet some of the criteria appropriate to different road types and are difficult to define. Where precise definition of the road type is difficult, comparison with roads of similar role in other local government areas may assist.

Figure 10 - Road Hierarchy in Vicinity of the Golden Gateway Precinct (source: MRWA)

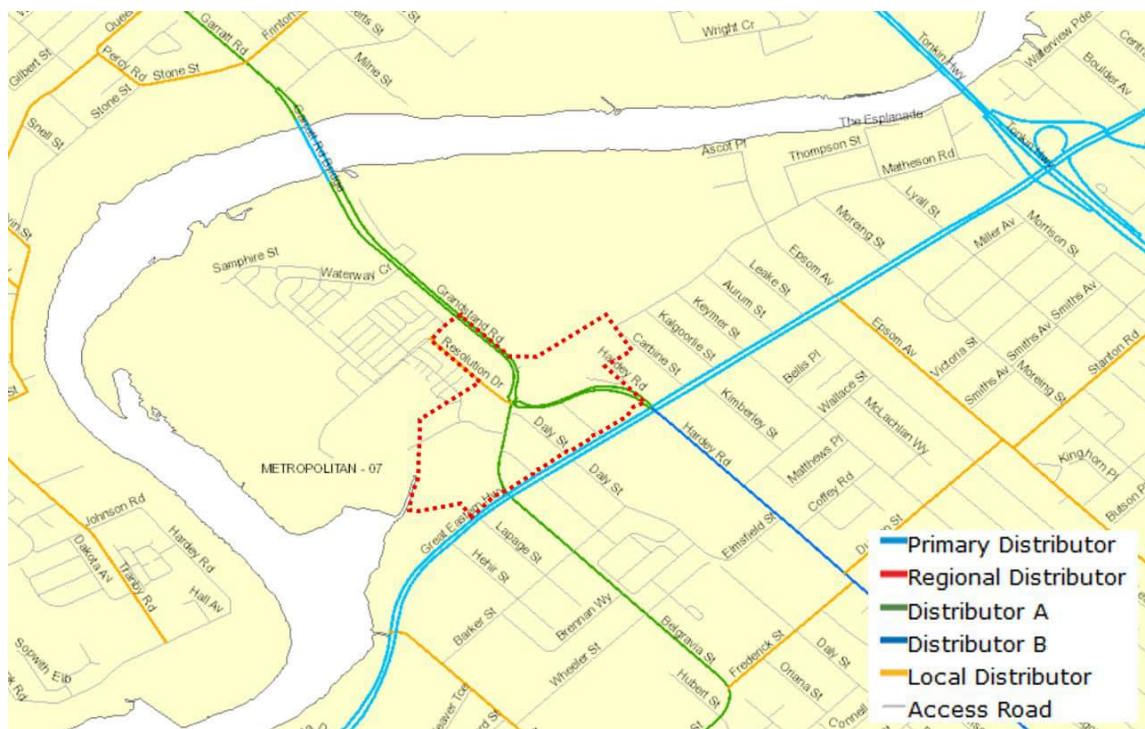
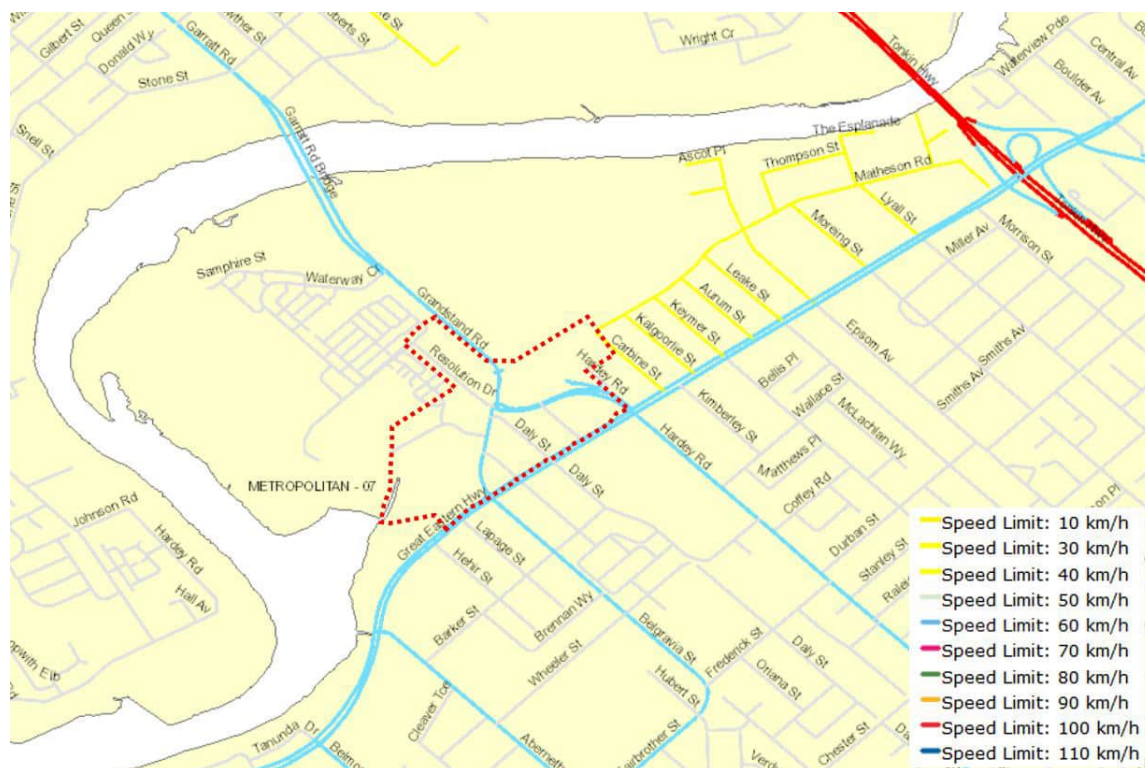


Figure 11 - Speed Limits in Vicinity of the Golden Gateway Precinct (source: MRWA)



### 3.5.1 Regional Roads

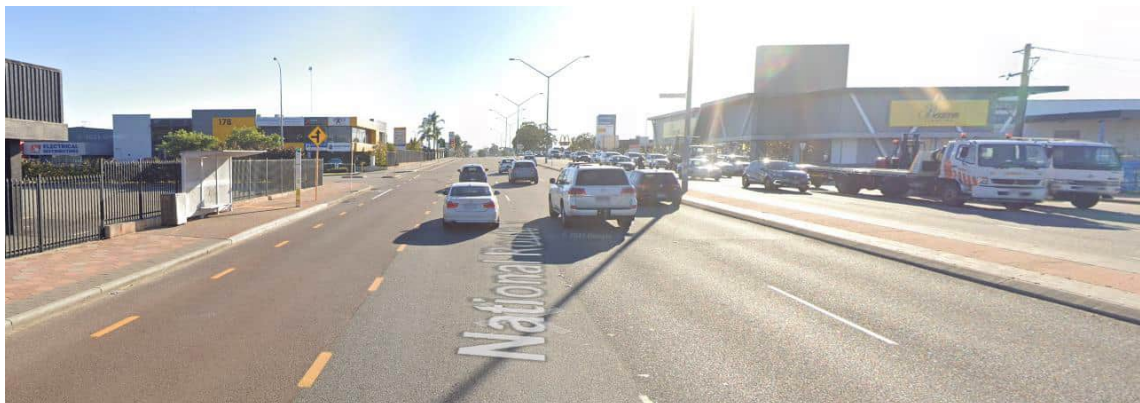
#### Great Eastern Highway

Great Eastern Highway runs along the southern boundary of the Golden Gateway precinct. It is one of the State's principal transport corridors and is designated as a Primary Distributor under the control of MRWA. The most recent traffic counts for the section of Great Eastern Highway bordering the Golden Gateway precinct, collected by MRWA in 2018, reveal a two-way traffic volume of over 54,000 vehicles per day (vpd). The posted speed limit is 60km/h.

A typical cross section of Great Eastern Highway is shown in Figure 12.



Figure 12 – Cross section of Great Eastern Highway corridor– looking east, west of Hargreaves St (source: Google Street View)



Great Eastern Highway is constructed with an on-road cycle lane, a bus lane, and 3 general traffic lanes in each direction, separated by a median which varies in width between 2.5m and 6m (with the reduced width adjacent to right turning lanes), all within a road reserve width which varies between 40 and 45m.

The median reduces to 2.5m to accommodate right turning lanes in advance of the signalised intersections at Stoneham Street / Belgravia Street and Resolution Drive / Hardey Road. The bus lane is constant in the westbound carriageway, however within the eastbound carriageway there is a bus lane for 170m of the 500m total length between the signalised intersections with Stoneham Street / Belgravia Street and Resolution Drive / Hardey Road.

#### Garratt Road Bridge

The Garratt Road Bridge, located 1km to the north of the Golden Gateway precinct, is one of only 8 traffic bridges across the Swan River between Fremantle and Guildford. The section of Garratt Road along the bridge is designated as a Primary Distributor under the control of MRWA. The posted speed limit is 60km/h. In the most recent traffic counts, undertaken by MRWA in 2018, the bridge was found to carry approximately 16,700 vpd, with 8,800 vpd northbound and 7,900 vpd southbound.

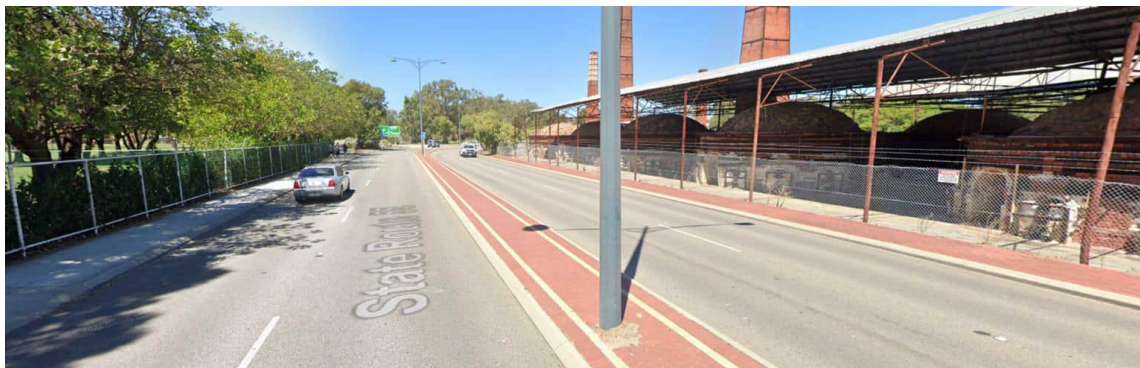
### 3.5.2 District Roads

The Golden Gateway Precinct has three key district road connections running through the site: Grandstand Road, Stoneham Street and Resolution Drive. Belgravia Street is the continuation of Stoneham Street to the south of Great Eastern Highway and the Golden Gateway site, while Hardey Road is the continuation of Resolution Drive south of Great Eastern Highway.

#### Grandstand Road

Grandstand Road is a District Distributor A road, running north south within the site, connecting to the Garratt Road Swan River crossing in the north and to Great Eastern Highway (via either Stoneham Street or Resolution Drive) to the south. It is constructed as a four-lane dual carriageway, with a median of varying width between 2 and 4.5m, as shown in Figure 13. Grandstand Road is constructed within a 20m road reserve. The posted speed limit is 60km/h. The most recent two-way traffic count (collected by MRWA in 2018) at the Garratt Road Bridge was 16,700 vehicles per day (vpd).

Figure 13 – Cross section of Grandstand Road – looking southeast, south of Waterway Cr (source: Google Street View)



### Stoneham Street

Stoneham Street is a District Distributor A road, running north-south within the site, between the roundabout controlled intersection of Grandstand Road with Resolution Drive and the signalised intersection of Great Eastern Highway with Belgravia Street. It is constructed as a four-lane undivided road, within a 20m road reserve, as shown in Figure 14. The posted speed limit is 60km/h. The most recent two-way traffic count for Stoneham Street (collected by MRWA in 2018) to the north of Great Eastern Highway was 14,270 vpd.

Figure 14 – Cross section of Stoneham Street – looking northeast, south of Memorial Dr (source: Google Street View)



### Resolution Drive (Great Eastern Highway to Stoneham Street)

Resolution Drive is a District Distributor A road, running east-west within the site, connecting Grandstand Road and Stoneham Street with Great Eastern Highway and Hardey Road. Between the intersection of Stoneham Street / Grandstand Road and the intersection with Raconteur Drive, Resolution Drive is constructed as a single lane in each direction separated by a 2m median, as shown in Figure 15.



Figure 15 – Cross section of Resolution Drive– looking northeast, east of Grandstand Rd south (source: Google Street View)



Between Raconteur Drive and Great Eastern Highway, Resolution Drive is constructed with 2 lanes in each direction, separated by a 10m median. The cross section for this part of Resolution Drive is shown in Figure 16.

Figure 16 – Cross section of Resolution Drive– looking southeast, northwest of Great Eastern Highway (source: Google Street View)



The road reserve width varies between 22m and more than 60m. The posted speed limit is 60km/h. The most recent two-way traffic count for Resolution Drive to the north of Great Eastern Highway (collected by MRWA in 2022) was 7,860 vpd.

### Belgravia Street

To the south of the Golden Gateway precinct, Belgravia Street is the southern approach to the signalised intersection of Great Eastern Highway with Stoneham Street. Belgravia Street is classified as a District Distributor A. The most recent two-way traffic count for Belgravia Street to the south of Great Eastern Highway (collected by MRWA in 2022) was 14,640 vpd.

Belgravia Street is constructed with 3 northbound lanes and 2 southbound lanes within a road reserve which varies between 24m (closest the signalised intersection) and 21m. Further to the south Belgravia Street has no median (or turning lanes) and the road reserve is 20m. Belgravia Street has a posted speed limit of 60km/h. The section of Belgravia Street to the south of Great Eastern Highway, adjacent to Belmont Primary School, is a school zone, where a 40kph speed limit applies between 7:30 and 9:00 AM and between 2:30 and 4:00 PM on weekdays.

#### Hardey Road (south of Great Eastern Highway)

To the south of the Golden Gateway precinct, Hardey Road is the southern approach to the signalised intersection of Great Eastern Highway with Resolution Drive. Hardey Road is constructed as 3 northbound lanes and 2 southbound lanes, separated by a painted median and within a 25m road reserve. Further to the south Hardey Road reduces to a kerb side parking lane and single traffic lane in each direction, separated by a 2m median and within a 20m road reserve. Hardey Road is classified as a District Distributor B, with a posted speed limit of 60km/h. The most recent two-way traffic count for Hardey Road to the south of Great Eastern Highway (collected by MRWA in 2019) was 8,270 vpd.

### 3.5.3 Local Roads

The Golden Gateway Precinct has seven local road connections running through the site: Hargreaves Street, Daly Street, Grandstand Road (south), Resolution Drive (northwest), Memorial Drive, Raconteur Drive and Matheson Road. These local roads are all classified as Access Streets (except for Resolution Drive which is a local distributor), with posted speed limits of 50km/h.

#### Hargreaves Street

Hargreaves Street is a 12.5m wide single carriageway road, within a 20m road reserve. Parking is permitted on both sides of the road. Hargreaves Street runs northwest-southeast between Stoneham Street and Great Eastern Highway. The intersection with Stoneham Street is restricted to left and right in, and left out only movements, while the intersection with Great Eastern Highway permits only left in left out movements. A cross section of Hargreaves Street is shown in Figure 17.

Figure 17 – Cross section of Hargreaves St, north of Great Eastern Hwy, looking south (source: Google Street View)

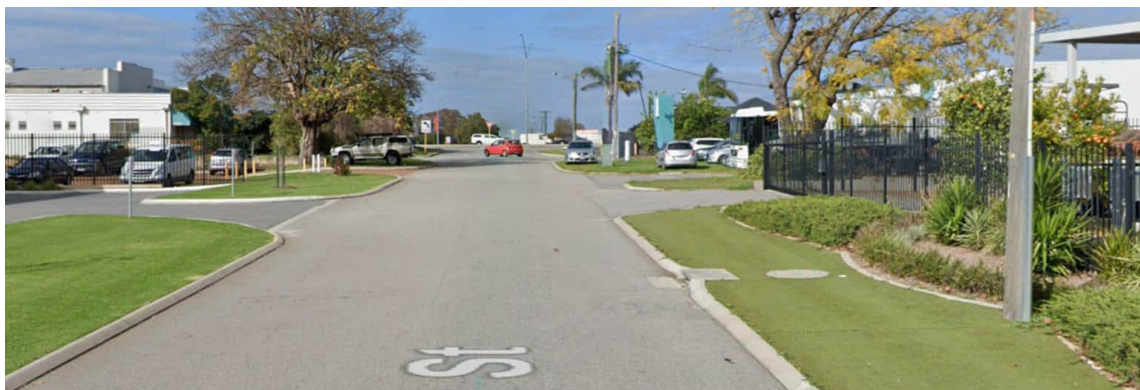




### Daly Street

Daly Street is an 8m wide road, within a 20m road reserve. Parking is permitted on both sides of the road. Daly Street runs northwest-southeast between Stoneham Street and Great Eastern Highway. The intersection with Stoneham Street is restricted to left out only movements. The intersection with Great Eastern Highway permits only left in left out movements. A cross section of Daly Street is shown in Figure 18.

Figure 18 – Cross section of Daly St, north of Great Eastern Hwy, looking south (source: Google Street View)



### Grandstand Road (south)

Grandstand Road (south) is a 12.5m wide single carriageway road, within a 20m road reserve. Parking is permitted on both sides of the road. Grandstand Road (south) runs northwest-southeast between Resolution Drive and Great Eastern Highway. All movements are permitted at the intersection with Resolution Drive, while the intersection with Great Eastern Highway permits only left in left out movements. A cross section of Grandstand Road (south) is shown in Figure 19.

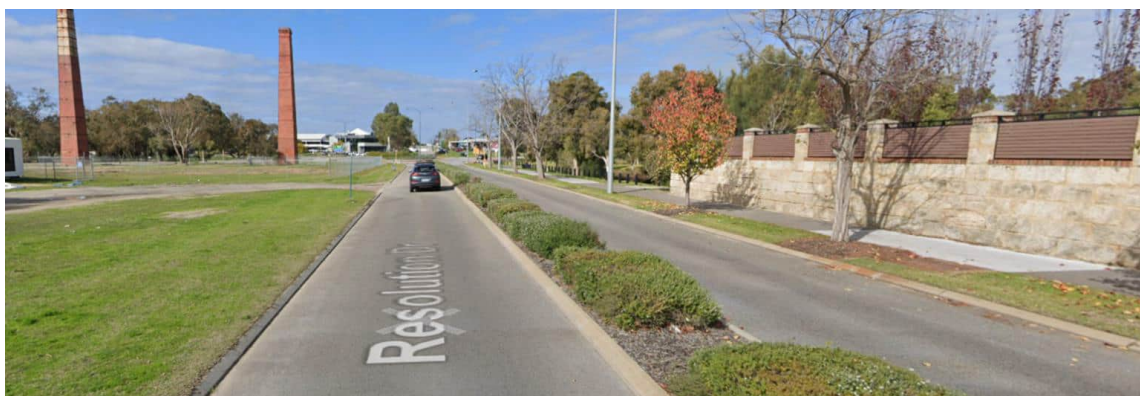
Figure 19 – Cross section of Grandstand Rd (south), north of Great Eastern Hwy, looking south (source: Google Street View)



### Resolution Drive

The section of Resolution Drive to the west of the roundabout intersection with Stoneham Street and Grandstand Road is classified as a local distributor, providing the main access for the Ascot Waters residential development. It is constructed as two 4.5m wide lanes separated by a 2m median, within a 20m road reserve. On-street parking is not permitted on either side of the road. Resolution Drive has three intersections along its 300m length, all full movement roundabouts. The Ascot Kilns area is immediately to the northeast of Resolution Drive. A cross section of Resolution Drive is shown in Figure 20.

Figure 20 – Cross section of Resolution Dr (northwest) north of Stoneham St, looking south (source: Google Street View)



### Memorial Drive

Memorial Drive is a 6m wide road constructed through the Belmont Trust land at the western end of the Golden Gateway precinct. Memorial Drive provides a minor connection to the southern portion of the Ascot Waters development. Low fence posts either side of Memorial Drive prevent on-street parking. A cross section of Memorial Drive is shown in Figure 21.

Figure 21 – Cross section of Memorial Dr west of Stoneham St, looking east (source: Google Street View)



### 3.6 Existing Traffic Volumes

Traffic volume data was obtained from the following sources:

- SCATS traffic volumes and signal data from September 2021 for the two signal controlled intersections:
  - Great Eastern Highway/Stoneham Street/Belgravia Street Intersection
  - Great Eastern Highway/Resolution Drive/Hardey Road Intersection
- Peak hour and 12 hour intersection turning counts (derived from video surveys in February 2018) for the two signal controlled intersections:
  - Great Eastern Highway/Stoneham Street/Belgravia Street Intersection
  - Great Eastern Highway/Resolution Drive/Hardey Road Intersection
- Volume, classification, and speed data collected in September 2021 from midblock loop detectors for the following sites:
  - Daly Street near Great Eastern Highway
  - Daly Street near Stoneham Street
  - Hargreaves Street near Great Eastern Highway
  - Hargreaves Street near Stoneham Street
  - Grandstand Road near Great Eastern Highway
  - Grandstand Road near Resolution Drive
- Peak hour turning counts and queue length observations from a video survey collected in September 2021 at the roundabout intersection of Grandstand Road/Resolution Drive/Stoneham Street roundabout.
- Mid-block traffic counts for Great Eastern Highway, Stoneham Street, Resolution Drive, Belgravia Street, Hardey Road and Garratt Road Bridge collected by MRWA in 2018, 2019, 2020 and 2022 and obtained from Traffic Map.

#### 3.6.1 SCATS Signal Data

All MRWA's traffic signals in the metropolitan area are connected to SCATS (Sydney Co-ordinated Adaptive Traffic System). This is an adaptive urban traffic management system that synchronises traffic signals to optimise traffic flow across a whole city, region, or corridor. SCATS can provide vehicle count data (through loop detectors in each lane) and traffic signal phase data (a record of green, amber, and red times for each signal phase).

SCATS signal data for the two signalised intersections was provided by Main Roads. This data included:

- SCATS monitor and timing screenshots,
- Phase and Signal Group history data, and
- Offset data between sites.

SCATS data was obtained for the 5 weekdays between Monday September 6<sup>th</sup> and Friday September 10<sup>th</sup> 2021, which coincided with the dates of the roundabout survey and the local road loop detector counts. These weekdays were outside of school holidays and no major works or disruptions to the local or regional road network were noted.

The AM and PM peak hours were found to occur between 7:45 and 8:45am, and between 16:15 and 17:15pm.

The SCATS graphics for each of the signalised intersections are shown in Figure 22 and Figure 23.



Figure 22 – Great Eastern Highway/Stoneham Street/Belgravia Street SCATS graphic (source: Main Roads WA)

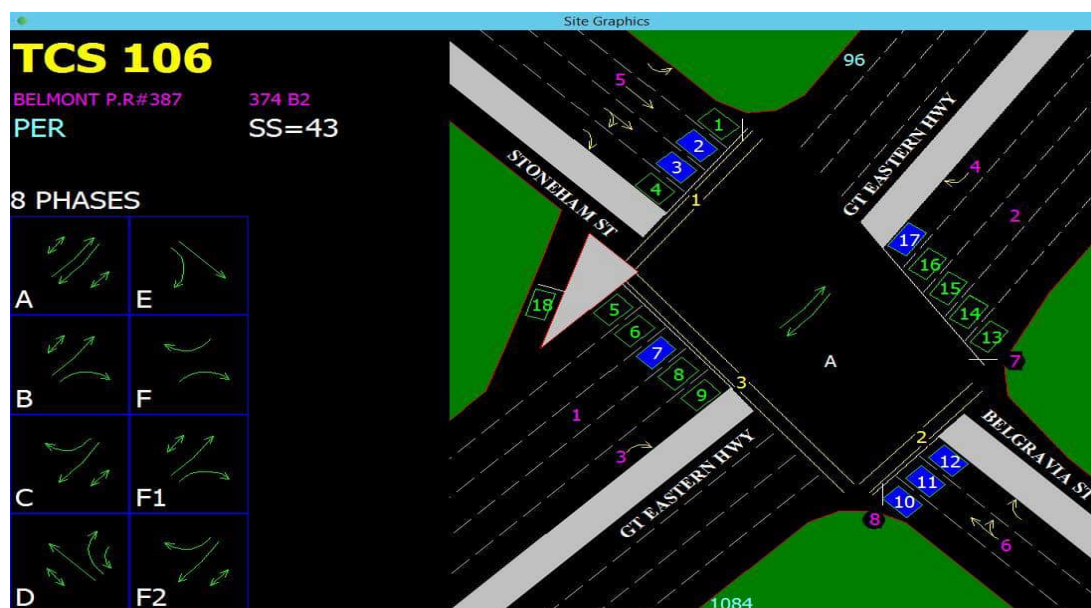
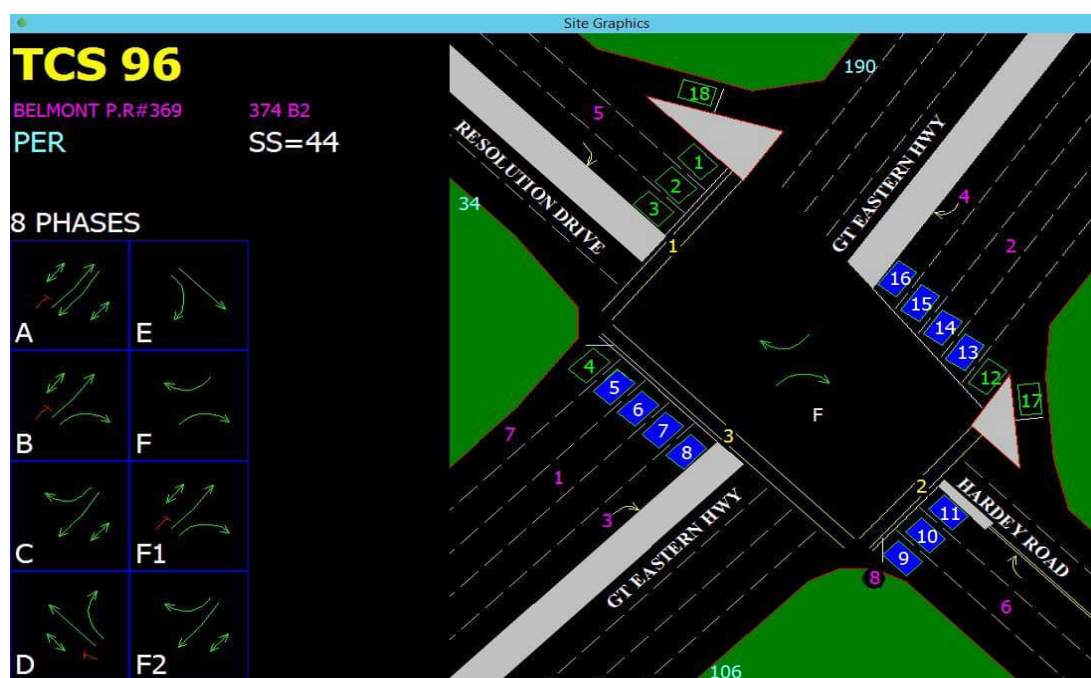


Figure 23 – Great Eastern Highway/Resolution Drive/Hardey Road SCATS graphic (source: Main Roads WA)



The relevant peak hour data was extracted and processed to calculate the average cycle time for each intersection.

The calculation set out in the Main Roads WA Guidelines Appendix A – Signal Data Information for Modelling – Version 1.1, Section A.2.3 was used to calculate the average cycle time and phase lengths during the peak hours. The calculated green, amber and red timings for each signalised intersection are shown in Table 5.



Table 5 – Signalised Intersection peak hour phase times

Intersection	AM Phase Times (seconds)			PM Phase Times (seconds)		
	Green	Amber	Red	Green	Amber	Red
Great Eastern Hwy / Stoneham St / Belgravia St		134s			139s	
Signal Phase A (Great Eastern Highway)	62	4	2.5	56	4	2.5
Signal Phase D (Belgravia Street)	17	4	3	29	4	3
Signal Phase E (Stoneham Street)	19	4	3	14	4	3
Signal Phase F (GEH right turns)	9	4	3	13	4	3
Great Eastern Hwy / Resolution Dr / Hardey Rd		134s			139s	
Signal Phase A (Great Eastern Highway)	67	4	3	63	4	3
Signal Phase D (Hardey Road)	14	4	3.5	19	4	3.5
Signal Phase E (Resolution Drive)	10	4	3.5	8	4	3.5
Signal Phase F (GEH right turns)	13	4	3.5	19	4	3.5

The signal phase data reveals that each of the signalised intersections has four phases per signal cycle in the peak hours. Phase A is where the green time is allocated to Great Eastern Highway through and left turning traffic. Phase D is the next phase, with green time allocated to traffic movements from the southern intersection approach (Belgravia Street and Hardey Road). Phase E allocates green time to traffic movements from the northern intersection approach (Stoneham Street and Resolution Drive). Finally, Phase F allocates green time to the right turn movements from Great Eastern Highway.

These most recent signal cycle lengths are significantly longer than the cycle lengths recorded in November 2020 as part of an earlier assessment. The AM peak period average signal cycle time increased by 14s seconds from 120 to 134 seconds while the PM peak average signal cycle time increased by 19 seconds from 120 to 139 seconds. Most of the increased green time was given to phase A which is for Great Eastern Highway through and left turning traffic. These increases were most notable at the intersection of Great Eastern Highway with Hardey Road and Resolution Drive where over 95% of the additional green time in each peak hour was allocated to Great Eastern Highway traffic and not side roads.

### 3.6.2 Signalised Intersection Turn Counts

SCATS signal data provides traffic volumes at 15 minute intervals for each traffic lane through an intersection. Where a lane permits shared turning movements, on site observations are required to determine an accurate split between the permitted turning movements. For the intersections of Great Eastern Highway with Stoneham Street / Belgravia Street and Resolution Drive / Hardey Road there are multiple shared lanes.

SCATS traffic volume data was obtained for the 5 weekdays between Monday September 6<sup>th</sup> and Friday September 10<sup>th</sup> 2021, which coincides with the dates of the roundabout survey and the local road loop detector counts. The AM and PM peak hours were found to occur between 7:45 and 8:45am, and between 16:15 and 17:15pm.

For the shared lanes, the proportion of vehicles making each movement was determined from the video surveys undertaken by MRWA in February 2018.



Peak hour traffic turning volumes at the intersection of Great Eastern Highway / Stoneham Street / Belgravia Street are illustrated in Figure 24 (for the AM peak) and Figure 25 (for the PM peak).

Figure 24 – Great Eastern Highway/Stoneham Street/Belgravia Street AM Peak Hour Turn Counts (source: Main Roads WA)

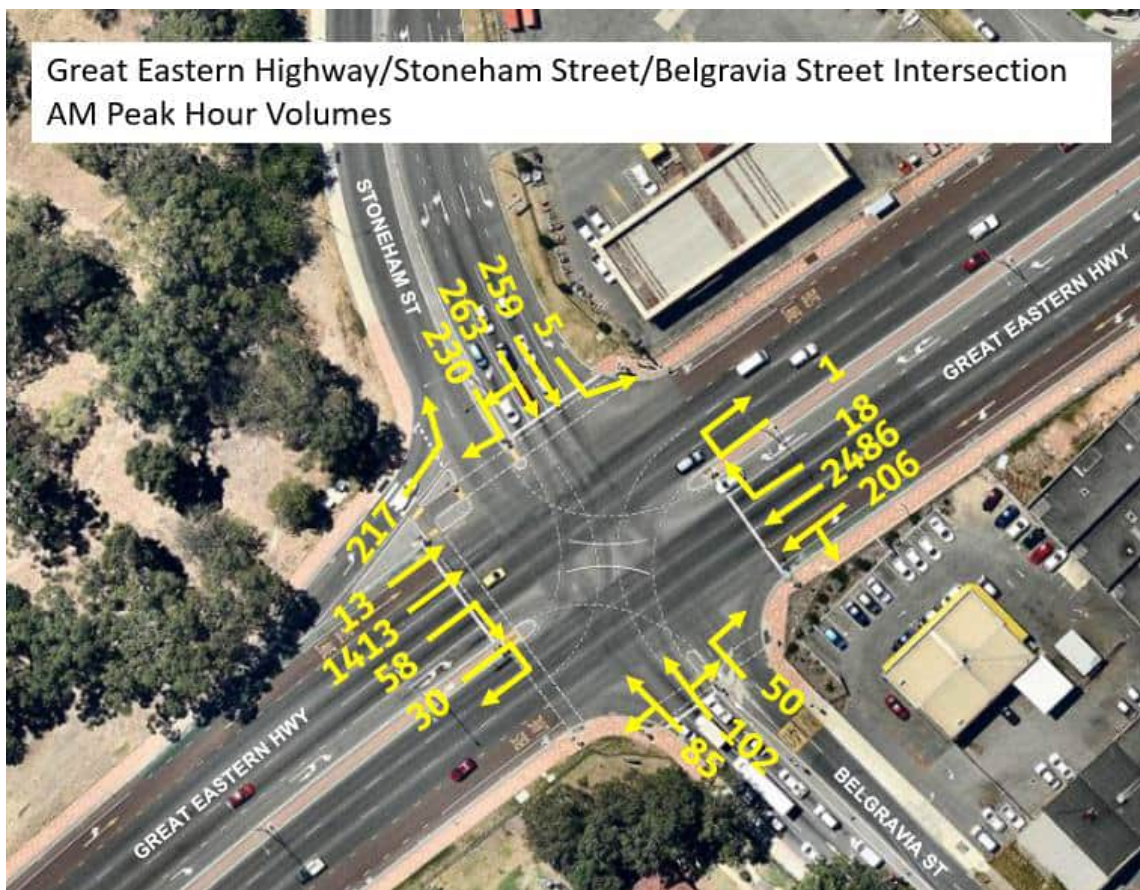
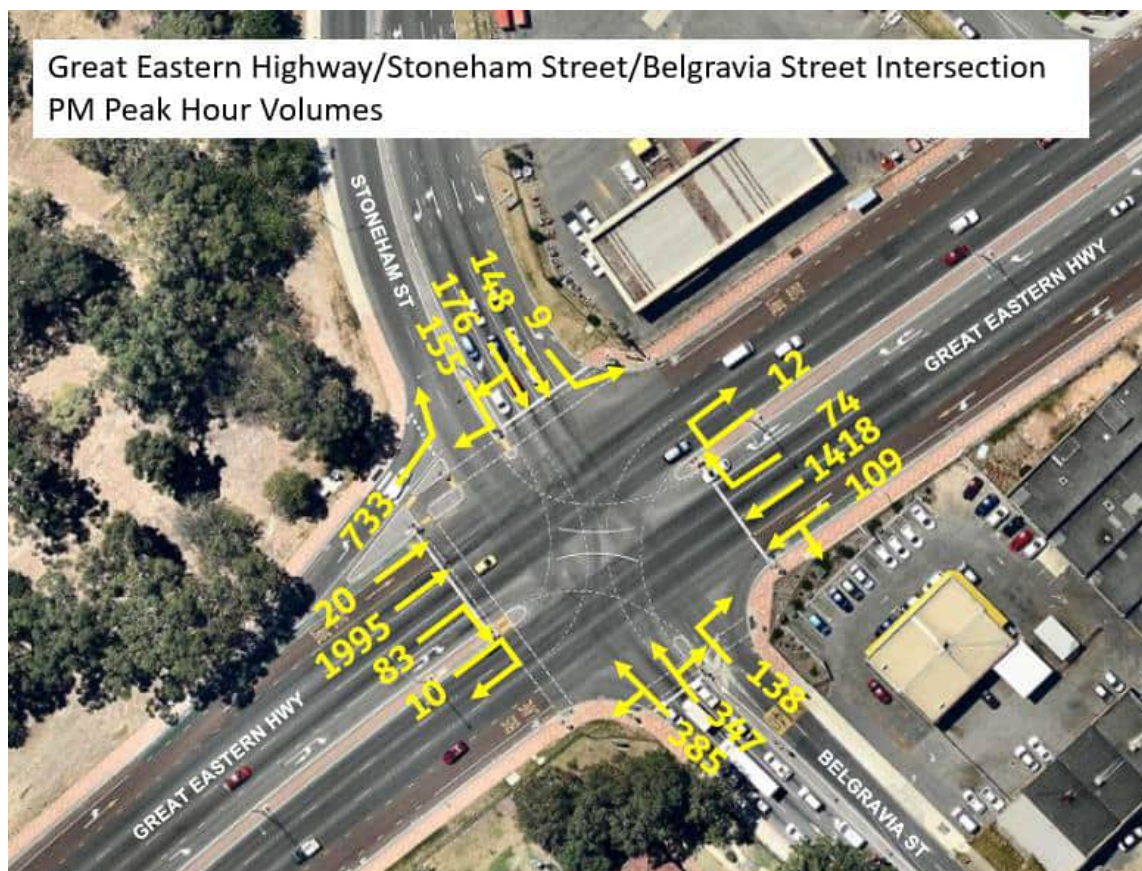


Figure 25 – Great Eastern Highway/Stoneham Street/Belgravia Street PM Peak Hour Turn Counts (source: Main Roads WA)



Peak hour traffic turning volumes at the intersection of Great Eastern Highway / Resolution Drive / Hardey Road are illustrated in Figure 26 (for the AM peak) and Figure 27 (for the PM peak).



Figure 26 – Great Eastern Highway/Resolution Drive/Harvey Road AM Peak Hour Turn Counts (source: Main Roads WA)

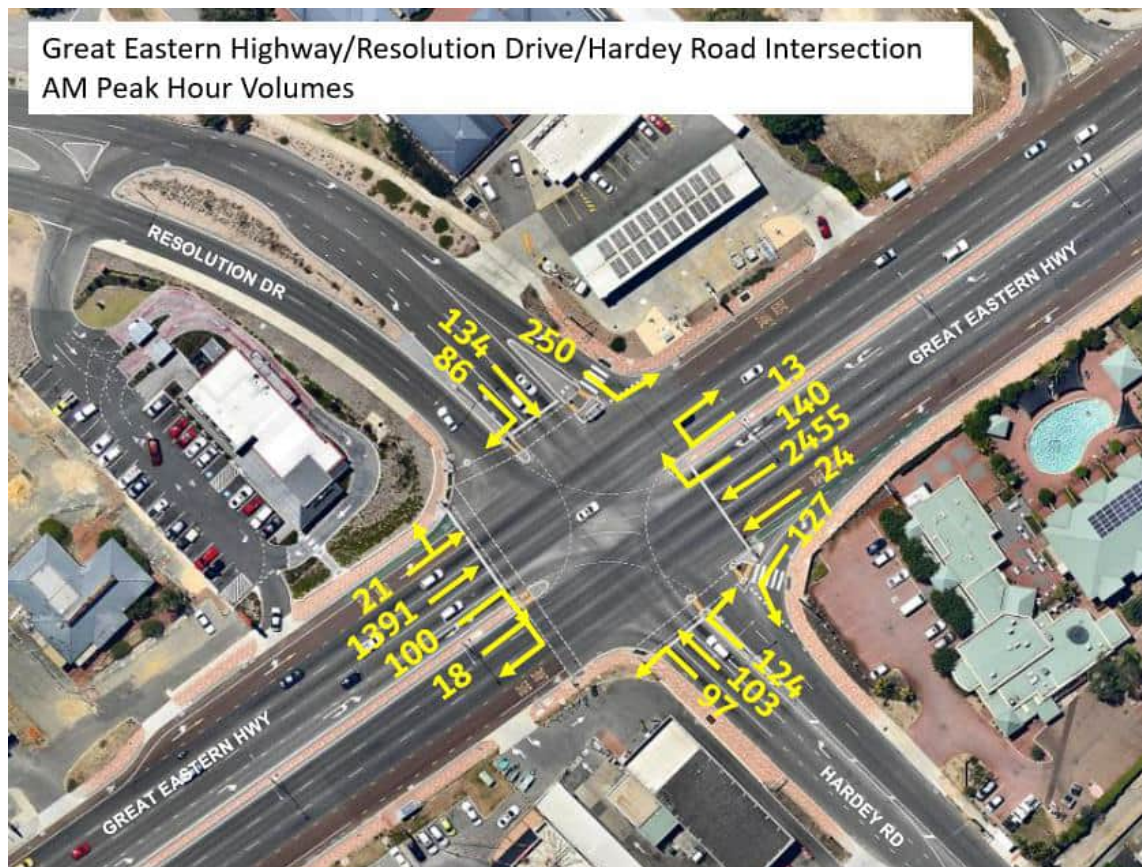
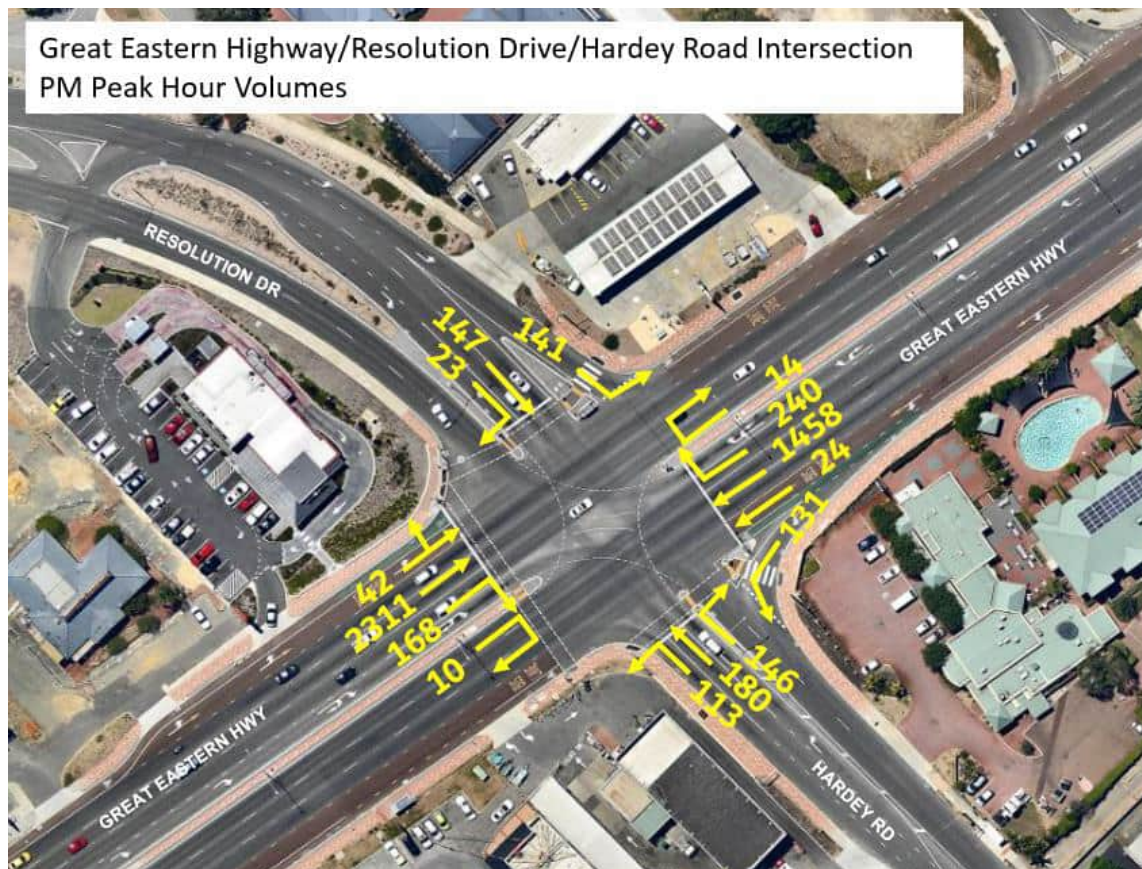




Figure 27 – Great Eastern Highway/Resolution Drive/Harvey Road PM Peak Hour Turn Counts (source: Main Roads WA)



### 3.6.3 City of Belmont Local Road Traffic Count Data

To gain an understanding of the level of traffic generated by existing land uses within the precinct, the City of Belmont collected mid-block traffic data for selected local roads between Wednesday September 8<sup>th</sup> and Friday September 10<sup>th</sup>, 2021.

The location of the traffic counters is shown in Figure 28. Weekday and peak hour traffic volumes by direction for each count site are summarised in Table 6.

Figure 28 - Local Road Network Traffic Count Locations

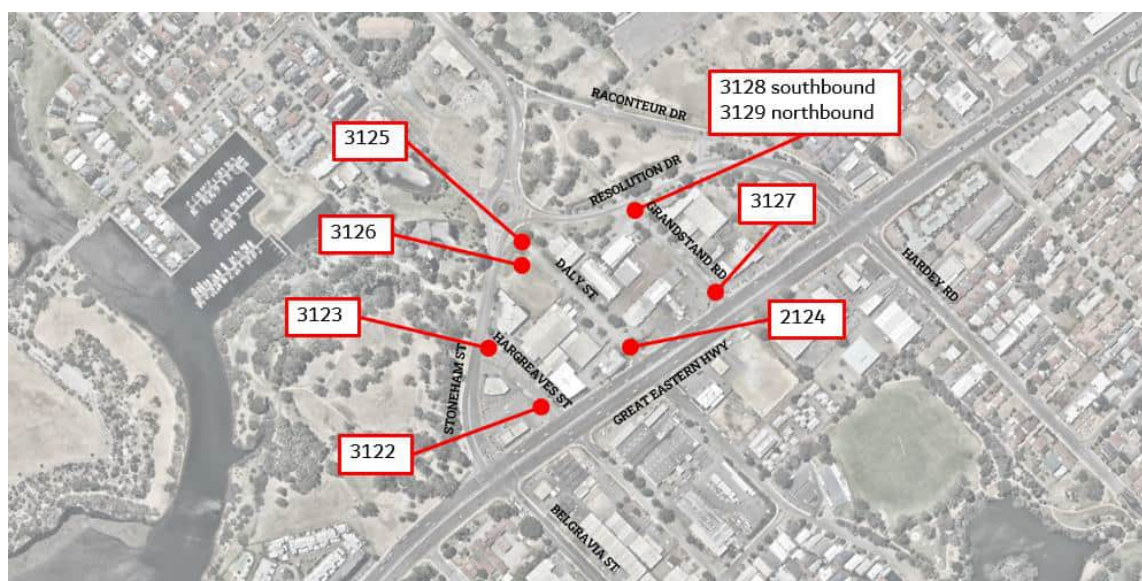


Table 6 – Local Road Network September 2021 Average Weekday Traffic Volumes (source: City of Belmont)

Road Name	Location	Average Weekday Volumes				
		Daily (vpd)	By Direction	Daily (vpd)	AM Peak (vph)	PM Peak (vph)
Hargreaves St	3122 North of GEH	278	Northbound	74	15	3
			Southbound	204	11	24
	3123 South of Stoneham St	330	Northbound	90	3	12
			Southbound	240	19	24
Daly St	3124 North of GEH	595	Northbound	375	18	17
			Southbound	220	5	18
	3125 South of Stoneham St		Northbound	188	4	25
Daly St link to Stoneham St	3126 East of Stoneham St	215	Eastbound	9	1	1
			Westbound	18	3	2
Grandstand Rd	3127 North of GEH	1,043	Northbound	323	20	20
			Southbound	720	30	50
	3128 South of Resolution Dr	1,482	Southbound	657	69	39
	3129 South of Resolution Dr		Northbound	825	40	90

The collected traffic data shows that Hargreaves Street carries higher traffic volumes at the northern end rather than the end closer to Great Eastern Highway, however the difference is within 20%. For Daly Street, the highest traffic volumes were observed at the Great Eastern Highway end, with volumes more than 2.5 times those recorded south of Stoneham Street. Grandstand Road was observed to carry higher traffic volumes south of Resolution Drive than to the north of Great Eastern Highway.

All existing traffic volumes are well within the capacity of local access roads, which is in the order of 3,000 vpd.

Grandstand Road carries the highest volumes of the local road network. The higher traffic volumes along Grandstand Road are primarily a result of the land uses at the southern end of Grandstand Road (fronting Great Eastern Highway), which are predominantly fast food outlets which generate a high volume of vehicle movements, particularly around lunch time and afternoon peak periods.

Not all the existing precinct traffic uses the local roads to access properties; there are 2 existing crossovers onto Stoneham Street (serving two properties, both of which also have access to Hargreaves Street) and 5 crossovers onto Resolution Drive (serving 4 properties where 2 also have access to Daly Street and one property which also has access to Great Eastern Highway). There are a further three properties with direct access to Great Eastern Highway (2 properties which also have access to Grandstand Road). There are only three properties which do not have any access to the local roads. Therefore, while the local road counts will not include all development traffic, it will provide a reasonable lower estimate of precinct traffic volumes.

A sum of precinct entry and exit traffic movements on local roads is presented in Table 7.

Table 7 – Existing Precinct Traffic Entry and Exit Movements to Local Roads September 2021 (source: City of Belmont)

Precinct Movements	Road	Average Weekday Volumes		
		Daily (vpd)	AM Peak (vph)	PM Peak (vph)
IN	From Great Eastern Hwy	772	53	40
	From Stoneham St	249	20	25
	From Resolution Dr	657	69	39
	<b>Total</b>	<b>1,678</b>	<b>142</b>	<b>104</b>
OUT	To Great Eastern Hwy	1,144	46	92
	To Stoneham St	296	10	39
	To Resolution Dr	825	40	90
	<b>Total</b>	<b>2,265</b>	<b>96</b>	<b>221</b>

The local road count data shows that the existing land uses within the precinct are generating at least 4,000 vpd, probably closer to 4,500 vpd, with 1,678 local road entry movements and 2,265 local road exit movements. The imbalance between entry and exit movements can be explained by there being several crossovers on Great Eastern Highway, Resolution Drive and Stoneham Street which allow direct entry and exit movements to the precinct which were not counted.

### 3.6.4 City of Belmont Peak Hour Turning Movement Data

Peak hour turning counts at the roundabout controlled intersection of Grandstand Road / Resolution Drive / Stoneham Street were obtained from a video survey undertaken Wednesday September 8<sup>th</sup>, 2021. Queue lengths were also observed.



The survey was completed using a video camera erected on a mast located between the southwest of the intersection.

The peak period turning movement survey collected full turning movement data at the roundabout (including u-turns), with the data collected for light and heavy vehicles in 15-minute time periods. To determine the actual peak hour, volumes were collected for a ninety minute period between:

- AM – 7:45am and 9:15am.
- PM – 3:45pm and 5:15pm.

Figure 29 shows the turning movement data for the AM peak hour of 7:45 am to 8:45am, and Figure 30 shows the turning movement data for the PM peak hour of 4pm to 5pm.

Figure 29 - September 2021 AM Peak Hour Turning Volumes at Grandstand Road/Resolution Drive/Stoneham Street Intersection

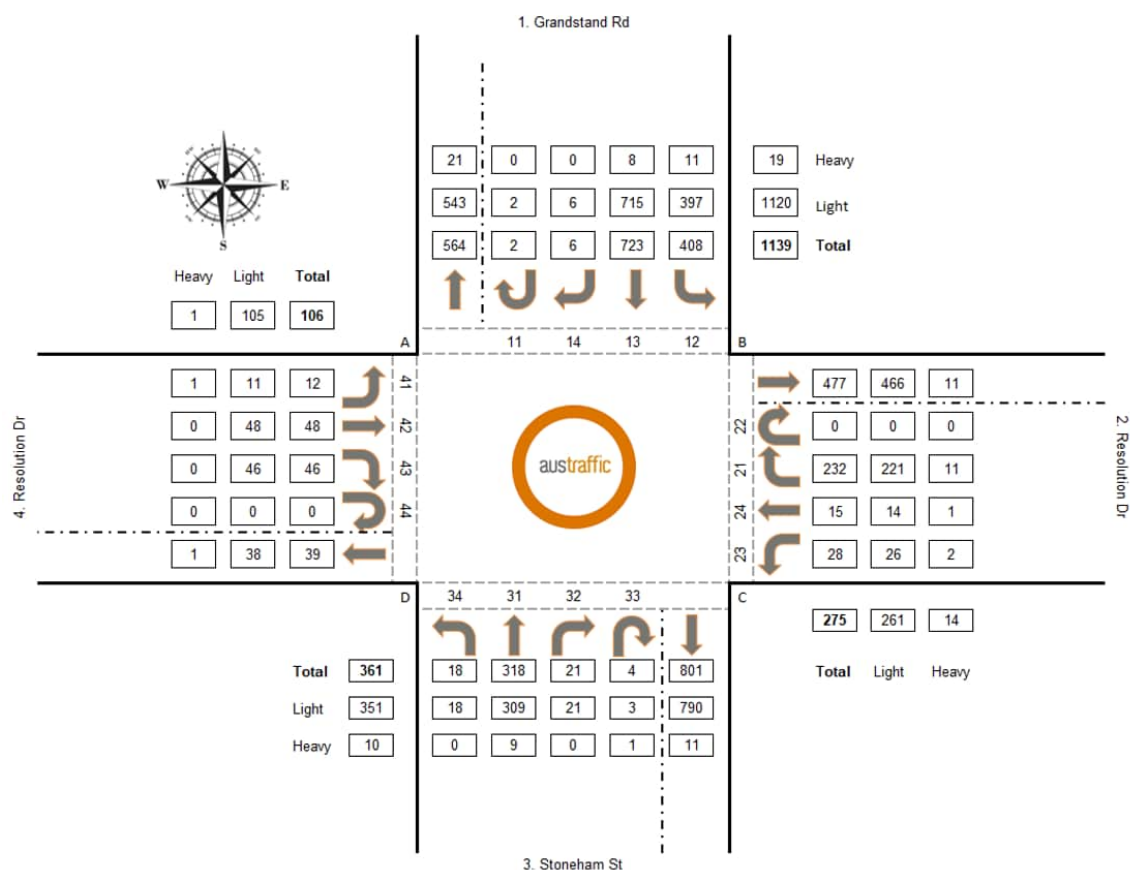
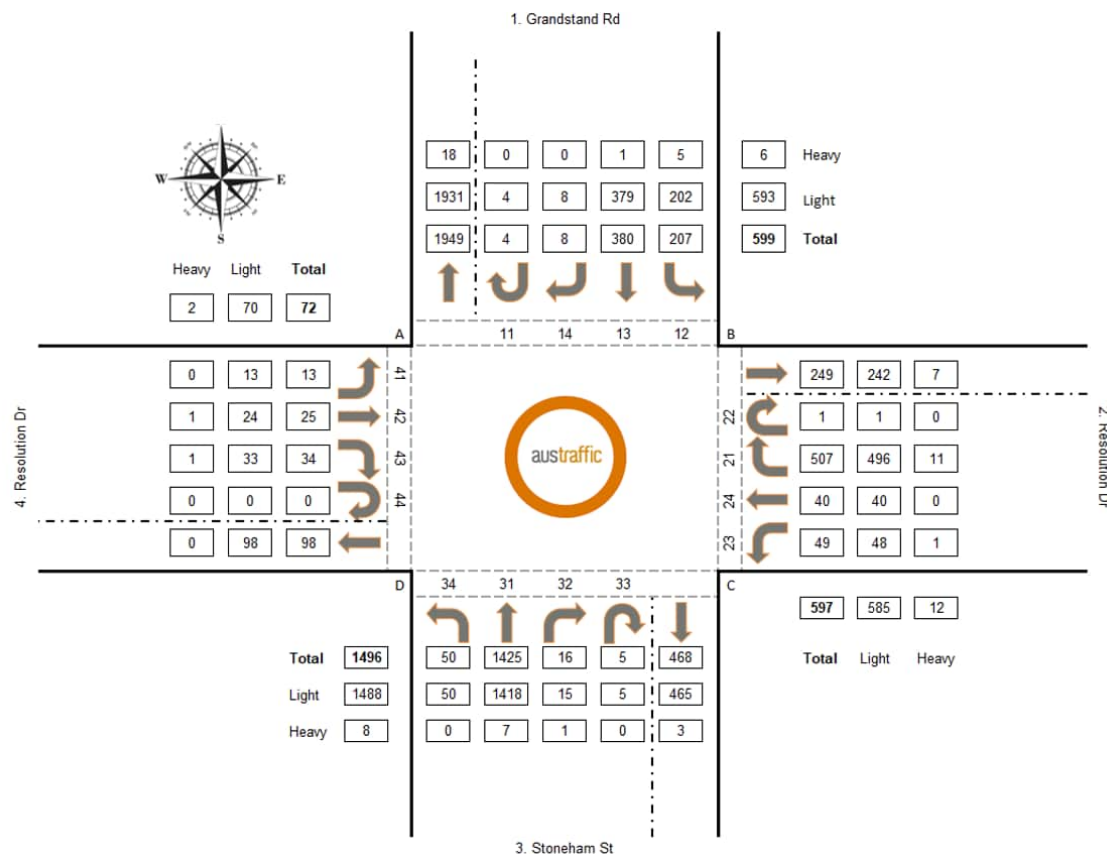




Figure 30 – September 2021 PM Peak Hour Turning Volumes at Grandstand Road / Resolution Drive / Stoneham Street Intersection



Observed queue lengths for the AM peak are presented in Figure 31. In the AM peak the longest queues were observed on the single lane Resolution Drive eastern approach to the roundabout, and on Grandstand Road. The video images also reveal the queue back along Stoneham Street from the signalised intersection of Great Eastern Highway/Stoneham Street/Belgravia Street sometimes reaches back to the roundabout. Still images from the AM peak video survey are shown in Figure 32, showing typical queuing and an instance of the queue back from the Great Eastern Highway/Stoneham Street/Belgravia intersection reaching back to the roundabout.

Figure 31 - September 2021 AM Peak Hour Observed Queues at Grandstand Road/Resolution Drive/Stoneham Street Intersection

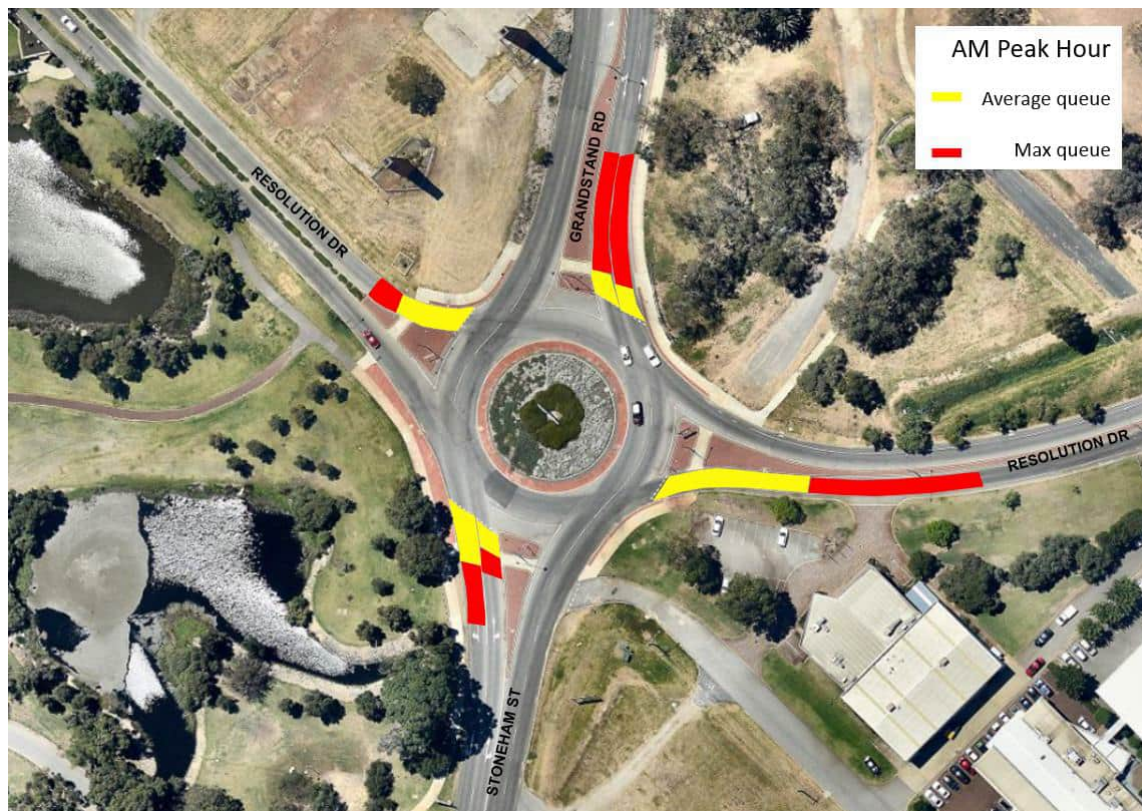


Figure 32 - September 2021 AM Peak Hour Still Images from Video Survey

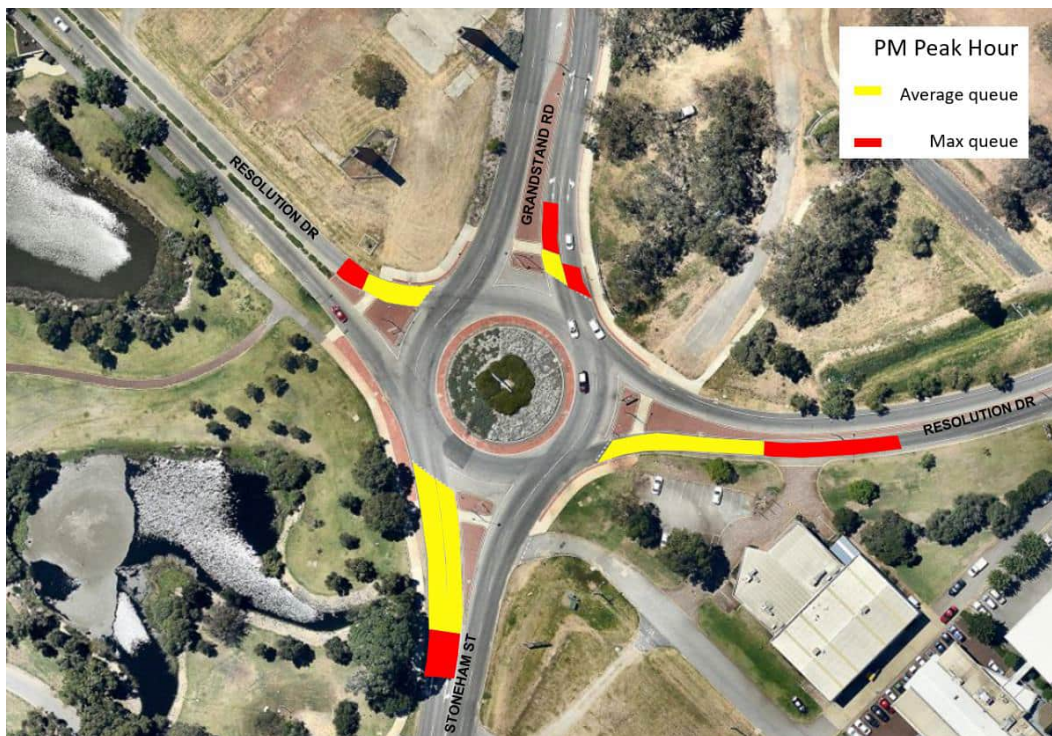


Observed queue lengths for the PM peak are presented in Figure 33. In the PM peak the longest queues were observed on the single lane Resolution Drive eastern approach to the roundabout, and the two Stoneham Street approach lanes (from the south).

It should be noted that due to the viewing angle of the survey video camera, it is not possible to see the full extent of queuing on the Stoneham Street approach to the roundabout in the PM peak. The viewing angle only allowed the first 7 vehicles in the queue to be observed. The queue does not exceed this length in the AM peak hour, only in the PM peak.



Figure 33 - September 2021 PM Peak Hour Observed Queues at Grandstand Road/Resolution Drive/Stoneham Street Intersection



Still images from the PM peak video survey are shown in Figure 34, showing typical queuing.

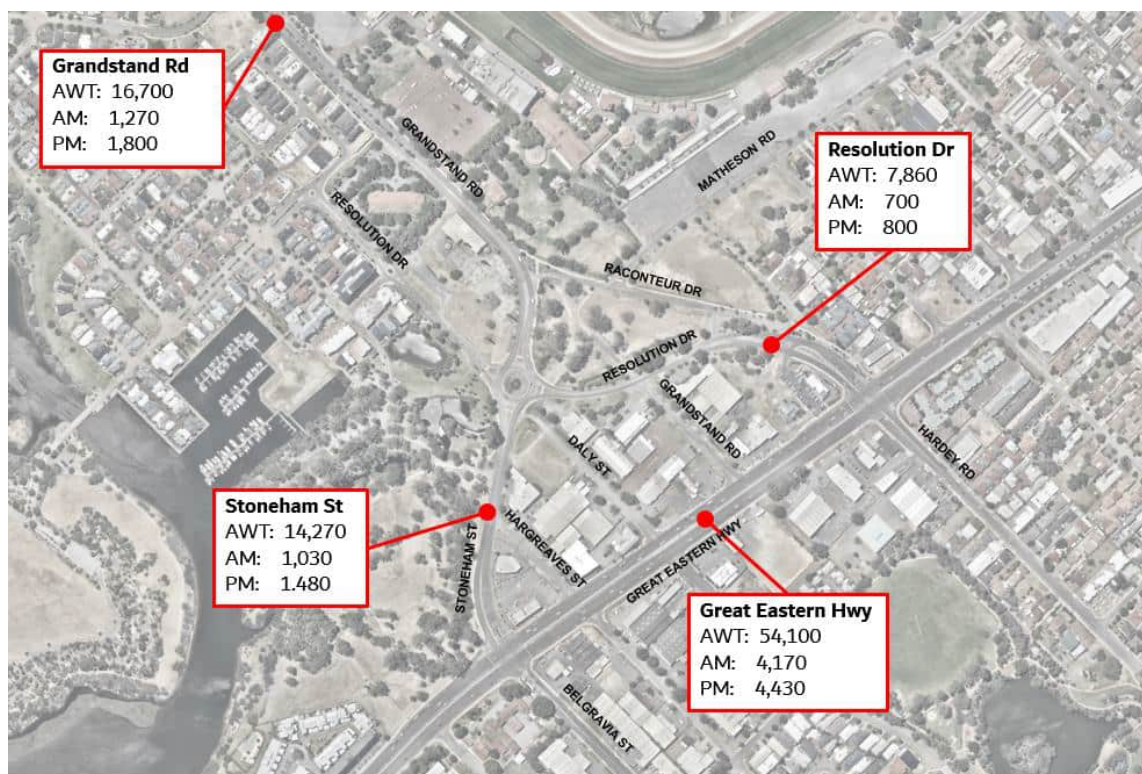
Figure 34 - September 2021 PM Peak Hour Still Images from Video Survey



### 3.6.5 Mid-block Traffic Volumes

Mid-block traffic counts for the regional and district level roads including Great Eastern Highway, Stoneham Street, Resolution Drive and Garratt Road Bridge (Grandstand Road) were sourced from Traffic Map. These counts are all from the 2018/2019 period, with the exception of Resolution Drive where the counts are from 2021/2022 and are presented in Figure 35.

Figure 35 – Two-way Mid-block Volumes (source: Main Roads WA)



### 3.6.6 Mid-block Great Eastern Highway Traffic Volumes

Traffic volumes at two sites along Great Eastern Highway (site 3404 north of Abernethy Road and site 7938 west of Aurum Street) were extracted from Traffic Map to determine historic growth trends. Between 2018 and 2020, traffic volumes along Great Eastern Highway reduced, as illustrated in Figure 36. The extent of the reduction is demonstrated in Table 8.

The 2020 counts are the most recent counts, and were undertaken in February 2020, before there was a temporary Covid-19 related reduction in traffic volumes.



Figure 36 – Great Eastern Highway Growth Trends (source: Main Roads WA)



Table 8 – Great Eastern Highway Traffic Volume Trends (source: Main Roads WA)

Site	Year	Northbound/Eastbound	Southbound/Westbound	Both Directions
3404	2018	29,295	29,400	58,695
	2020	28,132	27,897	56,029
	Change	-8.71%	-9.80%	-9.25%
7938	2018	29,559	29,746	59,305
	2020	26,548	27,065	53,613
	Change	-10.19%	-9.01%	-9.6%

### 3.6.7 Key Considerations - Existing Traffic Volumes

Great Eastern Highway is a regional road carrying a high volume of traffic over the day and in each of the peak hours. The two signalised intersections within the precinct, of Great Eastern Highway with Stoneham Street / Belgravia Street and Great Eastern Highway with Resolution Drive / Hardey Road are congested, with peak hour signal cycle times of up to 139 seconds (this is the time taken for all required traffic signal phases to run once). This signal cycle time (of 2 minutes and 19 seconds) causes long queues to form.

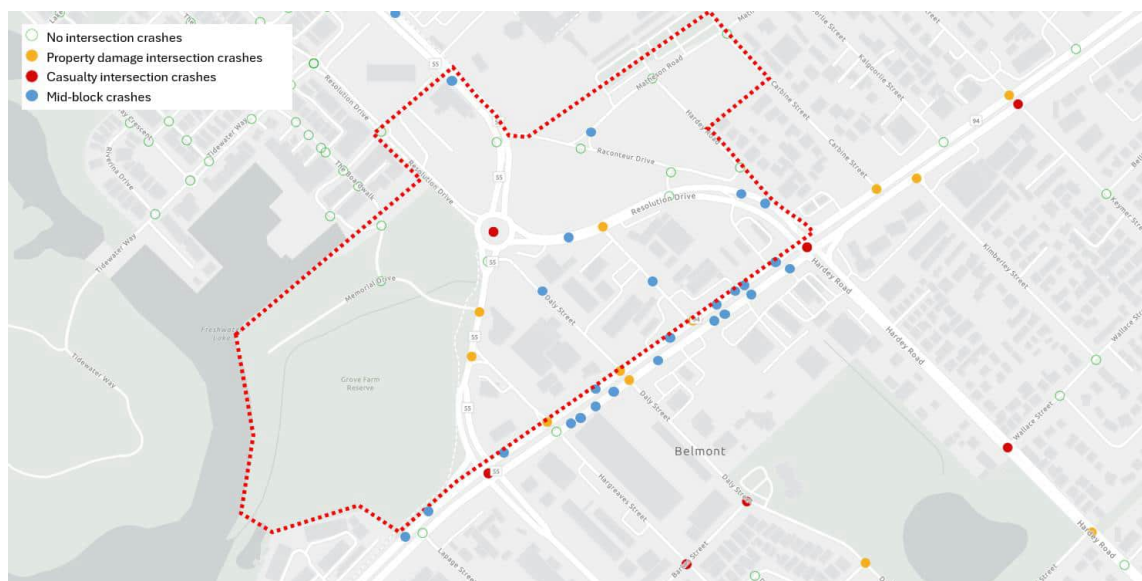
For the district level roads, Stoneham Street carries twice the amount of traffic as Resolution Drive, over the course of an entire day and in each peak period. This is partly due to signage to the north of the roundabout intersection of Grandstand Road / Resolution Drive / Stoneham Street which advises traffic destined for Midland and the Airport to use Resolution Drive to access Great Eastern Highway while traffic for Belmont is advised to use Stoneham Street.

Local roads within the precinct all carry low traffic volumes, well within their capacity. Of the local roads Grandstand Road carries the highest volumes.

### 3.7 Existing Crash Data

Intersection and mid-block crash history for the roads bordering and within the Golden Gateway precinct were obtained from Main Roads WA. The location of road crashes in the vicinity of the precinct is shown in Figure 37. This data is for the five-year period ending Friday June 28<sup>th</sup>, 2024.

Figure 37 - Location of road crashes (Source: Main Roads WA)



#### 3.7.1 Intersection Crashes

In the five-year period there were 135 reported crashes at intersections within or adjacent to the Golden Gateway precinct, as summarised in Table 9. Crash types include:

- |                      |   |
|----------------------|---|
| • Rear end           | where a vehicle collides with the rear of another vehicle.                      |
| • Right angle        | where colliding vehicles approach from adjacent approaches of the intersection. |
| • Right turn through | where a vehicle turns right in front of an oncoming vehicle.                    |
| • Sideswipe          | where a vehicle collides with the side of another vehicle.                      |
| • Hit object         | where a single vehicle hits an object which is not a vehicle                    |

Table 9 – Intersection crash summary for 5 years to June 2024 (source: Main Roads WA)

Intersection	Crash Type	Severity
Great Eastern Hwy / Stoneham St / Belgravia St – traffic signals	<b>49 reported crashes</b>	43% Property damage major
	41 Rear end	43% Property damage minor
	5 Sideswipe	12% Medical
	2 Right angle	2% Hospital
	1 Hit object	
Great Eastern Hwy / Resolution Dr / Hardey Rd – traffic signals	<b>64 reported crashes</b>	47% Property damage major
	50 Rear End	38% Property damage minor
	6 Right angle	13% Medical
	4 Other	3% Hospital
	2 Sideswipe	
Great Eastern Hwy / Hargreaves St – left in left out priority controlled intersection	2 Right turn through	
	1 Hit object	100% Property damage minor
Great Eastern Hwy / Daly St – left in left out priority controlled intersection	1 Rear End	100% Property damage major
Great Eastern Hwy / Grandstand Rd – left in left out priority controlled intersection	<b>4 reported crashes</b>	75% Property damage major
	3 Right Angle	25% Property damage minor
	1 Rear End	
Stoneham St / Resolution Dr / Grandstand Rd – roundabout	<b>11 reported crashes</b>	55% Property damage minor
	4 Right angle	36% Property damage major
	3 Rear end	9% Medical
	2 Sideswipe	
	2 Other	
Stoneham St / Memorial Dr – Priority controlled T intersection	1 Sideswipe	100% Property damage minor
Stoneham St / Hargreaves St – Priority controlled T intersection	1 Rear End	100% Property damage major
	1 Right turn through	
Resolution Dr / Grandstand Rd – Priority controlled T intersection	1 Hit object	50% Property damage minor
	1 Rear End	50% Property damage major

### 3.7.2 Midblock Crashes

In the same five-year period, there were 23 reported midblock crashes along the roads bordering and within the Golden Gateway precinct, as summarised in Table 10.

Table 10 – Mid-block crash summary for 5 years to June 2024 (source: Main Roads WA)

Road	Section	Crash Summary	Severity and Analysis
	Stoneham St to Hargreaves St – eastbound carriageway	1 Sideswipe same direction	Low severity - property damage only
Great Eastern Highway	Hargreaves St to Daly St – eastbound carriageway	1 Rear End	Crash required medical treatment
	Daly St to Grandstand Rd – eastbound carriageway	1 Rear End	Low severity - property damage only

Road	Section	Crash Summary	Severity and Analysis
Great Eastern Highway	Grandstand Rd to Resolution Dr – eastbound carriageway	2 Rear End 1 Right Angle 1 Sideswipe same direction	Low severity - property damage only
	Hardey Rd to Daly St – westbound carriageway	3 Rear End 2 Sideswipe same direction	80% property damage only 20% required medical treatment
	Daly St to Hargreaves St – westbound carriageway	4 Rear End	75% property damage only 25% required medical treatment
Grandstand Rd (north)	Resolution Dr to northern boundary of Golden Gateway precinct – northbound carriageway	1 Sideswipe same direction	Low severity - property damage only
	Resolution Dr to northern boundary of Golden Gateway precinct – southbound carriageway	1 Sideswipe same direction	Low severity - property damage only
Daly Street	Great Eastern Hwy to Stoneham St	1 Sideswipe same direction	Low severity - property damage only Crash involved parking
Grandstand Rd (south)	Great Eastern Hwy to Resolution Dr	1 Hit object	Low severity - property damage only Crash involved parking

### 3.7.3 Crash Summary

For the roads bordering and within the Golden Gateway precinct, the biggest road safety issue is rear end crashes at the two signalised intersections with Great Eastern Highway, where the crash rate is higher than expected for intersections of their nature. This is due in part to the high volume of traffic carried by Great Eastern Highway in comparison to the other streets, and because rear end crashes are often the most common crash type at signalised intersections.

Crashes at the intersections of Great Eastern Hwy / Stoneham St / Belgravia St and Great Eastern Hwy / Resolution Dr / Hardey Rd account for 71.5% of all crashes for the roads bordering and within the Golden Gateway precinct

This indicates that the precinct is bordered by a busy regional route. There is no safety issue within the precinct, with all mid-block and intersection crash rates well within the expected ranges.



## 4. MOVEMENT NETWORK

### 4.1 Original Movement Network

The original Movement Network for the Golden Gateway precinct LSP, as documented in Flyt's *Local Structure Plan Movement and Access Strategy Report* (dated June 2018), is reproduced as Figure 38. This included a portion of the Perth Racing landholding.

Figure 38 – Original Golden Gateway Precinct Movement Network (Source: City of Belmont)



Elements of original Movement Network included:

- The realignment of Resolution Drive along the historical Raconteur Drive alignment;
- Relocation of the existing Stoneham St/ Resolution Drive/ Grandstand Road roundabout to 125m northeast of its current location;
- Maintain Grandstand Road standard as four lane divided (two lanes in each direction) and realigned Resolution Drive as two lane divided (one lane in each direction);

- One intersection along Resolution Drive (between Great Eastern Highway and Grandstand Road) for access to northern area of precinct;
- Introduction of four-way traffic signal control at intersection of Stoneham Street with Resolution Drive and Daly Street, with controlled pedestrian / cycle crossings across all four intersection approaches;
- Maintain alignment of Hargreaves Street and Daly Street, realign Grandstand Road (south) at midway point to connect to Daly Street (no connection to Resolution Drive);
- Introduction of indirect connection of Matheson Road to realigned Resolution Drive;
- Stoneham Street to remain four lane divided road (with two lanes in each direction);
- Shared paths were proposed along Stoneham Street, Resolution Drive, Grandstand Road, Hargreaves Street, Daly Street and Matheson Road; and
- No changes proposed to Great Eastern Highway.

The draft Golden Gateway LSP was considered by the Belmont Council at an Ordinary Council Meeting held on June 23<sup>rd</sup>, 2020. In response to submissions received, Council resolved to require several modifications to the LSP, including to the road network to address the following issues raised in submissions:

- Matheson Road becoming a through road to provide access for Perth Racing.
- Access and egress associated with Ascot Waters.
- The extension of Grandstand Road through private property.

### 4.2 Revised Road Network

Many iterations of the road network have been produced and tested; however, the final option has been developed on the basis of the following directives from the City of Bement:

- Road network to exclude Perth Racing land holdings.
- Resolution Drive link to be maintained (to service existing businesses and future development sites) within the existing road reserve and not Water Corporation land.
- Stoneham Street is to remain as the primary route through the precinct, rather than Raconteur Drive.
- Daly Street to terminate prior to the intersection with Stoneham Street, with creation of cul-de-sac. The remainder of Daly Street will be identified as Public Open Space (POS).

The proposed road network is displayed as Figure 39.

Figure 39 – Proposed Road Network



### 4.3 Proposed Pedestrian and Cycle Facilities

Reducing traffic speeds improves road safety for all and removes a major barrier to walking and cycling. A precinct wide 30km/h speed zone should be implemented (excluding Grandstand Road and Stoneham Street as the main through route for traffic) to improve the environment for walking and cycling.

All existing shared paths surrounding and through the Golden Gateway precinct should be maintained and additional shared paths should be provided along Hargreaves Street, Grandstand Road (south), and along the sections of Resolution Drive that currently don't have any paths. These will provide connectivity between the Great Eastern Highway on-road bike lanes and the shared path network along Stoneham Street.

Tree canopy coverage should be increased along all roads within the precinct to create a pleasant environment for walking and cycling.

Other options to further encourage the use of active transport modes include the introduction of a bike or electric scooter share scheme.

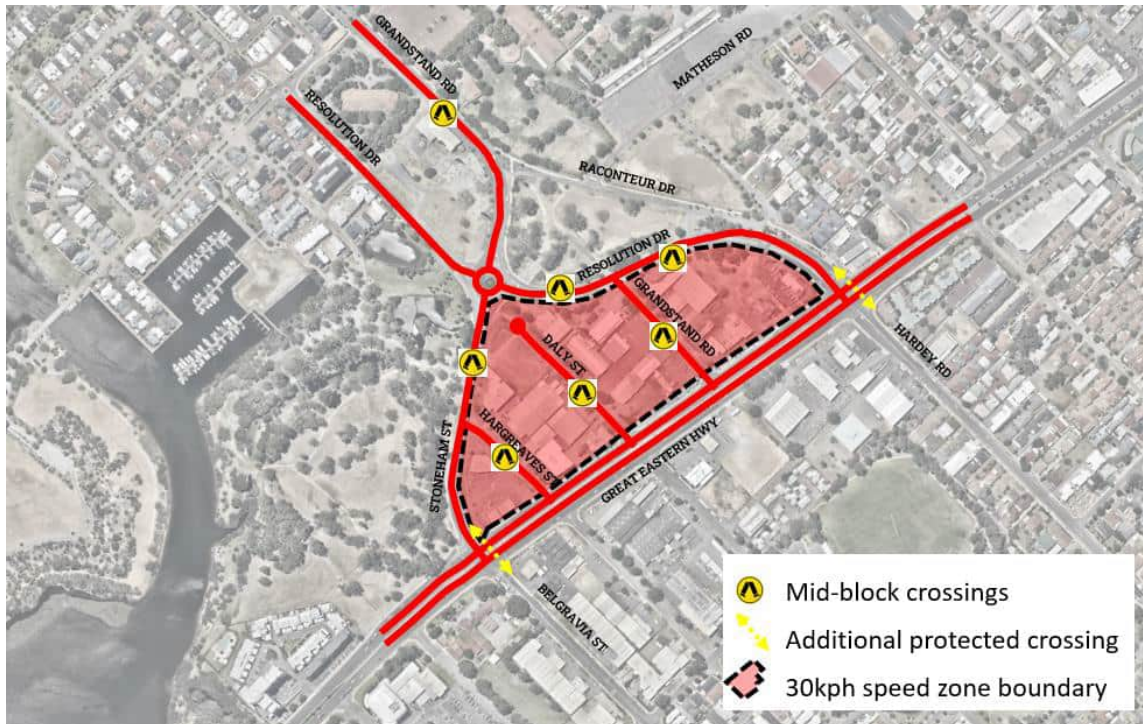
Main Roads WA are responsible for the layout and signal phasing at traffic signal controlled intersections. At the signalised intersections of Great Eastern Highway with Resolution Drive/ Hardey Road and Stoneham Street/ Belgravia Street, protected pedestrian crossing of Great Eastern Highway is only available on the western intersection approach. The City should investigate the provision of protected pedestrian crossing of Great Eastern Highway on both sides of these intersections.

Roundabouts are generally good for cars, reducing crash severity and minimising delays, however they can present barriers for accessibility by pedestrians and cyclists. Crossing during peak periods can be a real issue as there is no interruption in the traffic stream as would occur at a signalised intersection. Mid-block crossing facilities should be



provided along Stoneham Street, Resolution Drive, Raconteur Drive and Grandstand Road (north), as shown in Figure 40.

Figure 40 – Recommended Pedestrian and Cyclists Facilities



Possible types of pedestrian crossing treatments are shown in Figure 41. These include:

- Raised zebra crossings, with the crossing at footpath level creating a raised plateau speed hump for vehicles;
- Kerb ramps and median refuges or cut throughs; and
- Shared paths having continuity and priority at side street intersections.



Figure 41 – Possible Pedestrian Crossing Treatments

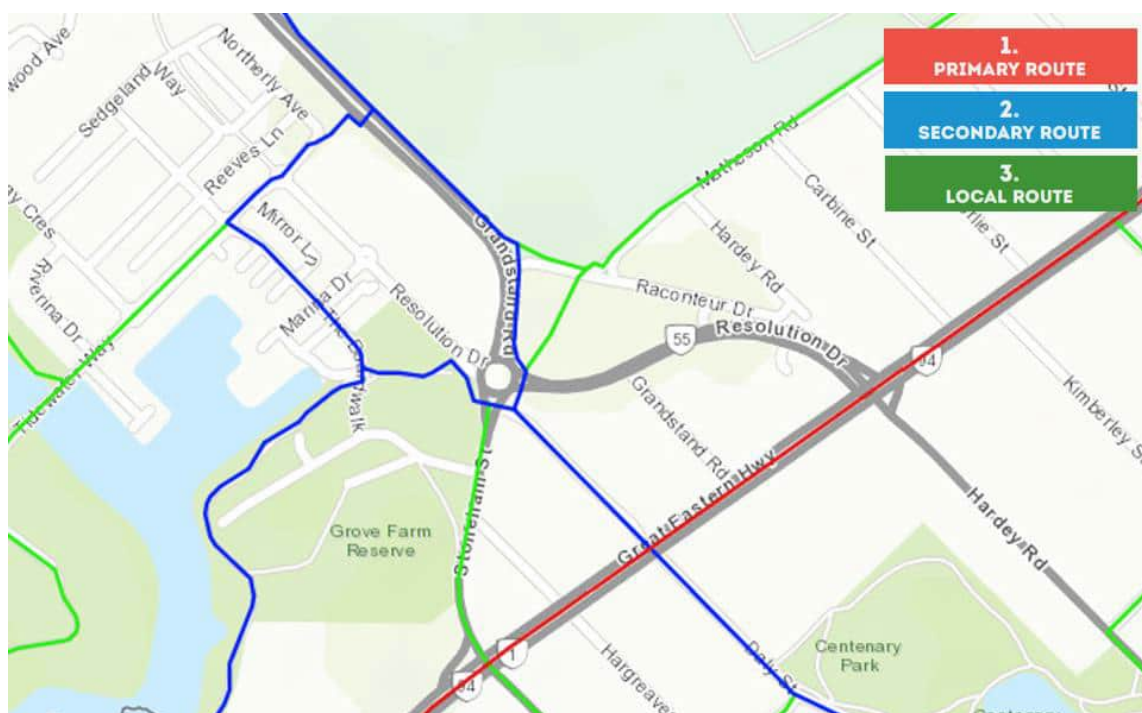


The planned pedestrian and cyclist network should be consistent with the long term cycle network (LTCN), as reproduced in Figure 42. The streets within the precinct which have been identified as LTCN routes, and the appropriate form of infrastructure are outlined in Table 11.

Table 11 – Form of LTCN within Precinct

Hierarchy	Road	Appropriate Form
Primary	Great Eastern Highway	
Secondary	Daly Street, Grandstand Road (north), path through Belmont Trust land	<ul style="list-style-type: none"> <li>• shared paths</li> <li>• separated bike and pedestrian paths</li> </ul>
Local	Stoneham Street, Matheson Road, section of Raconteur Drive, future route through triangle of land between Resolution Drive, Grandstand Road, and Raconteur Drive	<ul style="list-style-type: none"> <li>• protected bicycle lanes (uni or bi-directional)</li> <li>• safe active streets</li> </ul>

Figure 42 – Long Term Cycle Network Near Precinct (source: Department of Transport)



#### 4.4 Proposed Public Transport

To facilitate higher density development in the Golden Gateway precinct, a step change in public transport provision and public transport use will be required to ensure residents, employees and visitors have the potential to travel to/from Golden Gateway by a sustainable form of transport.

The Public Transport Authority has indicated that, if sufficient public transport demand was generated by large scale development of the Golden Gateway precinct, they would consider the option of operating a bus service between the Golden Gateway precinct and central Perth – utilising the internal road network within the Golden Gateway precinct. The bus service would originate/terminate within the Golden Gateway precinct.

This would be contingent upon the Golden Gateway precinct generating the requisite public transport demand to warrant the investment in such a service.

It is recommended that the City lobby the PTA to improve bus services to the precinct and explore the potential of other transit options such as a superbus or trackless tram.

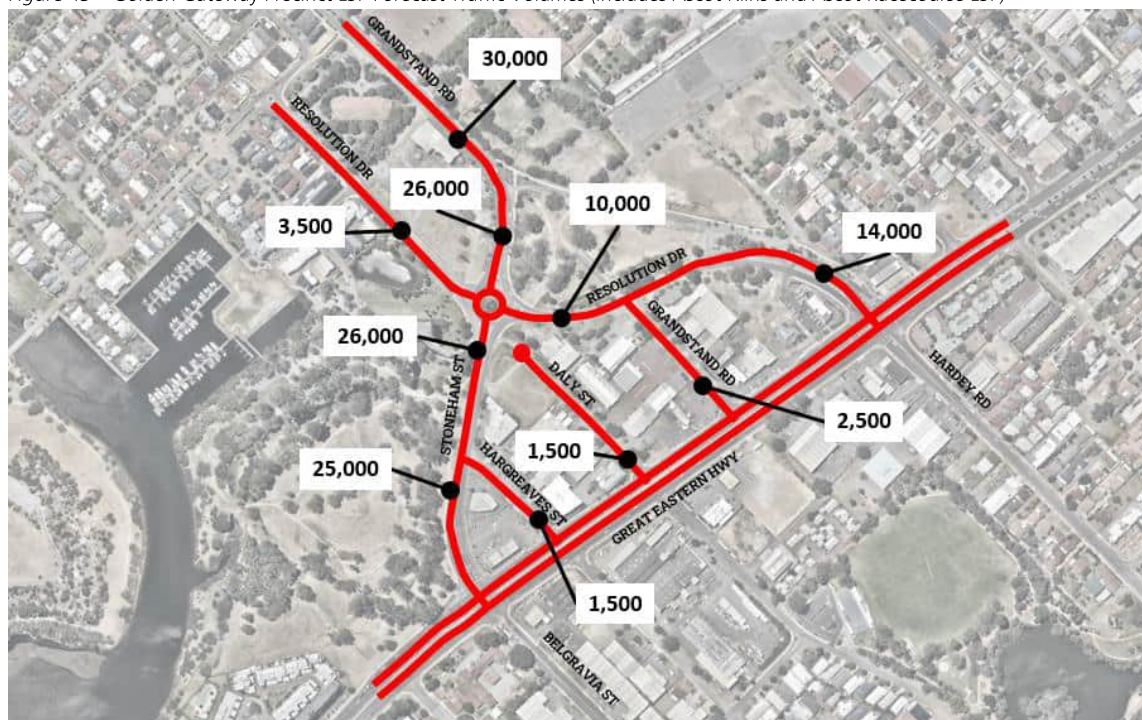


## 4.5 Role and Function of Key Roads

### 4.5.1 Forecast Traffic Volumes

The forecast traffic volumes for 2041 are shown in Figure 43. These forecasts include through traffic (traffic that does not originate or terminate in the Golden Gateway precinct), as well as traffic generated by the development of the Ascot Kilns site and the Ascot Racecourse LSP area.

Figure 43 – Golden Gateway Precinct LSP Forecast Traffic Volumes (includes Ascot Kilns and Ascot Racecourse LSP)



### 4.5.2 Road Hierarchy

The proposed road hierarchy is shown in Figure 44. This includes:

- Primary Distributor
  - Great Eastern Highway
- Distributor A
  - Stoneham Street
  - Grandstand Road (north)
  - Section of Resolution Drive immediately north of Great Eastern Highway
- Local Distributor
  - Northern section of Resolution Drive
- Access Roads
  - Hargreaves Street
  - Daly Street
  - Grandstand Road (south)
  - Matheson Road
  - Hardey Road (between Great Eastern Highway and Matheson Road)

Figure 44 – Golden Gateway Precinct LSP Road Hierarchy



#### 4.5.3 Great Eastern Highway

The Great Eastern Highway corridor will present itself as a strong, unified commercial and mixed-use edge to the Golden Gateway precinct.

Great Eastern Highway will remain in its current form. No changes are proposed to the existing road connections with Great Eastern Highway nor the forms of intersections between Great Eastern Highway and connecting roads.

#### 4.5.4 Stoneham Street

Stoneham Street will be the primary interface between the Golden Gateway precinct and the Swan River. It is proposed that future planning for the Belmont Trust Land, located to the west of Stoneham Street, should ensure strong physical links are maintained between the Swan River and future Golden Gateway population and workforce.

Stoneham Street will continue to be a major district road corridor and provide for high capacity traffic movements. Forecast traffic volumes for 2041 range between 25,000 vpd and 26,000 vpd, with the higher traffic volumes carried close to the intersection with Resolution Drive. The form of Stoneham Street will be retained as a four lane divided road (two lanes in each direction) with a median on approaches to main intersections and a painted dividing line mid-block.

The road reserve width is only 20m, which allows for four lanes at 3.3m wide, and 3.4m verges either side, or only 2.4m verges if a 2m median island is included. If Stoneham Street were being built as part of a new development, the minimum required road reserve would be at least 33m.

The intersection of Stoneham Street with Resolution Drive and Grandstand Road will remain as a two-lane roundabout. The intersection of Stoneham Street with Hargreaves Street will remain in its current configuration and there will be no intersection with Daly Street as it will become a cul-de-sac.



### 4.5.5 Resolution Drive

Resolution Drive will remain on its existing alignment. The form of Resolution Drive as a two lane divided road (one lane in each direction) will be retained, however additional lanes will develop on the approach and exit from the Great Eastern Highway intersection, as per the existing lane arrangement.

Forecast traffic volumes for 2041 range between 10,500 vpd (east of the roundabout controlled intersection with Grandstand Road) and 14,000 vpd (north of Great Eastern Highway).

### 4.5.6 Grandstand Road (north)

Grandstand Road (north) will remain in its current alignment and configuration as a four lane divided road (with two lanes in each direction). Grandstand Road is forecast to carry 30,000 vpd by 2041.

The roundabout controlled intersection with Stoneham Street and Resolution Drive will remain.

### 4.5.7 Hargreaves Street

Hargreaves Street will continue along its existing alignment providing a connection between Great Eastern Highway (permitting left in left out movements only) and Stoneham Street. The intersection with Stoneham Street will remain.

Hargreaves Street is forecast to carry 1,500 vpd by 2041. It is proposed as a two-lane road with on-street parking where appropriate. Its current width of 12.5m should be reduced to 7m, with embayed parking.

### 4.5.8 Daly Street

Daly Street will continue along its existing alignment however it will become a cul-de-sac south of Stoneham Street, with the remainder of Daly Street to be identified as Public Open Space. The intersection with Great Eastern Highway (permitting left in left out movements only) will remain.

Daly Street is forecast to carry 1,500 vpd by 2041. Daly Street is proposed as a two-lane road with on-street parking where appropriate. Daly Street's current width is 8m; this could be reduced to 7m. On-street parking would need to be embayed.

Daly Street has been identified as a secondary route under the Long Term Cycle Network, which could take the form of a shared path, protected bike path or safe active street. The treatment should continue through the public open space.

### 4.5.9 Grandstand Road (south)

Grandstand Road will continue along its existing alignment providing a connection between Great Eastern Highway (permitting left in left out movements only) and Resolution Drive where it has a full movement intersection.

Grandstand Road (south) is forecast to carry 2,500 vpd by 2041. Grandstand Road is proposed as a two-lane road with on-street parking where appropriate. It is currently 12.5m wide and should be reduced to 7m, with embayed parking.

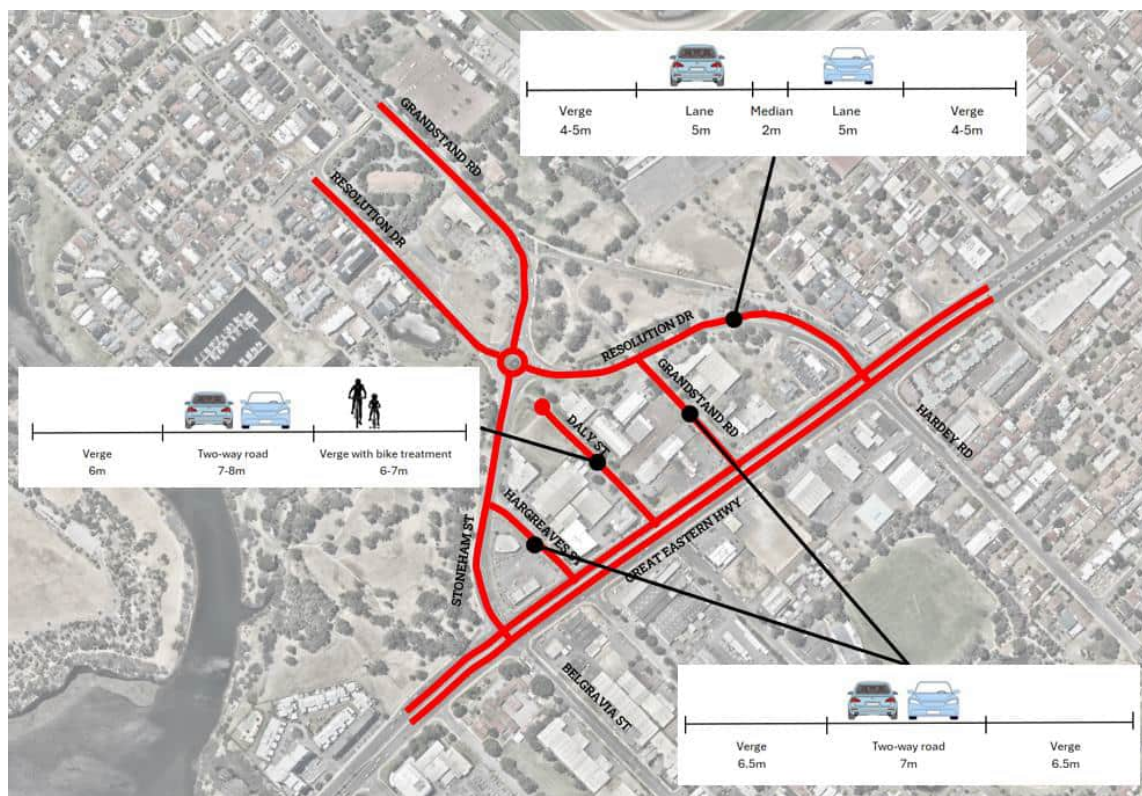
### 4.5.10 Memorial Drive

Memorial Drive and its intersection with Stoneham Street will remain unchanged.

## 4.6 Road Cross Sections

The proposed road cross sections are shown in Figure 45.

Figure 45 – Proposed Road Cross Sections Golden Gateway Development



## 4.7 Intersection Controls

The proposed intersection controls are shown in Figure 46.

In the AM peak hour, the intersection of Stoneham Street with Hargreaves Street will be impacted by queuing along Stoneham Street, back from the intersection with Great Eastern Highway. It is recommended “KEEP CLEAR” pavement markings be applied to this intersection to ensure vehicles are able enter the Stoneham Street northbound and southbound traffic streams.

Figure 46 – Proposed Intersection Controls for Golden Gateway Development



#### 4.8 Parking and Planning Controls

To reduce the car dependence of the Golden Gateway Precinct and to maximise the use of active transport modes, it is recommended the City consider the imposition of a parking cap.

The required residential parking outlined in the existing Structure Plan follows the recommendations of the Residential Design Codes Volume 2 – Apartments and provides minimum and maximum parking rates. Any parking proposed in excess of the minimum provision must be capable of potential future conversion into habitable floor space.

It is recommended that commercial parking also be subject to a maximum rate.

Other innovative approaches include the encouragement of reciprocal parking, possible car share schemes, bike and electric scooter hire schemes, and the mandatory provision of safe and secure parking for bikes, electric scooters, and other micro mobility devices (including charging stations).

The City is also able to impose an ambitious mode share target for this development. From 2021 Census data, the existing car driver and car passenger mode share for the journey to work from the Ascot area is estimated at 56%, with 11.8% using public transport and 1% using active modes. Approximately 13.3% worked from home and 9.6% did not work at all. The trip generation rates used in this assessment assumed a 20% reduction in car use. A more ambitious car driver and passenger mode share target would need to be supported by a comprehensive range of strategies to increase public transport ridership, and use of active modes and micro mobility devices.

## 5. ANALYSIS OF TRANSPORT NETWORK

The weekday peak hour performance of the existing and proposed movement networks has been assessed for the years 2021, 2031 (interim) and 2041 (ultimate).

Potential traffic associated with the Ascot Racecourse LSP and Ascot Kilns Local Development Plan has also been included. Land use and trip generation data for the Ascot Racecourse LSP area have been extracted from the Traffic Impact Assessment prepared by PJA in May 2024.

Traffic performance at an Ascot Racecourse weekday event day has also been investigated.

### 5.1 Form of Assessment

The traffic assessment has been undertaken using the SIDRA Network platform, which is able to model the operation of the entire Golden Gateway movement network and can consider the impact of congestion and queuing at adjacent intersections.

### 5.2 Assessment Scenarios

A SIDRA Network assessment has been undertaken for the AM and PM period in each of the following scenarios:

- Base year (2021) with existing road network;
- Base year (2021) with proposed road network;
- Interim forecast year (2031) with existing road network;
- Interim forecast year (2031) with proposed road network and 25% of Ascot Kilns and Golden Gateway development, 50% of Ascot Racecourse development complete;
- Ultimate forecast year (2041) with existing road network;
- Ultimate forecast year (2041) with proposed road network and 100% of development complete.

Seven scenarios for an Ascot Racecourse event day have been assessed for a single PM peak period:

- 2021 event day with existing road network;
- 2021 event day with proposed road network;
- 2031 event day with proposed road network and 25% of Ascot Kilns and Golden Gateway development, 50% of Ascot Racecourse development complete;
- 2041 event day with proposed road network and 100% of development complete.

### 5.3 Assessment Time Period

The assessment has been undertaken for an average weekday AM peak hour, found to occur from 7:30am to 8:30am, and the PM peak hour, between 4:30pm and 5:30pm.

For an event at Ascot Racecourse, the 2021 calendar of events was reviewed. During 2021, 49 events were scheduled; 20 events on weekdays (mainly Wednesdays, with a single event on a Tuesday and another on a Friday), 28 events on Saturdays and a single event was scheduled on a Sunday. Events are held 9 months of the year, with no racing over the winter months of June, July, and August. The three busiest event days are the Melbourne Cup (held on a Tuesday), Railway Stakes and Perth Cup (both held on Saturdays).

Weekday and weekend traffic volumes were compared for Great Eastern Highway, Stoneham Street, Resolution Drive and Garratt Road. For all sites, weekend peak hour volumes are less than weekday volumes. For this reason, it was decided to assess a Melbourne Cup event at Ascot Racecourse during the regular PM peak hour (between 4:30pm and 5:30pm).





## 5.4 Background Traffic Growth

Background or through traffic is traffic that does not originate or terminate in the Golden Gateway precinct, but instead travels through the precinct, or adjacent to the precinct, on regional and district roads such as Great Eastern Highway, Stoneham Street, Resolution Drive and Grandstand Road (north).

To estimate the future growth of background traffic, historic traffic growth has been investigated. Traffic volumes along the section of Great Eastern Highway between Stoneham Street and Resolution Drive (site 1012) have reduced from 64,800 vpd in 2014 to 54,100 vpd in 2018, a reduction of 16.5% over the 4 year period. Similarly at sites 3404 and 7938 (along Great Eastern Highway to the west and east of the Golden Gateway precinct respectively), daily traffic volumes on Great Eastern Highway reduced by more than 9% over the two year period between 2018 and 2020. Despite these reductions, background traffic volumes are expected to increase over time.

Along road corridors where intersections currently operate close to capacity during peak hours, any traffic growth will see an increase in the duration of the peak period (as there is no capacity for this growth to occur during the existing peak hours). This phenomenon is called peak spreading. As daily traffic volumes continue to increase, the proportion of the total daily traffic occurring during the morning and afternoon peak hours reduces. This also results in the growth in peak hour traffic being less than the growth in daily traffic volumes.

Despite the recent reduction in traffic volumes along Great Eastern Highway, an annual peak hour growth rate of 0.5% has been assumed. This represents an increase of 5.1% between 2021 and 2031 and an increase of 10.5% between 2021 and 2041. The peak hour growth rate has been applied to all through traffic (excluding buses) travelling on regional and district roads such as Great Eastern Highway, Stoneham Street, Resolution Drive and Grandstand Road (north).

## 5.5 Trip Generation Assumptions

The proposed land uses within the Golden Gateway Local Structure Plan area are reproduced in Table 12. This table also includes land uses for the Ascot Kilns development site, and the Ascot Racecourse Local Structure Plan area.

Table 12 – Proposed Structure Plan Land Uses

Development Area	Yield
Golden Gateway	2,268 dwellings, 6,979 m <sup>2</sup> NLA commercial, 1,200 m <sup>2</sup> NLA retail
Ascot Kilns	250 dwellings, 512m <sup>2</sup> GFA commercial
Ascot Racecourse Area A	390 unit retirement village
Ascot Racecourse Area D	41 dwellings, 2,100m <sup>2</sup> childcare centre for up to 90 children
Ascot Racecourse Area E	3,400m <sup>2</sup> retail, 9,600m <sup>2</sup> commercial plus jockey heath Equine Centre

The traffic assessment has considered two different time periods for development of the Golden Gateway precinct: 2031 and 2041. By 2031 it is assumed that 25% of the total yield will be redeveloped, with 75% of the existing commercial development retained.

For the Ascot Racecourse Local Structure Plan area, the Transport Impact Assessment prepared by PJA stated that the redevelopment would be completed by 2036, therefore it is assumed that 50% would be completed by 2031.

By 2041 it is assumed that all redevelopment will be complete.

### 5.5.1 Residential

The WAPC's Transport Impact Assessment Guidelines Volume 5 – Technical Guidance suggest peak hour trip rates for residential land uses. The residential trip rates are based on the Perth and Regions Travel Surveys (PARTS) data averaged over the range of dwelling types. The recommended rate for residential land use is 0.8 vehicle trips per dwelling for the AM and PM peak hours.

These rates are considered high, given they represent an average of the entire Metropolitan area and include a high proportion of detached dwellings rather than dwellings in mixed use developments. Surveys of apartment developments undertaken by Flyt for the Department of Lands Planning and Heritage (DLPH) within inner and middle suburbs revealed peak hour vehicle trip rates of between 0.13 and 0.33 per dwelling, as shown in Table 13.

Table 13 also lists the Walk Score and Transit Score for each development surveyed so that the walkability and public transport accessibility of each site can be compared to that of the proposed development. The average peak hour trip rate for the 3 'middle suburb' apartment developments was found to be 0.27 trips per apartment, with the range between 0.23 and 0.33. The 3 surveyed middle suburb sites have a Walk Score range of 47 - 65 (compared to 43 - 48 for the Golden Gateway precinct) and a Transit Score range of 41 - 53 (compared to 47 for the Golden Gateway precinct). This would indicate residential development within the precinct would most likely generate a similar level of trips to the 3 surveyed middle suburb sites.

Table 13 – Apartment peak hour trip rates from DLPH surveys

Development	Address	Inner/ Middle	Walk Score	Transit Score	No. Apartments	No. Car Bays	Peak Hr Trip Rate (per unit)
Eastgate	76 Newcastle Street, Perth	Inner	96	99	53	65	0.23
x 2	143 Adelaide Terrace, Perth	Inner	86	81	200	328	0.13
Depot	65 Brewer Street, Highgate	Inner	91	93	35	39	0.31
Lakeside	134 Mounts Bay Road, Perth	Inner	57	92	30	31	0.13
Abode	6 Campbell Street, West Perth	Inner	94	86	86	76	0.13
Rivershores	2 Doepel Street, North Fremantle	Middle	65	53	58	122	0.33
Ceresa	12 Tanunda Drive, Rivervale	Middle	49	41	113	228	0.23
Westend	33 Blythe Avenue, Yokine	Middle	47	48	36	50	0.25
Average of all (inner/ middle) developments							0.19
Average of middle suburb developments							0.27

The nature of the development and the site's walkability and public transport accessibility has led to the adoption of a peak hour trip rate of 0.3 trips per multiple dwelling. The resulting peak hour trip rates are shown in Table 14.

Table 14 – Residential Peak hour trip rates

Land Use	AM Peak IN	AM Peak OUT	PM Peak IN	PM Peak OUT
Multiple dwelling	0.075	0.225	0.1875	0.1125

As discussed in Section 4.8, car parking controls can be used to reduce car dependency, in conjunction with safe and continuous routes for bikes, electric scooters and other micro mobility devices, and an increased provision of public transport services. A variety of local amenities within a short and pleasant walking or biking distance will also encourage trips by active transport modes and micro mobility devices.



A 20% reduction in residential vehicle trips to/from the site has been assumed given the proposed parking controls, improvements to the pedestrian and cyclist network and the enhanced public transport provision.

### 5.5.2 Non Residential

Trip rates for the non-residential (commercial and retail) land uses have been sourced from the WAPC Guidelines. The resulting peak hour trip rates for the retail and commercial land uses are shown in Table 15.

Table 15 – Commercial and Retail Peak hour trip rates (per 100m<sup>2</sup> NLA)

Land Use	AM Peak IN	AM Peak OUT	PM Peak IN	PM Peak OUT
Commercial	1.6	0.4	0.4	1.6
Retail	1.0	0.25	2.0	2.0

In addition to the above it was assumed that 10% of retail and commercial employees would live within the Golden Gateway precinct and as such total commercial and retail vehicle trips were reduced by 10% (approximately 20 employees) to reflect an internal walk trip rather than an external vehicle trip.

### 5.5.3 Ascot Special Event

As discussed in Section 5.3, the PM peak hour (between 4:30pm and 5:30pm) on Melbourne Cup Day was selected as the Ascot Racecourse special event to be modelled. This is because traffic leaving the event coincides with the regular PM peak hour.

On Melbourne Cup Days, Transperth operate bus services to and from Ascot, as shown in Table 16. This demonstrates that 9am to 2pm are the main times for travel to Ascot, while 3:15pm to 7pm are the main times for travel from Ascot.

Table 16 – Melbourne Cup Event Bus Services

Service	To Ascot	From Ascot
To / from Burswood Station	Every 10 minutes from 9am to 1:50pm	Every 10 minutes from 3:30pm to 7:45pm
To / from Fremantle Station	Every 30 minutes from 9:30am to 1pm	Every 30 minutes from 3:30pm to 6:30pm
To / from Meltham Station	Every 10 minutes from 9:30am to 1:50pm	Every 10 minutes from 3:15pm to 7pm

There are two main parking areas for event patrons, the northern car parks accessed from the north and the Matheson Road car parks (plus overflow parking areas) which are accessed from the south. It is estimated that the Matheson Road car parks and overflow parking areas have capacity for 880 vehicles. Assuming the vehicles leave in a constant stream between 3:30pm and 6:30pm, there would be 293 vehicle exiting movements per hour.

### 5.5.4 Existing Trip Generation

Based on the City of Belmont counts of existing vehicle activity along local streets (as documented in Section 3.6.3), the estimated vehicle trips generated by the existing land uses on a non-event day at Ascot are shown in Table 17.

Table 17 – Existing Precinct Estimated Traffic Generation

Time Period	Inbound	Outbound	Total
Daily traffic	1,700	2,300	4,000
AM Peak hour	142	104	246
PM Peak hour	96	221	317

For the 2031 forecast years, 25% of the existing precinct traffic volumes will be removed from the road network before the Golden Gateway Precinct volumes are added. For the 2041 forecast years, all of the existing precinct traffic volumes will be removed from the road network.

### 5.5.5 Ultimate Trip Generation

For the ultimate build out of the Golden Gateway precinct (including the Ascot Kilns development) assumed to occur by 2041, a total of 753 trips are forecast to be generated in the AM peak hour (270 trips to the site and 483 trips from the site) and 782 trips are forecast to be generated in the PM peak hour (426 trips to the site and 356 trips from the site), as summarised in Table 18.

The traffic generation for the Ascot Racecourse LSP area has been extracted from the Traffic Impact Assessment prepared by PJA in May 2024. A total of 300 AM peak hour trips and 623 PM peak hour trips are forecast for the ultimate development. The forecast Ascot Racecourse LSP traffic represents 28.5% of total forecast AM peak hour traffic volumes, and 44.3% of total forecast PM peak hour volumes.

Table 18 – Ultimate development land uses

Land Use	AM Peak IN	AM Peak OUT	PM Peak IN	PM Peak OUT
Golden Gateway	247	436	387	326
Ascot Kilns	22	47	39	30
<b>Sub Total</b>	<b>270</b>	<b>483</b>	<b>426</b>	<b>356</b>
Ascot Racecourse Area A	29	88	78	39
Ascot Racecourse Area D	28	44	33	23
Ascot Racecourse Area E	89	22	217	233
<b>Ascot Sub Total</b>	<b>146</b>	<b>154</b>	<b>328</b>	<b>295</b>
<b>Total</b>	<b>416</b>	<b>637</b>	<b>754</b>	<b>651</b>

### 5.5.6 10 Year Trip Generation

By 2031 it is assumed that 25% of Ascot Kilns and Golden Gateway development will be redeveloped, with 75% of the existing commercial uses retained. Based on the Ascot Racecourse LSP Traffic Impact Assessment, the Perth Racing Landholdings is expected to be fully developed by 2036, therefore it is assumed that by 2031 50% of the Ascot Racecourse LSP will be complete.

The 2031 forecast is for 185 trips to be generated in the AM peak hour (65 trips to the site and 120 trips from the site) with 185 trips forecast to be generated in the PM peak hour (101 trips to the site and 84 trips from the site), as summarised in Table 19.

Table 19 – 10-year development land uses

Land Use	AM Peak IN	AM Peak OUT	PM Peak IN	PM Peak OUT
Golden Gateway	62	109	97	82
Ascot Kilns	6	12	10	7
Ascot Racecourse	73	77	164	148
<b>Total</b>	<b>140</b>	<b>198</b>	<b>271</b>	<b>237</b>
<b>Existing land uses (75% retained)</b>	<b>106</b>	<b>78</b>	<b>72</b>	<b>166</b>



## 5.6 Trip Distribution

Trips to and from the Golden Gateway precinct were distributed according to the relative proportion of existing vehicle volumes travelling to and from the precinct along each route in each of the peak hours, with a slight reassignment of trips to/from Hardey Road south to Belgravia Street.

Regional through traffic is assigned to the existing major routes.

The AM peak distribution of trips to and from the precinct is shown in Figure 47, while the PM peak is shown in Figure 48.

Figure 47 – Distribution of AM Peak Trips to and from the Precinct Ultimate Development

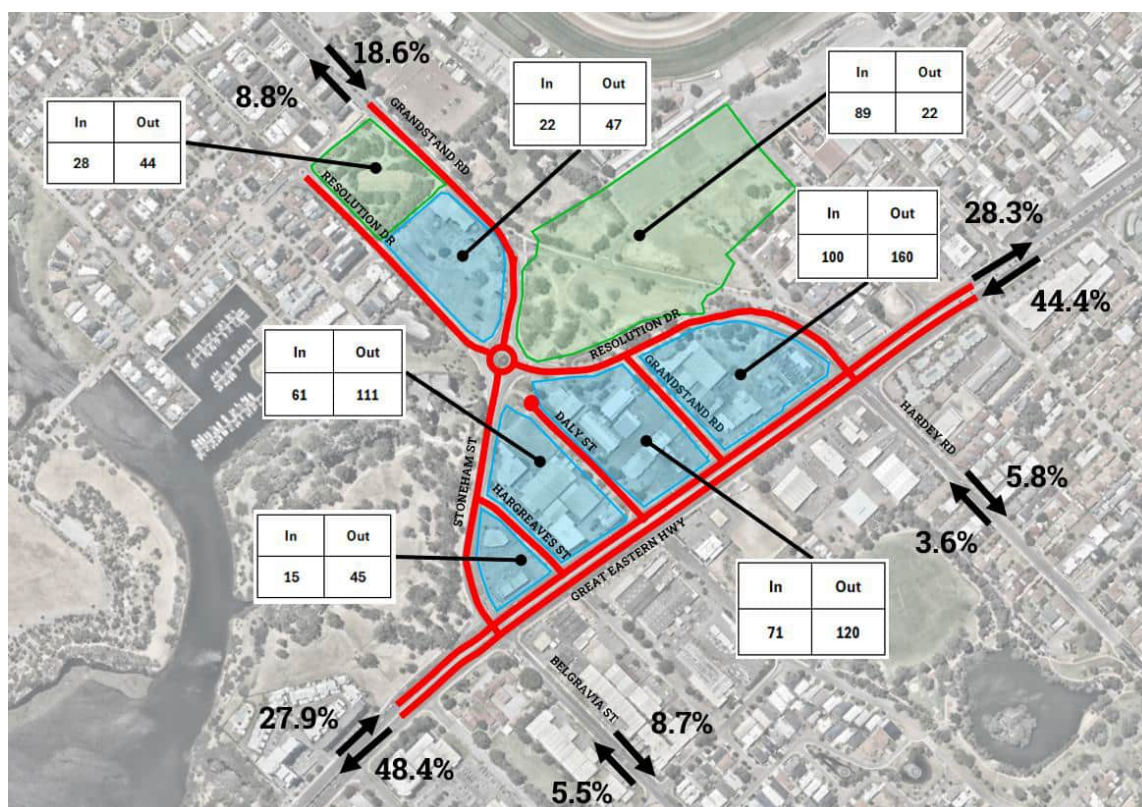
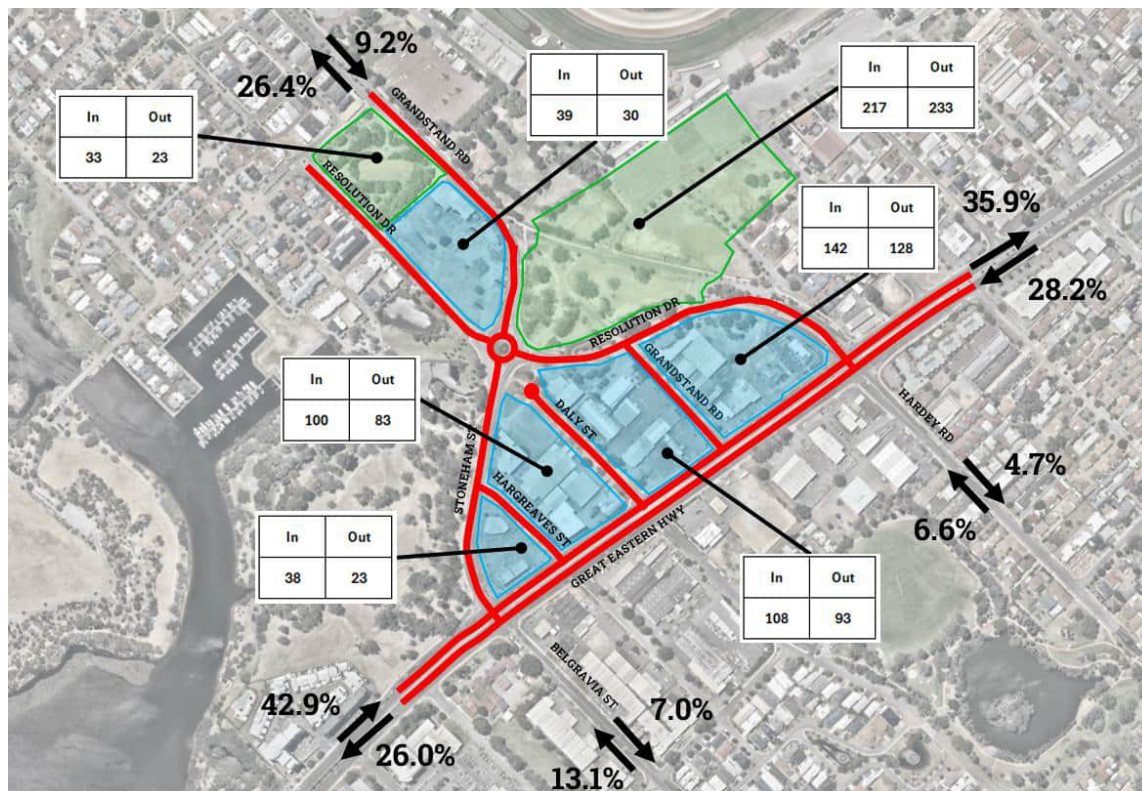


Figure 48 – Distribution of PM Peak Trips to and from the Precinct Ultimate Development



The existing peak hour traffic to and from Hargreaves Street, Daly Street and Grandstand Road will also be reduced by 25%, to reflect the traffic to and from the 75% of existing precinct land uses which are expected to be retained.

Forecast turning traffic volumes for the intersections within the precinct which have been derived from the traffic generation and distribution processes are outlined in Appendix 8.

## 5.7 SIDRA Network Modelling

SIDRA is a modelling tool that can be used to assess the performance of an individual intersection, or a network of intersections. The SIDRA models have been developed in accordance with Main Roads' Operational Modelling Guidelines.

The performance of the overall network and individual intersections is expressed as a level of service. Level of service ranges from A to F, where A is the highest level of performance (unimpeded traffic flow, minimal delay) and F is the lowest (high levels of congestion, extreme delays, demand exceeds capacity). The level of service designation is based on delay. The Highway Capacity Manual sets out the ranges of delay for each level of service, which differs slightly between signalised and non-signalised intersections, and is reproduced in Table 20.

Table 20 – Level of Service Ranges for Signalised, Roundabout and Priority Controlled Intersections

Ranges of Delay for each Level of Service and Intersection Type (seconds)			
LoS	Signalised	Roundabout	Give Way / Stop Sign
A	0 - 10	0 – 10	0 - 10
B	10 - 20	10 – 20	10 - 15
C	20 - 35	20 – 35	15 - 25
D	35 - 55	35 – 50	25 - 35
E	55 - 80	50 – 70	35 - 50
F	80+	70+	50+

### 5.7.1 Base Network Modelling

To gain an understanding of the existing performance of the road network, and the impact of continued traffic growth on this performance, the following three scenarios have been assessed for the AM and PM peak periods:

- Existing road network, with 2021 volumes (no Golden Gateway development);
- Existing road network, with 2031 volumes (no Golden Gateway development); and
- Existing road network, with 2041 volumes (no Golden Gateway development).

The SIDRA predicted AM peak hour performance of the existing network with 2021, 2031 and 2041 forecast volumes (without any Golden Gateway redevelopment traffic) is shown in Figure 49.

The SIDRA predicted PM peak hour performance of the existing network with 2021, 2031 and 2041 forecast volumes (without any Golden Gateway redevelopment traffic) is shown in Figure 50.

The SIDRA predicted queue storage ratios (showing the 95<sup>th</sup> percentile queues) of the existing network with 2021, 2031 and 2041 volumes is shown in Figure 51 for the AM peak hour and Figure 52 for the PM peak hour.

The SIDRA predicted level of service for the signalised intersections of Great Eastern Highway/Stoneham Street/ Belgravia Street, Great Eastern Highway/Resolution Drive/Harvey Road, and the roundabout controlled intersection of Stoneham Street/Grandstand Road/Resolution Drive for 2021, 2031 and 2041 volumes are summarised in Table 21.

Detailed SIDRA Network output for these intersections is displayed in Appendix 1 (for 2021), Appendix 2 (for 2031) and Appendix 3 (for 2041).

Table 21 – SIDRA Predicted Intersection Approach Level of Service – Base Network

Approach	AM Peak			PM Peak		
	2021	2031	2041	2021	2031	2041
Great Eastern Hwy / Stoneham St / Belgravia St						
Belgravia St	E	E	E	E	E	E
Great Eastern Hwy east	D	F	F	D	D	D
Stoneham St	F	F	F	E	E	E
Great Eastern Hwy west	C	C	C	C	C	D
Great Eastern Hwy / Resolution Dr / Hardey Rd						
Hardey Rd	E	E	E	E	E	E
Great Eastern Hwy east	C	D	F	D	D	D
Resolution Dr	D	D	E	D	E	E
Great Eastern Hwy west	C	C	C	D	D	E
Stoneham St / Grandstand Rd / Resolution Dr						
Resolution Dr east	B	B	B	B	B	B
Grandstand Rd north	A	A	A	A	A	A
Resolution Dr west	A	A	A	B	B	B
Stoneham St south	A	A	A	A	B	B

The SIDRA Network base modelling demonstrates that the signalised intersections along the Great Eastern Highway corridor are congested in each of the peak hours. While the Great Eastern Highway approaches currently operate at a level of service C and D, the side roads, particularly Stoneham Street, Belgravia Street, and Hardey Street currently operate at a level of service E or F in the peak periods. The side roads experience congestion as more than half of the traffic signal green time is allocated to Great Eastern Highway. This congestion is expected to continue as volumes increase, with regional background traffic growth predicted to cause the Great Eastern Highway eastern approaches to operate at LOS F in the 2041 AM peak.



Figure 49 – SIDRA Output Network Level of Service AM Peak – Base Network

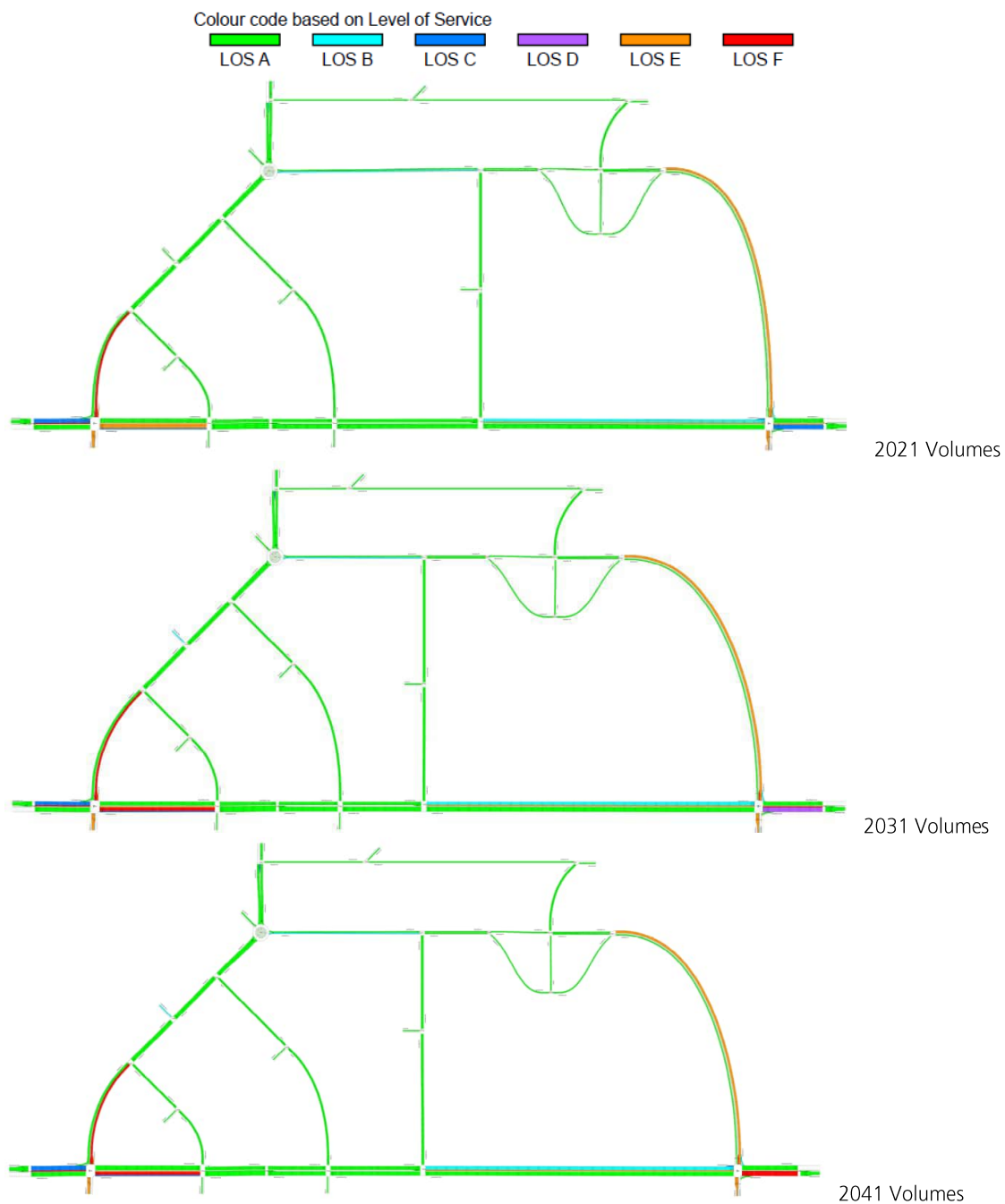


Figure 50 – SIDRA Output Network Level of Service PM Peak – Base Network

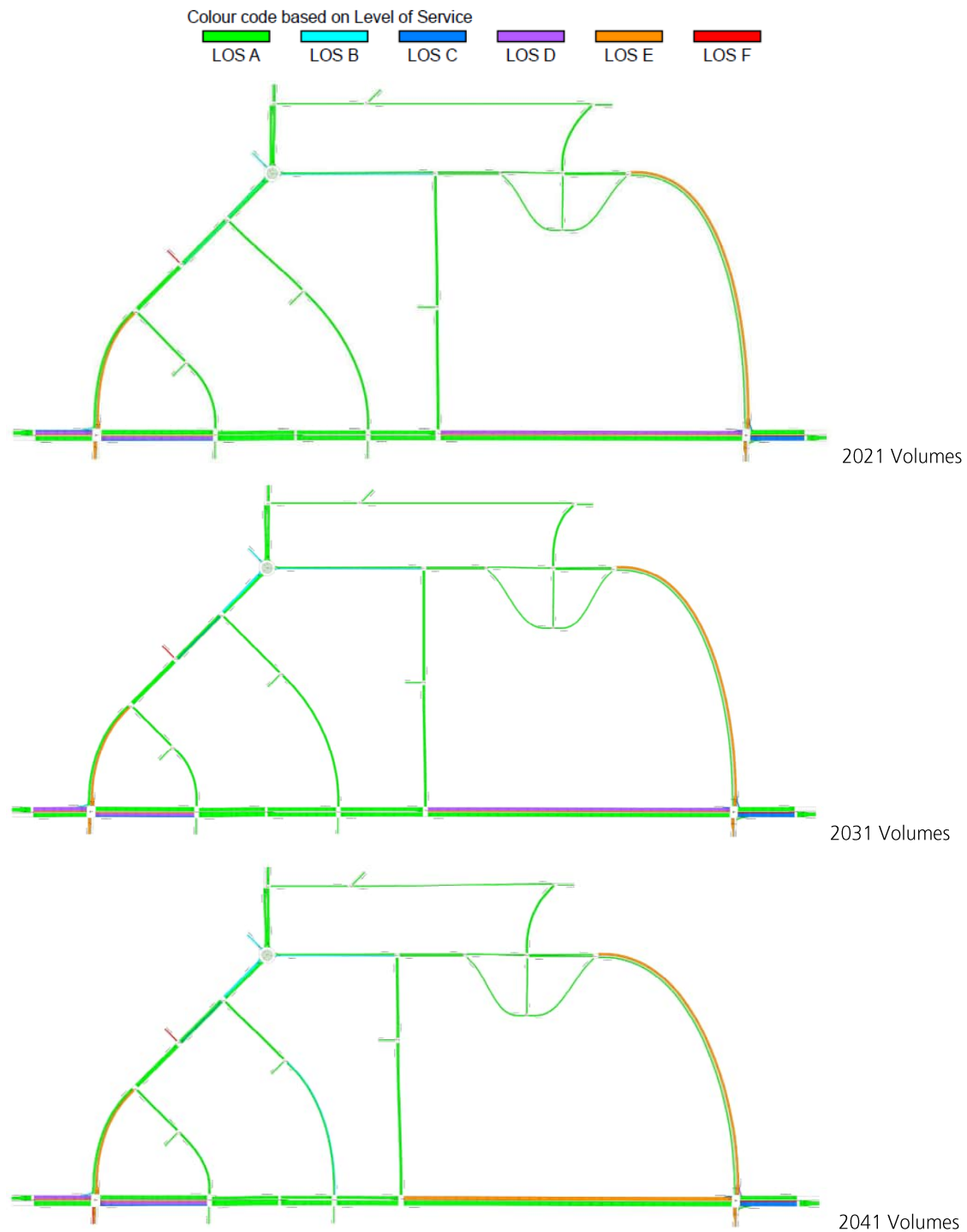


Figure 51 – SIDRA Output Network Queue Storage Ratio AM Peak – Base Network

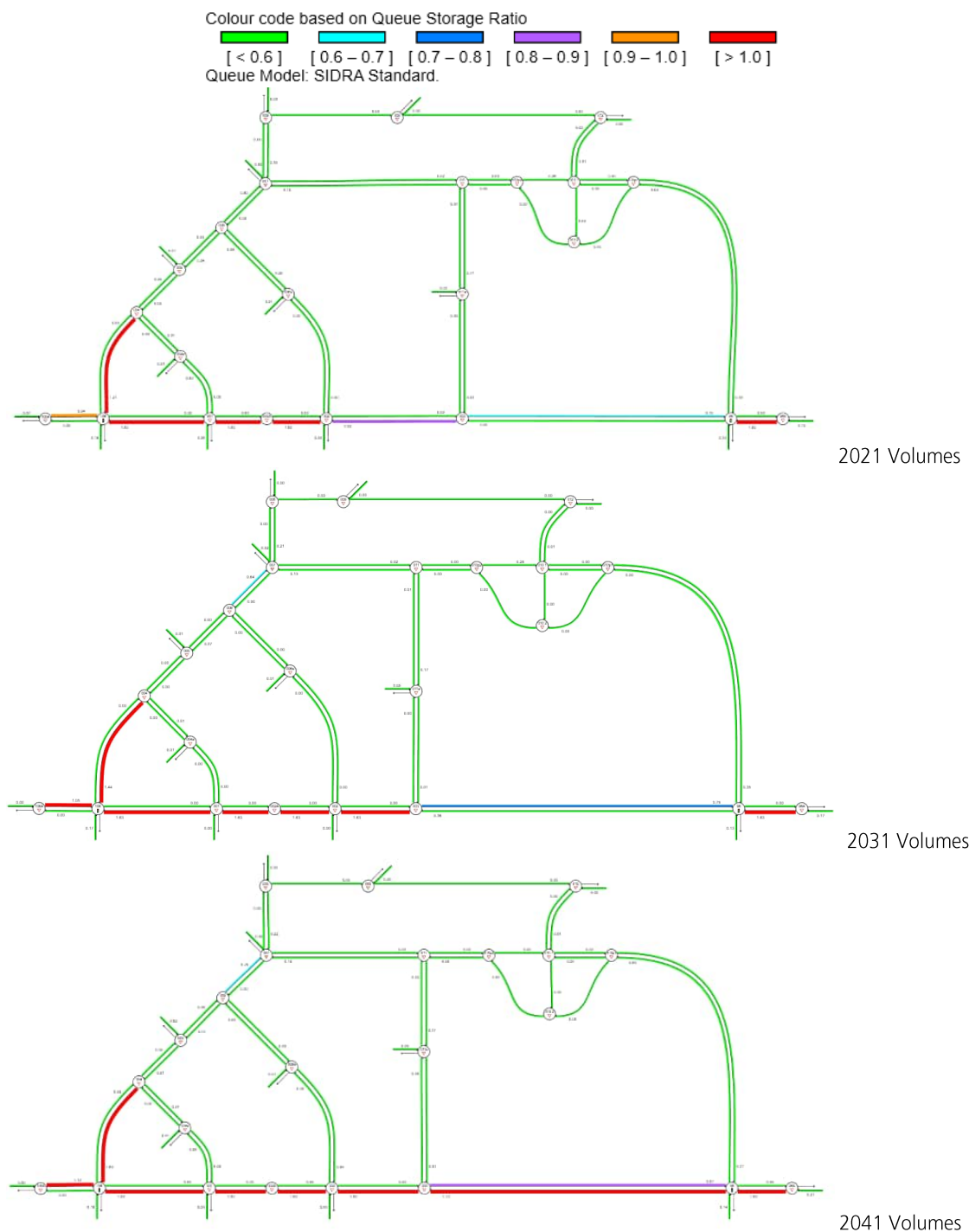
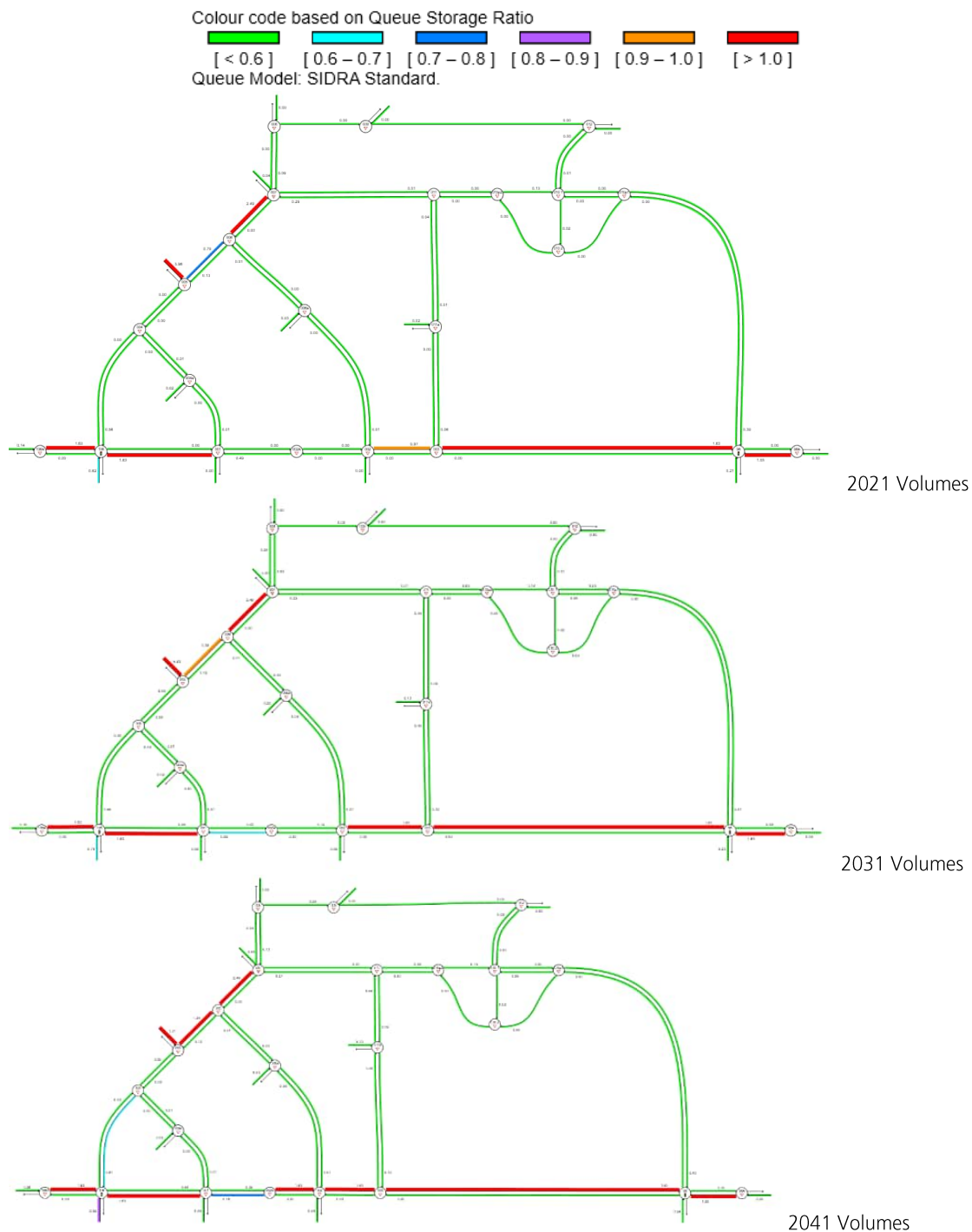


Figure 52 – SIDRA Output Network Queue Storage Ratio PM Peak – Base Network





### 5.7.2 Forecast Year - Proposed Road Network and Development

The proposed road network has been tested for three scenarios, as follows:

- Base year (2021) with proposed road network and no intensification of land use (existing traffic volumes);
- Forecast year (2031) with proposed road network and 25% of Ascot Kilns and Golden Gateway development, 50% of Ascot Racecourse development complete (and 75% of the existing commercial development retained);
- Forecast year (2041) with proposed road network and 100% of development complete.

The SIDRA predicted AM peak hour performance for the 2021, 2031 and 2041 land uses are shown in Figure 53, while the predicted PM peak hour performance for the 2021, 2031 and 2041 land uses are shown in Figure 54.

The SIDRA predicted queue storage ratios are shown in Figure 55 for the AM peak hour and Figure 56 for the PM peak hour.

The SIDRA predicted level of service for the signalised and roundabout controlled intersections in the proposed road network are summarised in Table 22.

Detailed SIDRA Network output for these intersections is displayed in Appendix 4 (2021 Proposed Road Network), Appendix 5 (2031 land uses with proposed road network) and Appendix 6 (2041 land uses with proposed road network).

Table 22 – SIDRA Predicted Intersection Approach Level of Service

Approach	2021		2031		2041	
	AM	PM	AM	PM	AM	PM
<b>Great Eastern Hwy / Stoneham St / Belgravia St</b>						
Belgravia St	E	E	E	E	E	F
Great Eastern Hwy east	D	D	F	D	F	D
Stoneham St	F	E	F	F	F	F
Great Eastern Hwy west	C	C	C	C	C	D
<b>Great Eastern Hwy / Resolution Dr / Hardey Rd</b>						
Hardey Rd	E	E	E	E	E	E
Great Eastern Hwy east	C	D	E	F	F	F
Resolution Dr	D	D	D	D	E	E
Great Eastern Hwy west	C	D	C	D	C	E
<b>Stoneham St / Grandstand Rd / Resolution Dr</b>						
Resolution Dr east	B	B	B	B	F	B
Grandstand Rd north	A	A	A	A	B	A
Resolution Dr west	A	B	A	B	A	B
Stoneham St south	A	B	A	B	A	B

Figure 53 – SIDRA Output Network Level of Service AM Peak Proposed Road Network

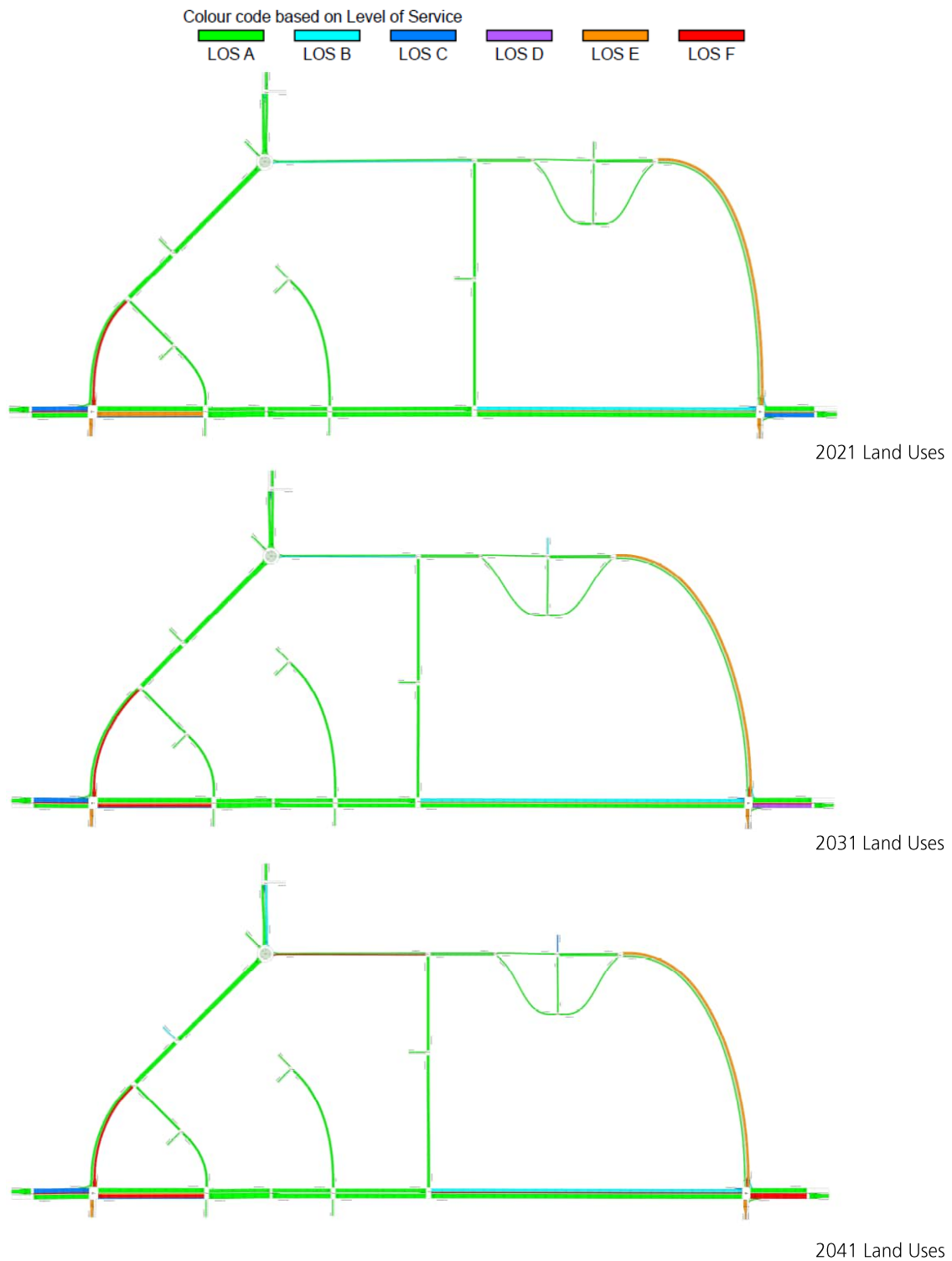


Figure 54 – SIDRA Output Network Level of Service PM Peak Proposed Road Network

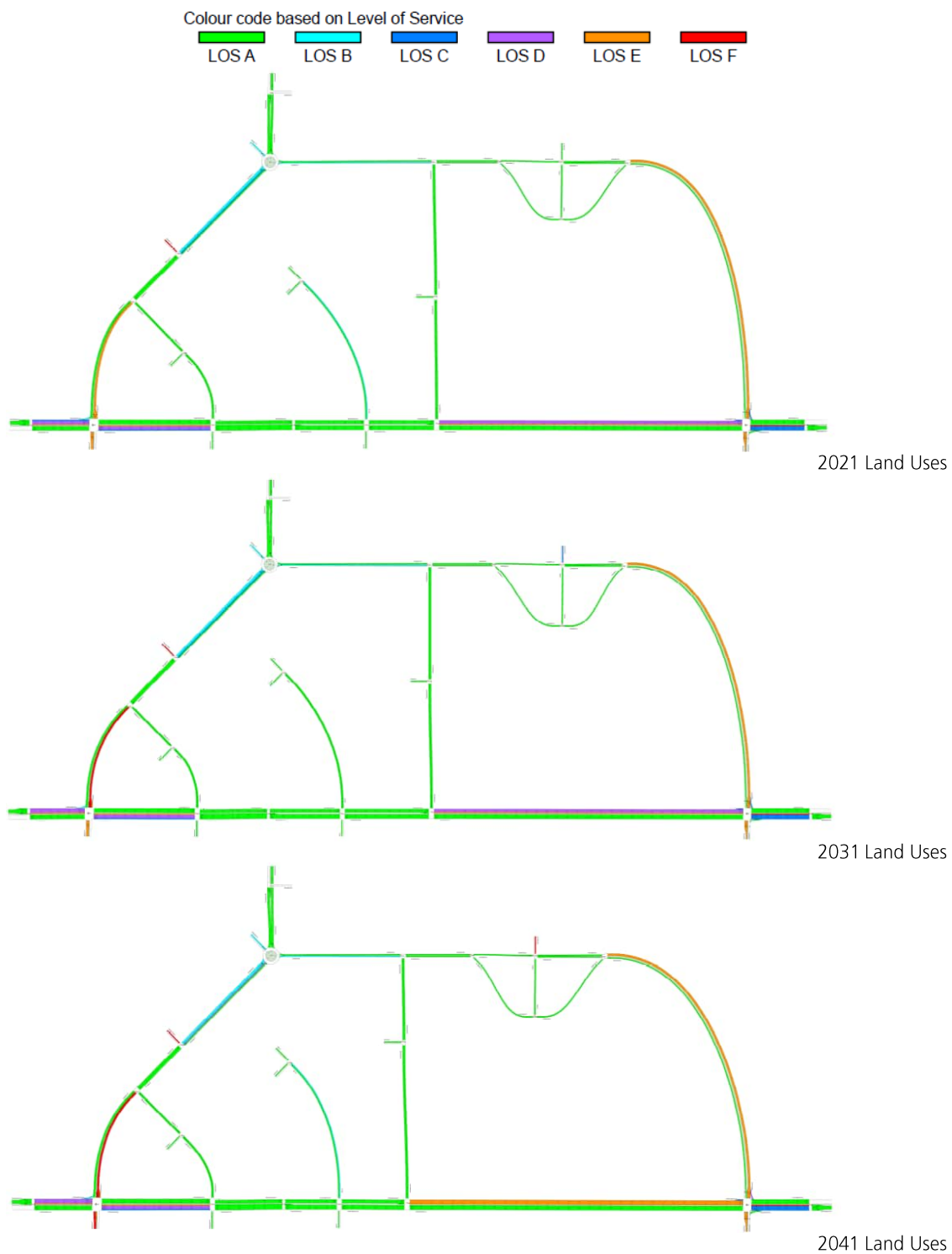


Figure 55 – SIDRA Output Network Queue Storage Ratio AM Peak Proposed Road Network

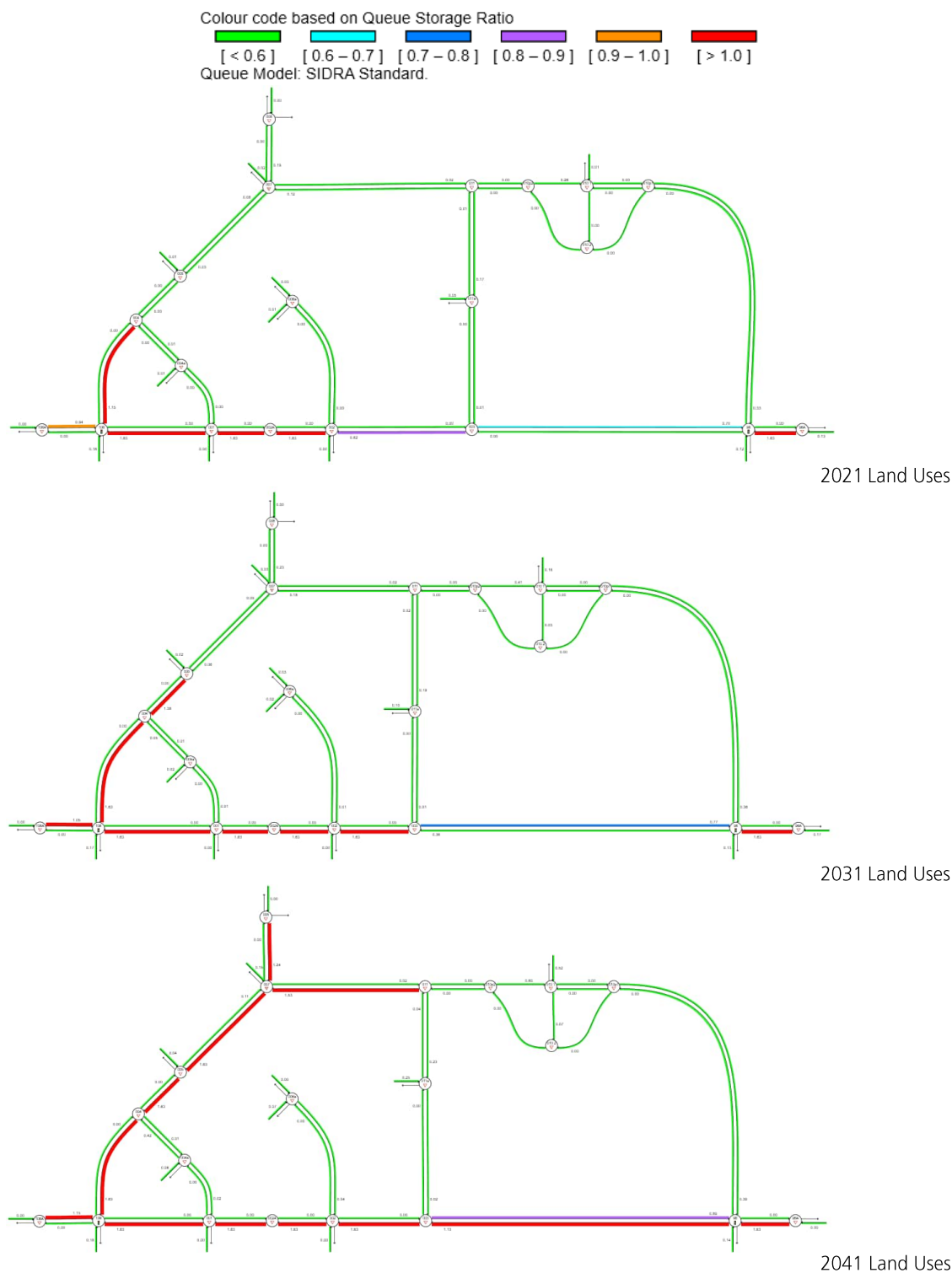
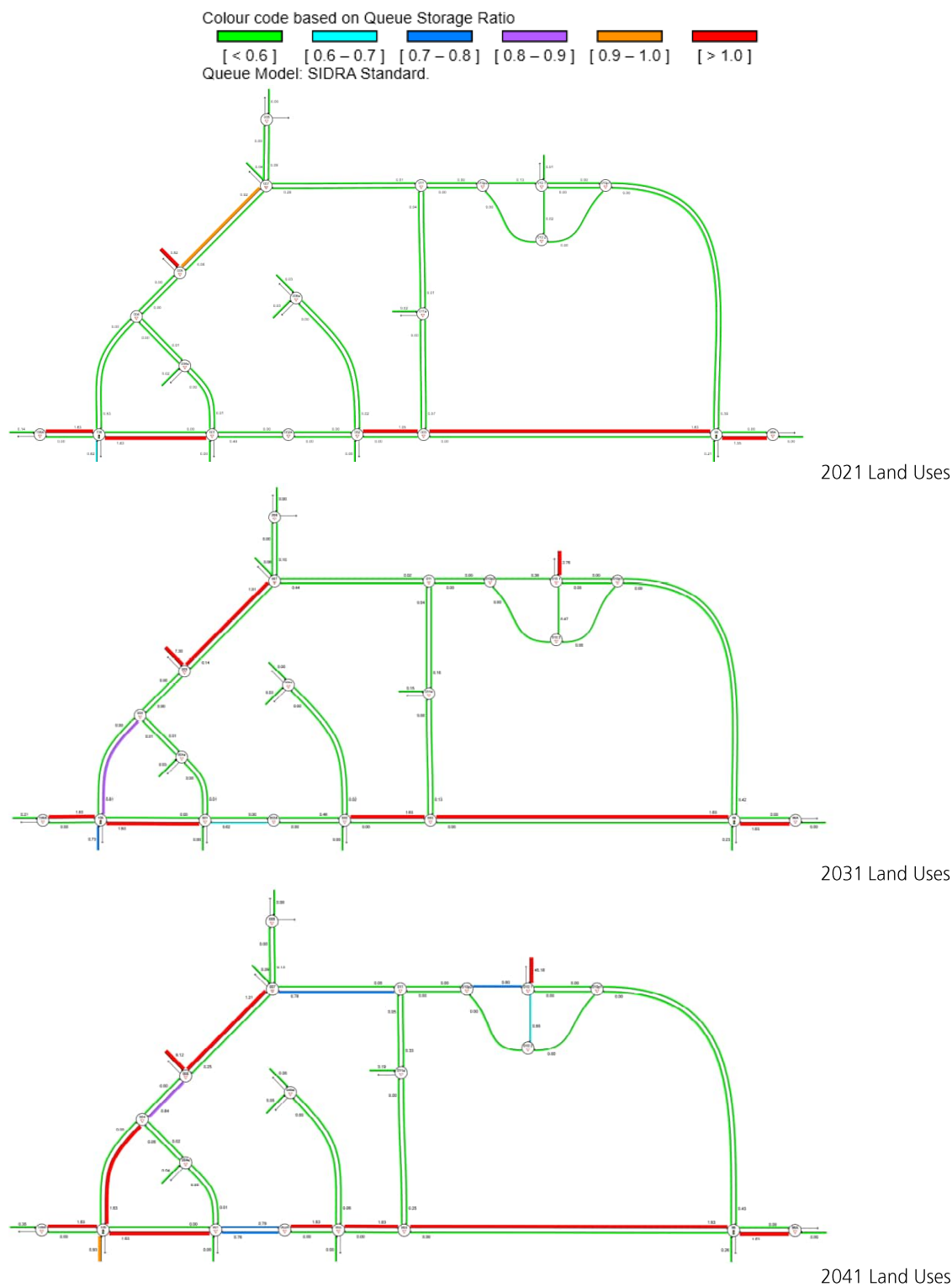




Figure 56 – SIDRA Output Network Queue Storage Ratio PM Peak Proposed Road Network



The SIDRA Network modelling of the proposed road network demonstrates that the level of congestion in 2021 and 2031 is generally consistent with the congestion predicted for the 2021 and 2031 existing road network scenario. The internal roads are predicted to operate well within their capacity.

The SIDRA Network modelling of the proposed road network and full build out of the Golden Gateway precinct demonstrates that the level of congestion in 2041 is generally consistent with the congestion predicted for the 2041 existing road network scenario, with added congestion along Resolution Drive associated with the development of the Ascot Racecourse landholdings. Congestion along the Resolution Drive approach to Great Eastern Highway is predicted to increase in the AM peak period, while congestion along the Stoneham Street approach to Great Eastern Highway will increase in the PM peak period. The other internal roads are predicted to operate well within their capacity.

### 5.7.3 Ascot Event Modelling

To understand how the road network performs under as Ascot event, the following four scenarios have been assessed:

- Existing road network, 2021 PM peak volumes with Melbourne Cup event traffic;
- Proposed road network, 2021 PM peak volumes with Melbourne Cup event traffic;
- Proposed road network, 2031 PM peak background volumes and development traffic with Melbourne Cup event traffic;
- Proposed road network, 2041 PM peak background volumes and development traffic with Melbourne Cup event traffic.

The SIDRA predicted PM peak hour performance of an Ascot Melbourne Cup event with 2021 volumes (existing network and proposed network) is shown in Figure 57. The SIDRA predicted PM peak hour performance of an Ascot Melbourne Cup event with the proposed network and 2031 and 2041 volumes are shown in Figure 58. The SIDRA predicted level of service for the signalised and roundabout controlled intersections in the existing network and proposed road network are summarised in Table 23.

Detailed SIDRA Network output for these intersections is displayed in Appendix 7.

Table 23 – SIDRA Predicted Intersection Approach Level of Service – Ascot Event

Approach	Existing Network 2021 vols + event	Proposed Network 2021 vols + event	Proposed Network 2031 vols + event	Proposed Network 2041 vols + event
<b>Great Eastern Hwy / Stoneham St / Belgravia St</b>				
Belgravia St	E	E	E	F
Great Eastern Hwy east	D	D	D	D
Stoneham St	E	E	F	F
Great Eastern Hwy west	C	C	C	D
<b>Great Eastern Hwy / Resolution Dr / Hardey Rd</b>				
Hardey Rd	E	E	E	E
Great Eastern Hwy east	D	D	F	F
Resolution Dr	E	E	E	E
Great Eastern Hwy west	D	D	D	E
<b>Stoneham St / Grandstand Rd / Resolution Dr</b>				
Resolution Dr east	B	B	B	B
Grandstand Rd north	A	A	A	A
Resolution Dr west	B	B	B	B
Stoneham St south	A	B	B	B

Figure 57 – SIDRA Output Network Level of Service Ascot Event PM Peak with 2021 Volumes

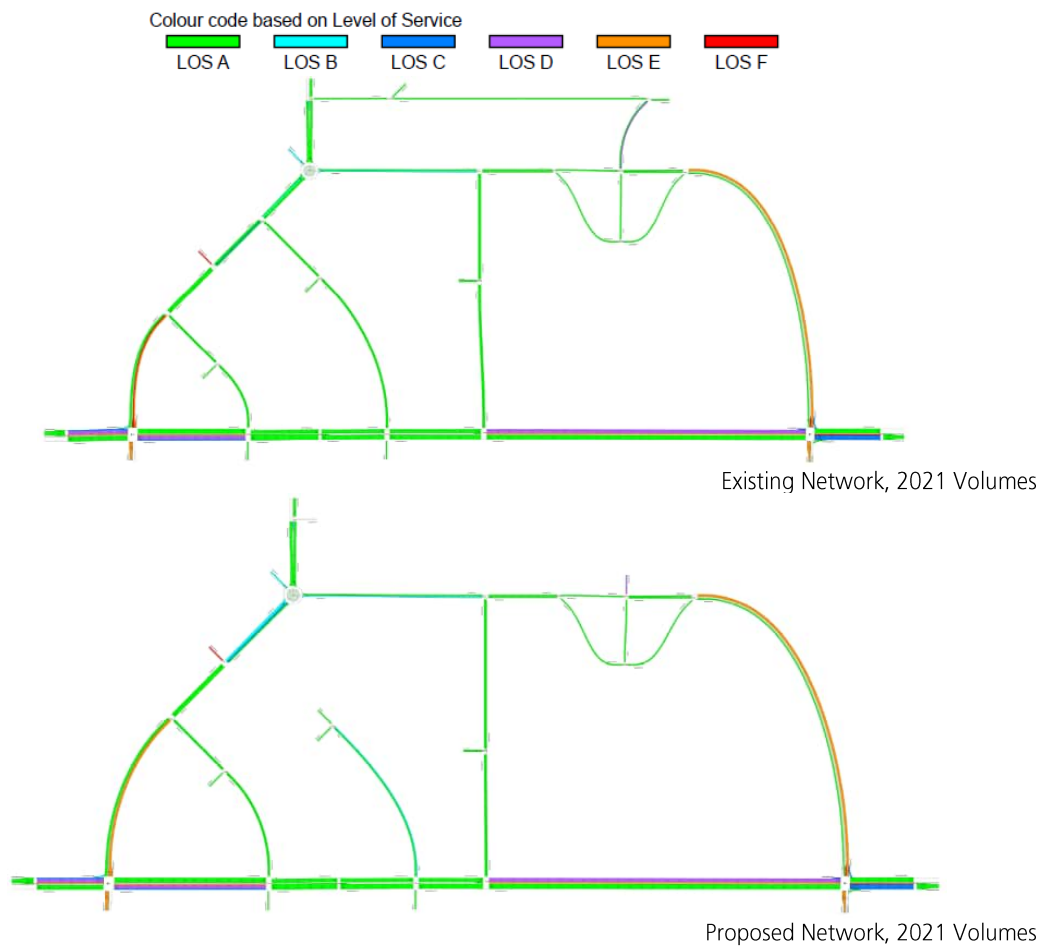
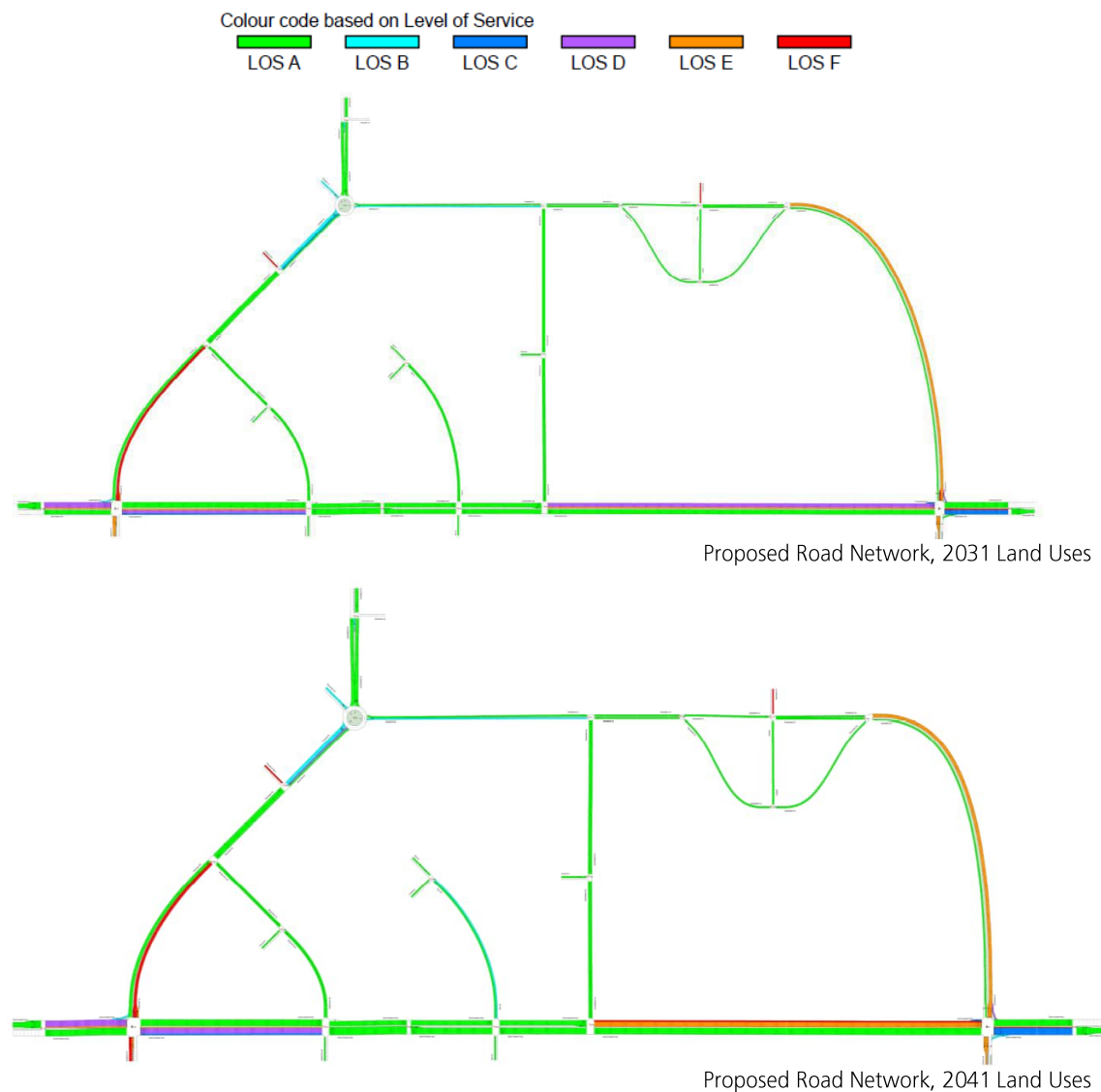


Figure 58 – SIDRA Output Network Level of Service Ascot Event PM Peak Proposed Network with Development Volumes



The SIDRA Network base modelling demonstrates that the signalised intersections along the Great Eastern Highway corridor are congested in each of the peak hours. While the Great Eastern Highway approaches currently operate at a level of service C and D, the side roads, particularly Stoneham Street, Belgravia Street, and Hardey Street currently operate at a level of service E of F in the peak periods. The side roads experience congestion as more than half of the traffic signal green time is allocated to Great Eastern Highway.

The addition of Ascot event traffic to this busy PM peak increases the congestion in this period. Traffic exiting an event at Ascot is predicted to cause local congestion where this traffic joins the external road network, at the intersection of Raconteur Drive and Resolution Drive.



## 6. CONCLUSIONS

### 6.1 Golden Gateway Local Structure Plan Context

The Golden Gateway Precinct is located within the City of Belmont and the LSP area is bounded by Ascot Racecourse to the north/northeast, Hardey Road to the east, Great Eastern Highway to the south, Swan River to the west and Ascot Waters residential estate to the west/northwest.

The Golden Gateway LSP is comprised of three main land uses, residential dwellings (approximately 2,268 dwellings), commercial space (6,979m<sup>2</sup> NLA) and retail space (1,200m<sup>2</sup> NLA). It is proposed that the three land uses will primarily be provided in mixed-use development sites across the Golden Gateway LSP area.

As noted in the Structure Plan Report, the LSP has been formulated around the following vision:

*"The development of the Golden Gateway will transform this degraded and fragmented area into a vibrant precinct of residential and mixed use development, with strengthened connections to the Swan River and Ascot Waters, with uses, density and built form that derive best value from these attributes while respecting the area's rich culture and heritage."*

The overarching objectives for the Golden Gateway Precinct as established by the project team and reinforced through stakeholder engagement include:

- Improve self-containment of facilities – reduce car dependence;
- Improve people's connection to the Swan River;
- Create accessible, quality public realm within the precinct; and
- Identify appropriate uses/densities in conjunction with infrastructure improvements.

### 6.2 Conclusions

The weekday peak hour performance of the existing, and proposed movement networks under a range of Golden Gateway land use scenarios has been assessed. Traffic performance at an Ascot Racecourse event day has also been investigated.

#### 6.2.1 Background Growth in Traffic

Traffic volumes along the section of Great Eastern Highway between Stoneham Street and Resolution Drive (site 1012) have reduced from 64,800 vpd in 2014 to 54,100 vpd in 2018, a reduction of 16.5% over the 4 year period. Similarly at sites 3404 and 7938 (along Great Eastern Highway to the west and east of the Golden Gateway precinct respectively), daily traffic volumes on Great Eastern Highway reduced by between 1.4% and 4.3% over the two year period between 2018 and 2020. Despite these reductions, background traffic volumes are expected to increase over time.

As traffic volumes continue to increase, the proportion of total traffic occurring during the morning and afternoon peak hours reduces. This phenomenon is called peak spreading, and results in a lengthening of the peak period. This also results in the growth in peak hour traffic being less than the growth in daily traffic volumes.

An annual peak hour growth rate of 0.5% has been assumed. This represents an increase of 5.1% between 2021 and 2031 and an increase of 10.5% between 2021 and 2041. The peak hour growth rate has been applied to all through traffic (excluding buses) travelling on regional and district roads such as Great Eastern Highway, Stoneham Street, Resolution Drive and Grandstand Road (north). The growth in regional peak hour traffic, without any development traffic, is predicted to lead to the deterioration of signalised intersection operation to level of service F by 2041 in the AM peak hour.



### 6.2.2 Intersection Performance

#### Stoneham Street/Great Eastern Highway Intersection

This intersection currently operates at an overall level of service D in both the AM and PM peak. The Great Eastern Highway approaches operate at a level of service C/D, which is particularly good given the traffic volumes. Belgravia Street and Stoneham Street operate at a level of service E/F.

As traffic volumes increase over time (without the inclusion of traffic associated with the development of the Golden Gateway precinct) the performance of the intersection will decrease, particularly in the AM peak hour, where a level of service F is predicted by 2041 (the PM peak hour is still predicted to operate at a level of service D).

When traffic associated with the development of the Golden Gateway precinct and Ascot Racecourse landholdings is included, the performance of the Belgravia Street and Stoneham Street approaches decreases. The overall intersection level of service in 2041 is predicted to be F in the AM peak hour, and E in the PM peak hour.

#### Resolution Drive/Great Eastern Highway Intersection

This intersection currently operates at an overall level of service C in the AM and D in the PM peak. The Great Eastern Highway approaches operate at a level of service C in the AM peak hour and D in the PM peak hour, which is very good given the traffic volumes. Hardey Road and Resolution Drive operate at a level of service D/E.

As traffic volumes increase over time (without the inclusion of traffic associated with the development of the Golden Gateway precinct) the performance of the intersection will decrease, particularly in the AM peak hour, where a level of service F is predicted by 2041, while a level of service E is predicted for the PM peak hour.

When traffic associated with the development of the Golden Gateway precinct and Ascot Racecourse landholdings is included, the performance of the Resolution Drive approach decreases in the AM peak, as does the Great Eastern Highway east approach (westbound) in the PM peak hour. The overall intersection level of service in 2041 is predicted to be F in both the AM and PM peak hours.

#### Grandstand Road/Resolution Drive/Stoneham Street Intersection

This roundabout controlled intersection currently operates at an overall level of service A in both the AM and PM peak, with all approaches operating at a level of service A/B.

As traffic volumes increase over time (without the inclusion of traffic associated with the development of the Golden Gateway precinct) the performance of the intersection is predicted to maintain a level of service A by 2041 in the AM peak hour and decrease to a level of service B in the PM peak hour.

When traffic associated with the development of the Golden Gateway precinct and Ascot Racecourse landholdings is included, the performance of the Resolution Drive approach to the roundabout reduces, however the overall intersection level of service is predicted to be C in the AM peak hour and B in the PM peak hour in 2041. Traffic volumes along Resolution Drive are forecast to increase with the development of the Ascot Racecourse landholdings, with the most traffic intensive developments (Ascot Racecourse Area E) to be accessed via Resolution Drive.

### 6.2.3 Pedestrian, Cycle and Public Transport Networks

The future development of the Golden Gateway Structure Plan would not only transform the pedestrian and cycle connections throughout the precinct, but also provide a resident population that could be the catalyst in a step change in public transport service provision across the local area.

To achieve the 20% reduction in car driver and car passenger mode share, the following strategies are recommended:

- Implementation of a precinct wide 30km/h speed zone (excluding Grandstand Road and Stoneham Street as the main through route for traffic) to improve the environment for walking and cycling
- Completing gaps in the shared path network and implementing the long term cycle network routes through the precinct.
- Increasing the tree canopy coverage along all roads within the precinct to create a pleasant environment for walking and cycling.
- Ensuring there are a variety of local amenities within a short and pleasant walking or biking distance.
- The introduction of a bike or electric scooter share scheme.
- The introduction of a car share scheme.
- The imposition of a parking cap for residential and commercial uses.
- The City should lobby the PTA to improve bus services to the precinct and explore the potential of other transit options such as a superbus or trackless tram



## Appendix 1 – SIDRA Network Output 2021 Existing Network



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## NETWORK SUMMARY

### Network: N101 [2021 AM Peak (Network Folder: General)]

New Network

Network Category: (None)

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS D		
Speed Efficiency	0.58		
Travel Time Index	5.34		
Congestion Coefficient	1.72		
Travel Speed (Average)	34.7 km/h		35.1 km/h
Travel Distance (Total)	10603.9 veh-km/h		16521.7 pers-km/h
Travel Time (Total)	305.4 veh-h/h		470.2 pers-h/h
Desired Speed (Program)	59.8 km/h		
Demand Flows (Total for all Sites)	47016 veh/h		75212 pers/h
Arrival Flows (Total for all Sites)	47016 veh/h		75212 pers/h
Demand Flows (Entry Total)	6526 veh/h		
Midblock Inflows (Total)	98 veh/h		
Midblock Outflows (Total)	-90 veh/h		
Percent Heavy Vehicles (Demand)	4.3 %		
Percent Heavy Vehicles (Arrival)	4.3 %		
Degree of Saturation	1.001		
Control Delay (Total)	127.01 veh-h/h		183.54 pers-h/h
Control Delay (Average)	9.7 sec		8.8 sec
Control Delay (Worst Lane)	109.3 sec		
Control Delay (Worst Movement)	109.6 sec		109.6 sec
Geometric Delay (Average)	0.6 sec		
Stop-Line Delay (Average)	9.1 sec		
Ave. Queue Storage Ratio (Worst Lane)	1.00		
Total Effective Stops	10215 veh/h		19053 pers/h
Effective Stop Rate	0.22	0.96 per km	0.25
Proportion Queued	0.20		0.18
Performance Index	893.5		893.5
Cost (Total)	15229.39 \$/h	1.44 \$/km	15229.39 \$/h
Fuel Consumption (Total)	1348.6 L/h	127.2 mL/km	
Fuel Economy	12.7 L/100km		
Carbon Dioxide (Total)	3199.2 kg/h	301.7 g/km	
Hydrocarbons (Total)	0.280 kg/h	0.026 g/km	
Carbon Monoxide (Total)	3.288 kg/h	0.310 g/km	
NOx (Total)	7.463 kg/h	0.704 g/km	

Network Model Variability Index (Iterations 3 to N): 0.0 %

Number of Iterations: 5 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.0% 0.0% 0.0%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values			
Performance Measure	Vehicles	Persons	
Demand Flows (Total for all Sites)	22,567,680 veh/y	36,101,960 pers/y	
Delay	60,963 veh-h/y	88,101 pers-h/y	
Effective Stops	4,903,093 veh/y	9,145,675 pers/y	
Travel Distance	5,089,875 veh-km/y	7,930,398 pers-km/y	
Travel Time	146,599 veh-h/y	225,674 pers-h/y	
Cost	7,310,108 \$/y	7,310,108 \$/y	
Fuel Consumption	647,308 L/y		
Carbon Dioxide	1,535,624 kg/y		
Hydrocarbons	135 kg/y		
Carbon Monoxide	1,578 kg/y		
NOx	3,582 kg/y		

## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia AM 2021 (Site Folder: 2021 AM Peak)]**

 **Network: N101 [2021 AM Peak (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2021 AM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV ] %	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Belgravia St														
1	L2	60	5.0	60	5.0	0.371	65.2	LOS E	5.1	38.4	0.96	0.77	0.96	12.2
2	T1	107	8.4	107	8.4	* 0.371	59.6	LOS E	5.2	39.8	0.96	0.75	0.96	13.2
3	R2	70	10.0	70	10.0	0.334	65.2	LOS E	4.3	34.1	0.95	0.76	0.95	12.2
Approach		237	8.0	237	8.0	0.371	62.7	LOS E	5.2	39.8	0.96	0.76	0.96	12.6
East: Great Eastern Hwy														
4	L2	194	5.7	194	5.7	0.280	28.6	LOS C	8.7	66.7	0.65	0.73	0.65	24.3
5	T1	2486	4.5	2486	4.5	* 0.934	55.7	LOS E	17.8	130.6	1.00	1.06	1.18	6.0
6	R2	18	5.6	18	5.6	0.171	72.1	LOS E	1.2	9.6	0.98	0.70	0.98	4.9
6u	U	1	0.0	1	0.0	0.171	73.8	LOS E	1.2	9.6	0.98	0.70	0.98	4.9
Approach		2699	4.6	2699	4.6	0.934	53.9	LOS D	17.8	130.6	0.97	1.04	1.14	7.1
North: Stoneham St														
7	L2	6	16.7	6	16.7	0.031	60.2	LOS E	0.3	3.3	0.89	0.66	0.89	8.1
8	T1	293	4.1	293	4.1	* 1.001	108.2	LOS F	24.1	169.0	1.00	1.21	1.63	11.4
9	R2	459	0.4	459	0.4	1.001	109.6	LOS F	21.7	152.7	1.00	1.13	1.57	5.1
Approach		758	2.0	758	2.0	1.001	108.7	LOS F	24.1	169.0	1.00	1.16	1.59	7.8
West: Great Eastern Hwy														
10	L2	217	1.4	217	1.4	0.141	6.6	LOS A	1.6	11.0	0.18	0.60	0.18	31.6
11	T1	1426	5.3	1426	5.3	0.431	20.8	LOS C	12.7	94.5	0.55	0.48	0.55	15.8
12	R2	58	3.4	58	3.4	* 0.797	80.4	LOS F	6.3	44.6	1.00	0.89	1.27	12.9
12u	U	30	0.0	30	0.0	0.797	82.0	LOS F	6.3	44.6	1.00	0.89	1.27	5.1
Approach		1731	4.7	1731	4.7	0.797	22.0	LOS C	12.7	94.5	0.53	0.52	0.54	15.8
All Vehicles		5425	4.4	5425	4.4	1.001	51.8	LOS D	24.1	169.0	0.83	0.88	1.01	9.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey AM 2021 (Site Folder: 2021 AM Peak)]

 Network: N101 [2021 AM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2021 AM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
South: Hardey Rd														
1	L2	97	2.1	97	2.1	0.514	67.8	LOS E	6.5	48.3	0.99	0.79	0.99	15.3
2	T1	108	5.6	108	5.6	0.514	61.7	LOS E	6.5	45.9	0.98	0.77	0.98	17.0
3	R2	124	4.0	124	4.0	* 0.626	69.2	LOS E	8.0	59.3	1.00	0.81	1.02	15.4
Approach		329	4.0	329	4.0	0.626	66.3	LOS E	8.0	59.3	0.99	0.79	1.00	15.9
East: Great Eastern Hwy														
4	L2	127	4.7	127	4.7	0.089	7.8	LOS A	1.3	9.1	0.22	0.61	0.22	45.2
5	T1	2479	4.8	2479	4.8	* 0.693	26.7	LOS C	22.2	163.2	0.81	0.73	0.81	13.0
6	R2	140	7.1	140	7.1	* 0.857	79.3	LOS E	11.0	83.1	1.00	0.95	1.30	5.2
6u	U	13	0.0	13	0.0	0.857	80.9	LOS F	11.0	83.1	1.00	0.95	1.30	5.2
Approach		2759	4.9	2759	4.9	0.857	28.8	LOS C	22.2	163.2	0.80	0.74	0.81	13.6
North: Resolution Dr														
7	L2	250	2.0	250	2.0	0.424	15.4	LOS B	7.2	51.8	0.53	0.73	0.53	21.5
8	T1	134	7.5	134	7.5	0.611	67.7	LOS E	5.7	40.0	1.00	0.77	1.02	19.1
9	R2	86	1.2	86	1.2	* 0.628	74.0	LOS E	5.7	40.4	1.00	0.79	1.04	6.3
Approach		470	3.4	470	3.4	0.628	41.0	LOS D	7.2	51.8	0.75	0.75	0.76	16.2
West: Great Eastern Hwy														
10	L2	8	0.0	8	0.0	0.030	23.8	LOS C	0.7	7.3	0.53	0.50	0.53	21.1
11	T1	1391	6.0	1391	6.0	0.495	18.3	LOS B	14.9	111.4	0.54	0.48	0.54	22.5
12	R2	100	1.0	100	1.0	0.638	70.3	LOS E	7.7	54.1	1.00	0.81	1.03	19.0
12u	U	18	0.0	18	0.0	0.638	71.9	LOS E	7.7	54.1	1.00	0.81	1.03	8.1
Approach		1517	5.6	1517	5.6	0.638	22.4	LOS C	14.9	111.4	0.58	0.51	0.58	21.4
All Vehicles		5075	4.9	5075	4.9	0.857	30.4	LOS C	22.2	163.2	0.74	0.68	0.75	16.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution AM 2021 (Site Folder: 2021 AM Peak)]**

 **Network: N101 [2021 AM Peak (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 AM Peak  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	HV %	[ Total HV veh/h ]	%				[ Veh. veh ]	[ Dist m ]				
East: Resolution Dr														
4a	L1	28	7.1	28	7.1	0.358	6.8	LOS A	1.9	13.9	0.69	0.88	0.70	29.3
6a	R1	15	6.7	15	6.7	0.358	12.1	LOS B	1.9	13.9	0.69	0.88	0.70	39.3
6	R2	232	4.7	232	4.7	0.358	13.2	LOS B	1.9	13.9	0.69	0.88	0.70	29.3
Approach		275	5.1	275	5.1	0.358	12.5	LOS B	1.9	13.9	0.69	0.88	0.70	30.0
North: Grandstand Rd														
7	L2	408	2.7	408	2.7	0.405	3.9	LOS A	2.7	19.0	0.33	0.50	0.33	33.6
9a	R1	723	1.1	723	1.1	0.405	8.7	LOS A	2.7	19.0	0.34	0.57	0.34	31.0
9b	R3	6	0.0	6	0.0	0.405	11.2	LOS B	2.6	18.6	0.34	0.59	0.34	46.7
9u	U	2	0.0	2	0.0	0.405	12.4	LOS B	2.6	18.6	0.34	0.59	0.34	30.3
Approach		1139	1.7	1139	1.7	0.405	7.0	LOS A	2.7	19.0	0.34	0.54	0.34	31.9
NorthWest: Resolution Dr														
27b	L3	12	8.3	12	8.3	0.113	4.3	LOS A	0.5	3.3	0.50	0.60	0.50	35.7
27a	L1	48	0.0	48	0.0	0.113	3.3	LOS A	0.5	3.3	0.50	0.60	0.50	35.7
29	R2	46	0.0	46	0.0	0.113	9.3	LOS A	0.5	3.3	0.50	0.60	0.50	35.7
Approach		106	0.9	106	0.9	0.113	6.0	LOS A	0.5	3.3	0.50	0.60	0.50	35.7
SouthWest: Stoneham St														
30	L2	18	0.0	18	0.0	0.151	2.1	LOS A	0.8	6.0	0.42	0.43	0.42	47.1
30a	L1	318	2.8	318	2.8	0.151	2.2	LOS A	0.8	6.0	0.42	0.46	0.42	31.1
32a	R1	21	0.0	21	0.0	0.151	6.3	LOS A	0.8	5.8	0.43	0.49	0.43	30.3
32u	U	4	25.0	4	25.0	0.151	10.3	LOS B	0.8	5.8	0.43	0.49	0.43	30.3
Approach		361	2.8	361	2.8	0.151	2.5	LOS A	0.8	6.0	0.43	0.46	0.43	33.1
All Vehicles		1881	2.3	1881	2.3	0.405	6.9	LOS A	2.7	19.0	0.41	0.58	0.42	31.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## NETWORK SUMMARY

### Network: N101 [2021 PM Peak (Network Folder: General)]

New Network

Network Category: (None)

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS D		
Speed Efficiency	0.51		
Travel Time Index	4.57		
Congestion Coefficient	1.96		
Travel Speed (Average)	30.5 km/h		31.5 km/h
Travel Distance (Total)	11447.1 veh-km/h		16730.4 pers-km/h
Travel Time (Total)	375.0 veh-h/h		531.8 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	50964 veh/h		75154 pers/h
Arrival Flows (Total for all Sites)	50628 veh/h		74750 pers/h
Demand Flows (Entry Total)	7292 veh/h		
Midblock Inflows (Total)	577 veh/h		
Midblock Outflows (Total)	-234 veh/h		
Percent Heavy Vehicles (Demand)	2.2 %		
Percent Heavy Vehicles (Arrival)	2.2 %		
Degree of Saturation	1.504		
Control Delay (Total)	182.04 veh-h/h		247.62 pers-h/h
Control Delay (Average)	12.9 sec		11.9 sec
Control Delay (Worst Lane)	490.9 sec		
Control Delay (Worst Movement)	531.6 sec		531.6 sec
Geometric Delay (Average)	0.7 sec		
Stop-Line Delay (Average)	12.2 sec		
Ave. Queue Storage Ratio (Worst Lane)	1.59		
Total Effective Stops	14496 veh/h		20918 pers/h
Effective Stop Rate	0.29	1.27 per km	0.28
Proportion Queued	0.23		0.22
Performance Index	1146.1		1146.1
Cost (Total)	16864.10 \$/h	1.47 \$/km	16864.10 \$/h
Fuel Consumption (Total)	1394.0 L/h	121.8 mL/km	
Fuel Economy	12.2 L/100km		
Carbon Dioxide (Total)	3292.4 kg/h	287.6 g/km	
Hydrocarbons (Total)	0.309 kg/h	0.027 g/km	
Carbon Monoxide (Total)	3.462 kg/h	0.302 g/km	
NOx (Total)	4.021 kg/h	0.351 g/km	

Network Model Variability Index (Iterations 3 to N): 0.7 %

Number of Iterations: 6 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.4% 0.3% 0.2%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values			
Performance Measure	Vehicles	Persons	
Demand Flows (Total for all Sites)	24,462,720 veh/y	36,073,730 pers/y	
Delay	87,379 veh-h/y	118,860 pers-h/y	
Effective Stops	6,958,220 veh/y	10,040,540 pers/y	
Travel Distance	5,494,583 veh-km/y	8,030,580 pers-km/y	
Travel Time	179,984 veh-h/y	255,284 pers-h/y	
Cost	8,094,768 \$/y	8,094,768 \$/y	
Fuel Consumption	669,123 L/y		
Carbon Dioxide	1,580,361 kg/y		
Hydrocarbons	148 kg/y		
Carbon Monoxide	1,662 kg/y		
NOx	1,930 kg/y		

## MOVEMENT SUMMARY

 Site: 106 [GEH Stoneham Belgravia PM 2021 (Site Folder: 2021 PM Peak)]

 Network: N101 [2021 PM Peak (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

2021 PM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	[ HV % ]	[ Total HV veh/h ]	[ HV % ]				[ Veh. veh ]	[ Dist m ]				
South: Belgravia St														
1	L2	200	0.5	200	0.5	0.812	66.7	LOS E	21.8	154.2	1.00	0.91	1.11	12.2
2	T1	416	1.4	416	1.4	* 0.812	60.6	LOS E	21.8	154.2	1.00	0.92	1.11	13.0
3	R2	254	1.2	254	1.2	0.666	60.5	LOS E	16.0	113.7	0.98	0.84	0.98	12.9
Approach		870	1.1	870	1.1	0.812	62.0	LOS E	21.8	154.2	0.99	0.90	1.07	12.8
East: Great Eastern Hwy														
4	L2	102	3.9	102	3.9	0.195	34.3	LOS C	5.5	44.9	0.69	0.71	0.69	22.3
5	T1	1442	2.6	1442	2.6	0.617	35.6	LOS D	18.4	130.6	0.86	0.76	0.86	8.9
6	R2	74	2.7	74	2.7	0.525	72.3	LOS E	5.8	41.5	1.00	0.78	1.00	4.9
6u	U	12	0.0	12	0.0	0.525	74.0	LOS E	5.8	41.5	1.00	0.78	1.00	4.9
Approach		1630	2.6	1630	2.6	0.617	37.5	LOS D	18.4	130.6	0.85	0.76	0.85	9.6
North: Stoneham St														
7	L2	9	0.0	9	0.0	0.046	66.9	LOS E	0.5	3.7	0.93	0.67	0.93	7.4
8	T1	224	0.0	213	0.0	* 0.804	71.8	LOS E	11.3	79.1	1.00	0.90	1.18	15.6
9	R2	255	2.0	243	2.1	0.804	77.2	LOS E	10.7	76.2	1.00	0.89	1.16	7.1
Approach		488	1.0	465 <sup>N1</sup>	1.1	0.804	74.5	LOS E	11.3	79.1	1.00	0.89	1.17	11.3
West: Great Eastern Hwy														
10	L2	733	0.4	733	0.4	0.615	12.8	LOS B	19.7	138.8	0.52	0.73	0.52	21.9
11	T1	2015	3.2	2015	3.2	* 0.777	35.0	LOS C	22.7	163.2	0.84	0.75	0.85	10.5
12	R2	83	0.0	83	0.0	* 0.549	72.8	LOS E	6.3	43.8	1.00	0.78	1.00	14.0
12u	U	10	0.0	10	0.0	0.549	74.4	LOS E	6.3	43.8	1.00	0.78	1.00	5.6
Approach		2841	2.4	2841	2.4	0.777	30.5	LOS C	22.7	163.2	0.76	0.75	0.77	12.3
All Vehicles		5829	2.2	5806 <sup>N1</sup>	2.2	0.812	40.7	LOS D	22.7	163.2	0.84	0.78	0.87	11.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey PM 2021 (Site Folder: 2021 PM Peak)]

 Network: N101 [2021 PM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2021 PM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h					[ Veh. veh	Dist ] m				
						v/c	sec							km/h
South: Hardey Rd														
1	L2	113	0.0	113	0.0	0.488	66.4	LOS E	8.0	55.7	0.97	0.79	0.97	15.6
2	T1	180	2.8	180	2.8	* 0.644	62.5	LOS E	11.1	79.4	1.00	0.82	1.00	16.8
3	R2	146	2.7	146	2.7	0.591	67.7	LOS E	9.5	68.7	0.99	0.81	0.99	15.7
Approach		439	2.1	439	2.1	0.644	65.2	LOS E	11.1	79.4	0.99	0.81	0.99	16.1
East: Great Eastern Hwy														
4	L2	131	0.0	131	0.0	0.092	9.0	LOS A	1.8	12.4	0.26	0.62	0.26	45.5
5	T1	1482	3.0	1482	3.0	0.451	27.4	LOS C	18.1	128.8	0.73	0.64	0.73	12.8
6	R2	240	0.4	240	0.4	* 0.967	100.7	LOS F	22.1	155.4	1.00	1.08	1.50	4.2
6u	U	15	0.0	15	0.0	0.967	102.3	LOS F	22.1	155.4	1.00	1.08	1.50	4.2
Approach		1868	2.4	1868	2.4	0.967	36.1	LOS D	22.1	155.4	0.73	0.70	0.80	12.0
North: Resolution Dr														
7	L2	141	3.5	141	3.5	0.265	30.0	LOS C	5.8	42.3	0.70	0.75	0.70	13.4
8	T1	147	3.4	147	3.4	* 0.738	73.1	LOS E	6.7	46.7	1.00	0.81	1.10	18.2
9	R2	23	0.0	23	0.0	0.191	74.5	LOS E	1.5	10.6	0.96	0.71	0.96	6.3
Approach		311	3.2	311	3.2	0.738	53.7	LOS D	6.7	46.7	0.86	0.77	0.91	16.0
West: Great Eastern Hwy														
10	L2	22	0.0	22	0.0	0.063	28.9	LOS C	1.6	15.5	0.59	0.58	0.59	17.8
11	T1	2331	2.8	2331	2.8	* 0.894	38.3	LOS D	36.4	261.1	0.92	0.90	1.00	13.4
12	R2	168	1.8	168	1.8	0.746	70.6	LOS E	13.0	91.3	1.00	0.86	1.09	18.9
12u	U	22	0.0	22	0.0	0.746	72.2	LOS E	13.0	91.3	1.00	0.86	1.09	8.1
Approach		2543	2.7	2543	2.7	0.894	40.6	LOS D	36.4	261.1	0.92	0.90	1.00	14.1
All Vehicles		5161	2.6	5161	2.6	0.967	41.9	LOS D	36.4	261.1	0.86	0.81	0.92	13.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution PM 2021 (Site Folder: 2021 PM Peak)]**

 **Network: N101 [2021 PM Peak (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 PM Peak  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV ] %	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
East: Resolution Dr														
4a	L1	49	2.0	49	2.0	0.610	6.9	LOS A	4.9	35.2	0.70	0.87	0.83	29.1
6a	R1	40	0.0	40	0.0	0.610	12.0	LOS B	4.9	35.2	0.70	0.87	0.83	40.0
6	R2	507	2.2	507	2.2	0.610	13.4	LOS B	4.9	35.2	0.70	0.87	0.83	29.1
Approach		596	2.0	596	2.0	0.610	12.7	LOS B	4.9	35.2	0.70	0.87	0.83	30.0
North: Grandstand Rd														
7	L2	207	2.4	207	2.4	0.208	3.6	LOS A	1.2	8.6	0.24	0.48	0.24	34.5
9a	R1	380	0.3	380	0.3	0.208	8.4	LOS A	1.2	8.6	0.24	0.55	0.24	31.8
9b	R3	8	0.0	8	0.0	0.208	10.9	LOS B	1.2	8.3	0.25	0.57	0.25	47.5
9u	U	4	0.0	4	0.0	0.208	12.1	LOS B	1.2	8.3	0.25	0.57	0.25	31.1
Approach		599	1.0	599	1.0	0.208	6.8	LOS A	1.2	8.6	0.24	0.52	0.24	32.9
NorthWest: Resolution Dr														
27b	L3	13	0.0	13	0.0	0.190	9.7	LOS A	1.0	7.3	0.87	0.93	0.87	28.8
27a	L1	25	4.0	25	4.0	0.190	9.0	LOS A	1.0	7.3	0.87	0.93	0.87	28.8
29	R2	34	2.9	34	2.9	0.190	15.0	LOS B	1.0	7.3	0.87	0.93	0.87	28.8
Approach		72	2.8	72	2.8	0.190	11.9	LOS B	1.0	7.3	0.87	0.93	0.87	28.8
SouthWest: Stoneham St														
30	L2	50	0.0	47	0.0	0.756	8.7	LOS A	3.5	24.9	0.95	1.03	1.29	34.2
30a	L1	1425	0.5	1338	0.5	0.756	9.4	LOS A	3.5	24.9	0.95	1.05	1.31	14.2
32a	R1	16	6.2	15	6.6	0.756	14.3	LOS B	3.5	24.9	0.95	1.08	1.34	13.7
32u	U	5	0.0	5	0.0	0.756	17.9	LOS B	3.5	24.9	0.95	1.08	1.34	13.7
Approach		1496	0.5	1404 <sup>N</sup> <sub>1</sub>	0.6	0.756	9.5	LOS A	3.5	24.9	0.95	1.05	1.31	15.4
All Vehicles		2763	1.0	2671 <sup>N</sup> <sub>1</sub>	1.0	0.756	9.7	LOS A	4.9	35.2	0.74	0.89	0.95	24.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## Appendix 2 – SIDRA Network Output 2031 Existing Network



81113-581-FLYT-REP-0005 June 24

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## NETWORK SUMMARY

### Network: N101 [2031 AM Peak (Network Folder: General)]

New Network

Network Category: (None)

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS D		
Speed Efficiency	0.51		
Travel Time Index	4.58		
Congestion Coefficient	1.95		
Travel Speed (Average)	30.6 km/h		31.6 km/h
Travel Distance (Total)	11123.4 veh-km/h		17145.1 pers-km/h
Travel Time (Total)	363.3 veh-h/h		542.6 pers-h/h
Desired Speed (Program)	59.8 km/h		
Demand Flows (Total for all Sites)	49353 veh/h		78017 pers/h
Arrival Flows (Total for all Sites)	49329 veh/h		77988 pers/h
Demand Flows (Entry Total)	6820 veh/h		
Midblock Inflows (Total)	89 veh/h		
Midblock Outflows (Total)	-30 veh/h		
Percent Heavy Vehicles (Demand)	4.2 %		
Percent Heavy Vehicles (Arrival)	4.2 %		
Degree of Saturation	1.052		
Control Delay (Total)	175.44 veh-h/h		244.61 pers-h/h
Control Delay (Average)	12.8 sec		11.3 sec
Control Delay (Worst Lane)	138.6 sec		
Control Delay (Worst Movement)	138.9 sec		138.9 sec
Geometric Delay (Average)	0.6 sec		
Stop-Line Delay (Average)	12.2 sec		
Ave. Queue Storage Ratio (Worst Lane)	1.00		
Total Effective Stops	11920 veh/h		21255 pers/h
Effective Stop Rate	0.24	1.07 per km	0.27
Proportion Queued	0.21		0.19
Performance Index	1039.4		1039.4
Cost (Total)	17614.30 \$/h	1.58 \$/km	17614.30 \$/h
Fuel Consumption (Total)	1505.3 L/h	135.3 mL/km	
Fuel Economy	13.5 L/100km		
Carbon Dioxide (Total)	3569.9 kg/h	320.9 g/km	
Hydrocarbons (Total)	0.321 kg/h	0.029 g/km	
Carbon Monoxide (Total)	3.619 kg/h	0.325 g/km	
NOx (Total)	8.302 kg/h	0.746 g/km	

Network Model Variability Index (Iterations 3 to N): 0.0 %

Number of Iterations: 5 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.0% 0.0% 0.0%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	23,689,440 veh/y	37,448,070 pers/y
Delay	84,210 veh-h/y	117,415 pers-h/y
Effective Stops	5,721,724 veh/y	10,202,420 pers/y
Travel Distance	5,339,232 veh-km/y	8,229,638 pers-km/y
Travel Time	174,372 veh-h/y	260,425 pers-h/y
Cost	8,454,863 \$/y	8,454,863 \$/y
Fuel Consumption	722,563 L/y	
Carbon Dioxide	1,713,534 kg/y	
Hydrocarbons	154 kg/y	
Carbon Monoxide	1,737 kg/y	
NOx	3,985 kg/y	

## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia AM 2031 (Site Folder: 2031 AM Peak)]**  **Network: N101 [2031 AM Peak (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2031 AM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
South: Belgravia St														
1	L2	63	4.8	63	4.8	0.387	65.4	LOS E	5.4	40.1	0.96	0.77	0.96	12.2
2	T1	112	8.0	112	8.0	* 0.387	59.7	LOS E	5.5	41.7	0.96	0.76	0.96	13.2
3	R2	73	9.6	73	9.6	0.347	65.3	LOS E	4.5	35.4	0.96	0.77	0.96	12.1
Approach		248	7.7	248	7.7	0.387	62.8	LOS E	5.5	41.7	0.96	0.76	0.96	12.6
East: Great Eastern Hwy														
4	L2	204	5.9	204	5.9	0.297	29.4	LOS C	9.3	71.0	0.67	0.74	0.67	23.9
5	T1	2612	4.5	2612	4.5	* 0.998	87.4	LOS F	17.8	130.6	1.00	1.24	1.40	4.0
6	R2	19	5.3	19	5.3	0.179	72.2	LOS E	1.3	10.1	0.98	0.71	0.98	4.9
6u	U	1	0.0	1	0.0	0.179	73.9	LOS E	1.3	10.1	0.98	0.71	0.98	4.9
Approach		2836	4.6	2836	4.6	0.998	83.1	LOS F	17.8	130.6	0.97	1.20	1.34	4.8
North: Stoneham St														
7	L2	5	0.0	5	0.0	0.019	59.0	LOS E	0.3	2.0	0.88	0.65	0.88	8.2
8	T1	308	4.2	308	4.2	* 1.052	137.4	LOS F	28.9	202.2	1.00	1.33	1.82	9.2
9	R2	482	0.4	482	0.4	1.052	138.9	LOS F	26.1	183.6	1.00	1.23	1.77	4.0
Approach		795	1.9	795	1.9	1.052	137.8	LOS F	28.9	202.2	1.00	1.27	1.78	6.2
West: Great Eastern Hwy														
10	L2	228	1.3	228	1.3	0.149	6.7	LOS A	1.8	12.6	0.19	0.61	0.19	31.3
11	T1	1496	5.3	1496	5.3	0.463	21.9	LOS C	14.1	104.6	0.58	0.51	0.58	15.2
12	R2	61	3.3	61	3.3	* 0.842	82.6	LOS F	6.8	48.0	1.00	0.93	1.35	12.6
12u	U	32	0.0	32	0.0	0.842	84.3	LOS F	6.8	48.0	1.00	0.93	1.35	5.0
Approach		1817	4.7	1817	4.7	0.842	23.1	LOS C	14.1	104.6	0.55	0.54	0.57	15.3
All Vehicles		5696	4.4	5696	4.4	1.052	70.7	LOS E	28.9	202.2	0.84	0.98	1.14	6.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey AM 2031 (Site Folder: 2031 AM Peak)]

 Network: N101 [2031 AM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2031 AM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	HV %	[ Total HV veh/h ]	%				[ Veh. veh ]	[ Dist m ]				
South: Hardey Rd														
1	L2	102	2.0	102	2.0	0.538	68.0	LOS E	6.8	50.7	0.99	0.79	0.99	15.3
2	T1	113	5.3	113	5.3	0.538	61.9	LOS E	6.8	50.7	0.99	0.78	0.99	16.9
3	R2	130	3.8	130	3.8	*0.655	69.7	LOS E	8.5	62.5	1.00	0.82	1.04	15.3
Approach		345	3.8	345	3.8	0.655	66.7	LOS E	8.5	62.5	0.99	0.80	1.01	15.8
East: Great Eastern Hwy														
4	L2	133	4.5	133	4.5	0.094	8.0	LOS A	1.4	10.1	0.23	0.61	0.23	45.0
5	T1	2605	4.8	2605	4.8	*0.881	42.5	LOS D	22.2	163.2	0.94	0.95	1.06	8.9
6	R2	147	7.5	147	7.5	*0.905	85.1	LOS F	12.2	92.0	1.00	1.01	1.41	4.9
6u	U	14	0.0	14	0.0	0.905	86.7	LOS F	12.2	92.0	1.00	1.01	1.41	4.9
Approach		2899	4.9	2899	4.9	0.905	43.3	LOS D	22.2	163.2	0.91	0.94	1.04	9.8
North: Resolution Dr														
7	L2	262	1.9	262	1.9	0.459	16.7	LOS B	8.2	58.8	0.57	0.74	0.57	20.4
8	T1	140	7.1	140	7.1	0.636	68.0	LOS E	5.9	41.9	1.00	0.78	1.03	19.1
9	R2	90	1.1	90	1.1	*0.851	81.5	LOS F	6.5	46.1	1.00	0.91	1.31	5.8
Approach		492	3.3	492	3.3	0.851	43.1	LOS D	8.2	58.8	0.77	0.78	0.84	15.6
West: Great Eastern Hwy														
10	L2	8	0.0	8	0.0	0.030	23.9	LOS C	0.7	7.3	0.53	0.50	0.53	21.1
11	T1	1459	6.0	1459	6.0	0.520	18.6	LOS B	16.0	119.9	0.55	0.49	0.55	22.3
12	R2	105	1.0	105	1.0	0.700	71.9	LOS E	8.3	58.0	1.00	0.84	1.09	18.7
12u	U	19	0.0	19	0.0	0.700	73.5	LOS E	8.3	58.0	1.00	0.84	1.09	8.0
Approach		1591	5.6	1591	5.6	0.700	22.8	LOS C	16.0	119.9	0.59	0.52	0.60	21.2
All Vehicles		5327	4.9	5327	4.9	0.905	38.6	LOS D	22.2	163.2	0.81	0.79	0.89	13.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution AM 2031 (Site Folder: 2031 AM Peak)]**

 **Network: N101 [2031 AM Peak (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 AM Peak  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
East: Resolution Dr														
4a	L1	29	6.9	29	6.9	0.382	7.2	LOS A	2.1	15.5	0.72	0.91	0.76	28.8
6a	R1	16	6.3	16	6.3	0.382	12.5	LOS B	2.1	15.5	0.72	0.91	0.76	38.9
6	R2	242	4.5	242	4.5	0.382	13.6	LOS B	2.1	15.5	0.72	0.91	0.76	28.8
Approach		287	4.9	287	4.9	0.382	12.9	LOS B	2.1	15.5	0.72	0.91	0.76	29.6
North: Grandstand Rd														
7	L2	426	2.6	426	2.6	0.425	3.9	LOS A	2.9	20.5	0.34	0.51	0.34	33.4
9a	R1	759	1.1	759	1.1	0.425	8.7	LOS A	2.9	20.5	0.36	0.57	0.36	30.9
9b	R3	6	0.0	6	0.0	0.425	11.2	LOS B	2.8	20.0	0.36	0.59	0.36	46.5
9u	U	2	0.0	2	0.0	0.425	12.5	LOS B	2.8	20.0	0.36	0.59	0.36	30.2
Approach		1193	1.6	1193	1.6	0.425	7.0	LOS A	2.9	20.5	0.35	0.55	0.35	31.8
NorthWest: Resolution Dr														
27b	L3	13	7.7	13	7.7	0.120	4.4	LOS A	0.5	3.5	0.51	0.61	0.51	35.5
27a	L1	50	0.0	50	0.0	0.120	3.4	LOS A	0.5	3.5	0.51	0.61	0.51	35.5
29	R2	48	0.0	48	0.0	0.120	9.4	LOS A	0.5	3.5	0.51	0.61	0.51	35.5
Approach		111	0.9	111	0.9	0.120	6.1	LOS A	0.5	3.5	0.51	0.61	0.51	35.5
SouthWest: Stoneham St														
30	L2	19	0.0	19	0.0	0.160	2.1	LOS A	0.9	6.4	0.43	0.44	0.43	47.0
30a	L1	334	2.7	334	2.7	0.160	2.3	LOS A	0.9	6.4	0.44	0.47	0.44	30.9
32a	R1	22	0.0	22	0.0	0.160	6.4	LOS A	0.9	6.3	0.44	0.50	0.44	30.1
32u	U	4	25.0	4	25.0	0.160	10.4	LOS B	0.9	6.3	0.44	0.50	0.44	30.1
Approach		379	2.6	379	2.6	0.160	2.6	LOS A	0.9	6.4	0.44	0.47	0.44	32.9
All Vehicles		1970	2.2	1970	2.2	0.425	7.0	LOS A	2.9	20.5	0.43	0.59	0.44	31.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## NETWORK SUMMARY

### Network: N101 [2031 PM Peak (Network Folder: General)]

New Network

Network Category: (None)

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS E		
Speed Efficiency	0.45		
Travel Time Index	3.90		
Congestion Coefficient	2.22		
Travel Speed (Average)	26.9 km/h		28.5 km/h
Travel Distance (Total)	11965.4 veh-km/h		18550.5 pers-km/h
Travel Time (Total)	444.0 veh-h/h		650.6 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	53437 veh/h		85765 pers/h
Arrival Flows (Total for all Sites)	52906 veh/h		85106 pers/h
Demand Flows (Entry Total)	7638 veh/h		
Midblock Inflows (Total)	391 veh/h		
Midblock Outflows (Total)	-23 veh/h		
Percent Heavy Vehicles (Demand)	2.1 %		
Percent Heavy Vehicles (Arrival)	2.1 %		
Degree of Saturation	1.937		
Control Delay (Total)	241.83 veh-h/h		330.15 pers-h/h
Control Delay (Average)	16.5 sec		14.0 sec
Control Delay (Worst Lane)	875.1 sec		
Control Delay (Worst Movement)	912.1 sec		912.1 sec
Geometric Delay (Average)	0.7 sec		
Stop-Line Delay (Average)	15.7 sec		
Ave. Queue Storage Ratio (Worst Lane)	2.35		
Total Effective Stops	16273 veh/h		27080 pers/h
Effective Stop Rate	0.31	1.36 per km	0.32
Proportion Queued	0.24		0.21
Performance Index	1320.4		1320.4
Cost (Total)	20345.79 \$/h	1.70 \$/km	20345.79 \$/h
Fuel Consumption (Total)	1528.9 L/h	127.8 mL/km	
Fuel Economy	12.8 L/100km		
Carbon Dioxide (Total)	3609.7 kg/h	301.7 g/km	
Hydrocarbons (Total)	0.344 kg/h	0.029 g/km	
Carbon Monoxide (Total)	3.718 kg/h	0.311 g/km	
NOx (Total)	4.218 kg/h	0.353 g/km	

Network Model Variability Index (Iterations 3 to N): 0.6 %

Number of Iterations: 9 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.1% 0.0% 0.0%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	25,649,760 veh/y	41,167,300 pers/y
Delay	116,076 veh-h/y	158,471 pers-h/y
Effective Stops	7,811,153 veh/y	12,998,270 pers/y
Travel Distance	5,743,401 veh-km/y	8,904,247 pers-km/y
Travel Time	213,118 veh-h/y	312,269 pers-h/y
Cost	9,765,982 \$/y	9,765,982 \$/y
Fuel Consumption	733,861 L/y	
Carbon Dioxide	1,732,659 kg/y	
Hydrocarbons	165 kg/y	
Carbon Monoxide	1,785 kg/y	
NOx	2,025 kg/y	

## MOVEMENT SUMMARY

 Site: 106 [GEH Stoneham Belgravia PM 2031 (Site Folder: 2031 PM Peak)]

 Network: N101 [2031 PM Peak (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

2031 PM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Belgravia St														
1	L2	210	0.5	210	0.5	0.866	71.9	LOS E	24.7	174.2	1.00	0.96	1.19	11.4
2	T1	437	1.4	437	1.4	* 0.866	65.9	LOS E	24.7	174.2	1.00	0.98	1.20	12.2
3	R2	267	1.1	267	1.1	0.700	61.3	LOS E	17.0	121.0	0.98	0.85	0.99	12.7
Approach		914	1.1	914	1.1	0.866	65.9	LOS E	24.7	174.2	1.00	0.94	1.14	12.2
East: Great Eastern Hwy														
4	L2	107	3.7	107	3.7	0.201	34.4	LOS C	5.8	46.6	0.69	0.72	0.69	22.3
5	T1	1514	2.4	1514	2.4	0.648	36.2	LOS D	18.4	130.6	0.87	0.77	0.87	8.8
6	R2	78	2.6	78	2.6	0.555	72.5	LOS E	6.1	44.0	1.00	0.78	1.00	4.9
6u	U	13	0.0	13	0.0	0.555	74.3	LOS E	6.1	44.0	1.00	0.78	1.00	4.9
Approach		1712	2.5	1712	2.5	0.648	38.0	LOS D	18.4	130.6	0.87	0.77	0.87	9.4
North: Stoneham St														
7	L2	9	0.0	8	0.0	0.044	66.9	LOS E	0.5	3.6	0.93	0.67	0.93	7.4
8	T1	234	0.0	218	0.0	* 0.822	72.8	LOS E	11.7	81.6	1.00	0.92	1.21	15.5
9	R2	267	1.9	249	2.0	0.822	78.0	LOS E	11.1	78.6	1.00	0.90	1.19	7.0
Approach		510	1.0	475 <sup>N1</sup>	1.1	0.822	75.4	LOS E	11.7	81.6	1.00	0.91	1.19	11.2
West: Great Eastern Hwy														
10	L2	770	0.4	770	0.4	0.649	13.5	LOS B	22.2	155.9	0.55	0.74	0.55	21.2
11	T1	2115	3.2	2115	3.2	* 0.819	37.5	LOS D	22.7	163.2	0.87	0.80	0.90	9.9
12	R2	87	0.0	87	0.0	* 0.579	73.0	LOS E	6.6	46.3	1.00	0.78	1.00	14.0
12u	U	11	0.0	11	0.0	0.579	74.7	LOS E	6.6	46.3	1.00	0.78	1.00	5.5
Approach		2983	2.3	2983	2.3	0.819	32.5	LOS C	22.7	163.2	0.79	0.79	0.81	11.7
All Vehicles		6119	2.1	6084 <sup>N1</sup>	2.1	0.866	42.4	LOS D	24.7	174.2	0.86	0.81	0.91	11.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey PM 2031 (Site Folder: 2031 PM Peak)]

 Network: N101 [2031 PM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2031 PM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Hardey Rd														
1	L2	119	0.0	119	0.0	0.511	66.7	LOS E	8.4	58.6	0.98	0.80	0.98	15.6
2	T1	188	2.7	188	2.7	* 0.675	63.1	LOS E	11.7	84.0	1.00	0.83	1.02	16.7
3	R2	153	2.6	153	2.6	0.618	68.0	LOS E	10.0	72.2	0.99	0.81	0.99	15.6
Approach		460	2.0	460	2.0	0.675	65.6	LOS E	11.7	84.0	0.99	0.82	1.00	16.0
East: Great Eastern Hwy														
4	L2	138	0.0	138	0.0	0.098	9.3	LOS A	2.0	13.7	0.27	0.62	0.27	45.3
5	T1	1557	2.9	1557	2.9	0.474	27.7	LOS C	19.3	137.4	0.74	0.65	0.74	12.7
6	R2	251	0.4	251	0.4	* 1.013	122.4	LOS F	23.2	163.2	1.00	1.16	1.66	3.5
6u	U	16	0.0	16	0.0	1.013	124.1	LOS F	23.2	163.2	1.00	1.16	1.66	3.5
Approach		1962	2.3	1962	2.3	1.013	39.3	LOS D	23.2	163.2	0.74	0.72	0.83	11.1
North: Resolution Dr														
7	L2	147	3.4	146	3.4	0.281	33.9	LOS C	6.5	47.0	0.74	0.76	0.74	12.2
8	T1	154	3.2	153	3.3	* 0.769	73.7	LOS E	7.0	49.1	1.00	0.82	1.12	18.1
9	R2	24	0.0	24	0.0	0.199	74.6	LOS E	1.6	11.0	0.96	0.71	0.96	6.3
Approach		325	3.1	324 <sup>N1</sup>	3.1	0.769	55.8	LOS E	7.0	49.1	0.88	0.79	0.94	15.6
West: Great Eastern Hwy														
10	L2	23	0.0	23	0.0	0.064	28.9	LOS C	1.6	15.8	0.59	0.59	0.59	17.8
11	T1	2444	2.7	2443	2.7	* 0.938	48.4	LOS D	36.4	261.1	0.97	1.01	1.13	11.1
12	R2	176	1.7	176	1.7	0.721	69.6	LOS E	12.6	88.7	1.00	0.85	1.06	19.1
12u	U	11	0.0	11	0.0	0.721	71.2	LOS E	12.6	88.7	1.00	0.85	1.06	8.2
Approach		2654	2.6	2653 <sup>N1</sup>	2.6	0.938	49.7	LOS D	36.4	261.1	0.97	1.00	1.12	12.0
All Vehicles		5401	2.5	5399 <sup>N1</sup>	2.5	1.013	47.7	LOS D	36.4	261.1	0.88	0.87	0.99	12.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution PM 2031 (Site Folder: 2031 PM Peak)]**

 **Network: N101 [2031 PM Peak (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 PM Peak  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
East: Resolution Dr														
4a	L1	51	2.0	51	2.0	0.642	7.4	LOS A	5.5	39.5	0.74	0.91	0.89	28.5
6a	R1	42	0.0	42	0.0	0.642	12.6	LOS B	5.5	39.5	0.74	0.91	0.89	39.4
6	R2	529	2.1	527	2.1	0.642	13.9	LOS B	5.5	39.5	0.74	0.91	0.89	28.5
Approach		622	1.9	619 <sup>N1</sup>	1.9	0.642	13.3	LOS B	5.5	39.5	0.74	0.91	0.89	29.4
North: Grandstand Rd														
7	L2	217	2.3	217	2.3	0.219	3.7	LOS A	1.3	9.2	0.25	0.48	0.25	34.4
9a	R1	398	0.3	398	0.3	0.219	8.4	LOS A	1.3	9.2	0.25	0.55	0.25	31.8
9b	R3	8	0.0	8	0.0	0.219	10.9	LOS B	1.3	8.9	0.25	0.57	0.25	47.4
9u	U	4	0.0	4	0.0	0.219	12.1	LOS B	1.3	8.9	0.25	0.57	0.25	31.0
Approach		627	1.0	627	1.0	0.219	6.8	LOS A	1.3	9.2	0.25	0.53	0.25	32.8
NorthWest: Resolution Dr														
27b	L3	14	0.0	14	0.0	0.212	10.2	LOS B	1.1	8.2	0.88	0.93	0.88	28.3
27a	L1	26	3.8	26	3.8	0.212	9.5	LOS A	1.1	8.2	0.88	0.93	0.88	28.3
29	R2	36	2.8	36	2.8	0.212	15.5	LOS B	1.1	8.2	0.88	0.93	0.88	28.3
Approach		76	2.6	76	2.6	0.212	12.5	LOS B	1.1	8.2	0.88	0.93	0.88	28.3
SouthWest: Stoneham St														
30	L2	53	0.0	48	0.0	0.794	10.4	LOS B	3.5	24.9	1.00	1.11	1.44	32.0
30a	L1	1498	0.5	1366	0.5	0.794	11.1	LOS B	3.5	24.9	1.00	1.13	1.46	12.5
32a	R1	17	5.9	16	6.4	0.794	16.2	LOS B	3.5	24.9	0.99	1.16	1.48	12.0
32u	U	5	0.0	5	0.0	0.794	19.7	LOS B	3.5	24.9	0.99	1.16	1.48	12.0
Approach		1573	0.5	1434 <sup>N1</sup>	0.6	0.794	11.2	LOS B	3.5	24.9	1.00	1.13	1.46	13.6
All Vehicles		2898	1.0	2757 <sup>N1</sup>	1.0	0.794	10.7	LOS B	5.5	39.5	0.76	0.94	1.04	23.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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### Appendix 3 – SIDRA Network Output 2041 Existing Network



81113-581-FLYT-REP-0005 June 24

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## NETWORK SUMMARY

### Network: N101 [2041 AM Peak (Network Folder: General)]

New Network

Network Category: (None)

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS E		
Speed Efficiency	0.38		
Travel Time Index	3.07		
Congestion Coefficient	2.66		
Travel Speed (Average)	22.5 km/h		23.7 km/h
Travel Distance (Total)	11607.3 veh-km/h		17725.7 pers-km/h
Travel Time (Total)	515.8 veh-h/h		749.4 pers-h/h
Desired Speed (Program)	59.8 km/h		
Demand Flows (Total for all Sites)	51917 veh/h		81094 pers/h
Arrival Flows (Total for all Sites)	51745 veh/h		80887 pers/h
Demand Flows (Entry Total)	7152 veh/h		
Midblock Inflows (Total)	217 veh/h		
Midblock Outflows (Total)	-156 veh/h		
Percent Heavy Vehicles (Demand)	4.2 %		
Percent Heavy Vehicles (Arrival)	4.2 %		
Degree of Saturation	1.158		
Control Delay (Total)	315.01 veh-h/h		435.33 pers-h/h
Control Delay (Average)	21.9 sec		19.4 sec
Control Delay (Worst Lane)	224.8 sec		
Control Delay (Worst Movement)	224.8 sec		224.8 sec
Geometric Delay (Average)	0.6 sec		
Stop-Line Delay (Average)	21.3 sec		
Ave. Queue Storage Ratio (Worst Lane)	1.00		
Total Effective Stops	15104 veh/h		25604 pers/h
Effective Stop Rate	0.29	1.30 per km	0.32
Proportion Queued	0.21		0.20
Performance Index	1291.3		1291.3
Cost (Total)	23857.12 \$/h	2.06 \$/km	23857.12 \$/h
Fuel Consumption (Total)	1811.6 L/h	156.1 mL/km	
Fuel Economy	15.6 L/100km		
Carbon Dioxide (Total)	4293.3 kg/h	369.9 g/km	
Hydrocarbons (Total)	0.415 kg/h	0.036 g/km	
Carbon Monoxide (Total)	4.242 kg/h	0.365 g/km	
NOx (Total)	9.748 kg/h	0.840 g/km	

Network Model Variability Index (Iterations 3 to N): 0.0 %

Number of Iterations: 5 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.0% 0.0% 0.0%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	24,920,160 veh/y	38,924,930 pers/y
Delay	151,205 veh-h/y	208,960 pers-h/y
Effective Stops	7,249,894 veh/y	12,289,960 pers/y
Travel Distance	5,571,491 veh-km/y	8,508,312 pers-km/y
Travel Time	247,562 veh-h/y	359,700 pers-h/y
Cost	11,451,420 \$/y	11,451,420 \$/y
Fuel Consumption	869,555 L/y	
Carbon Dioxide	2,060,780 kg/y	
Hydrocarbons	199 kg/y	
Carbon Monoxide	2,036 kg/y	
NOx	4,679 kg/y	

## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia AM 2041 (Site Folder: 2041 AM Peak)]**

 **Network: N101 [2041 AM Peak (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2041 AM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
South: Belgravia St														
1	L2	66	4.5	66	4.5	0.408	65.5	LOS E	5.7	42.4	0.97	0.77	0.97	12.2
2	T1	118	8.5	118	8.5	* 0.408	59.9	LOS E	5.7	44.1	0.97	0.76	0.97	13.1
3	R2	78	10.3	78	10.3	0.373	65.6	LOS E	4.8	38.3	0.96	0.77	0.96	12.1
Approach		262	8.0	262	8.0	0.408	63.0	LOS E	5.7	44.1	0.96	0.77	0.96	12.6
East: Great Eastern Hwy														
4	L2	214	5.6	214	5.6	0.309	29.5	LOS C	9.7	74.3	0.67	0.74	0.67	23.8
5	T1	2744	4.4	2744	4.4	* 1.048	119.5	LOS F	17.8	130.6	1.00	1.41	1.61	3.0
6	R2	20	5.0	20	5.0	0.187	72.2	LOS E	1.4	10.6	0.98	0.71	0.98	4.9
6u	U	1	0.0	1	0.0	0.187	73.9	LOS E	1.4	10.6	0.98	0.71	0.98	4.9
Approach		2979	4.5	2979	4.5	1.048	112.7	LOS F	17.8	130.6	0.97	1.36	1.54	3.6
North: Stoneham St														
7	L2	6	0.0	6	0.0	0.023	59.1	LOS E	0.3	2.4	0.89	0.66	0.89	8.2
8	T1	323	4.0	323	4.0	* 1.103	173.8	LOS F	32.6	228.5	1.00	1.46	2.03	7.5
9	R2	506	0.4	506	0.4	1.103	175.7	LOS F	31.3	219.8	1.00	1.34	1.97	3.2
Approach		835	1.8	835	1.8	1.103	174.1	LOS F	32.6	228.5	1.00	1.38	1.99	4.9
West: Great Eastern Hwy														
10	L2	239	1.3	239	1.3	0.157	6.7	LOS A	1.9	13.3	0.19	0.61	0.19	31.3
11	T1	1568	5.2	1568	5.2	0.487	22.1	LOS C	15.1	112.2	0.59	0.52	0.59	15.0
12	R2	64	3.1	64	3.1	* 0.877	85.3	LOS F	7.2	51.1	1.00	0.96	1.42	12.3
12u	U	33	0.0	33	0.0	0.877	86.9	LOS F	7.2	51.1	1.00	0.96	1.42	4.8
Approach		1904	4.6	1904	4.6	0.877	23.5	LOS C	15.1	112.2	0.56	0.55	0.58	15.1
All Vehicles		5980	4.3	5980	4.3	1.103	90.7	LOS F	32.6	228.5	0.84	1.08	1.27	5.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey AM 2041 (Site Folder: 2041 AM Peak)]

 Network: N101 [2041 AM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2041 AM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
South: Hardey Rd														
1	L2	107	1.9	107	1.9	0.562	68.2	LOS E	7.2	53.1	0.99	0.79	0.99	15.3
2	T1	118	5.1	118	5.1	0.562	62.1	LOS E	7.2	53.1	0.99	0.78	0.99	16.9
3	R2	136	3.7	136	3.7	* 0.684	70.3	LOS E	9.0	65.8	1.00	0.83	1.06	15.2
Approach		361	3.6	361	3.6	0.684	67.0	LOS E	9.0	65.8	0.99	0.81	1.02	15.8
East: Great Eastern Hwy														
4	L2	141	5.0	141	5.0	0.101	8.4	LOS A	1.7	11.8	0.25	0.61	0.25	44.5
5	T1	2736	4.8	2736	4.8	* 1.099	165.0	LOS F	22.2	163.2	1.00	1.65	1.92	2.5
6	R2	153	7.2	153	7.2	* 0.936	91.2	LOS F	13.2	99.3	1.00	1.05	1.50	4.6
6u	U	14	0.0	14	0.0	0.936	92.8	LOS F	13.2	99.3	1.00	1.05	1.50	4.6
Approach		3044	4.9	3044	4.9	1.099	153.7	LOS F	22.2	163.2	0.97	1.57	1.82	3.1
North: Resolution Dr														
7	L2	274	1.8	274	1.8	0.494	18.1	LOS B	9.3	66.4	0.61	0.76	0.61	19.3
8	T1	147	6.8	147	6.8	0.666	68.3	LOS E	6.3	44.2	1.00	0.79	1.05	19.0
9	R2	95	1.1	95	1.1	* 1.158	224.8	LOS F	12.7	89.8	1.00	1.29	2.35	2.2
Approach		516	3.1	516	3.1	1.158	70.5	LOS E	12.7	89.8	0.79	0.87	1.06	10.4
West: Great Eastern Hwy														
10	L2	9	0.0	9	0.0	0.032	23.9	LOS C	0.7	7.5	0.53	0.51	0.53	20.9
11	T1	1531	6.0	1531	6.0	0.547	18.9	LOS B	17.3	129.5	0.57	0.51	0.57	22.1
12	R2	110	0.9	110	0.9	0.775	74.6	LOS E	9.0	62.8	1.00	0.89	1.18	18.3
12u	U	20	0.0	20	0.0	0.775	76.2	LOS E	9.0	62.8	1.00	0.89	1.18	7.7
Approach		1670	5.6	1670	5.6	0.775	23.3	LOS C	17.3	129.5	0.60	0.54	0.62	20.9
All Vehicles		5591	4.8	5591	4.8	1.158	101.5	LOS F	22.2	163.2	0.84	1.15	1.34	5.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution AM 2041 (Site Folder: 2041 AM Peak)]**

 **Network: N101 [2041 AM Peak (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 AM Peak  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
East: Resolution Dr														
4a	L1	31	6.5	31	6.5	0.413	7.8	LOS A	2.4	17.6	0.74	0.93	0.82	28.2
6a	R1	16	6.3	16	6.2	0.413	13.0	LOS B	2.4	17.6	0.74	0.93	0.82	38.3
6	R2	254	4.7	254	4.7	0.413	14.2	LOS B	2.4	17.6	0.74	0.93	0.82	28.2
Approach		301	5.0	301	5.0	0.413	13.5	LOS B	2.4	17.6	0.74	0.93	0.82	28.9
North: Grandstand Rd														
7	L2	446	2.7	446	2.7	0.449	4.0	LOS A	3.1	22.4	0.36	0.51	0.36	33.2
9a	R1	797	1.1	797	1.1	0.449	8.8	LOS A	3.1	22.4	0.38	0.57	0.38	30.7
9b	R3	7	0.0	7	0.0	0.449	11.3	LOS B	3.1	21.8	0.38	0.60	0.38	46.3
9u	U	2	0.0	2	0.0	0.449	12.5	LOS B	3.1	21.8	0.38	0.60	0.38	30.0
Approach		1252	1.7	1252	1.7	0.449	7.1	LOS A	3.1	22.4	0.37	0.55	0.37	31.6
NorthWest: Resolution Dr														
27b	L3	13	7.7	13	7.7	0.129	4.5	LOS A	0.5	3.8	0.52	0.62	0.52	35.4
27a	L1	53	0.0	53	0.0	0.129	3.5	LOS A	0.5	3.8	0.52	0.62	0.52	35.4
29	R2	51	0.0	51	0.0	0.129	9.5	LOS A	0.5	3.8	0.52	0.62	0.52	35.4
Approach		117	0.9	117	0.9	0.129	6.2	LOS A	0.5	3.8	0.52	0.62	0.52	35.4
SouthWest: Stoneham St														
30	L2	20	0.0	20	0.0	0.171	2.2	LOS A	1.0	7.0	0.45	0.45	0.45	46.9
30a	L1	351	2.8	351	2.8	0.171	2.3	LOS A	1.0	7.0	0.46	0.48	0.46	30.6
32a	R1	23	0.0	23	0.0	0.171	6.5	LOS A	0.9	6.8	0.46	0.51	0.46	29.8
32u	U	4	25.0	4	25.0	0.171	10.4	LOS B	0.9	6.8	0.46	0.51	0.46	29.8
Approach		398	2.8	398	2.8	0.171	2.6	LOS A	1.0	7.0	0.46	0.48	0.46	32.6
All Vehicles		2068	2.3	2068	2.3	0.449	7.1	LOS A	3.1	22.4	0.45	0.60	0.46	31.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## NETWORK SUMMARY

### Network: N101 [2041 PM Peak (Network Folder: General)]

New Network

Network Category: (None)

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS E		
Speed Efficiency	0.38		
Travel Time Index	3.10		
Congestion Coefficient	2.64		
Travel Speed (Average)	22.7 km/h		24.5 km/h
Travel Distance (Total)	12510.3 veh-km/h		19071.6 pers-km/h
Travel Time (Total)	552.2 veh-h/h		777.8 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	56031 veh/h		87878 pers/h
Arrival Flows (Total for all Sites)	55259 veh/h		86914 pers/h
Demand Flows (Entry Total)	8011 veh/h		
Midblock Inflows (Total)	431 veh/h		
Midblock Outflows (Total)	-44 veh/h		
Percent Heavy Vehicles (Demand)	2.1 %		
Percent Heavy Vehicles (Arrival)	2.1 %		
Degree of Saturation	2.596		
Control Delay (Total)	340.05 veh-h/h		448.22 pers-h/h
Control Delay (Average)	22.2 sec		18.6 sec
Control Delay (Worst Lane)	1466.0 sec		
Control Delay (Worst Movement)	1499.0 sec		1499.0 sec
Geometric Delay (Average)	0.7 sec		
Stop-Line Delay (Average)	21.4 sec		
Ave. Queue Storage Ratio (Worst Lane)	3.10		
Total Effective Stops	18075 veh/h		28702 pers/h
Effective Stop Rate	0.33	1.44 per km	0.33
Proportion Queued	0.24		0.22
Performance Index	1566.8		1566.8
Cost (Total)	24160.01 \$/h	1.93 \$/km	24160.01 \$/h
Fuel Consumption (Total)	1722.5 L/h	137.7 mL/km	
Fuel Economy	13.8 L/100km		
Carbon Dioxide (Total)	4065.9 kg/h	325.0 g/km	
Hydrocarbons (Total)	0.394 kg/h	0.031 g/km	
Carbon Monoxide (Total)	4.064 kg/h	0.325 g/km	
NOx (Total)	4.660 kg/h	0.373 g/km	

Network Model Variability Index (Iterations 3 to N): 20.6 %

Number of Iterations: 7 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.9% 0.7% 0.3%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values			
Performance Measure	Vehicles	Persons	
Demand Flows (Total for all Sites)	26,894,880 veh/y	42,181,630 pers/y	
Delay	163,225 veh-h/y	215,145 pers-h/y	
Effective Stops	8,675,784 veh/y	13,776,860 pers/y	
Travel Distance	6,004,929 veh-km/y	9,154,381 pers-km/y	
Travel Time	265,053 veh-h/y	373,325 pers-h/y	
Cost	11,596,800 \$/y	11,596,800 \$/y	
Fuel Consumption	826,816 L/y		
Carbon Dioxide	1,951,608 kg/y		
Hydrocarbons	189 kg/y		
Carbon Monoxide	1,951 kg/y		
NOx	2,237 kg/y		

## MOVEMENT SUMMARY

 Site: 106 [GEH Stoneham Belgravia PM 2041 (Site Folder: 2041 PM Peak)]

 Network: N101 [2041 PM Peak (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

2041 PM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Belgravia St														
1	L2	221	0.5	221	0.5	0.927	83.3	LOS F	29.1	205.6	1.00	1.04	1.32	10.1
2	T1	460	1.5	460	1.5	* 0.927	77.5	LOS E	29.1	205.6	1.00	1.07	1.34	10.7
3	R2	280	1.1	280	1.1	0.758	63.4	LOS E	18.4	130.8	0.99	0.87	1.05	12.4
Approach		961	1.1	961	1.1	0.927	74.7	LOS E	29.1	205.6	1.00	1.01	1.25	11.0
East: Great Eastern Hwy														
4	L2	112	3.6	112	3.6	0.208	34.5	LOS C	6.0	48.3	0.70	0.72	0.70	22.2
5	T1	1591	2.5	1591	2.5	0.682	36.9	LOS D	18.4	130.6	0.89	0.79	0.89	8.6
6	R2	82	2.4	82	2.4	0.578	72.7	LOS E	6.4	46.0	1.00	0.78	1.00	4.9
6u	U	13	0.0	13	0.0	0.578	74.4	LOS E	6.4	46.0	1.00	0.78	1.00	4.9
Approach		1798	2.5	1798	2.5	0.682	38.7	LOS D	18.4	130.6	0.88	0.79	0.88	9.3
North: Stoneham St														
7	L2	10	0.0	9	0.0	0.048	67.0	LOS E	0.6	3.9	0.93	0.67	0.93	7.3
8	T1	246	0.0	224	0.0	* 0.848	74.4	LOS E	12.2	85.5	1.00	0.94	1.25	15.2
9	R2	280	2.1	256	2.3	0.848	79.5	LOS E	11.6	82.3	1.00	0.92	1.22	6.9
Approach		536	1.1	489 <sup>N1</sup>	1.2	0.848	76.9	LOS E	12.2	85.5	1.00	0.93	1.23	11.0
West: Great Eastern Hwy														
10	L2	810	0.4	810	0.4	0.686	14.3	LOS B	23.2	163.2	0.59	0.76	0.59	20.4
11	T1	2220	3.2	2220	3.2	* 0.866	42.2	LOS D	22.7	163.2	0.90	0.87	0.98	9.0
12	R2	92	0.0	92	0.0	* 0.608	73.4	LOS E	7.0	48.9	1.00	0.79	1.02	13.9
12u	U	11	0.0	11	0.0	0.608	75.1	LOS E	7.0	48.9	1.00	0.79	1.02	5.5
Approach		3133	2.3	3133	2.3	0.866	36.0	LOS D	23.2	163.2	0.83	0.84	0.88	10.7
All Vehicles		6428	2.1	6381 <sup>N1</sup>	2.1	0.927	45.7	LOS D	29.1	205.6	0.88	0.86	0.96	10.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey PM 2041 (Site Folder: 2041 PM Peak)]

 Network: N101 [2041 PM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2041 PM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
South: Hardey Rd														
1	L2	125	0.0	125	0.0	0.536	66.9	LOS E	8.8	61.6	0.98	0.80	0.98	15.6
2	T1	197	2.5	197	2.5	* 0.708	64.0	LOS E	12.4	89.1	1.00	0.85	1.05	16.5
3	R2	161	2.5	161	2.5	0.650	68.5	LOS E	10.6	76.5	1.00	0.82	1.01	15.5
Approach		483	1.9	483	1.9	0.708	66.2	LOS E	12.4	89.1	0.99	0.83	1.02	15.9
East: Great Eastern Hwy														
4	L2	145	0.0	145	0.0	0.104	9.5	LOS A	2.1	15.0	0.28	0.62	0.28	45.0
5	T1	1636	2.9	1636	2.9	0.500	28.1	LOS C	20.6	146.9	0.75	0.66	0.75	12.5
6	R2	263	0.4	263	0.4	* 1.062	152.7	LOS F	23.2	163.2	1.00	1.25	1.85	2.8
6u	U	17	0.0	17	0.0	1.062	154.3	LOS F	23.2	163.2	1.00	1.25	1.85	2.8
Approach		2061	2.3	2061	2.3	1.062	43.7	LOS D	23.2	163.2	0.75	0.74	0.87	10.1
North: Resolution Dr														
7	L2	155	3.9	154	3.9	0.305	38.7	LOS D	7.3	53.6	0.80	0.77	0.80	10.9
8	T1	160	3.1	159	3.1	* 0.798	74.4	LOS E	7.3	51.4	1.00	0.84	1.15	18.0
9	R2	25	0.0	25	0.0	0.207	74.7	LOS E	1.6	11.4	0.96	0.71	0.96	6.3
Approach		340	3.2	338 <sup>N1</sup>	3.3	0.798	58.1	LOS E	7.3	53.6	0.90	0.80	0.97	15.1
West: Great Eastern Hwy														
10	L2	24	0.0	24	0.0	0.066	28.9	LOS C	1.6	16.0	0.59	0.59	0.59	17.7
11	T1	2564	2.7	2563	2.7	* 0.985	68.2	LOS E	36.4	261.1	1.00	1.15	1.29	8.4
12	R2	185	1.6	185	1.6	0.755	70.8	LOS E	13.4	94.4	1.00	0.87	1.10	18.9
12u	U	11	0.0	11	0.0	0.755	72.4	LOS E	13.4	94.4	1.00	0.87	1.10	8.1
Approach		2784	2.6	2783 <sup>N1</sup>	2.6	0.985	68.1	LOS E	36.4	261.1	0.99	1.12	1.27	9.3
All Vehicles		5668	2.5	5665 <sup>N1</sup>	2.5	1.062	58.5	LOS E	36.4	261.1	0.90	0.94	1.08	10.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution PM 2041 (Site Folder: 2041 PM Peak)]**

 **Network: N101 [2041 PM Peak (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 PM Peak  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
						v/c	sec							km/h
East: Resolution Dr														
4a	L1	54	1.9	53	1.9	0.672	8.0	LOS A	6.1	43.9	0.77	0.95	0.96	27.8
6a	R1	44	0.0	43	0.0	0.672	13.2	LOS B	6.1	43.9	0.77	0.95	0.96	38.7
6	R2	554	2.2	542	2.2	0.672	14.5	LOS B	6.1	43.9	0.77	0.95	0.96	27.8
Approach		652	2.0	638 <sup>N1</sup>	2.0	0.672	13.9	LOS B	6.1	43.9	0.77	0.95	0.96	28.7
North: Grandstand Rd														
7	L2	230	3.5	230	3.5	0.232	3.7	LOS A	1.4	9.9	0.26	0.48	0.26	34.3
9a	R1	417	0.2	417	0.2	0.232	8.4	LOS A	1.4	9.9	0.26	0.55	0.26	31.7
9b	R3	9	0.0	9	0.0	0.232	10.9	LOS B	1.4	9.5	0.26	0.58	0.26	47.3
9u	U	4	0.0	4	0.0	0.232	12.2	LOS B	1.4	9.5	0.26	0.58	0.26	30.9
Approach		660	1.4	660	1.4	0.232	6.8	LOS A	1.4	9.9	0.26	0.53	0.26	32.8
NorthWest: Resolution Dr														
27b	L3	14	0.0	14	0.0	0.230	10.7	LOS B	1.2	9.0	0.89	0.94	0.89	27.8
27a	L1	28	3.6	28	3.6	0.230	10.1	LOS B	1.2	9.0	0.89	0.94	0.89	27.8
29	R2	37	2.7	37	2.7	0.230	16.1	LOS B	1.2	9.0	0.89	0.94	0.89	27.8
Approach		79	2.5	79	2.5	0.230	13.0	LOS B	1.2	9.0	0.89	0.94	0.89	27.8
SouthWest: Stoneham St														
30	L2	55	0.0	49	0.0	0.833	12.6	LOS B	3.5	24.9	1.00	1.18	1.58	29.3
30a	L1	1575	0.5	1398	0.6	0.833	13.4	LOS B	3.5	24.9	1.00	1.20	1.61	10.7
32a	R1	18	5.6	16	6.2	0.833	18.7	LOS B	3.5	24.9	1.00	1.23	1.63	10.3
32u	U	6	0.0	5	0.0	0.833	22.1	LOS C	3.5	24.9	1.00	1.23	1.63	10.3
Approach		1654	0.5	1469 <sup>N1</sup>	0.6	0.833	13.5	LOS B	3.5	24.9	1.00	1.20	1.61	11.7
All Vehicles		3045	1.1	2845 <sup>N1</sup>	1.2	0.833	12.0	LOS B	6.1	43.9	0.77	0.98	1.13	21.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## Appendix 4 – SIDRA Network Output 2021 Proposed Road Network



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## NETWORK SUMMARY

### ■ Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]

Proposed Network

2021 Traffic Volumes

Network Category: Proposed Design 1

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS D		
Speed Efficiency	0.58		
Travel Time Index	5.37		
Congestion Coefficient	1.71		
Travel Speed (Average)	34.9 km/h		35.3 km/h
Travel Distance (Total)	10611.7 veh-km/h		16520.4 pers-km/h
Travel Time (Total)	304.0 veh-h/h		468.2 pers-h/h
Desired Speed (Program)	59.8 km/h		
Demand Flows (Total for all Sites)	45822 veh/h		73780 pers/h
Arrival Flows (Total for all Sites)	45822 veh/h		73780 pers/h
Demand Flows (Entry Total)	6528 veh/h		
Midblock Inflows (Total)	104 veh/h		
Midblock Outflows (Total)	-77 veh/h		
Percent Heavy Vehicles (Demand)	4.3 %		
Percent Heavy Vehicles (Arrival)	4.3 %		
Degree of Saturation	0.986		
Control Delay (Total)	125.39 veh-h/h		181.56 pers-h/h
Control Delay (Average)	9.9 sec		8.9 sec
Control Delay (Worst Lane)	101.2 sec		
Control Delay (Worst Movement)	101.5 sec		101.5 sec
Geometric Delay (Average)	0.6 sec		
Stop-Line Delay (Average)	9.2 sec		
Ave. Queue Storage Ratio (Worst Lane)	1.00		
Total Effective Stops	10175 veh/h		19002 pers/h
Effective Stop Rate	0.22	0.96 per km	0.26
Proportion Queued	0.20		0.18
Performance Index	893.5		893.5
Cost (Total)	15191.53 \$/h	1.43 \$/km	15191.53 \$/h
Fuel Consumption (Total)	1355.4 L/h	127.7 mL/km	
Fuel Economy	12.8 L/100km		
Carbon Dioxide (Total)	3215.4 kg/h	303.0 g/km	
Hydrocarbons (Total)	0.283 kg/h	0.027 g/km	
Carbon Monoxide (Total)	3.308 kg/h	0.312 g/km	
NOx (Total)	7.476 kg/h	0.705 g/km	

Network Model Variability Index (Iterations 3 to N): 0.0 %

Number of Iterations: 5 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.0% 0.0% 0.0%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	21,994,560 veh/y	35,414,210 pers/y
Delay	60,188 veh-h/y	87,151 pers-h/y
Effective Stops	4,883,829 veh/y	9,120,820 pers/y
Travel Distance	5,093,591 veh-km/y	7,929,785 pers-km/y
Travel Time	145,919 veh-h/y	224,734 pers-h/y
Cost	7,291,933 \$/y	7,291,933 \$/y
Fuel Consumption	650,606 L/y	
Carbon Dioxide	1,543,384 kg/y	
Hydrocarbons	136 kg/y	
Carbon Monoxide	1,588 kg/y	



## Attachment 12.1.4 Movement and Access Strategy

NOx	3,589 kg/y
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## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]**

 **Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2021 AM Peak with proposed road network

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	HV %	[ Total HV ]	%	v/c	sec		[ Veh. veh ]	[ Dist m ]				km/h
South: Belgravia St														
1	L2	60	5.0	60	5.0	0.371	65.2	LOS E	5.1	38.4	0.96	0.77	0.96	12.2
2	T1	107	8.4	107	8.4	* 0.371	59.6	LOS E	5.2	39.8	0.96	0.75	0.96	13.2
3	R2	70	10.0	70	10.0	0.334	65.2	LOS E	4.3	34.1	0.95	0.76	0.95	12.2
Approach		237	8.0	237	8.0	0.371	62.7	LOS E	5.2	39.8	0.96	0.76	0.96	12.6
East: Great Eastern Hwy														
4	L2	194	5.7	194	5.7	0.280	28.6	LOS C	8.7	66.7	0.65	0.73	0.65	24.3
5	T1	2486	4.5	2486	4.5	* 0.934	55.7	LOS E	17.8	130.6	1.00	1.06	1.18	6.0
6	R2	18	5.6	18	5.6	0.171	72.1	LOS E	1.2	9.6	0.98	0.70	0.98	4.9
6u	U	1	0.0	1	0.0	0.171	73.8	LOS E	1.2	9.6	0.98	0.70	0.98	4.9
Approach		2699	4.6	2699	4.6	0.934	53.9	LOS D	17.8	130.6	0.97	1.04	1.14	7.1
North: Stoneham St														
7	L2	7	14.3	7	14.3	0.035	60.2	LOS E	0.4	3.7	0.89	0.67	0.89	8.1
8	T1	293	4.1	293	4.1	* 0.986	100.4	LOS F	22.9	160.3	1.00	1.18	1.57	12.1
9	R2	452	0.4	452	0.4	0.986	101.5	LOS F	20.6	144.6	1.00	1.10	1.52	5.5
Approach		752	2.0	752	2.0	0.986	100.7	LOS F	22.9	160.3	1.00	1.13	1.53	8.3
West: Great Eastern Hwy														
10	L2	217	1.4	217	1.4	0.141	6.6	LOS A	1.6	11.0	0.18	0.60	0.18	31.6
11	T1	1426	5.3	1426	5.3	0.431	20.8	LOS C	12.7	94.5	0.55	0.48	0.55	15.8
12	R2	58	3.4	58	3.4	* 0.797	80.4	LOS F	6.3	44.6	1.00	0.89	1.27	12.9
12u	U	30	0.0	30	0.0	0.797	82.0	LOS F	6.3	44.6	1.00	0.89	1.27	5.1
Approach		1731	4.7	1731	4.7	0.797	22.0	LOS C	12.7	94.5	0.53	0.52	0.54	15.8
All Vehicles		5419	4.4	5419	4.4	0.986	50.6	LOS D	22.9	160.3	0.83	0.87	1.00	9.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]

 Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2021 AM Peak with proposed road network

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
South: Hardey Rd														
1	L2	97	2.1	97	2.1	0.514	67.8	LOS E	6.5	48.3	0.99	0.79	0.99	15.3
2	T1	108	5.6	108	5.6	0.514	61.7	LOS E	6.5	45.9	0.98	0.77	0.98	17.0
3	R2	124	4.0	124	4.0	* 0.626	69.2	LOS E	8.0	59.3	1.00	0.81	1.02	15.4
Approach		329	4.0	329	4.0	0.626	66.3	LOS E	8.0	59.3	0.99	0.79	1.00	15.9
East: Great Eastern Hwy														
4	L2	127	4.7	127	4.7	0.089	7.9	LOS A	1.4	9.6	0.23	0.61	0.23	45.0
5	T1	2479	4.8	2479	4.8	* 0.693	26.7	LOS C	22.2	163.2	0.81	0.73	0.81	13.0
6	R2	140	7.1	140	7.1	* 0.857	79.3	LOS E	11.0	83.1	1.00	0.95	1.30	5.2
6u	U	13	0.0	13	0.0	0.857	80.9	LOS F	11.0	83.1	1.00	0.95	1.30	5.2
Approach		2759	4.9	2759	4.9	0.857	28.8	LOS C	22.2	163.2	0.80	0.74	0.81	13.6
North: Resolution Dr														
7	L2	250	2.0	250	2.0	0.425	15.4	LOS B	7.2	51.8	0.53	0.73	0.53	21.5
8	T1	134	7.5	134	7.5	0.611	67.7	LOS E	5.7	40.0	1.00	0.77	1.02	19.1
9	R2	86	1.2	86	1.2	* 0.628	74.0	LOS E	5.7	40.4	1.00	0.79	1.04	6.3
Approach		470	3.4	470	3.4	0.628	41.0	LOS D	7.2	51.8	0.75	0.75	0.76	16.2
West: Great Eastern Hwy														
10	L2	8	0.0	8	0.0	0.030	23.8	LOS C	0.7	7.3	0.53	0.50	0.53	21.1
11	T1	1395	6.0	1395	6.0	0.497	18.3	LOS B	15.0	112.0	0.54	0.48	0.54	22.5
12	R2	104	1.0	104	1.0	0.658	70.7	LOS E	8.0	56.2	1.00	0.82	1.05	19.0
12u	U	18	0.0	18	0.0	0.658	72.3	LOS E	8.0	56.2	1.00	0.82	1.05	8.1
Approach		1525	5.6	1525	5.6	0.658	22.5	LOS C	15.0	112.0	0.58	0.51	0.58	21.4
All Vehicles		5083	4.9	5083	4.9	0.857	30.5	LOS C	22.2	163.2	0.74	0.68	0.75	16.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]**

 **Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 AM Peak with proposed road network  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	HV %	[ Total HV ]	%	v/c	sec		[ Veh. veh ]	Dist m				km/h
East: Resolution Dr														
4a	L1	28	7.1	28	7.1	0.358	6.8	LOS A	1.9	13.9	0.69	0.88	0.70	29.3
6a	R1	15	6.7	15	6.7	0.358	12.1	LOS B	1.9	13.9	0.69	0.88	0.70	39.3
6	R2	232	4.7	232	4.7	0.358	13.2	LOS B	1.9	13.9	0.69	0.88	0.70	29.3
Approach		275	5.1	275	5.1	0.358	12.5	LOS B	1.9	13.9	0.69	0.88	0.70	30.0
North: Grandstand Rd														
7	L2	408	2.7	408	2.7	0.405	3.9	LOS A	2.7	19.0	0.33	0.50	0.33	33.6
9a	R1	723	1.1	723	1.1	0.405	8.7	LOS A	2.7	19.0	0.34	0.57	0.34	31.0
9b	R3	6	0.0	6	0.0	0.405	11.2	LOS B	2.6	18.6	0.34	0.59	0.34	46.7
9u	U	2	0.0	2	0.0	0.405	12.4	LOS B	2.6	18.6	0.34	0.59	0.34	30.3
Approach		1139	1.7	1139	1.7	0.405	7.0	LOS A	2.7	19.0	0.34	0.54	0.34	31.9
NorthWest: Resolution Dr														
27b	L3	12	8.3	12	8.3	0.113	4.3	LOS A	0.5	3.3	0.50	0.60	0.50	35.7
27a	L1	48	0.0	48	0.0	0.113	3.3	LOS A	0.5	3.3	0.50	0.60	0.50	35.7
29	R2	46	0.0	46	0.0	0.113	9.3	LOS A	0.5	3.3	0.50	0.60	0.50	35.7
Approach		106	0.9	106	0.9	0.113	6.0	LOS A	0.5	3.3	0.50	0.60	0.50	35.7
SouthWest: Stoneham St														
30	L2	18	0.0	18	0.0	0.151	3.8	LOS A	0.8	6.0	0.42	0.43	0.42	44.8
30a	L1	318	2.8	318	2.8	0.151	3.5	LOS A	0.8	6.0	0.42	0.46	0.42	35.2
32a	R1	21	0.0	21	0.0	0.151	8.7	LOS A	0.8	5.8	0.43	0.49	0.43	34.6
32u	U	4	25.0	4	25.0	0.151	12.6	LOS B	0.8	5.8	0.43	0.49	0.43	34.6
Approach		361	2.8	361	2.8	0.151	3.9	LOS A	0.8	6.0	0.43	0.46	0.43	36.0
All Vehicles		1881	2.3	1881	2.3	0.405	7.1	LOS A	2.7	19.0	0.41	0.58	0.42	32.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## NETWORK SUMMARY

### ■ Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]

Proposed Network

2021 Traffic Volumes

Network Category: Proposed Design 1

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS D		
Speed Efficiency	0.51		
Travel Time Index	4.59		
Congestion Coefficient	1.95		
Travel Speed (Average)	30.7 km/h		31.6 km/h
Travel Distance (Total)	11461.9 veh-km/h		16737.6 pers-km/h
Travel Time (Total)	373.8 veh-h/h		530.1 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	48965 veh/h		72755 pers/h
Arrival Flows (Total for all Sites)	48738 veh/h		72482 pers/h
Demand Flows (Entry Total)	7296 veh/h		
Midblock Inflows (Total)	587 veh/h		
Midblock Outflows (Total)	-225 veh/h		
Percent Heavy Vehicles (Demand)	2.3 %		
Percent Heavy Vehicles (Arrival)	2.3 %		
Degree of Saturation	1.475		
Control Delay (Total)	180.62 veh-h/h		245.88 pers-h/h
Control Delay (Average)	13.3 sec		12.2 sec
Control Delay (Worst Lane)	464.6 sec		
Control Delay (Worst Movement)	504.4 sec		504.4 sec
Geometric Delay (Average)	0.8 sec		
Stop-Line Delay (Average)	12.5 sec		
Ave. Queue Storage Ratio (Worst Lane)	1.54		
Total Effective Stops	14517 veh/h		20940 pers/h
Effective Stop Rate	0.30	1.27 per km	0.29
Proportion Queued	0.24		0.23
Performance Index	1167.5		1167.5
Cost (Total)	16827.04 \$/h	1.47 \$/km	16827.04 \$/h
Fuel Consumption (Total)	1395.6 L/h	121.8 mL/km	
Fuel Economy	12.2 L/100km		
Carbon Dioxide (Total)	3296.1 kg/h	287.6 g/km	
Hydrocarbons (Total)	0.311 kg/h	0.027 g/km	
Carbon Monoxide (Total)	3.464 kg/h	0.302 g/km	
NOx (Total)	4.031 kg/h	0.352 g/km	

Network Model Variability Index (Iterations 3 to N): 0.2 %

Number of Iterations: 5 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.3% 0.2% 0.2%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	23,503,200 veh/y	34,922,310 pers/y
Delay	86,698 veh-h/y	118,024 pers-h/y
Effective Stops	6,968,119 veh/y	10,051,170 pers/y
Travel Distance	5,501,712 veh-km/y	8,034,062 pers-km/y
Travel Time	179,401 veh-h/y	254,466 pers-h/y
Cost	8,076,979 \$/y	8,076,979 \$/y
Fuel Consumption	669,870 L/y	
Carbon Dioxide	1,582,124 kg/y	
Hydrocarbons	149 kg/y	
Carbon Monoxide	1,663 kg/y	

## Attachment 12.1.4 Movement and Access Strategy

NOx	1,935 kg/y
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## MOVEMENT SUMMARY

 Site: 106 [GEH Stoneham Belgravia PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]

 Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

2021 PM Peak with proposed road network

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	[ HV % ]	[ Total HV veh/h ]	[ % ]				[ Veh. veh ]	[ Dist m ]				
South: Belgravia St														
1	L2	200	0.5	200	0.5	0.812	66.7	LOS E	21.8	154.2	1.00	0.91	1.11	12.2
2	T1	416	1.4	416	1.4	* 0.812	60.6	LOS E	21.8	154.2	1.00	0.92	1.11	13.0
3	R2	254	1.2	254	1.2	0.666	60.5	LOS E	16.0	113.7	0.98	0.84	0.98	12.9
Approach		870	1.1	870	1.1	0.812	62.0	LOS E	21.8	154.2	0.99	0.90	1.07	12.8
East: Great Eastern Hwy														
4	L2	102	3.9	102	3.9	0.195	34.3	LOS C	5.5	44.9	0.69	0.71	0.69	22.3
5	T1	1442	2.6	1442	2.6	0.617	35.6	LOS D	18.4	130.6	0.86	0.76	0.86	8.9
6	R2	74	2.7	74	2.7	0.525	72.3	LOS E	5.8	41.5	1.00	0.78	1.00	4.9
6u	U	12	0.0	12	0.0	0.525	74.0	LOS E	5.8	41.5	1.00	0.78	1.00	4.9
Approach		1630	2.6	1630	2.6	0.617	37.5	LOS D	18.4	130.6	0.85	0.76	0.85	9.6
North: Stoneham St														
7	L2	9	0.0	9	0.0	0.046	66.9	LOS E	0.5	3.7	0.93	0.67	0.93	7.4
8	T1	211	0.0	201	0.0	* 0.762	70.1	LOS E	10.5	73.5	1.00	0.87	1.13	15.9
9	R2	242	2.1	231	2.2	0.762	75.6	LOS E	10.0	70.8	1.00	0.86	1.11	7.2
Approach		462	1.1	440 <sup>N1</sup>	1.1	0.762	72.9	LOS E	10.5	73.5	1.00	0.86	1.12	11.5
West: Great Eastern Hwy														
10	L2	733	0.4	733	0.4	0.615	12.8	LOS B	19.7	138.8	0.52	0.73	0.52	21.9
11	T1	2015	3.2	2015	3.2	* 0.777	35.0	LOS C	22.7	163.2	0.84	0.75	0.85	10.5
12	R2	83	0.0	83	0.0	* 0.549	72.8	LOS E	6.3	43.8	1.00	0.78	1.00	14.0
12u	U	10	0.0	10	0.0	0.549	74.4	LOS E	6.3	43.8	1.00	0.78	1.00	5.6
Approach		2841	2.4	2841	2.4	0.777	30.5	LOS C	22.7	163.2	0.76	0.75	0.77	12.3
All Vehicles		5803	2.2	5781 <sup>N1</sup>	2.2	0.812	40.4	LOS D	22.7	163.2	0.84	0.78	0.86	11.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 **Site: 96 [GEH Resolution Hardey PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]**

 **Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]**

GEH / Resolution Dr / Hardey Rd

Traffic signals

2021 PM Peak with proposed road network

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	[ HV % ]	[ Total veh/h ]	[ HV % ]				[ Veh. veh ]	[ Dist m ]				
South: Hardey Rd														
1	L2	113	0.0	113	0.0	0.488	66.4	LOS E	8.0	55.7	0.97	0.79	0.97	15.6
2	T1	180	2.8	180	2.8	* 0.644	62.5	LOS E	11.1	79.4	1.00	0.82	1.00	16.8
3	R2	146	2.7	146	2.7	0.591	67.7	LOS E	9.5	68.7	0.99	0.81	0.99	15.7
Approach		439	2.1	439	2.1	0.644	65.2	LOS E	11.1	79.4	0.99	0.81	0.99	16.1
East: Great Eastern Hwy														
4	L2	131	0.0	131	0.0	0.093	9.2	LOS A	1.9	13.0	0.27	0.62	0.27	45.3
5	T1	1482	3.0	1482	3.0	0.451	27.4	LOS C	18.1	128.8	0.73	0.64	0.73	12.8
6	R2	240	0.4	240	0.4	* 0.967	100.7	LOS F	22.1	155.4	1.00	1.08	1.50	4.2
6u	U	15	0.0	15	0.0	0.967	102.3	LOS F	22.1	155.4	1.00	1.08	1.50	4.2
Approach		1868	2.4	1868	2.4	0.967	36.1	LOS D	22.1	155.4	0.73	0.70	0.80	12.0
North: Resolution Dr														
7	L2	141	3.5	141	3.5	0.265	30.0	LOS C	5.8	42.3	0.70	0.75	0.70	13.4
8	T1	147	3.4	147	3.4	* 0.738	73.1	LOS E	6.7	46.7	1.00	0.81	1.10	18.2
9	R2	23	0.0	23	0.0	0.191	74.5	LOS E	1.5	10.6	0.96	0.71	0.96	6.3
Approach		311	3.2	311	3.2	0.738	53.7	LOS D	6.7	46.7	0.86	0.77	0.91	16.0
West: Great Eastern Hwy														
10	L2	22	0.0	22	0.0	0.063	28.9	LOS C	1.6	15.5	0.59	0.58	0.59	17.8
11	T1	2345	2.8	2345	2.8	* 0.899	39.2	LOS D	36.4	261.1	0.92	0.91	1.01	13.1
12	R2	182	1.6	182	1.6	0.798	73.1	LOS E	14.4	100.9	1.00	0.89	1.15	18.5
12u	U	22	0.0	22	0.0	0.798	74.7	LOS E	14.4	100.9	1.00	0.89	1.15	7.9
Approach		2571	2.6	2571	2.6	0.899	41.9	LOS D	36.4	261.1	0.93	0.91	1.02	13.8
All Vehicles		5189	2.5	5189	2.5	0.967	42.5	LOS D	36.4	261.1	0.86	0.82	0.93	13.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]**

 **Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 PM Peak with proposed road network  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	HV %	[ Total HV ]	%	v/c	sec		[ Veh. veh ]	[ Dist ] m				km/h
East: Resolution Dr														
4a	L1	49	2.0	49	2.0	0.610	6.9	LOS A	4.9	35.2	0.70	0.87	0.83	29.1
6a	R1	40	0.0	40	0.0	0.610	12.0	LOS B	4.9	35.2	0.70	0.87	0.83	40.0
6	R2	507	2.2	507	2.2	0.610	13.4	LOS B	4.9	35.2	0.70	0.87	0.83	29.1
Approach		596	2.0	596	2.0	0.610	12.7	LOS B	4.9	35.2	0.70	0.87	0.83	30.0
North: Grandstand Rd														
7	L2	207	2.4	207	2.4	0.209	3.6	LOS A	1.2	8.6	0.24	0.48	0.24	34.5
9a	R1	380	0.3	380	0.3	0.209	8.4	LOS A	1.2	8.6	0.24	0.55	0.24	31.8
9b	R3	8	0.0	8	0.0	0.209	10.9	LOS B	1.2	8.3	0.25	0.57	0.25	47.5
9u	U	4	0.0	4	0.0	0.209	12.1	LOS B	1.2	8.3	0.25	0.57	0.25	31.1
Approach		599	1.0	599	1.0	0.209	6.8	LOS A	1.2	8.6	0.24	0.52	0.24	32.9
NorthWest: Resolution Dr														
27b	L3	13	0.0	13	0.0	0.191	9.7	LOS A	1.0	7.3	0.87	0.93	0.87	28.8
27a	L1	25	4.0	25	4.0	0.191	9.0	LOS A	1.0	7.3	0.87	0.93	0.87	28.8
29	R2	34	2.9	34	2.9	0.191	15.0	LOS B	1.0	7.3	0.87	0.93	0.87	28.8
Approach		72	2.8	72	2.8	0.191	12.0	LOS B	1.0	7.3	0.87	0.93	0.87	28.8
SouthWest: Stoneham St														
30	L2	50	0.0	47	0.0	0.759	10.6	LOS B	10.4	73.2	0.96	1.03	1.30	36.4
30a	L1	1425	0.5	1343	0.5	0.759	10.8	LOS B	10.4	73.2	0.96	1.06	1.32	23.8
32a	R1	16	6.3	15	6.6	0.759	16.8	LOS B	9.8	68.8	0.96	1.08	1.35	23.0
32u	U	5	0.0	5	0.0	0.759	20.3	LOS C	9.8	68.8	0.96	1.08	1.35	23.0
Approach		1496	0.5	1410 <sup>N</sup> <sub>1</sub>	0.6	0.759	10.8	LOS B	10.4	73.2	0.96	1.06	1.32	24.5
All Vehicles		2763	1.0	2677 <sup>N</sup> <sub>1</sub>	1.0	0.759	10.4	LOS B	10.4	73.2	0.74	0.89	0.96	27.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**N1** Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## Appendix 5 – SIDRA Network Output 2031 Proposed Road Network



81113-581-FLYT-REP-0005 June 24

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## NETWORK SUMMARY

### ■ Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

Proposed Network

25% of Ascot Kilns and Golden Gateway development

50% of Ascot Racecourse development

Network Category: Future Conditions 1

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS E		
Speed Efficiency	0.46		
Travel Time Index	3.98		
Congestion Coefficient	2.18		
Travel Speed (Average)	27.4 km/h		28.9 km/h
Travel Distance (Total)	11381.5 veh-km/h		18343.7 pers-km/h
Travel Time (Total)	415.3 veh-h/h		634.8 pers-h/h
Desired Speed (Program)	59.8 km/h		
Demand Flows (Total for all Sites)	49837 veh/h		87594 pers/h
Arrival Flows (Total for all Sites)	49582 veh/h		86309 pers/h
Demand Flows (Entry Total)	7118 veh/h		
Midblock Inflows (Total)	82 veh/h		
Midblock Outflows (Total)	-86 veh/h		
Percent Heavy Vehicles (Demand)	4.2 %		
Percent Heavy Vehicles (Arrival)	4.2 %		
Degree of Saturation	1.201		
Control Delay (Total)	220.28 veh-h/h		311.22 pers-h/h
Control Delay (Average)	16.0 sec		13.0 sec
Control Delay (Worst Lane)	259.0 sec		
Control Delay (Worst Movement)	260.5 sec		260.5 sec
Geometric Delay (Average)	0.7 sec		
Stop-Line Delay (Average)	15.3 sec		
Ave. Queue Storage Ratio (Worst Lane)	1.00		
Total Effective Stops	12962 veh/h		26984 pers/h
Effective Stop Rate	0.26	1.14 per km	0.31
Proportion Queued	0.22		0.19
Performance Index	1201.3		1201.3
Cost (Total)	20328.28 \$/h	1.79 \$/km	20328.28 \$/h
Fuel Consumption (Total)	1612.2 L/h	141.7 mL/km	
Fuel Economy	14.2 L/100km		
Carbon Dioxide (Total)	3821.2 kg/h	335.7 g/km	
Hydrocarbons (Total)	0.352 kg/h	0.031 g/km	
Carbon Monoxide (Total)	3.836 kg/h	0.337 g/km	
NOx (Total)	8.452 kg/h	0.743 g/km	

Network Model Variability Index (Iterations 3 to N): 0.0 %

Number of Iterations: 5 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.0% 0.0% 0.0%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	23,921,760 veh/y	42,045,120 pers/y
Delay	105,733 veh-h/y	149,385 pers-h/y
Effective Stops	6,221,603 veh/y	12,952,480 pers/y
Travel Distance	5,463,101 veh-km/y	8,804,996 pers-km/y
Travel Time	199,334 veh-h/y	304,696 pers-h/y
Cost	9,757,576 \$/y	9,757,576 \$/y
Fuel Consumption	773,852 L/y	
Carbon Dioxide	1,834,172 kg/y	

## Attachment 12.1.4 Movement and Access Strategy

Hydrocarbons	169 kg/y
Carbon Monoxide	1,842 kg/y
NOx	4,057 kg/y


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## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]**

 **Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2031 AM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	[ HV % ]	[ Total HV ]	[ % ]	v/c	sec		[ Veh. veh ]	[ Dist m ]				km/h
South: Belgravia St														
1	L2	63	4.8	63	4.8	0.396	65.4	LOS E	5.5	41.1	0.96	0.77	0.96	12.2
2	T1	116	7.8	116	7.8	* 0.396	59.8	LOS E	5.6	42.6	0.96	0.76	0.96	13.2
3	R2	76	9.2	76	9.2	0.360	65.4	LOS E	4.7	36.8	0.96	0.77	0.96	12.1
Approach		255	7.5	255	7.5	0.396	62.9	LOS E	5.6	42.6	0.96	0.77	0.96	12.6
East: Great Eastern Hwy														
4	L2	204	5.9	204	5.9	0.297	29.4	LOS C	9.3	71.0	0.67	0.74	0.67	23.9
5	T1	2612	4.5	2612	4.5	* 0.998	87.4	LOS F	17.8	130.6	1.00	1.24	1.40	4.0
6	R2	19	5.3	19	5.3	0.179	72.2	LOS E	1.3	10.1	0.98	0.71	0.98	4.9
6u	U	1	0.0	1	0.0	0.179	73.9	LOS E	1.3	10.1	0.98	0.71	0.98	4.9
Approach		2836	4.6	2836	4.6	0.998	83.1	LOS F	17.8	130.6	0.97	1.20	1.34	4.8
North: Stoneham St														
7	L2	6	0.0	6	0.0	0.023	59.1	LOS E	0.3	2.4	0.89	0.66	0.89	8.2
8	T1	325	4.0	325	4.0	* 1.190	243.5	LOS F	32.6	228.5	1.00	1.68	2.38	5.5
9	R2	570	0.4	570	0.4	1.190	246.2	LOS F	32.5	228.5	1.00	1.52	2.34	2.3
Approach		901	1.7	901	1.7	1.190	244.0	LOS F	32.6	228.5	1.00	1.57	2.35	3.5
West: Great Eastern Hwy														
10	L2	250	1.2	250	1.2	0.164	6.7	LOS A	2.0	14.0	0.19	0.61	0.19	31.3
11	T1	1500	5.3	1500	5.3	0.466	21.9	LOS C	14.2	105.6	0.58	0.51	0.58	15.2
12	R2	61	3.3	61	3.3	* 0.842	82.6	LOS F	6.8	48.0	1.00	0.93	1.35	12.6
12u	U	32	0.0	32	0.0	0.842	84.3	LOS F	6.8	48.0	1.00	0.93	1.35	5.0
Approach		1843	4.6	1843	4.6	0.842	22.9	LOS C	14.2	105.6	0.55	0.54	0.57	15.4
All Vehicles		5835	4.3	5835	4.3	1.190	88.1	LOS F	32.6	228.5	0.84	1.03	1.23	5.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)


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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]

 Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2031 AM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Hardey Rd														
1	L2	102	2.0	102	2.0	0.538	68.0	LOS E	6.8	50.7	0.99	0.79	0.99	15.3
2	T1	116	5.2	116	5.2	0.538	62.0	LOS E	7.0	49.7	0.99	0.78	0.99	16.9
3	R2	130	3.8	130	3.8	* 0.655	69.7	LOS E	8.5	62.5	1.00	0.82	1.04	15.3
Approach		348	3.7	348	3.7	0.655	66.7	LOS E	8.5	62.5	0.99	0.80	1.01	15.8
East: Great Eastern Hwy														
4	L2	133	4.5	133	4.5	0.094	8.2	LOS A	1.5	10.6	0.24	0.61	0.24	44.8
5	T1	2605	4.8	2605	4.8	* 0.881	42.5	LOS D	22.2	163.2	0.94	0.95	1.06	8.9
6	R2	205	5.4	205	5.4	* 1.201	258.9	LOS F	22.0	163.2	1.00	1.53	2.48	1.6
6u	U	14	0.0	14	0.0	1.201	260.5	LOS F	22.0	163.2	1.00	1.53	2.48	1.6
Approach		2957	4.8	2957	4.8	1.201	57.0	LOS E	22.2	163.2	0.91	0.98	1.13	7.6
North: Resolution Dr														
7	L2	283	1.8	283	1.8	0.488	16.6	LOS B	9.0	64.2	0.58	0.75	0.58	20.5
8	T1	144	6.9	144	6.9	0.653	68.2	LOS E	6.1	43.2	1.00	0.79	1.04	19.1
9	R2	90	1.1	90	1.1	* 0.851	81.5	LOS F	6.5	46.1	1.00	0.91	1.31	5.8
Approach		517	3.1	517	3.1	0.851	42.2	LOS D	9.0	64.2	0.77	0.79	0.84	15.8
West: Great Eastern Hwy														
10	L2	29	0.0	29	0.0	0.053	24.1	LOS C	1.4	12.2	0.54	0.60	0.54	19.7
11	T1	1481	5.9	1481	5.9	0.528	18.7	LOS B	16.5	123.2	0.56	0.50	0.56	22.2
12	R2	114	0.9	114	0.9	0.746	73.2	LOS E	9.0	63.2	1.00	0.86	1.14	18.5
12u	U	19	0.0	19	0.0	0.746	74.8	LOS E	9.0	63.2	1.00	0.86	1.14	7.9
Approach		1643	5.4	1643	5.4	0.746	23.3	LOS C	16.5	123.2	0.60	0.53	0.61	21.0
All Vehicles		5465	4.8	5465	4.8	1.201	46.1	LOS D	22.2	163.2	0.81	0.82	0.94	11.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)


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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]**

 **Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	[ HV % ]	[ Total veh/h ]	[ HV % ]	v/c	sec		[ Veh. veh ]	[ Dist m ]				km/h
East: Resolution Dr														
4a	L1	92	2.2	86	2.0	0.473	8.3	LOS A	3.0	21.9	0.77	0.96	0.91	28.1
6a	R1	25	4.0	23	3.7	0.473	13.6	LOS B	3.0	21.9	0.77	0.96	0.91	38.9
6	R2	254	4.3	235	4.3	0.473	14.9	LOS B	3.0	21.9	0.77	0.96	0.91	28.1
Approach		371	3.8	344 <sup>N1</sup>	3.7	0.473	13.1	LOS B	3.0	21.9	0.77	0.96	0.91	29.1
North: Grandstand Rd														
7	L2	447	2.5	447	2.5	0.459	4.2	LOS A	3.2	22.8	0.42	0.54	0.42	32.7
9a	R1	783	1.0	783	1.0	0.459	9.0	LOS A	3.2	22.8	0.43	0.60	0.43	30.3
9b	R3	6	0.0	6	0.0	0.459	11.5	LOS B	3.1	22.2	0.43	0.62	0.43	45.9
9u	U	2	0.0	2	0.0	0.459	12.8	LOS B	3.1	22.2	0.43	0.62	0.43	29.6
Approach		1238	1.5	1238	1.5	0.459	7.3	LOS A	3.2	22.8	0.42	0.58	0.42	31.1
NorthWest: Resolution Dr														
27b	L3	13	7.7	13	7.7	0.154	4.5	LOS A	0.6	4.6	0.52	0.63	0.52	35.2
27a	L1	61	0.0	61	0.0	0.154	3.4	LOS A	0.6	4.6	0.52	0.63	0.52	35.2
29	R2	67	0.0	67	0.0	0.154	9.5	LOS A	0.6	4.6	0.52	0.63	0.52	35.2
Approach		141	0.7	141	0.7	0.154	6.4	LOS A	0.6	4.6	0.52	0.63	0.52	35.2
SouthWest: Stoneham St														
30	L2	26	0.0	26	0.0	0.172	3.9	LOS A	1.0	7.1	0.44	0.44	0.44	44.6
30a	L1	339	2.7	339	2.7	0.172	3.5	LOS A	1.0	7.1	0.45	0.47	0.45	34.6
32a	R1	37	0.0	37	0.0	0.172	8.7	LOS A	1.0	6.9	0.45	0.51	0.45	33.8
32u	U	4	25.0	4	25.0	0.172	12.7	LOS B	1.0	6.9	0.45	0.51	0.45	33.8
Approach		406	2.5	406	2.5	0.172	4.1	LOS A	1.0	7.1	0.45	0.47	0.45	35.6
All Vehicles		2156	2.0	2129 <sup>N1</sup>	2.1	0.473	7.6	LOS A	3.2	22.8	0.49	0.62	0.51	31.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## NETWORK SUMMARY

### ■ Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

Proposed Network

25% of Ascot Kilns and Golden Gateway development

50% of Ascot Racecourse development

Network Category: Future Conditions 1

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS E		
Speed Efficiency	0.37		
Travel Time Index	2.96		
Congestion Coefficient	2.73		
Travel Speed (Average)	21.9 km/h		23.3 km/h
Travel Distance (Total)	12303.7 veh-km/h		20451.0 pers-km/h
Travel Time (Total)	562.7 veh-h/h		877.0 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	54040 veh/h		106812 pers/h
Arrival Flows (Total for all Sites)	52903 veh/h		102661 pers/h
Demand Flows (Entry Total)	8051 veh/h		
Midblock Inflows (Total)	393 veh/h		
Midblock Outflows (Total)	-21 veh/h		
Percent Heavy Vehicles (Demand)	2.1 %		
Percent Heavy Vehicles (Arrival)	2.1 %		
Degree of Saturation	2.581		
Control Delay (Total)	351.88 veh-h/h		517.73 pers-h/h
Control Delay (Average)	23.9 sec		18.2 sec
Control Delay (Worst Lane)	1454.1 sec		
Control Delay (Worst Movement)	1490.4 sec		1490.4 sec
Geometric Delay (Average)	0.8 sec		
Stop-Line Delay (Average)	23.1 sec		
Ave. Queue Storage Ratio (Worst Lane)	2.94		
Total Effective Stops	17637 veh/h		41732 pers/h
Effective Stop Rate	0.33	1.43 per km	0.41
Proportion Queued	0.26		0.25
Performance Index	1633.8		1633.8
Cost (Total)	26843.04 \$/h	2.18 \$/km	26843.04 \$/h
Fuel Consumption (Total)	1713.5 L/h	139.3 mL/km	
Fuel Economy	13.9 L/100km		
Carbon Dioxide (Total)	4043.5 kg/h	328.6 g/km	
Hydrocarbons (Total)	0.395 kg/h	0.032 g/km	
Carbon Monoxide (Total)	4.018 kg/h	0.327 g/km	
NOx (Total)	4.326 kg/h	0.352 g/km	

Network Model Variability Index (Iterations 3 to N): 2.2 %

Number of Iterations: 10 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 7.1% 0.7% 0.6%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	25,939,200 veh/y	51,269,760 pers/y
Delay	168,904 veh-h/y	248,512 pers-h/y
Effective Stops	8,465,573 veh/y	20,031,340 pers/y
Travel Distance	5,905,771 veh-km/y	9,816,458 pers-km/y
Travel Time	270,083 veh-h/y	420,966 pers-h/y
Cost	12,884,660 \$/y	12,884,660 \$/y
Fuel Consumption	822,470 L/y	
Carbon Dioxide	1,940,881 kg/y	



## Attachment 12.1.4 Movement and Access Strategy


Hydrocarbons	190 kg/y
Carbon Monoxide	1,929 kg/y
NOx	2,077 kg/y

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## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]**

 **Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Belgravia St														
1	L2	210	0.5	210	0.5	0.883	74.3	LOS E	25.8	182.0	1.00	0.98	1.22	11.1
2	T1	447	1.3	447	1.3	* 0.883	68.3	LOS E	25.8	182.0	1.00	1.01	1.23	11.8
3	R2	272	1.1	272	1.1	0.713	61.7	LOS E	17.4	124.1	0.99	0.85	1.01	12.7
Approach		929	1.1	929	1.1	0.883	67.8	LOS E	25.8	182.0	1.00	0.96	1.16	11.9
East: Great Eastern Hwy														
4	L2	107	3.7	107	3.7	0.201	34.4	LOS C	5.8	46.6	0.69	0.72	0.69	22.3
5	T1	1514	2.4	1514	2.4	0.648	36.2	LOS D	18.4	130.6	0.87	0.77	0.87	8.8
6	R2	78	2.6	78	2.6	0.555	72.5	LOS E	6.1	44.0	1.00	0.78	1.00	4.9
6u	U	13	0.0	13	0.0	0.555	74.3	LOS E	6.1	44.0	1.00	0.78	1.00	4.9
Approach		1712	2.5	1712	2.5	0.648	38.0	LOS D	18.4	130.6	0.87	0.77	0.87	9.4
North: Stoneham St														
7	L2	10	0.0	9	0.0	0.048	67.0	LOS E	0.6	3.9	0.93	0.67	0.93	7.3
8	T1	240	0.0	215	0.0	* 0.967	95.7	LOS F	16.2	113.3	1.00	1.11	1.55	12.6
9	R2	366	1.4	333	1.5	0.967	99.4	LOS F	15.1	107.3	1.00	1.08	1.51	5.6
Approach		616	0.8	557 <sup>N1</sup>	0.9	0.967	97.4	LOS F	16.2	113.3	1.00	1.08	1.52	8.5
West: Great Eastern Hwy														
10	L2	819	0.4	819	0.4	0.687	13.9	LOS B	23.2	163.2	0.58	0.76	0.58	20.7
11	T1	2132	3.1	2132	3.1	* 0.829	38.4	LOS D	22.7	163.2	0.88	0.82	0.92	9.7
12	R2	87	0.0	87	0.0	* 0.579	73.0	LOS E	6.6	46.3	1.00	0.78	1.00	14.0
12u	U	11	0.0	11	0.0	0.579	74.7	LOS E	6.6	46.3	1.00	0.78	1.00	5.5
Approach		3049	2.3	3049	2.3	0.829	32.9	LOS C	23.2	163.2	0.80	0.80	0.83	11.5
All Vehicles		6306	2.0	6247 <sup>N1</sup>	2.0	0.967	45.3	LOS D	25.8	182.0	0.87	0.84	0.95	10.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.


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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]

 Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	[ HV % ]	[ Total veh/h ]	[ HV % ]	v/c	sec		[ Veh. veh ]	[ Dist m ]				km/h
South: Hardey Rd														
1	L2	119	0.0	119	0.0	0.523	66.8	LOS E	8.6	60.0	0.98	0.80	0.98	15.6
2	T1	195	2.6	195	2.6	* 0.690	63.5	LOS E	12.0	86.3	1.00	0.84	1.03	16.6
3	R2	153	2.6	153	2.6	0.618	68.0	LOS E	10.0	72.2	0.99	0.81	0.99	15.6
Approach		467	1.9	467	1.9	0.690	65.8	LOS E	12.0	86.3	0.99	0.82	1.01	16.0
East: Great Eastern Hwy														
4	L2	138	0.0	138	0.0	0.099	9.5	LOS A	2.0	14.3	0.28	0.62	0.28	45.0
5	T1	1557	2.9	1557	2.9	0.474	27.7	LOS C	19.3	137.4	0.74	0.65	0.74	12.7
6	R2	367	0.3	367	0.3	* 1.442	464.7	LOS F	23.2	163.2	1.00	1.91	3.18	0.9
6u	U	16	0.0	16	0.0	1.442	466.4	LOS F	23.2	163.2	1.00	1.91	3.18	0.9
Approach		2078	2.2	2078	2.2	1.442	107.1	LOS F	23.2	163.2	0.76	0.88	1.16	4.5
North: Resolution Dr														
7	L2	187	2.7	186	2.7	0.348	34.7	LOS C	8.5	61.1	0.77	0.77	0.77	11.9
8	T1	159	3.1	158	3.2	* 0.793	74.2	LOS E	7.3	50.9	1.00	0.83	1.15	18.0
9	R2	24	0.0	24	0.0	0.198	74.6	LOS E	1.6	10.9	0.96	0.71	0.96	6.3
Approach		370	2.7	368 <sup>N1</sup>	2.7	0.793	54.3	LOS D	8.5	61.1	0.88	0.80	0.94	15.3
West: Great Eastern Hwy														
10	L2	39	0.0	39	0.0	0.083	29.2	LOS C	2.2	20.1	0.60	0.63	0.60	17.3
11	T1	2454	2.7	2453	2.7	* 0.945	51.0	LOS D	36.4	261.1	0.98	1.03	1.15	10.7
12	R2	191	1.6	191	1.6	0.777	71.8	LOS E	14.0	98.5	1.00	0.88	1.12	18.8
12u	U	11	0.0	11	0.0	0.777	73.4	LOS E	14.0	98.5	1.00	0.88	1.12	8.0
Approach		2695	2.6	2694 <sup>N1</sup>	2.6	0.945	52.2	LOS D	36.4	261.1	0.97	1.02	1.14	11.6
All Vehicles		5610	2.4	5607 <sup>N1</sup>	2.4	1.442	73.8	LOS E	36.4	261.1	0.89	0.93	1.12	8.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.


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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]**

 **Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
						v/c	sec							km/h
East: Resolution Dr														
4a	L1	171	0.6	153	0.6	0.721	8.9	LOS A	7.5	53.2	0.81	0.98	1.07	27.3
6a	R1	55	0.0	48	0.0	0.721	14.1	LOS B	7.5	53.2	0.81	0.98	1.07	38.5
6	R2	550	2.0	483	2.2	0.721	15.4	LOS B	7.5	53.2	0.81	0.98	1.07	27.3
Approach		776	1.5	684 <sup>N1</sup>	1.7	0.721	13.9	LOS B	7.5	53.2	0.81	0.98	1.07	28.4
North: Grandstand Rd														
7	L2	252	2.0	252	2.0	0.247	3.9	LOS A	1.4	10.0	0.31	0.50	0.31	34.0
9a	R1	409	0.2	409	0.2	0.247	8.6	LOS A	1.4	10.0	0.32	0.57	0.32	31.1
9b	R3	8	0.0	8	0.0	0.247	11.1	LOS B	1.4	9.7	0.32	0.59	0.32	46.8
9u	U	4	0.0	4	0.0	0.247	12.4	LOS B	1.4	9.7	0.32	0.59	0.32	30.5
Approach		673	0.9	673	0.9	0.247	6.9	LOS A	1.4	10.0	0.32	0.54	0.32	32.3
NorthWest: Resolution Dr														
27b	L3	14	0.0	14	0.0	0.251	9.8	LOS A	1.4	9.7	0.88	0.94	0.88	28.7
27a	L1	32	3.1	32	3.1	0.251	9.1	LOS A	1.4	9.7	0.88	0.94	0.88	28.7
29	R2	47	2.1	47	2.1	0.251	15.1	LOS B	1.4	9.7	0.88	0.94	0.88	28.7
Approach		93	2.2	93	2.2	0.251	12.2	LOS B	1.4	9.7	0.88	0.94	0.88	28.7
SouthWest: Stoneham St														
30	L2	62	0.0	56	0.0	0.784	11.0	LOS B	11.5	80.6	0.98	1.06	1.36	35.8
30a	L1	1511	0.5	1341	0.5	0.784	11.2	LOS B	11.5	80.6	0.98	1.08	1.38	23.1
32a	R1	53	1.9	51	2.0	0.784	17.1	LOS B	10.7	75.7	0.98	1.11	1.40	22.2
32u	U	5	0.0	4	0.0	0.784	20.8	LOS C	10.7	75.7	0.98	1.11	1.40	22.2
Approach		1631	0.5	1453 <sup>N1</sup>	0.6	0.784	11.4	LOS B	11.5	80.6	0.98	1.08	1.38	23.8
All Vehicles		3173	0.9	2903 <sup>N1</sup>	1.0	0.784	11.0	LOS B	11.5	80.6	0.79	0.93	1.04	27.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## Appendix 6 – SIDRA Network Output 2041 Proposed Road Network



81113-581-FLYT-REP-0005 June 24

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## NETWORK SUMMARY

### ■ Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

Proposed Network

100% of Ascot Kilns, Golden Gateway and Ascot Racecourse development

Network Category: Future Conditions 2

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS F		
Speed Efficiency	0.28		
Travel Time Index	1.94		
Congestion Coefficient	3.64		
Travel Speed (Average)	16.4 km/h		18.9 km/h
Travel Distance (Total)	12315.3 veh-km/h		21191.1 pers-km/h
Travel Time (Total)	750.1 veh-h/h		1121.4 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	55967 veh/h		113744 pers/h
Arrival Flows (Total for all Sites)	54666 veh/h		106097 pers/h
Demand Flows (Entry Total)	7968 veh/h		
Midblock Inflows (Total)	216 veh/h		
Midblock Outflows (Total)	-185 veh/h		
Percent Heavy Vehicles (Demand)	3.9 %		
Percent Heavy Vehicles (Arrival)	3.9 %		
Degree of Saturation	1.793		
Control Delay (Total)	528.98 veh-h/h		733.22 pers-h/h
Control Delay (Average)	34.8 sec		24.9 sec
Control Delay (Worst Lane)	769.5 sec		
Control Delay (Worst Movement)	771.1 sec		771.1 sec
Geometric Delay (Average)	0.8 sec		
Stop-Line Delay (Average)	34.1 sec		
Ave. Queue Storage Ratio (Worst Lane)	1.00		
Total Effective Stops	19512 veh/h		43399 pers/h
Effective Stop Rate	0.36	1.58 per km	0.41
Proportion Queued	0.23		0.20
Performance Index	1919.1		1919.1
Cost (Total)	34790.18 \$/h	2.82 \$/km	34790.18 \$/h
Fuel Consumption (Total)	2211.6 L/h	179.6 mL/km	
Fuel Economy	18.0 L/100km		
Carbon Dioxide (Total)	5234.0 kg/h	425.0 g/km	
Hydrocarbons (Total)	0.531 kg/h	0.043 g/km	
Carbon Monoxide (Total)	4.978 kg/h	0.404 g/km	
NOx (Total)	10.187 kg/h	0.827 g/km	

Network Model Variability Index (Iterations 3 to N): 50.4 %

Number of Iterations: 10 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 54.0% 40.5% 31.8%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values			
Performance Measure	Vehicles	Persons	
Demand Flows (Total for all Sites)	26,864,160 veh/y	54,597,310 pers/y	
Delay	253,909 veh-h/y	351,946 pers-h/y	
Effective Stops	9,365,632 veh/y	20,831,730 pers/y	
Travel Distance	5,911,321 veh-km/y	10,171,720 pers-km/y	
Travel Time	360,062 veh-h/y	538,271 pers-h/y	
Cost	16,699,290 \$/y	16,699,290 \$/y	
Fuel Consumption	1,061,558 L/y		
Carbon Dioxide	2,512,333 kg/y		
Hydrocarbons	255 kg/y		

## Attachment 12.1.4 Movement and Access Strategy


Carbon Monoxide	2,390 kg/y
NOx	4,890 kg/y

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## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]**

 **Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2041 AM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Belgravia St														
1	L2	66	4.5	66	4.5	0.428	65.7	LOS E	6.0	44.8	0.97	0.78	0.97	12.2
2	T1	127	7.9	127	7.9	* 0.428	60.1	LOS E	6.1	46.4	0.97	0.77	0.97	13.1
3	R2	92	8.7	92	8.7	0.428	66.0	LOS E	6.1	46.4	0.97	0.78	0.97	12.0
Approach		285	7.4	285	7.4	0.428	63.3	LOS E	6.1	46.4	0.97	0.77	0.97	12.5
East: Great Eastern Hwy														
4	L2	214	5.6	214	5.6	0.309	29.5	LOS C	9.7	74.3	0.67	0.74	0.67	23.8
5	T1	2744	4.4	2744	4.4	* 1.048	119.5	LOS F	17.8	130.6	1.00	1.41	1.61	3.0
6	R2	20	5.0	20	5.0	0.187	72.2	LOS E	1.4	10.6	0.98	0.71	0.98	4.9
6u	U	1	0.0	1	0.0	0.187	73.9	LOS E	1.4	10.6	0.98	0.71	0.98	4.9
Approach		2979	4.5	2979	4.5	1.048	112.7	LOS F	17.8	130.6	0.97	1.36	1.54	3.6
North: Stoneham St														
7	L2	6	0.0	6	0.0	0.023	59.1	LOS E	0.3	2.4	0.89	0.66	0.89	8.2
8	T1	376	3.5	369	3.3	1.388	410.7	LOS F	32.6	228.5	1.00	2.12	3.08	3.4
9	R2	806	0.2	777	0.2	* 1.589	589.2	LOS F	32.5	228.5	1.00	2.16	3.62	1.0
Approach		1188	1.3	1151 <sup>N</sup> <sub>1</sub>	1.2	1.589	529.3	LOS F	32.6	228.5	1.00	2.14	3.43	1.6
West: Great Eastern Hwy														
10	L2	286	1.0	286	1.0	0.188	6.9	LOS A	2.5	17.5	0.21	0.61	0.21	30.9
11	T1	1584	5.2	1584	5.2	0.495	22.3	LOS C	15.6	115.4	0.59	0.52	0.59	15.0
12	R2	64	3.1	64	3.1	* 0.877	85.3	LOS F	7.2	51.1	1.00	0.96	1.42	12.3
12u	U	33	0.0	33	0.0	0.877	86.9	LOS F	7.2	51.1	1.00	0.96	1.42	4.8
Approach		1967	4.4	1967	4.4	0.877	23.2	LOS C	15.6	115.4	0.56	0.56	0.58	15.2
All Vehicles		6419	4.0	6382 <sup>N</sup> <sub>1</sub>	4.0	1.589	158.1	LOS F	32.6	228.5	0.85	1.23	1.56	3.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]

 Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2041 AM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	[ HV % ]	[ Total veh/h ]	[ HV % ]	v/c	sec		[ Veh. veh ]	[ Dist m ]				km/h
South: Hardey Rd														
1	L2	107	1.9	107	1.9	0.562	68.2	LOS E	7.2	53.1	0.99	0.79	0.99	15.3
2	T1	123	4.9	123	4.9	0.562	62.3	LOS E	7.5	53.0	0.99	0.79	0.99	16.9
3	R2	136	3.7	136	3.7	* 0.684	70.3	LOS E	9.0	65.8	1.00	0.83	1.06	15.2
Approach		366	3.6	366	3.6	0.684	67.0	LOS E	9.0	65.8	1.00	0.81	1.02	15.8
East: Great Eastern Hwy														
4	L2	141	5.0	141	5.0	0.103	8.9	LOS A	1.9	13.0	0.26	0.62	0.26	44.0
5	T1	2736	4.8	2736	4.8	* 1.098	164.5	LOS F	22.2	163.2	1.00	1.65	1.92	2.5
6	R2	321	3.4	321	3.4	* 1.793	769.5	LOS F	22.5	163.2	1.00	2.35	4.13	0.6
6u	U	14	0.0	14	0.0	1.793	771.1	LOS F	22.5	163.2	1.00	2.35	4.13	0.6
Approach		3212	4.6	3212	4.6	1.793	220.8	LOS F	22.5	163.2	0.97	1.68	2.07	2.1
North: Resolution Dr														
7	L2	315	1.6	315	1.6	0.567	19.7	LOS B	11.8	84.0	0.67	0.78	0.67	18.2
8	T1	155	6.5	155	6.5	0.700	68.8	LOS E	6.7	46.9	1.00	0.80	1.07	18.9
9	R2	95	1.1	95	1.1	* 1.158	224.8	LOS F	12.7	89.8	1.00	1.29	2.35	2.2
Approach		565	2.8	565	2.8	1.158	67.6	LOS E	12.7	89.8	0.82	0.87	1.06	10.7
West: Great Eastern Hwy														
10	L2	94	0.0	94	0.0	0.123	24.9	LOS C	3.6	28.2	0.56	0.68	0.56	18.6
11	T1	1608	5.7	1608	5.7	0.577	19.5	LOS B	19.2	143.1	0.59	0.53	0.59	21.6
12	R2	135	0.7	135	0.7	0.902	84.8	LOS F	11.7	82.0	1.00	1.00	1.41	16.7
12u	U	20	0.0	20	0.0	0.902	86.5	LOS F	11.7	82.0	1.00	1.00	1.41	6.9
Approach		1857	5.0	1857	5.0	0.902	25.3	LOS C	19.2	143.1	0.63	0.58	0.66	19.9
All Vehicles		6000	4.5	6000	4.5	1.793	136.5	LOS F	22.5	163.2	0.85	1.21	1.48	4.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)


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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]**

 **Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	[ HV % ]	[ Total veh/h ]	[ HV % ]	v/c	sec		[ Veh. veh ]	[ Dist m ]				km/h
East: Resolution Dr														
4a	L1	272	0.7	230	0.5	1.040	74.4	LOS F	26.3	188.0	1.00	2.63	5.60	7.4
6a	R1	40	2.5	33	1.8	1.040	79.8	LOS F	26.3	188.0	1.00	2.63	5.60	13.0
6	R2	288	4.2	231	4.0	1.040	81.1	LOS F	26.3	188.0	1.00	2.63	5.60	7.4
Approach		600	2.5	494 <sup>N1</sup>	2.2	1.040	77.9	LOS F	26.3	188.0	1.00	2.63	5.60	7.8
North: Grandstand Rd														
7	L2	481	2.5	481	2.5	0.887	9.2	LOS A	9.2	65.7	0.60	0.78	0.84	25.9
9a	R1	841	1.1	841	1.1	0.887	15.5	LOS B	17.5	124.0	0.55	0.83	0.85	23.7
9b	R3	7	0.0	7	0.0	0.887	19.2	LOS B	17.5	124.0	0.52	0.87	0.86	37.0
9u	U	2	0.0	2	0.0	0.887	20.4	LOS C	17.5	124.0	0.52	0.87	0.86	22.6
Approach		1331	1.6	1331	1.6	0.887	13.2	LOS B	17.5	124.0	0.57	0.81	0.85	24.5
NorthWest: Resolution Dr														
27b	L3	13	7.7	13	7.7	0.337	4.7	LOS A	3.7	26.3	0.56	0.68	0.56	34.7
27a	L1	84	0.0	84	0.0	0.337	3.6	LOS A	3.7	26.3	0.56	0.68	0.56	34.7
29	R2	103	0.0	103	0.0	0.337	9.7	LOS A	3.7	26.3	0.56	0.68	0.56	34.7
Approach		200	0.5	200	0.5	0.337	6.8	LOS A	3.7	26.3	0.56	0.68	0.56	34.7
SouthWest: Stoneham St														
30	L2	37	0.0	37	0.0	0.198	3.9	LOS A	1.2	8.7	0.47	0.45	0.47	44.3
30a	L1	361	2.8	361	2.8	0.198	3.5	LOS A	1.2	8.7	0.48	0.48	0.48	34.0
32a	R1	53	0.0	53	0.0	0.198	8.8	LOS A	1.1	8.2	0.48	0.52	0.48	33.1
32u	U	4	25.0	4	25.0	0.198	12.7	LOS B	1.1	8.2	0.48	0.52	0.48	33.1
Approach		455	2.4	455	2.4	0.198	4.3	LOS A	1.2	8.7	0.48	0.48	0.48	35.3
All Vehicles		2586	1.9	2480 <sup>N1</sup>	1.9	1.040	23.9	LOS C	26.3	188.0	0.64	1.10	1.70	17.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## NETWORK SUMMARY

### ■ Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

Proposed Network

100% of Ascot Kilns, Golden Gateway and Ascot Racecourse development

Network Category: Future Conditions 2

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS F		
Speed Efficiency	0.21		
Travel Time Index	1.24		
Congestion Coefficient	4.73		
Travel Speed (Average)	12.6 km/h		9.0 km/h
Travel Distance (Total)	13290.8 veh-km/h		23661.1 pers-km/h
Travel Time (Total)	1053.8 veh-h/h		2637.6 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	60977 veh/h		147359 pers/h
Arrival Flows (Total for all Sites)	57804 veh/h		128564 pers/h
Demand Flows (Entry Total)	9017 veh/h		
Midblock Inflows (Total)	462 veh/h		
Midblock Outflows (Total)	-28 veh/h		
Percent Heavy Vehicles (Demand)	1.9 %		
Percent Heavy Vehicles (Arrival)	2.0 %		
Degree of Saturation	5.150		
Control Delay (Total)	816.98 veh-h/h		2187.72 pers-h/h
Control Delay (Average)	50.9 sec		61.3 sec
Control Delay (Worst Lane)	3771.4 sec		
Control Delay (Worst Movement)	3805.1 sec		3805.1 sec
Geometric Delay (Average)	0.9 sec		
Stop-Line Delay (Average)	50.0 sec		
Ave. Queue Storage Ratio (Worst Lane)	18.18		
Total Effective Stops	21877 veh/h		110223 pers/h
Effective Stop Rate	0.38	1.65 per km	0.86
Proportion Queued	0.27		0.34
Performance Index	2552.0		2552.0
Cost (Total)	76466.39 \$/h	5.75 \$/km	76466.39 \$/h
Fuel Consumption (Total)	2437.1 L/h	183.4 mL/km	
Fuel Economy	18.3 L/100km		
Carbon Dioxide (Total)	5745.3 kg/h	432.3 g/km	
Hydrocarbons (Total)	0.593 kg/h	0.045 g/km	
Carbon Monoxide (Total)	5.158 kg/h	0.388 g/km	
NOx (Total)	5.053 kg/h	0.380 g/km	

Network Model Variability Index (Iterations 3 to N): 32.1 %

Number of Iterations: 10 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 8.3% 7.3% 6.2%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	29,268,960 veh/y	70,732,220 pers/y
Delay	392,152 veh-h/y	1,050,106 pers-h/y
Effective Stops	10,501,030 veh/y	52,906,890 pers/y
Travel Distance	6,379,566 veh-km/y	11,357,320 pers-km/y
Travel Time	505,843 veh-h/y	1,266,068 pers-h/y
Cost	36,703,870 \$/y	36,703,870 \$/y
Fuel Consumption	1,169,816 L/y	
Carbon Dioxide	2,757,749 kg/y	
Hydrocarbons	285 kg/y	
Carbon Monoxide	2,476 kg/y	

## Attachment 12.1.4 Movement and Access Strategy

NOx	2,426 kg/y
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## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]**

 **Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Belgravia St														
1	L2	221	0.5	221	0.5	0.964	95.6	LOS F	32.8	231.9	1.00	1.11	1.42	9.0
2	T1	480	1.5	480	1.5	* 0.964	90.0	LOS F	32.8	231.9	1.00	1.15	1.45	9.4
3	R2	300	1.0	300	1.0	0.884	74.5	LOS E	22.1	157.1	1.00	0.97	1.25	10.9
Approach		1001	1.1	1001	1.1	0.964	86.6	LOS F	32.8	231.9	1.00	1.08	1.38	9.7
East: Great Eastern Hwy														
4	L2	112	3.6	112	3.6	0.208	34.5	LOS C	6.0	48.3	0.70	0.72	0.70	22.2
5	T1	1591	2.5	1591	2.5	0.682	36.9	LOS D	18.4	130.6	0.89	0.79	0.89	8.6
6	R2	82	2.4	82	2.4	0.578	72.7	LOS E	6.4	46.0	1.00	0.78	1.00	4.9
6u	U	13	0.0	13	0.0	0.578	74.4	LOS E	6.4	46.0	1.00	0.78	1.00	4.9
Approach		1798	2.5	1798	2.5	0.682	38.7	LOS D	18.4	130.6	0.88	0.79	0.88	9.3
North: Stoneham St														
7	L2	10	0.0	9	0.0	0.046	66.9	LOS E	0.5	3.7	0.93	0.67	0.93	7.4
8	T1	284	0.0	241	0.0	1.225	273.8	LOS F	32.6	228.5	1.00	1.64	2.50	4.9
9	R2	575	1.0	473	1.3	* 1.283	326.9	LOS F	32.2	228.5	1.00	1.67	2.68	1.7
Approach		869	0.7	723 <sup>N1</sup>	0.8	1.283	306.2	LOS F	32.6	228.5	1.00	1.65	2.60	2.7
West: Great Eastern Hwy														
10	L2	912	0.3	912	0.3	0.768	15.7	LOS B	23.2	163.2	0.67	0.79	0.67	19.1
11	T1	2288	3.1	2288	3.1	* 0.900	47.8	LOS D	22.7	163.2	0.94	0.94	1.06	8.1
12	R2	92	0.0	92	0.0	* 0.608	73.4	LOS E	7.0	48.9	1.00	0.79	1.02	13.9
12u	U	11	0.0	11	0.0	0.608	75.1	LOS E	7.0	48.9	1.00	0.79	1.02	5.5
Approach		3303	2.2	3303	2.2	0.900	39.8	LOS D	23.2	163.2	0.86	0.89	0.95	9.9
All Vehicles		6971	1.9	6824 <sup>N1</sup>	2.0	1.283	74.5	LOS E	32.8	231.9	0.90	0.97	1.17	6.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.


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## MOVEMENT SUMMARY

 Site: 96 [GEH Resolution Hardey PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]

 Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Hardey Rd														
1	L2	125	0.0	125	0.0	0.560	67.2	LOS E	9.3	64.8	0.98	0.80	0.98	15.6
2	T1	212	2.4	212	2.4	* 0.740	64.9	LOS E	13.2	94.4	1.00	0.86	1.07	16.3
3	R2	161	2.5	161	2.5	0.650	68.5	LOS E	10.6	76.5	1.00	0.82	1.01	15.5
Approach		498	1.8	498	1.8	0.740	66.6	LOS E	13.2	94.4	1.00	0.83	1.03	15.9
East: Great Eastern Hwy														
4	L2	145	0.0	145	0.0	0.105	10.1	LOS B	2.3	16.1	0.30	0.63	0.30	44.4
5	T1	1636	2.9	1636	2.9	0.500	28.1	LOS C	20.6	146.9	0.75	0.66	0.75	12.5
6	R2	583	0.2	583	0.2	* 2.247	1174.9	LOS F	23.3	163.2	1.00	2.66	4.70	0.4
6u	U	17	0.0	17	0.0	2.247	1176.5	LOS F	23.3	163.2	1.00	2.66	4.70	0.4
Approach		2381	2.0	2381	2.0	2.247	316.0	LOS F	23.3	163.2	0.79	1.16	1.72	1.6
North: Resolution Dr														
7	L2	231	2.6	206	2.9	0.389	40.3	LOS D	10.2	73.5	0.83	0.79	0.83	10.6
8	T1	165	3.0	158	3.2	* 0.794	74.3	LOS E	7.3	51.1	1.00	0.83	1.15	18.0
9	R2	25	0.0	25	0.0	0.205	74.6	LOS E	1.6	11.3	0.96	0.71	0.96	6.3
Approach		421	2.6	389 <sup>N1</sup>	2.8	0.794	56.3	LOS E	10.2	73.5	0.91	0.80	0.97	14.6
West: Great Eastern Hwy														
10	L2	88	0.0	88	0.0	0.141	29.9	LOS C	4.2	34.0	0.62	0.69	0.62	16.5
11	T1	2564	2.7	2563	2.7	* 1.002	78.5	LOS E	36.4	261.1	1.00	1.20	1.35	7.4
12	R2	204	1.5	204	1.5	0.825	74.7	LOS E	15.4	108.1	1.00	0.91	1.18	18.3
12u	U	11	0.0	11	0.0	0.825	76.3	LOS E	15.4	108.1	1.00	0.91	1.18	7.7
Approach		2867	2.5	2866 <sup>N1</sup>	2.5	1.002	76.7	LOS E	36.4	261.1	0.99	1.16	1.32	8.4
All Vehicles		6167	2.3	6134 <sup>N1</sup>	2.3	2.247	167.5	LOS F	36.4	261.1	0.90	1.11	1.43	4.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.


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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]**

 **Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
						v/c	sec							km/h
East: Resolution Dr														
4a	L1	403	0.2	282	0.3	0.856	14.2	LOS B	13.2	94.1	0.97	1.22	1.60	22.8
6a	R1	79	0.0	58	0.0	0.856	19.4	LOS B	13.2	94.1	0.97	1.22	1.60	33.8
6	R2	581	2.1	439	2.6	0.856	20.8	LOS C	13.2	94.1	0.97	1.22	1.60	22.8
Approach		1063	1.2	779 <sup>N1</sup>	1.6	0.856	18.3	LOS B	13.2	94.1	0.97	1.22	1.60	23.9
North: Grandstand Rd														
7	L2	318	2.5	318	2.5	0.301	4.2	LOS A	1.8	12.8	0.40	0.53	0.40	33.4
9a	R1	440	0.2	440	0.2	0.301	9.0	LOS A	1.8	12.8	0.41	0.61	0.41	30.3
9b	R3	9	0.0	9	0.0	0.301	11.5	LOS B	1.8	12.3	0.42	0.63	0.42	46.0
9u	U	4	0.0	4	0.0	0.301	12.8	LOS B	1.8	12.3	0.42	0.63	0.42	29.7
Approach		771	1.2	771	1.2	0.301	7.1	LOS A	1.8	12.8	0.41	0.58	0.41	31.6
NorthWest: Resolution Dr														
27b	L3	14	0.0	14	0.0	0.357	11.2	LOS B	2.0	14.5	0.90	0.98	0.99	27.3
27a	L1	46	2.2	46	2.2	0.357	10.5	LOS B	2.0	14.5	0.90	0.98	0.99	27.3
29	R2	67	1.5	67	1.5	0.357	16.5	LOS B	2.0	14.5	0.90	0.98	0.99	27.3
Approach		127	1.6	127	1.6	0.357	13.7	LOS B	2.0	14.5	0.90	0.98	0.99	27.3
SouthWest: Stoneham St														
30	L2	79	0.0	72	0.0	0.828	12.1	LOS B	13.8	97.1	1.00	1.09	1.44	34.5
30a	L1	1601	0.5	1388	0.6	0.828	12.3	LOS B	13.8	97.1	1.00	1.12	1.47	21.8
32a	R1	90	1.1	88	1.1	0.828	18.3	LOS B	12.9	91.3	1.00	1.15	1.50	20.9
32u	U	6	0.0	5	0.0	0.828	22.0	LOS C	12.9	91.3	1.00	1.15	1.50	20.9
Approach		1776	0.5	1553 <sup>N1</sup>	0.6	0.828	12.7	LOS B	13.8	97.1	1.00	1.12	1.47	22.6
All Vehicles		3737	0.9	3230 <sup>N1</sup>	1.0	0.856	12.7	LOS B	13.8	97.1	0.85	1.01	1.23	24.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## Appendix 7 – SIDRA Network Output Ascot Event



81113-581-FLYT-REP-0005 June 24

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## NETWORK SUMMARY

### ■ Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]

Proposed Network

2021 Traffic Volumes with Ascot Weekday Event

Network Category: Proposed Design 1

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS E		
Speed Efficiency	0.49		
Travel Time Index	4.33		
Congestion Coefficient	2.04		
Travel Speed (Average)	29.2 km/h		24.6 km/h
Travel Distance (Total)	11825.6 veh-km/h		18838.1 pers-km/h
Travel Time (Total)	404.7 veh-h/h		764.6 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	50952 veh/h		97205 pers/h
Arrival Flows (Total for all Sites)	50676 veh/h		96874 pers/h
Demand Flows (Entry Total)	7697 veh/h		
Midblock Inflows (Total)	587 veh/h		
Midblock Outflows (Total)	-306 veh/h		
Percent Heavy Vehicles (Demand)	2.5 %		
Percent Heavy Vehicles (Arrival)	2.5 %		
Degree of Saturation	1.646		
Control Delay (Total)	205.18 veh-h/h		441.88 pers-h/h
Control Delay (Average)	14.6 sec		16.4 sec
Control Delay (Worst Lane)	617.1 sec		
Control Delay (Worst Movement)	656.8 sec		656.8 sec
Geometric Delay (Average)	0.8 sec		
Stop-Line Delay (Average)	13.8 sec		
Ave. Queue Storage Ratio (Worst Lane)	5.61		
Total Effective Stops	15837 veh/h		53953 pers/h
Effective Stop Rate	0.31	1.34 per km	0.56
Proportion Queued	0.25		0.36
Performance Index	1333.1		1333.1
Cost (Total)	23442.75 \$/h	1.98 \$/km	23442.75 \$/h
Fuel Consumption (Total)	1482.2 L/h	125.3 mL/km	
Fuel Economy	12.5 L/100km		
Carbon Dioxide (Total)	3502.1 kg/h	296.1 g/km	
Hydrocarbons (Total)	0.338 kg/h	0.029 g/km	
Carbon Monoxide (Total)	3.678 kg/h	0.311 g/km	
NOx (Total)	4.318 kg/h	0.365 g/km	

Network Model Variability Index (Iterations 3 to N): 0.5 %

Number of Iterations: 5 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 0.4% 0.7% 0.2%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	24,456,960 veh/y	46,658,310 pers/y
Delay	98,486 veh-h/y	212,104 pers-h/y
Effective Stops	7,601,861 veh/y	25,897,650 pers/y
Travel Distance	5,676,289 veh-km/y	9,042,264 pers-km/y
Travel Time	194,267 veh-h/y	366,984 pers-h/y
Cost	11,252,520 \$/y	11,252,520 \$/y
Fuel Consumption	711,444 L/y	
Carbon Dioxide	1,681,014 kg/y	
Hydrocarbons	162 kg/y	
Carbon Monoxide	1,765 kg/y	

## Attachment 12.1.4 Movement and Access Strategy

NOx	2,073 kg/y
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## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]**

 **Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2021 PM Peak with proposed road network Ascot Event

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h ]	[ HV % ]	[ Total HV ]	[ % ]	[ Veh. veh ]			[ Dist m ]	km/h				
South: Belgravia St														
1	L2	200	0.5	200	0.5	0.812	66.7	LOS E	13.4	94.5	1.00	0.91	1.11	12.2
2	T1	416	1.4	416	1.4	*0.812	60.6	LOS E	13.4	94.5	1.00	0.92	1.11	13.0
3	R2	254	1.2	254	1.2	0.666	60.5	LOS E	9.8	69.7	0.98	0.84	0.98	12.9
Approach		870	1.1	870	1.1	0.812	62.0	LOS E	13.4	94.5	0.99	0.90	1.07	12.8
East: Great Eastern Hwy														
4	L2	118	3.4	118	3.4	0.233	34.9	LOS C	4.1	33.9	0.71	0.72	0.71	22.2
5	T1	1507	3.0	1507	3.0	0.642	36.1	LOS D	11.3	80.0	0.87	0.77	0.87	8.8
6	R2	74	2.7	74	2.7	0.525	72.3	LOS E	3.5	25.4	1.00	0.78	1.00	4.9
6u	U	12	0.0	12	0.0	0.525	74.0	LOS E	3.5	25.4	1.00	0.78	1.00	4.9
Approach		1711	3.0	1711	3.0	0.642	37.8	LOS D	11.3	80.0	0.86	0.77	0.86	9.6
North: Stoneham St														
7	L2	9	0.0	8	0.0	0.045	66.9	LOS E	0.3	2.2	0.93	0.67	0.93	7.4
8	T1	211	0.0	199	0.0	*0.843	74.1	LOS E	7.4	51.9	1.00	0.94	1.24	15.3
9	R2	292	1.7	278	1.8	0.843	79.3	LOS E	7.0	49.6	1.00	0.92	1.22	6.9
Approach		512	1.0	486 <sup>N1</sup>	1.0	0.843	76.9	LOS E	7.4	51.9	1.00	0.92	1.22	10.6
West: Great Eastern Hwy														
10	L2	741	1.5	741	1.5	0.625	12.8	LOS B	12.4	87.8	0.52	0.73	0.52	21.8
11	T1	2015	3.2	2015	3.2	*0.778	35.0	LOS C	13.9	100.0	0.84	0.75	0.85	10.5
12	R2	83	0.0	83	0.0	*0.549	72.8	LOS E	3.8	26.8	1.00	0.78	1.00	14.0
12u	U	10	0.0	10	0.0	0.549	74.4	LOS E	3.8	26.8	1.00	0.78	1.00	5.6
Approach		2849	2.7	2849	2.7	0.778	30.5	LOS C	13.9	100.0	0.76	0.75	0.77	12.3
All Vehicles		5942	2.4	5916 <sup>N1</sup>	2.4	0.843	41.0	LOS D	13.9	100.0	0.84	0.79	0.88	11.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 **Site: 96 [GEH Resolution Hardey PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]**

 **Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]**

GEH / Resolution Dr / Hardey Rd

Traffic signals

2021 PM Peak with proposed road network Ascot Event

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
						v/c	sec							km/h
South: Hardey Rd														
1	L2	113	0.0	113	0.0	0.488	66.4	LOS E	4.9	34.1	0.97	0.79	0.97	15.6
2	T1	180	2.8	180	2.8	* 0.644	62.5	LOS E	6.8	48.7	1.00	0.82	1.00	16.8
3	R2	146	2.7	146	2.7	0.591	67.7	LOS E	5.8	42.1	0.99	0.81	0.99	15.7
Approach		439	2.1	439	2.1	0.644	65.2	LOS E	6.8	48.7	0.99	0.81	0.99	16.1
East: Great Eastern Hwy														
4	L2	131	0.0	131	0.0	0.094	9.5	LOS A	1.2	8.3	0.28	0.62	0.28	45.0
5	T1	1482	3.0	1482	3.0	0.451	27.4	LOS C	11.1	78.9	0.73	0.64	0.73	12.8
6	R2	240	0.4	240	0.4	* 0.967	100.7	LOS F	13.5	95.2	1.00	1.08	1.50	4.2
6u	U	15	0.0	15	0.0	0.967	102.3	LOS F	13.5	95.2	1.00	1.08	1.50	4.2
Approach		1868	2.4	1868	2.4	0.967	36.1	LOS D	13.5	95.2	0.73	0.70	0.80	12.0
North: Resolution Dr														
7	L2	287	1.7	287	1.7	0.533	34.0	LOS C	8.4	60.2	0.81	0.81	0.81	12.1
8	T1	170	2.9	170	2.9	0.851	76.1	LOS E	4.9	34.4	1.00	0.87	1.21	17.7
9	R2	104	7.7	104	7.7	* 0.912	90.6	LOS F	5.0	37.2	1.00	0.99	1.47	5.3
Approach		561	3.2	561	3.2	0.912	57.3	LOS E	8.4	60.2	0.90	0.86	1.06	12.9
West: Great Eastern Hwy														
10	L2	22	0.0	22	0.0	0.063	28.9	LOS C	1.0	9.5	0.59	0.58	0.59	17.8
11	T1	2345	2.8	2345	2.8	* 0.899	39.2	LOS D	22.3	160.0	0.92	0.91	1.01	13.1
12	R2	182	1.6	182	1.6	0.798	73.1	LOS E	8.8	61.8	1.00	0.89	1.15	18.5
12u	U	22	0.0	22	0.0	0.798	74.7	LOS E	8.8	61.8	1.00	0.89	1.15	7.9
Approach		2571	2.6	2571	2.6	0.899	41.9	LOS D	22.3	160.0	0.93	0.91	1.02	13.8
All Vehicles		5439	2.6	5439	2.6	0.967	43.4	LOS D	22.3	160.0	0.86	0.82	0.95	13.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]**

 **Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 PM Peak with proposed road network Ascot Event  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
East: Resolution Dr														
4a	L1	99	1.0	99	1.0	0.667	7.5	LOS A	2.4	17.6	0.75	0.91	0.92	28.5
6a	R1	40	0.0	40	0.0	0.667	12.7	LOS B	2.4	17.6	0.75	0.91	0.92	39.6
6	R2	513	3.3	513	3.3	0.667	14.1	LOS B	2.4	17.6	0.75	0.91	0.92	28.5
Approach		652	2.8	652	2.8	0.667	13.0	LOS B	2.4	17.6	0.75	0.91	0.92	29.4
North: Grandstand Rd														
7	L2	207	2.4	207	2.4	0.208	3.6	LOS A	0.5	3.5	0.24	0.48	0.24	34.5
9a	R1	380	0.3	380	0.3	0.208	8.4	LOS A	0.5	3.5	0.24	0.55	0.24	31.8
9b	R3	8	0.0	8	0.0	0.208	10.9	LOS B	0.5	3.4	0.25	0.57	0.25	47.5
9u	U	4	0.0	4	0.0	0.208	12.1	LOS B	0.5	3.4	0.25	0.57	0.25	31.1
Approach		599	1.0	599	1.0	0.208	6.8	LOS A	0.5	3.5	0.24	0.52	0.24	32.9
NorthWest: Resolution Dr														
27b	L3	13	0.0	13	0.0	0.193	9.8	LOS A	0.4	3.0	0.87	0.93	0.87	28.7
27a	L1	25	4.0	25	4.0	0.193	9.1	LOS A	0.4	3.0	0.87	0.93	0.87	28.7
29	R2	34	2.9	34	2.9	0.193	15.1	LOS B	0.4	3.0	0.87	0.93	0.87	28.7
Approach		72	2.8	72	2.8	0.193	12.1	LOS B	0.4	3.0	0.87	0.93	0.87	28.7
SouthWest: Stoneham St														
30	L2	50	0.0	46	0.0	0.769	11.0	LOS B	4.3	30.8	0.97	1.06	1.35	35.7
30a	L1	1433	1.0	1334	1.1	0.769	11.2	LOS B	4.3	30.8	0.97	1.08	1.37	23.2
32a	R1	16	6.3	15	6.7	0.769	17.3	LOS B	4.1	28.7	0.97	1.11	1.39	22.4
32u	U	5	0.0	5	0.0	0.769	20.8	LOS C	4.1	28.7	0.97	1.11	1.39	22.4
Approach		1504	1.1	1400 <sup>N</sup> <sub>1</sub>	1.1	0.769	11.3	LOS B	4.3	30.8	0.97	1.08	1.37	23.8
All Vehicles		2827	1.5	2723 <sup>N</sup> <sub>1</sub>	1.5	0.769	10.8	LOS B	4.3	30.8	0.76	0.91	1.00	27.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**N1** Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## NETWORK SUMMARY

### ■ Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

Proposed Network

25% of Ascot Kilns and Golden Gateway development

50% of Ascot Racecourse development

Network Category: Future Conditions 1

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS E		
Speed Efficiency	0.32		
Travel Time Index	2.49		
Congestion Coefficient	3.08		
Travel Speed (Average)	19.3 km/h		5.4 km/h
Travel Distance (Total)	12505.2 veh-km/h		22006.4 pers-km/h
Travel Time (Total)	646.3 veh-h/h		4045.4 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	55958 veh/h		130718 pers/h
Arrival Flows (Total for all Sites)	54150 veh/h		124681 pers/h
Demand Flows (Entry Total)	8372 veh/h		
Midblock Inflows (Total)	415 veh/h		
Midblock Outflows (Total)	-44 veh/h		
Percent Heavy Vehicles (Demand)	2.3 %		
Percent Heavy Vehicles (Arrival)	2.4 %		
Degree of Saturation	2.781		
Control Delay (Total)	430.97 veh-h/h		3617.80 pers-h/h
Control Delay (Average)	28.7 sec		104.5 sec
Control Delay (Worst Lane)	1634.5 sec		
Control Delay (Worst Movement)	1670.6 sec		1670.6 sec
Geometric Delay (Average)	0.8 sec		
Stop-Line Delay (Average)	27.8 sec		
Ave. Queue Storage Ratio (Worst Lane)	42.18		
Total Effective Stops	20603 veh/h		196336 pers/h
Effective Stop Rate	0.38	1.65 per km	1.57
Proportion Queued	0.26		0.38
Performance Index	2048.7		2048.7
Cost (Total)	114524.00 \$/h	9.16 \$/km	114524.00 \$/h
Fuel Consumption (Total)	1871.5 L/h	149.7 mL/km	
Fuel Economy	15.0 L/100km		
Carbon Dioxide (Total)	4417.5 kg/h	353.2 g/km	
Hydrocarbons (Total)	0.453 kg/h	0.036 g/km	
Carbon Monoxide (Total)	4.322 kg/h	0.346 g/km	
NOx (Total)	4.760 kg/h	0.381 g/km	

Network Model Variability Index (Iterations 3 to N): 4.3 %

Number of Iterations: 10 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 9.5% 1.0% 0.7%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total for all Sites)	26,859,840 veh/y	62,744,830 pers/y
Delay	206,865 veh-h/y	1,736,543 pers-h/y
Effective Stops	9,889,336 veh/y	94,241,200 pers/y
Travel Distance	6,002,488 veh-km/y	10,563,090 pers-km/y
Travel Time	310,212 veh-h/y	1,941,774 pers-h/y
Cost	54,971,540 \$/y	54,971,540 \$/y
Fuel Consumption	898,303 L/y	
Carbon Dioxide	2,120,378 kg/y	

## Attachment 12.1.4 Movement and Access Strategy

Hydrocarbons	217 kg/y
Carbon Monoxide	2,075 kg/y
NOx	2,285 kg/y

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## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia PM 2031 Ascot Event (Site Folder: 2031 PM Peak Proposed Network and Land Uses ASCOT TEST)]**

 **Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV ] %	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
						v/c	sec							km/h
South: Belgravia St														
1	L2	210	0.5	210	0.5	0.883	74.3	LOS E	15.8	111.5	1.00	0.98	1.22	11.1
2	T1	447	1.3	447	1.3	* 0.883	68.3	LOS E	15.8	111.5	1.00	1.01	1.23	11.8
3	R2	272	1.1	272	1.1	0.713	61.7	LOS E	10.7	76.1	0.99	0.85	1.01	12.7
Approach		929	1.1	929	1.1	0.883	67.8	LOS E	15.8	111.5	1.00	0.96	1.16	11.9
East: Great Eastern Hwy														
4	L2	123	3.3	119	3.4	0.214	34.6	LOS C	3.8	30.5	0.70	0.72	0.70	22.2
5	T1	1579	2.8	1562	2.8	0.673	36.7	LOS D	11.2	80.0	0.88	0.79	0.88	8.7
6	R2	78	2.6	78	2.6	0.555	72.5	LOS E	3.8	27.0	1.00	0.78	1.00	4.9
6u	U	13	0.0	13	0.0	0.555	74.3	LOS E	3.8	27.0	1.00	0.78	1.00	4.9
Approach		1793	2.8	1771 <sup>N1</sup>	2.8	0.673	38.4	LOS D	11.2	80.0	0.88	0.78	0.88	9.4
North: Stoneham St														
7	L2	10	0.0	9	0.0	0.047	66.9	LOS E	0.3	2.3	0.93	0.67	0.93	7.3
8	T1	240	0.0	212	0.0	* 1.017	119.1	LOS F	11.7	82.2	1.00	1.21	1.72	10.5
9	R2	416	1.2	364	1.4	1.017	122.6	LOS F	10.9	77.7	1.00	1.16	1.69	4.6
Approach		666	0.8	585 <sup>N1</sup>	0.8	1.017	120.5	LOS F	11.7	82.2	1.00	1.17	1.69	6.9
West: Great Eastern Hwy														
10	L2	827	1.3	827	1.3	0.697	14.0	LOS B	14.1	100.0	0.59	0.76	0.59	20.6
11	T1	2132	3.1	2132	3.1	* 0.830	38.5	LOS D	13.9	100.0	0.88	0.82	0.92	9.7
12	R2	87	0.0	87	0.0	* 0.579	73.0	LOS E	4.1	28.4	1.00	0.78	1.00	14.0
12u	U	11	0.0	11	0.0	0.579	74.7	LOS E	4.1	28.4	1.00	0.78	1.00	5.5
Approach		3057	2.6	3057	2.6	0.830	33.0	LOS C	14.1	100.0	0.80	0.80	0.83	11.5
All Vehicles		6445	2.2	6342 <sup>N1</sup>	2.3	1.017	47.7	LOS D	15.8	111.5	0.87	0.85	0.97	10.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 **Site: 96 [GEH Resolution Hardey PM 2031 Ascot Event (Site Folder: 2031 PM Peak Proposed Network and Land Uses ASCOT TEST)]**

 **Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]**

GEH / Resolution Dr / Hardey Rd

Traffic signals

2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ]					[ Veh. veh	Dist ]				
				veh/h	%	v/c	sec			m				km/h
South: Hardey Rd														
1	L2	119	0.0	119	0.0	0.523	66.8	LOS E	5.3	36.8	0.98	0.80	0.98	15.6
2	T1	195	2.6	195	2.6	* 0.690	63.5	LOS E	7.4	52.9	1.00	0.84	1.03	16.6
3	R2	153	2.6	153	2.6	0.618	68.0	LOS E	6.1	44.2	0.99	0.81	0.99	15.6
Approach		467	1.9	467	1.9	0.690	65.8	LOS E	7.4	52.9	0.99	0.82	1.01	16.0
East: Great Eastern Hwy														
4	L2	138	0.0	138	0.0	0.099	9.8	LOS A	1.3	9.0	0.29	0.62	0.29	44.7
5	T1	1557	2.9	1557	2.9	0.474	27.7	LOS C	11.8	84.2	0.74	0.65	0.74	12.7
6	R2	367	0.3	367	0.3	* 1.442	464.7	LOS F	14.2	100.0	1.00	1.91	3.18	0.9
6u	U	16	0.0	16	0.0	1.442	466.4	LOS F	14.2	100.0	1.00	1.91	3.18	0.9
Approach		2078	2.2	2078	2.2	1.442	107.1	LOS F	14.2	100.0	0.76	0.88	1.16	4.5
North: Resolution Dr														
7	L2	333	1.5	276	1.8	0.513	37.2	LOS D	8.4	59.7	0.83	0.81	0.83	11.3
8	T1	182	2.7	168	2.4	* 0.838	75.6	LOS E	4.8	33.6	1.00	0.86	1.19	17.8
9	R2	105	7.6	83	7.7	0.729	80.1	LOS F	3.6	27.2	1.00	0.84	1.15	5.9
Approach		620	2.9	527 <sup>N1</sup>	2.9	0.838	56.2	LOS E	8.4	59.7	0.91	0.83	1.00	13.3
West: Great Eastern Hwy														
10	L2	39	0.0	39	0.0	0.083	29.2	LOS C	1.4	12.3	0.60	0.63	0.60	17.3
11	T1	2454	2.7	2453	2.7	* 0.945	51.0	LOS D	22.3	160.0	0.98	1.03	1.15	10.7
12	R2	191	1.6	191	1.6	0.777	71.8	LOS E	8.6	60.3	1.00	0.88	1.12	18.8
12u	U	11	0.0	11	0.0	0.777	73.4	LOS E	8.6	60.3	1.00	0.88	1.12	8.0
Approach		2695	2.6	2694 <sup>N1</sup>	2.6	0.945	52.2	LOS D	22.3	160.0	0.97	1.02	1.14	11.6
All Vehicles		5860	2.4	5766 <sup>N1</sup>	2.5	1.442	73.4	LOS E	22.3	160.0	0.89	0.93	1.12	8.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution PM 2031 Ascot Event (Site Folder: 2031 PM Peak Proposed Network and Land Uses ASCOT TEST)]**

 **Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
East: Resolution Dr														
4a	L1	221	0.5	180	0.5	0.743	9.3	LOS A	3.3	23.3	0.83	1.01	1.12	27.0
6a	R1	55	0.0	47	0.0	0.743	14.5	LOS B	3.3	23.3	0.83	1.01	1.12	38.2
6	R2	556	3.1	477	3.1	0.743	15.9	LOS B	3.3	23.3	0.83	1.01	1.12	27.0
Approach		832	2.2	703 <sup>N1</sup>	2.2	0.743	14.1	LOS B	3.3	23.3	0.83	1.01	1.12	27.9
North: Grandstand Rd														
7	L2	253	2.0	253	2.0	0.247	3.9	LOS A	0.6	4.0	0.31	0.50	0.31	34.0
9a	R1	409	0.2	409	0.2	0.247	8.6	LOS A	0.6	4.0	0.32	0.57	0.32	31.1
9b	R3	8	0.0	8	0.0	0.247	11.1	LOS B	0.6	3.9	0.32	0.59	0.32	46.8
9u	U	4	0.0	4	0.0	0.247	12.4	LOS B	0.6	3.9	0.32	0.59	0.32	30.5
Approach		674	0.9	674	0.9	0.247	6.9	LOS A	0.6	4.0	0.32	0.54	0.32	32.3
NorthWest: Resolution Dr														
27b	L3	14	0.0	14	0.0	0.252	9.8	LOS A	0.5	3.9	0.88	0.94	0.88	28.7
27a	L1	32	3.1	32	3.1	0.252	9.1	LOS A	0.5	3.9	0.88	0.94	0.88	28.7
29	R2	47	2.1	47	2.1	0.252	15.1	LOS B	0.5	3.9	0.88	0.94	0.88	28.7
Approach		93	2.2	93	2.2	0.252	12.2	LOS B	0.5	3.9	0.88	0.94	0.88	28.7
SouthWest: Stoneham St														
30	L2	62	0.0	56	0.0	0.784	11.0	LOS B	4.6	32.7	0.98	1.06	1.36	35.8
30a	L1	1519	1.0	1341	1.1	0.784	11.2	LOS B	4.6	32.7	0.98	1.08	1.38	23.2
32a	R1	53	1.9	51	2.0	0.784	17.0	LOS B	4.3	30.5	0.99	1.11	1.40	22.3
32u	U	5	0.0	4	0.0	0.784	20.7	LOS C	4.3	30.5	0.99	1.11	1.40	22.3
Approach		1639	1.0	1452 <sup>N1</sup>	1.1	0.784	11.4	LOS B	4.6	32.7	0.98	1.08	1.38	23.9
All Vehicles		3238	1.3	2923 <sup>N1</sup>	1.4	0.784	11.0	LOS B	4.6	32.7	0.79	0.93	1.06	27.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## NETWORK SUMMARY

### ■ Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

Proposed Network

100% of Ascot Kilns, Golden Gateway and Ascot Racecourse development

PLUS Ascot Weekday Event

Network Category: Future Conditions 2

Network Performance - Hourly Values			
Performance Measure	Vehicles	Per Unit Distance	Persons
Network Level of Service (LOS)	LOS F		
Speed Efficiency	0.18		
Travel Time Index	0.90		
Congestion Coefficient	5.53		
Travel Speed (Average)	10.8 km/h		1.9 km/h
Travel Distance (Total)	13387.1 veh-km/h		24751.5 pers-km/h
Travel Time (Total)	1241.6 veh-h/h		12827.9 pers-h/h
Desired Speed (Program)	59.7 km/h		
Demand Flows (Total for all Sites)	62890 veh/h		171847 pers/h
Arrival Flows (Total for all Sites)	58430 veh/h		148809 pers/h
Demand Flows (Entry Total)	9453 veh/h		
Midblock Inflows (Total)	456 veh/h		
Midblock Outflows (Total)	-253 veh/h		
Percent Heavy Vehicles (Demand)	2.1 %		
Percent Heavy Vehicles (Arrival)	2.3 %		
Degree of Saturation	5.264		
Control Delay (Total)	1001.38 veh-h/h		12266.10 pers-h/h
Control Delay (Average)	61.7 sec		296.7 sec
Control Delay (Worst Lane)	3874.2 sec		
Control Delay (Worst Movement)	3907.8 sec		3907.8 sec
Geometric Delay (Average)	0.9 sec		
Stop-Line Delay (Average)	60.8 sec		
Ave. Queue Storage Ratio (Worst Lane)	91.45		
Total Effective Stops	26132 veh/h		360279 pers/h
Effective Stop Rate	0.45	1.95 per km	2.42
Proportion Queued	0.28		0.43
Performance Index	3244.5		3244.5
Cost (Total)	358181.80 \$/h	26.76 \$/km	358181.80 \$/h
Fuel Consumption (Total)	2720.9 L/h	203.2 mL/km	
Fuel Economy	20.3 L/100km		
Carbon Dioxide (Total)	6415.3 kg/h	479.2 g/km	
Hydrocarbons (Total)	0.708 kg/h	0.053 g/km	
Carbon Monoxide (Total)	5.649 kg/h	0.422 g/km	
NOx (Total)	5.577 kg/h	0.417 g/km	

Network Model Variability Index (Iterations 3 to N): 31.4 %

Number of Iterations: 10 (Maximum: 10)

Largest change in Lane Degrees of Saturation or Queue Storage Ratios for the last three Network Iterations: 8.3% 5.9% 4.5%

Network Level of Service (LOS) Method: SIDRA Speed Efficiency.

Software Setup used: Standard Left.

Network Performance - Annual Values			
Performance Measure	Vehicles	Persons	
Demand Flows (Total for all Sites)	30,187,200 veh/y	82,486,660 pers/y	
Delay	480,662 veh-h/y	5,887,729 pers-h/y	
Effective Stops	12,543,320 veh/y	172,933,700 pers/y	
Travel Distance	6,425,829 veh-km/y	11,880,740 pers-km/y	
Travel Time	595,962 veh-h/y	6,157,413 pers-h/y	
Cost	171,927,200 \$/y	171,927,200 \$/y	

## Attachment 12.1.4 Movement and Access Strategy

Fuel Consumption	1,306,047 L/y
Carbon Dioxide	3,079,337 kg/y
Hydrocarbons	340 kg/y
Carbon Monoxide	2,712 kg/y
NOx	2,677 kg/y

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## MOVEMENT SUMMARY

 **Site: 106 [GEH Stoneham Belgravia PM 2041 Ascot Event (Site Folder: 2041 PM Peak Proposed Network and Land Uses ASCOT TEST)]**

 **Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]**

GEH / Stoneham St / Belgravia St

Traffic signals

2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
						v/c	sec							km/h
South: Belgravia St														
1	L2	221	0.5	221	0.5	0.964	95.6	LOS F	20.1	142.1	1.00	1.11	1.42	9.0
2	T1	480	1.5	480	1.5	* 0.964	90.0	LOS F	20.1	142.1	1.00	1.15	1.45	9.4
3	R2	300	1.0	300	1.0	0.884	74.5	LOS E	13.5	96.2	1.00	0.97	1.25	10.9
Approach		1001	1.1	1001	1.1	0.964	86.6	LOS F	20.1	142.1	1.00	1.08	1.38	9.7
East: Great Eastern Hwy														
4	L2	128	3.1	119	3.4	0.229	34.8	LOS C	4.0	33.0	0.70	0.72	0.70	22.2
5	T1	1656	2.8	1621	2.7	0.693	37.1	LOS D	11.3	80.0	0.89	0.80	0.89	8.6
6	R2	82	2.4	82	2.4	0.578	72.7	LOS E	3.9	28.2	1.00	0.78	1.00	4.9
6u	U	13	0.0	13	0.0	0.578	74.4	LOS E	3.9	28.2	1.00	0.78	1.00	4.9
Approach		1879	2.8	1836 <sup>N1</sup>	2.7	0.693	38.8	LOS D	11.3	80.0	0.89	0.79	0.89	9.3
North: Stoneham St														
7	L2	10	0.0	9	0.0	0.046	66.9	LOS E	0.3	2.3	0.93	0.67	0.93	7.4
8	T1	284	0.0	236	0.0	1.199	252.8	LOS F	20.0	140.0	1.00	1.59	2.41	5.3
9	R2	625	1.0	481	1.2	* 1.303	344.6	LOS F	19.7	140.0	1.00	1.70	2.76	1.6
Approach		919	0.7	725 <sup>N1</sup>	0.8	1.303	311.5	LOS F	20.0	140.0	1.00	1.65	2.62	2.7
West: Great Eastern Hwy														
10	L2	920	1.2	920	1.2	0.778	15.9	LOS B	14.1	100.0	0.68	0.79	0.68	19.0
11	T1	2288	3.1	2288	3.1	* 0.901	48.0	LOS D	13.9	100.0	0.94	0.94	1.07	8.0
12	R2	92	0.0	92	0.0	* 0.608	73.4	LOS E	4.3	30.0	1.00	0.79	1.02	13.9
12u	U	11	0.0	11	0.0	0.608	75.1	LOS E	4.3	30.0	1.00	0.79	1.02	5.5
Approach		3311	2.4	3311	2.4	0.901	39.9	LOS D	14.1	100.0	0.87	0.90	0.96	9.8
All Vehicles		7110	2.1	6873 <sup>N1</sup>	2.2	1.303	75.0	LOS E	20.1	142.1	0.91	0.98	1.18	6.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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Computer Models\SIDRA\Base Model\Golden Gateway Options July 2024.sip9

## MOVEMENT SUMMARY

**Site: 96 [GEH Resolution Hardey PM 2041 Ascot Event (Site Folder: 2041 PM Peak Proposed Network and Land Uses ASCOT TEST)]**

**Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]**

GEH / Resolution Dr / Hardey Rd

Traffic signals

2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV ] %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Hardey Rd														
1	L2	125	0.0	125	0.0	0.560	67.2	LOS E	5.7	39.7	0.98	0.80	0.98	15.6
2	T1	212	2.4	212	2.4	* 0.740	64.9	LOS E	8.1	57.9	1.00	0.86	1.07	16.3
3	R2	161	2.5	161	2.5	0.650	68.5	LOS E	6.5	46.9	1.00	0.82	1.01	15.5
Approach		498	1.8	498	1.8	0.740	66.6	LOS E	8.1	57.9	1.00	0.83	1.03	15.9
East: Great Eastern Hwy														
4	L2	145	0.0	145	0.0	0.105	10.1	LOS B	1.4	9.9	0.30	0.63	0.30	44.4
5	T1	1636	2.9	1636	2.9	0.500	28.1	LOS C	12.6	90.0	0.75	0.66	0.75	12.5
6	R2	583	0.2	583	0.2	* 2.247	1174.9	LOS F	14.3	100.0	1.00	2.66	4.70	0.4
6u	U	17	0.0	17	0.0	2.247	1176.5	LOS F	14.3	100.0	1.00	2.66	4.70	0.4
Approach		2381	2.0	2381	2.0	2.247	316.0	LOS F	14.3	100.0	0.79	1.16	1.72	1.6
North: Resolution Dr														
7	L2	373	1.6	235	2.5	0.444	41.1	LOS D	7.3	52.4	0.85	0.80	0.85	10.4
8	T1	188	2.7	159	1.9	* 0.793	74.2	LOS E	4.5	31.2	1.00	0.83	1.14	18.0
9	R2	106	7.5	60	8.1	0.530	77.2	LOS E	2.5	19.1	1.00	0.76	1.00	6.1
Approach		667	2.8	455 <sup>N1</sup>	3.1	0.793	57.5	LOS E	7.3	52.4	0.92	0.81	0.97	13.5
West: Great Eastern Hwy														
10	L2	88	0.0	88	0.0	0.141	29.9	LOS C	2.6	20.9	0.62	0.69	0.62	16.5
11	T1	2564	2.7	2563	2.7	* 1.002	78.4	LOS E	22.3	160.0	1.00	1.20	1.35	7.4
12	R2	204	1.5	204	1.5	0.825	74.7	LOS E	9.4	66.2	1.00	0.91	1.18	18.3
12u	U	11	0.0	11	0.0	0.825	76.3	LOS E	9.4	66.2	1.00	0.91	1.18	7.7
Approach		2867	2.5	2866 <sup>N1</sup>	2.5	1.002	76.7	LOS E	22.3	160.0	0.99	1.16	1.32	8.4
All Vehicles		6413	2.3	6200 <sup>N1</sup>	2.4	2.247	166.4	LOS F	22.3	160.0	0.90	1.11	1.42	4.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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Project: C:\Users\Claire\Flyt Pty Ltd Dropbox\Flyt Pty Ltd Team Folder\Projects\81113-581 - Golden Gateway Update\3\_Project Docs\Modelling (Computer Models)\SIDRA\Base Model\Golden Gateway Options July 2024.sip9

## MOVEMENT SUMMARY

 **Site: 007 [Stoneham Grandstand Resolution PM 2041 Ascot Event (Site Folder: 2041 PM Peak Proposed Network and Land Uses ASCOT TEST)]**

 **Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ]	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
East: Resolution Dr														
4a	L1	453	0.2	281	0.3	0.846	13.6	LOS B	5.1	36.1	0.96	1.20	1.55	23.2
6a	R1	79	0.0	54	0.0	0.846	18.9	LOS B	5.1	36.1	0.96	1.20	1.55	34.3
6	R2	587	3.1	432	3.2	0.846	20.3	LOS C	5.1	36.1	0.96	1.20	1.55	23.2
Approach		1119	1.7	768 <sup>N1</sup>	1.9	0.846	17.7	LOS B	5.1	36.1	0.96	1.20	1.55	24.2
North: Grandstand Rd														
7	L2	318	2.5	318	2.5	0.301	4.2	LOS A	0.7	5.2	0.40	0.53	0.40	33.4
9a	R1	440	0.2	440	0.2	0.301	9.0	LOS A	0.7	5.2	0.41	0.61	0.41	30.3
9b	R3	9	0.0	9	0.0	0.301	11.5	LOS B	0.7	5.0	0.42	0.63	0.42	46.0
9u	U	4	0.0	4	0.0	0.301	12.8	LOS B	0.7	5.0	0.42	0.63	0.42	29.7
Approach		771	1.2	771	1.2	0.301	7.1	LOS A	0.7	5.2	0.41	0.58	0.41	31.6
NorthWest: Resolution Dr														
27b	L3	14	0.0	14	0.0	0.359	11.3	LOS B	0.8	5.9	0.91	0.98	0.99	27.3
27a	L1	46	2.2	46	2.2	0.359	10.5	LOS B	0.8	5.9	0.91	0.98	0.99	27.3
29	R2	67	1.5	67	1.5	0.359	16.5	LOS B	0.8	5.9	0.91	0.98	0.99	27.3
Approach		127	1.6	127	1.6	0.359	13.8	LOS B	0.8	5.9	0.91	0.98	0.99	27.3
SouthWest: Stoneham St														
30	L2	79	0.0	71	0.0	0.824	11.8	LOS B	5.4	38.7	1.00	1.08	1.43	34.9
30a	L1	1609	1.0	1395	1.1	0.824	12.0	LOS B	5.4	38.7	1.00	1.11	1.45	22.1
32a	R1	90	1.1	88	1.1	0.824	18.0	LOS B	5.1	36.2	1.00	1.14	1.48	21.2
32u	U	6	0.0	5	0.0	0.824	21.6	LOS C	5.1	36.2	1.00	1.14	1.48	21.2
Approach		1784	1.0	1559 <sup>N1</sup>	1.1	0.824	12.4	LOS B	5.4	38.7	1.00	1.11	1.45	22.9
All Vehicles		3801	1.2	3225 <sup>N1</sup>	1.5	0.846	12.4	LOS B	5.4	38.7	0.84	1.00	1.21	25.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

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## Appendix 8 – Forecast Turning Volumes



81113-581-FLYT-REP-0005 June 24

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia AM 2021 (Site Folder: 2021 AM Peak)]

Network: N101 [2021 AM Peak (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

2021 AM Peak

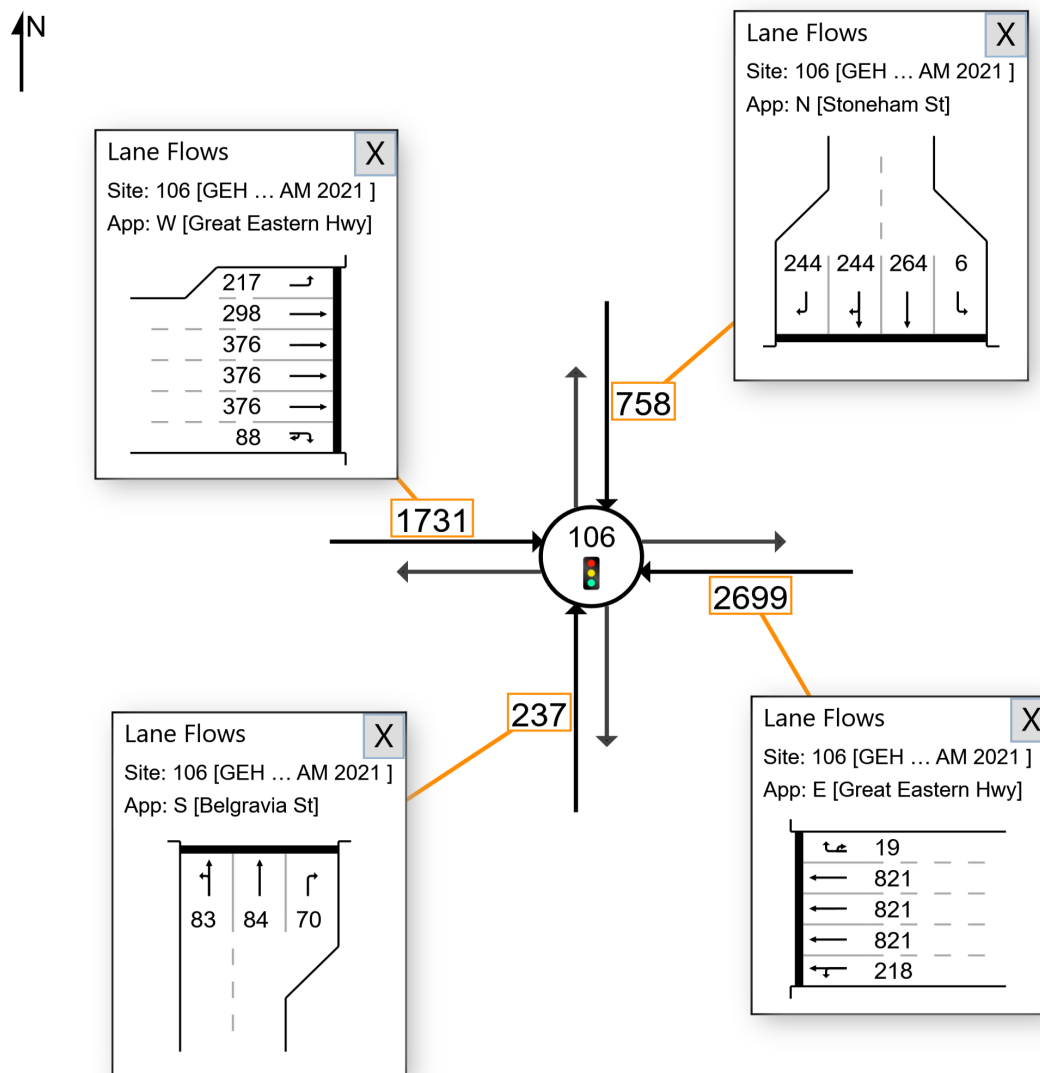
Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.

Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

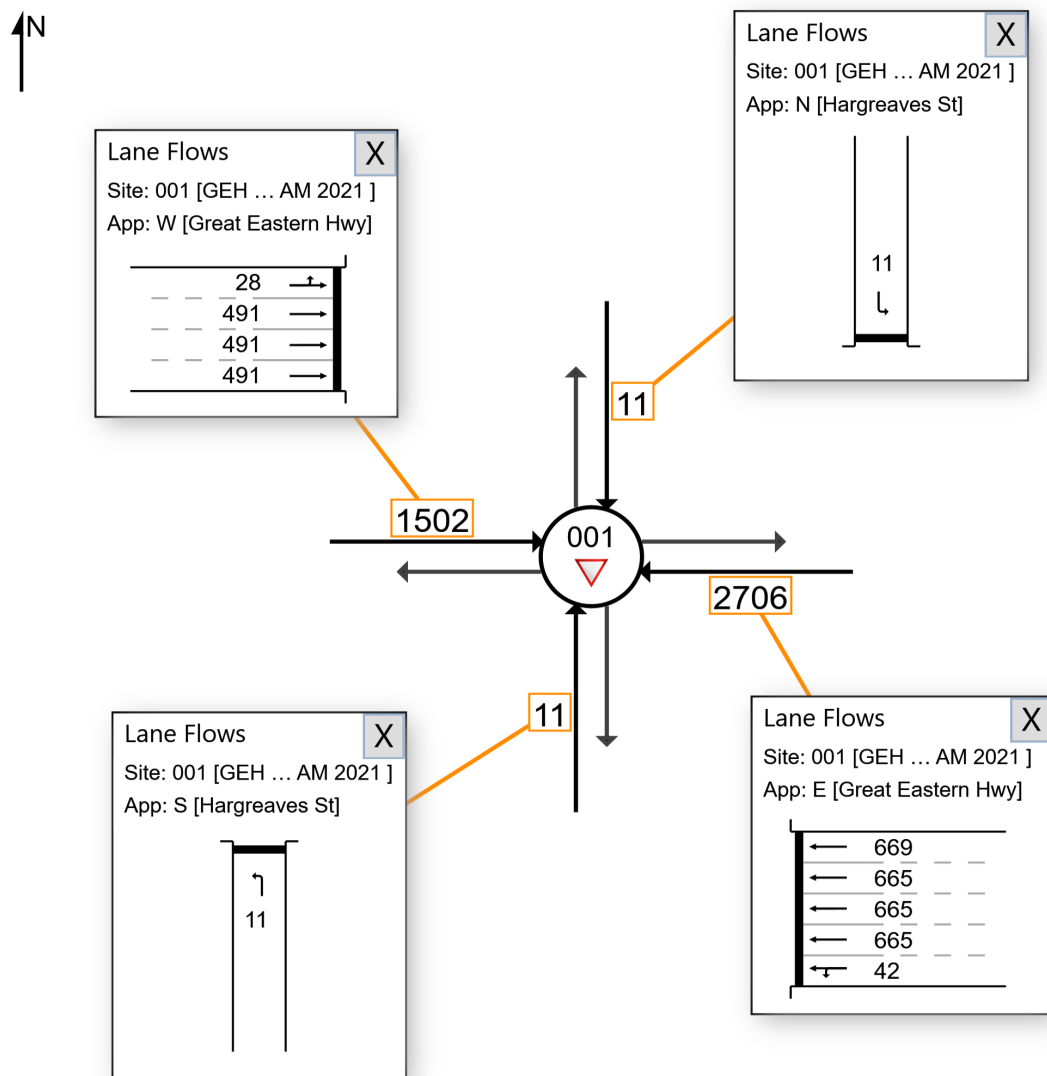
Site: 001 [GEH Hargreaves AM 2021 (Site Folder: 2021 AM Peak)]

Network: N101 [2021 AM Peak (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2021 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

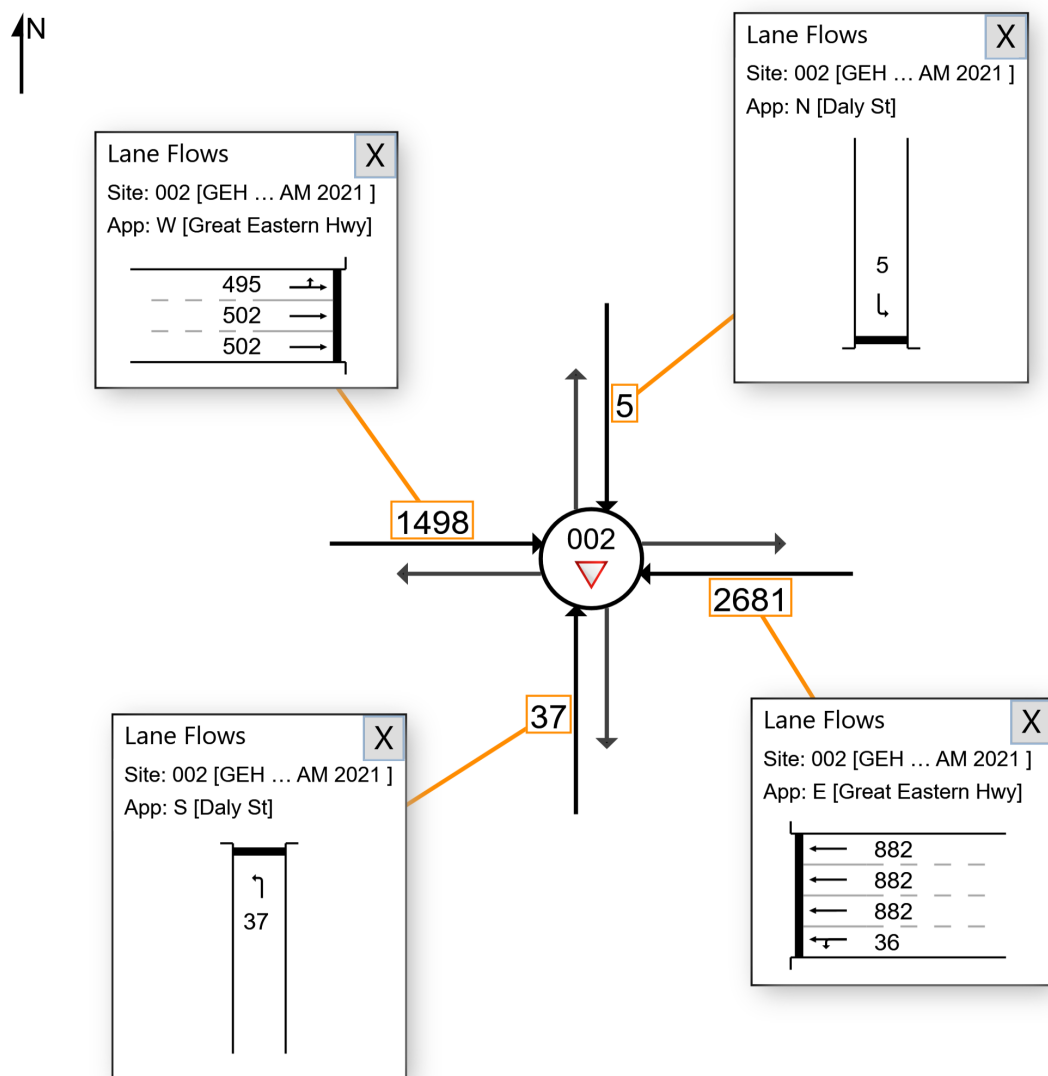
Site: 002 [GEH Daly AM 2021 (Site Folder: 2021 AM Peak)]

Network: N101 [2021 AM Peak (Network Folder: General)]

GEH / Daly St  
Left in Left out, Give Way  
2021 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

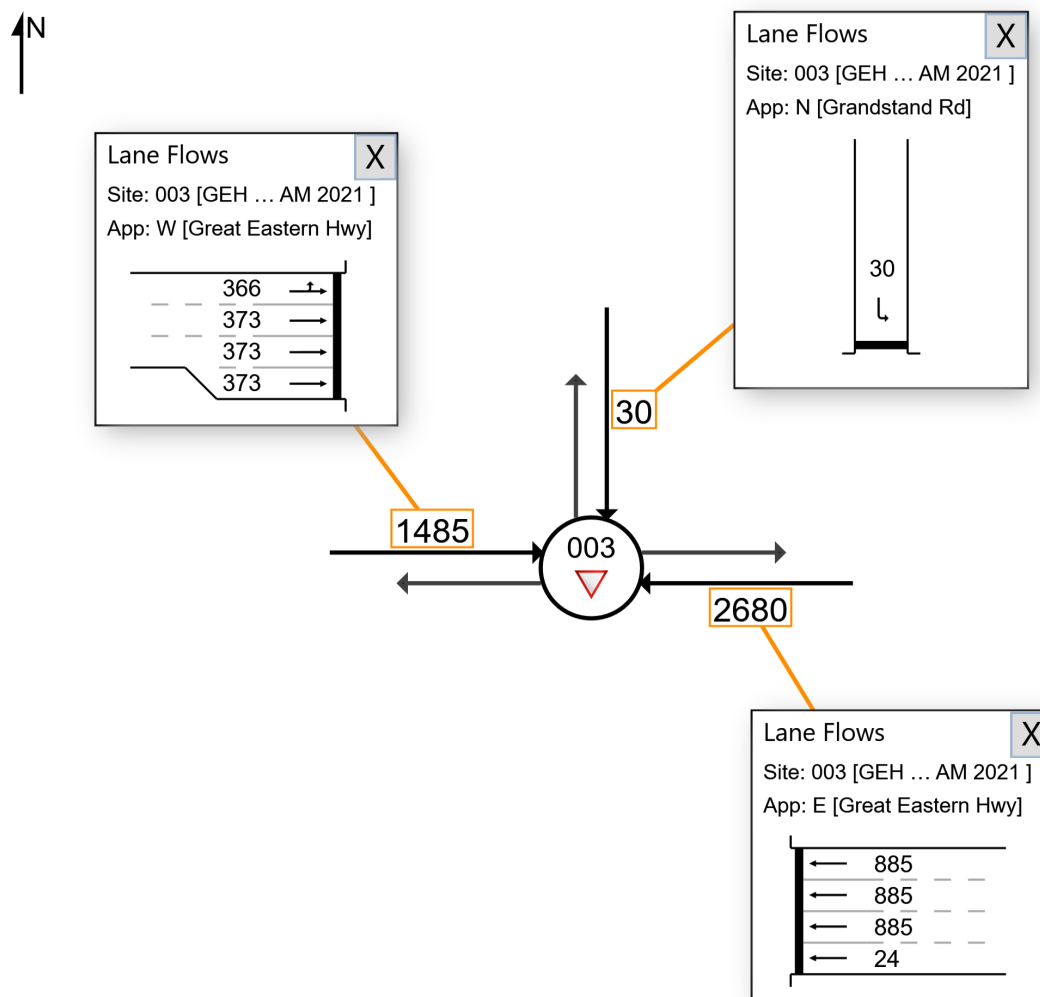
Site: 003 [GEH Grandstand AM 2021 (Site Folder: 2021 AM Peak)]

Network: N101 [2021 AM Peak (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2021 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey AM 2021 (Site Folder: 2021 AM Peak)]

Network: N101 [2021 AM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

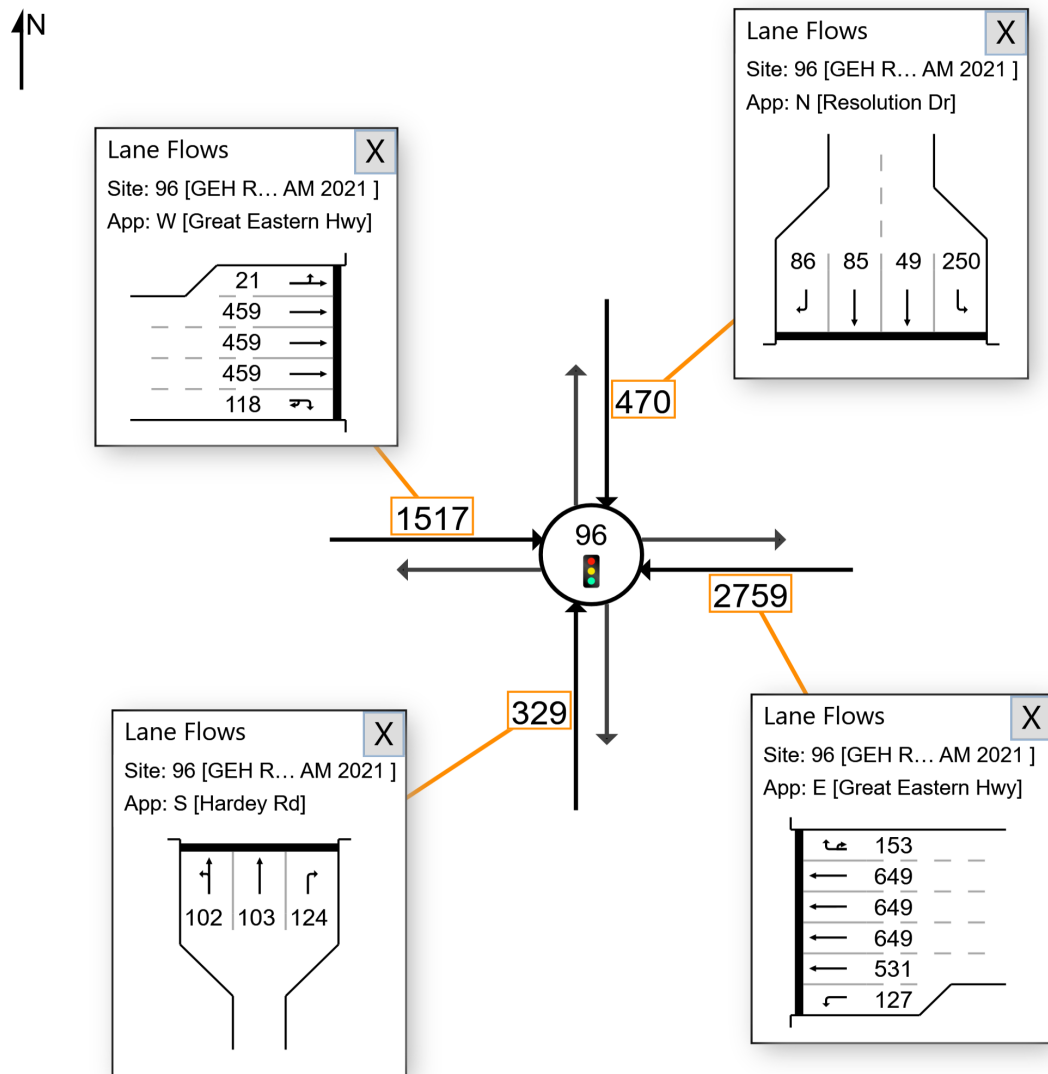
2021 AM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

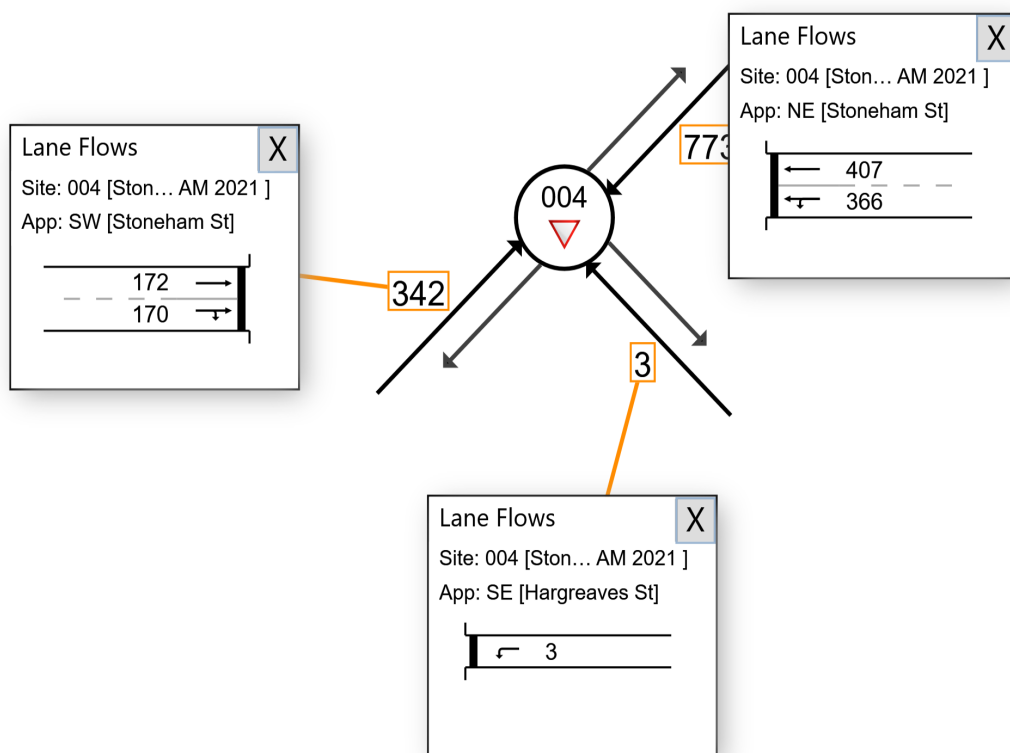
### All Movement Classes

Site: 004 [Stoneham Hargreaves AM 2021 (Site Folder: 2021 AM Peak)] Network: N101 [2021 AM Peak (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2021 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

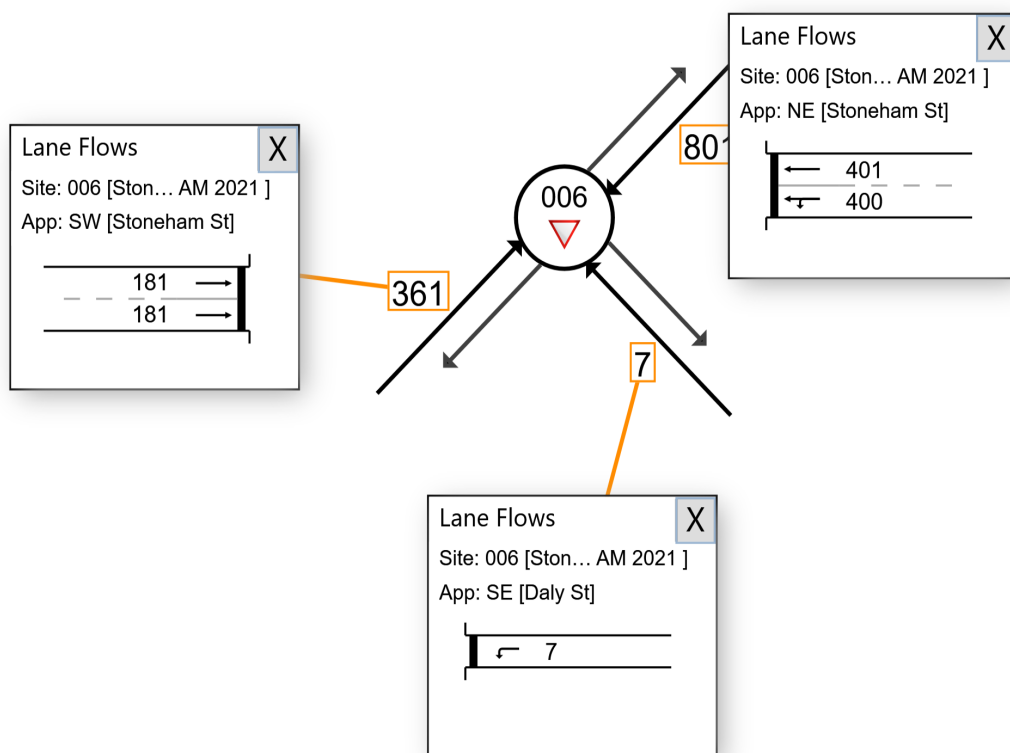
▼ Site: 006 [Stoneham Daly AM 2021 (Site Folder: 2021 AM Peak)]

■ Network: N101 [2021 AM Peak (Network Folder: General)]

Stoneham St / Daly St  
Left out only, Give Way  
2021 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

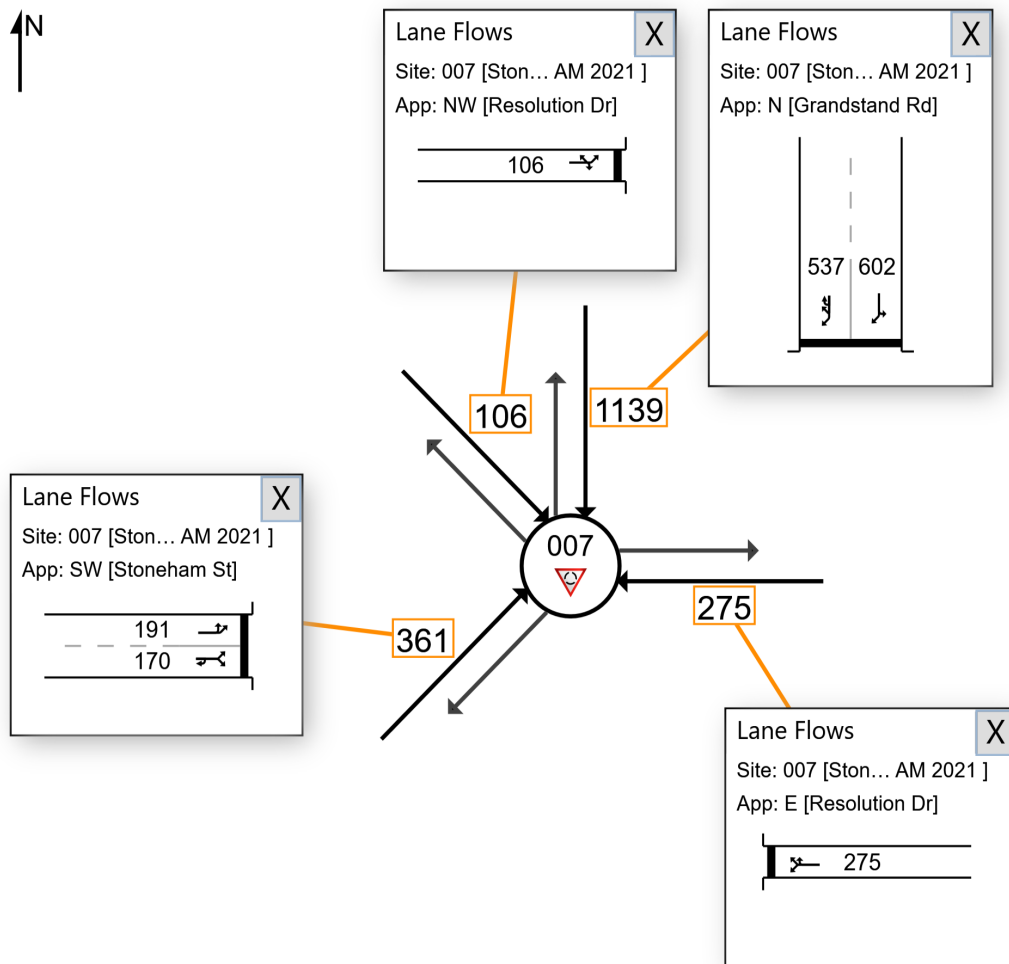
### All Movement Classes

Site: 007 [Stoneham Grandstand Resolution AM 2021 (Site Folder: 2021 AM Peak)] Network: N101 [2021 AM Peak (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 AM Peak  
Site Category: Existing Design  
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

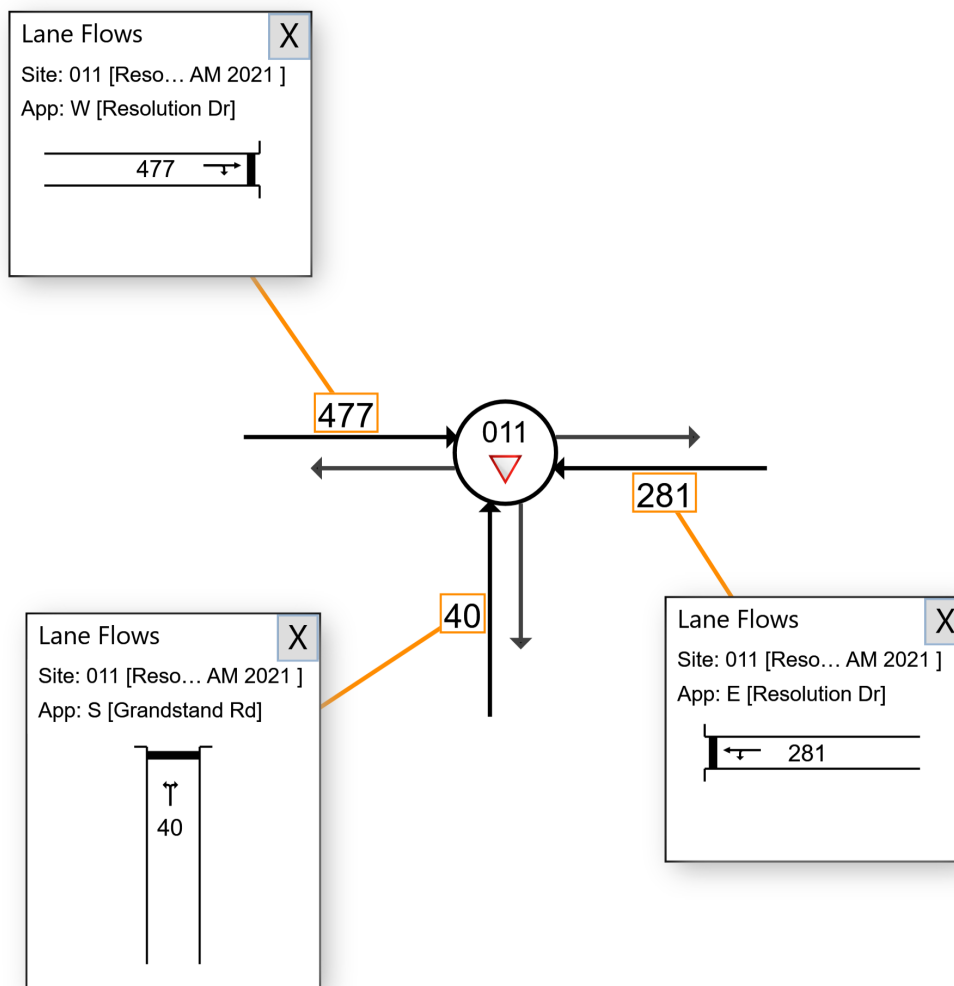
■ Network: N101 [2021 AM

▽ Site: 011 [Resolution Grandstand AM 2021 (Site Folder: 2021 AM Peak (Network Folder: General))

Resolution Dr / Grandstand Rd  
Give Way  
2021 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia PM 2021 (Site Folder: 2021 PM Peak)]

Network: N101 [2021 PM Peak (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

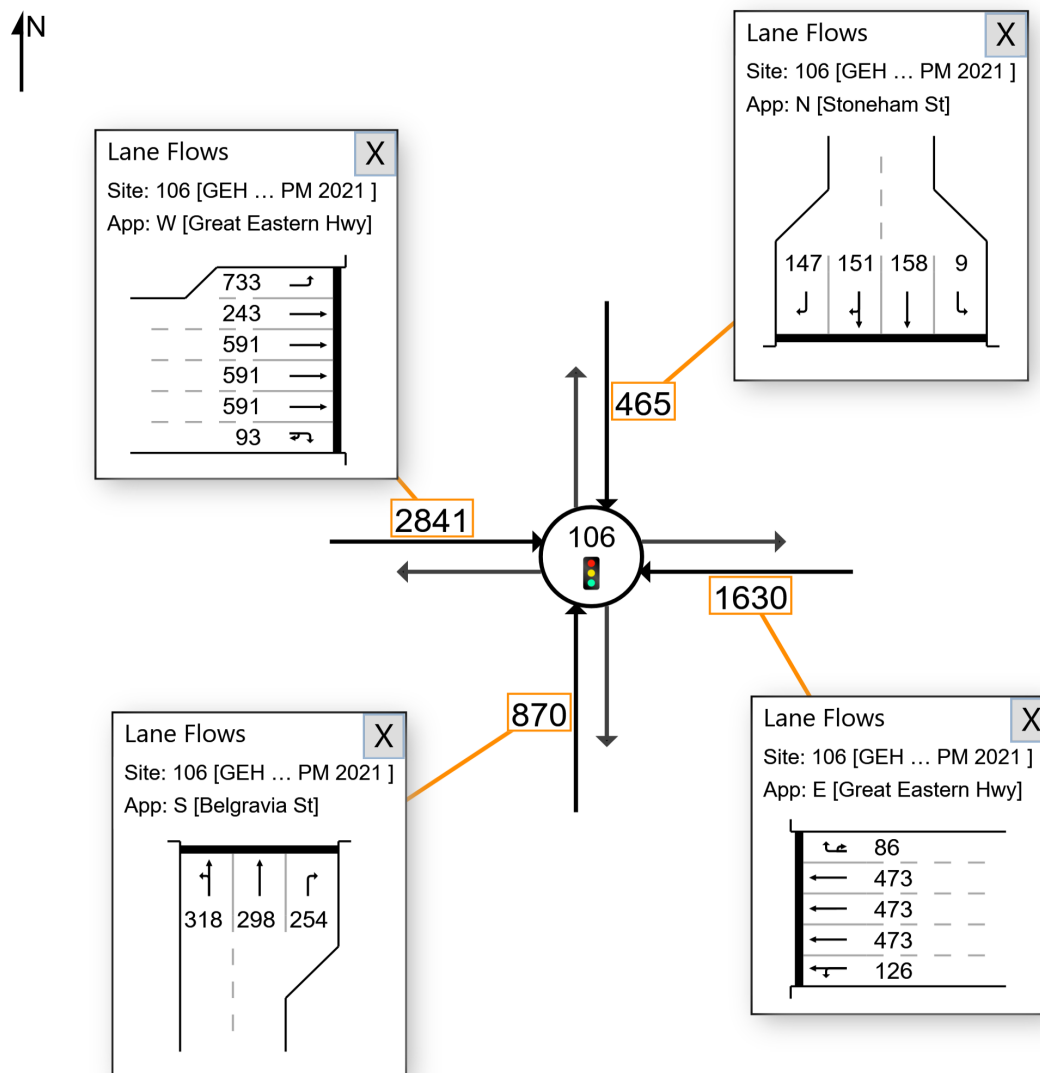
2021 PM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

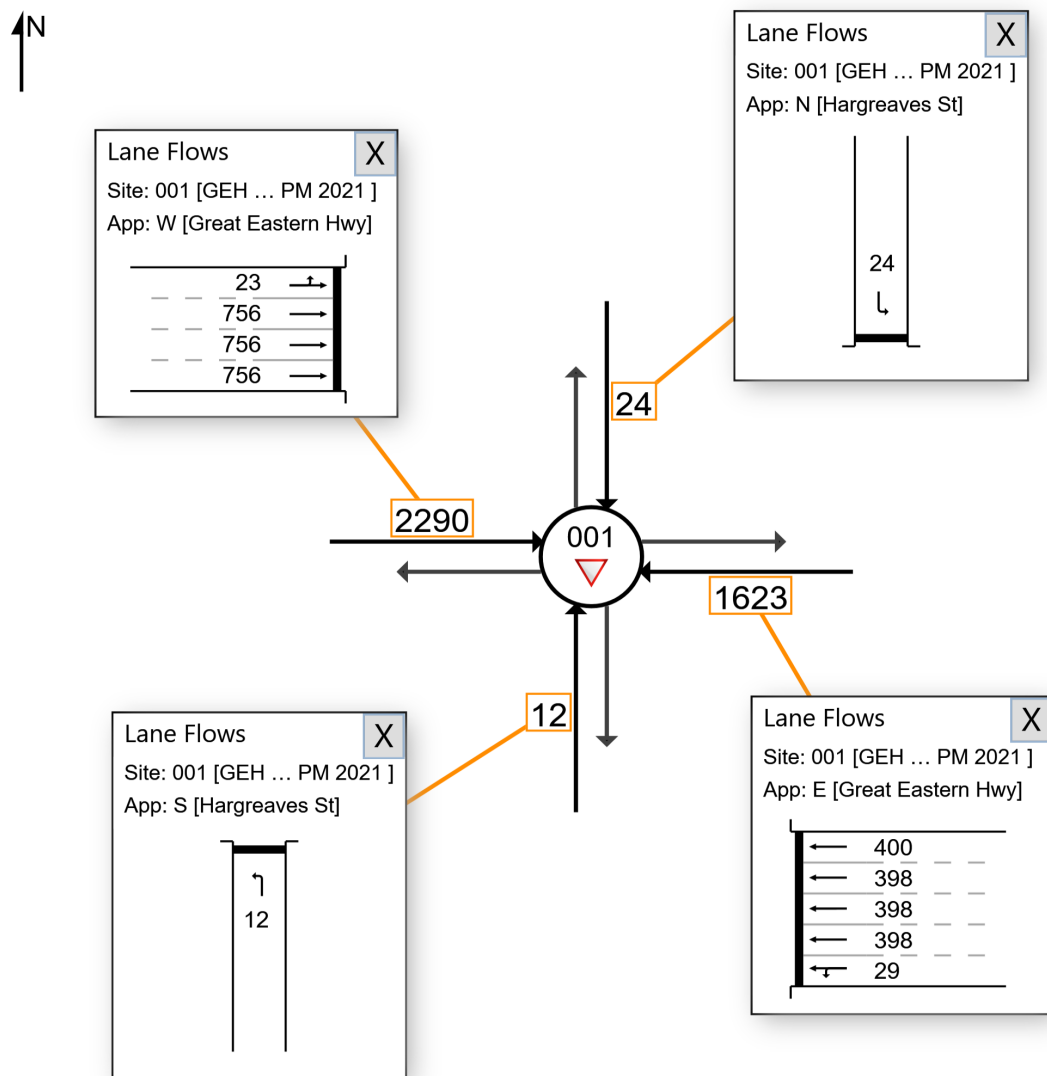
Site: 001 [GEH Hargreaves PM 2021 (Site Folder: 2021 PM Peak)]

Network: N101 [2021 PM Peak (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2021 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 002 [GEH Daly PM 2021 (Site Folder: 2021 PM Peak)]

Network: N101 [2021 PM Peak (Network Folder: General)]

GEH / Daly St

Left in Left out, Give Way

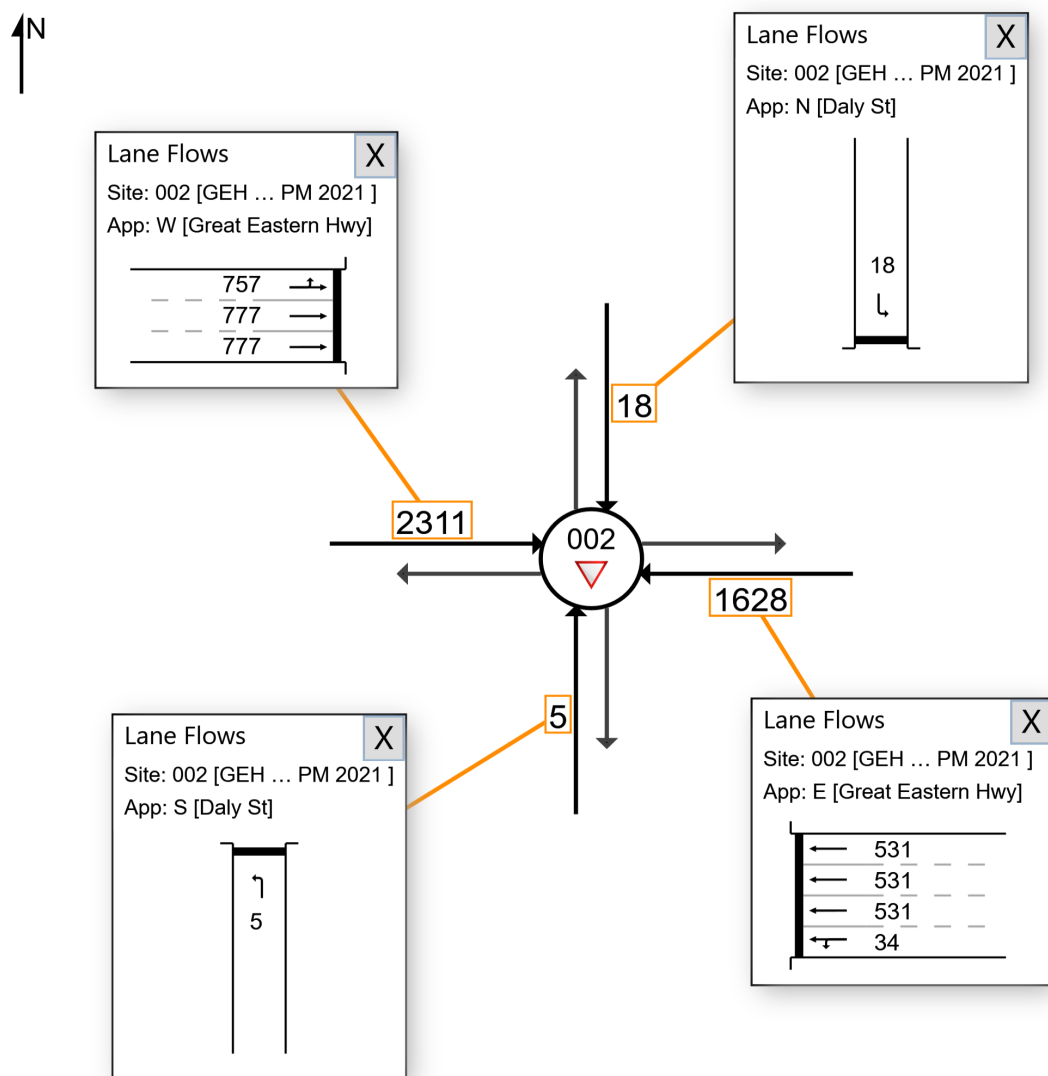
2021 PM Peak

Site Category: Existing Design

Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

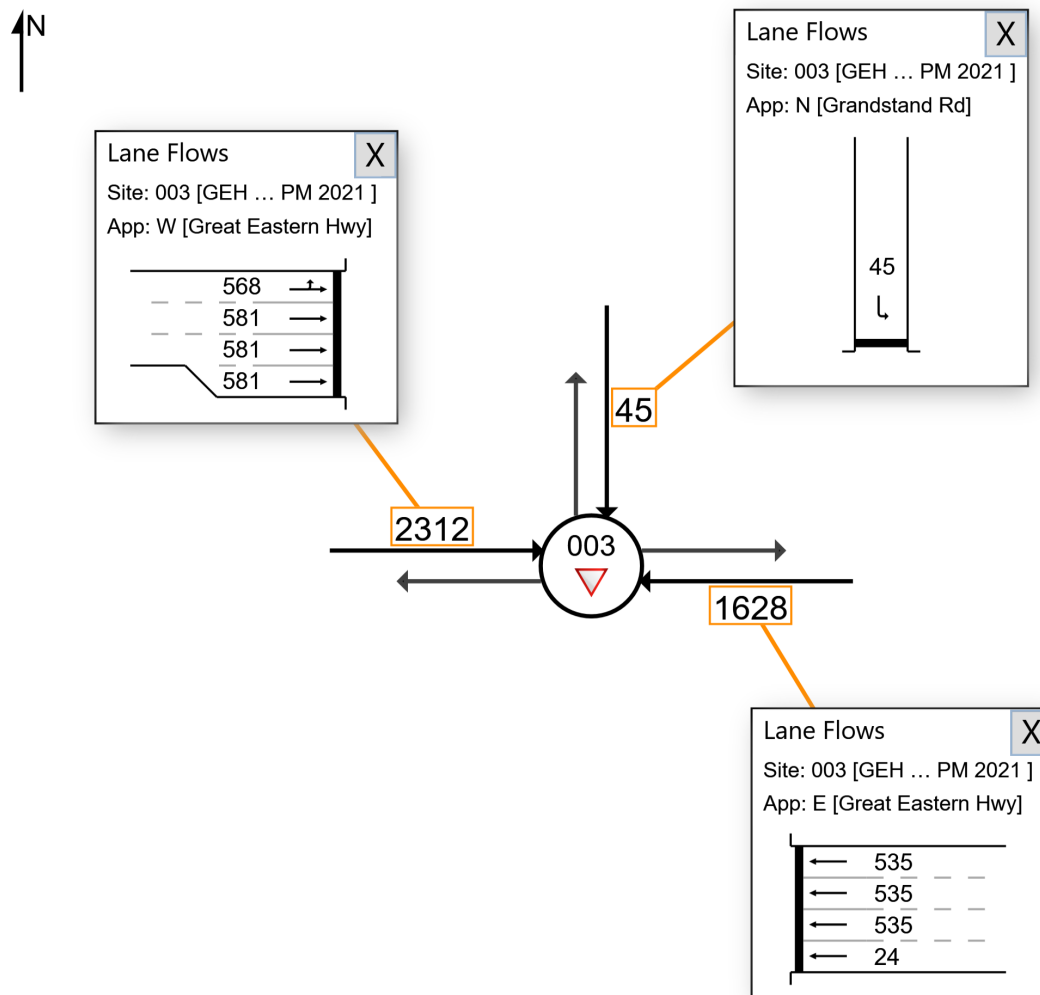
Site: 003 [GEH Grandstand PM 2021 (Site Folder: 2021 PM Peak)]

Network: N101 [2021 PM Peak (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2021 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey PM 2021 (Site Folder: 2021 PM Peak)]

Network: N101 [2021 PM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2021 PM Peak

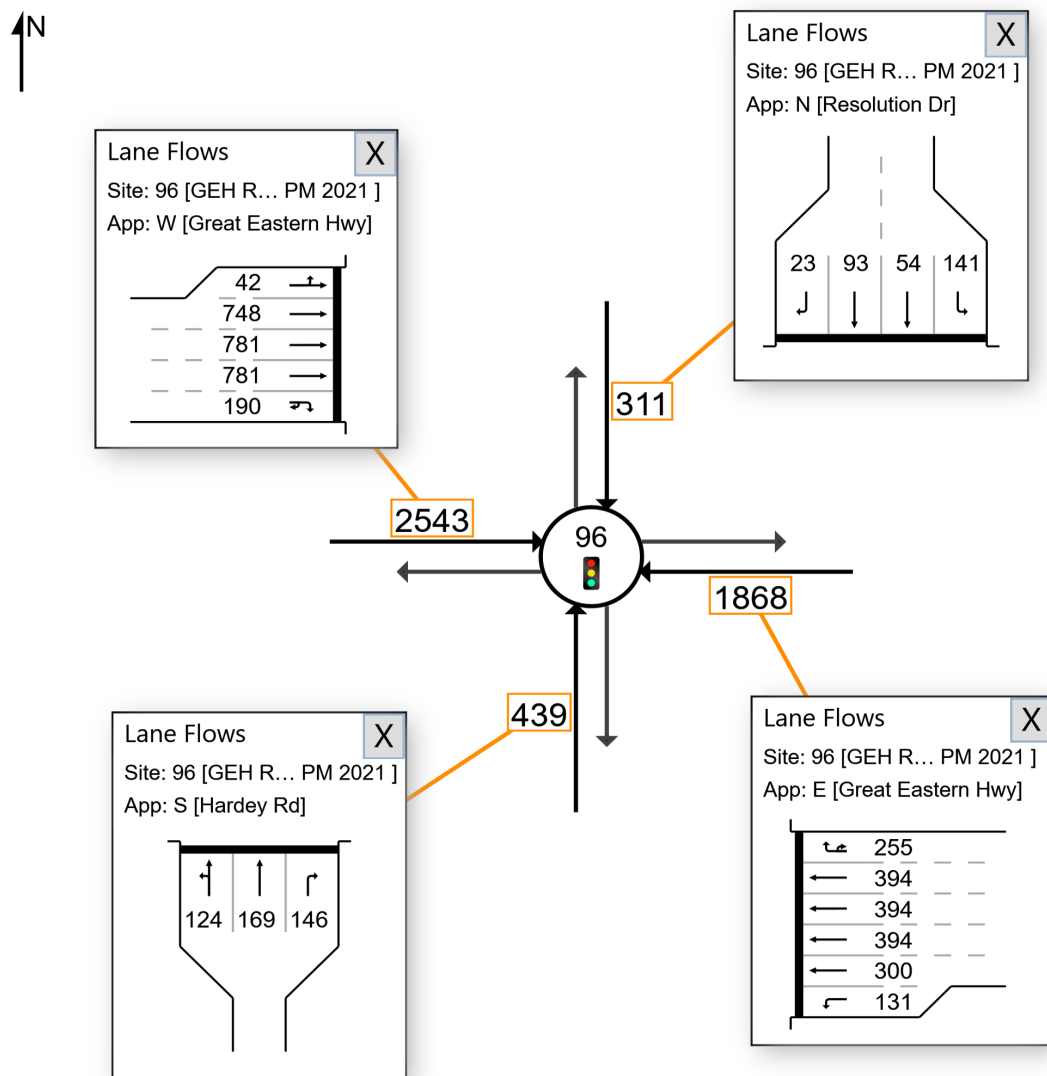
Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.

Click and drag popup boxes to move to preferred positions.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

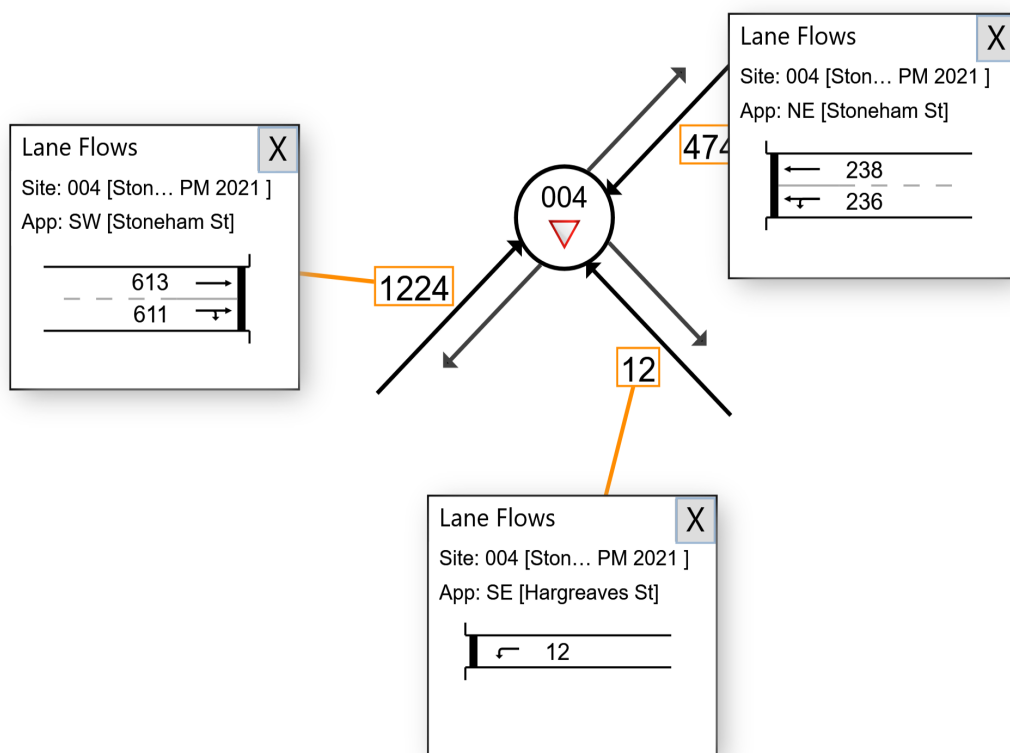
### All Movement Classes

Site: 004 [Stoneham Hargreaves PM 2021 (Site Folder: 2021 PM Peak)] Network: N101 [2021 PM Peak (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2021 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

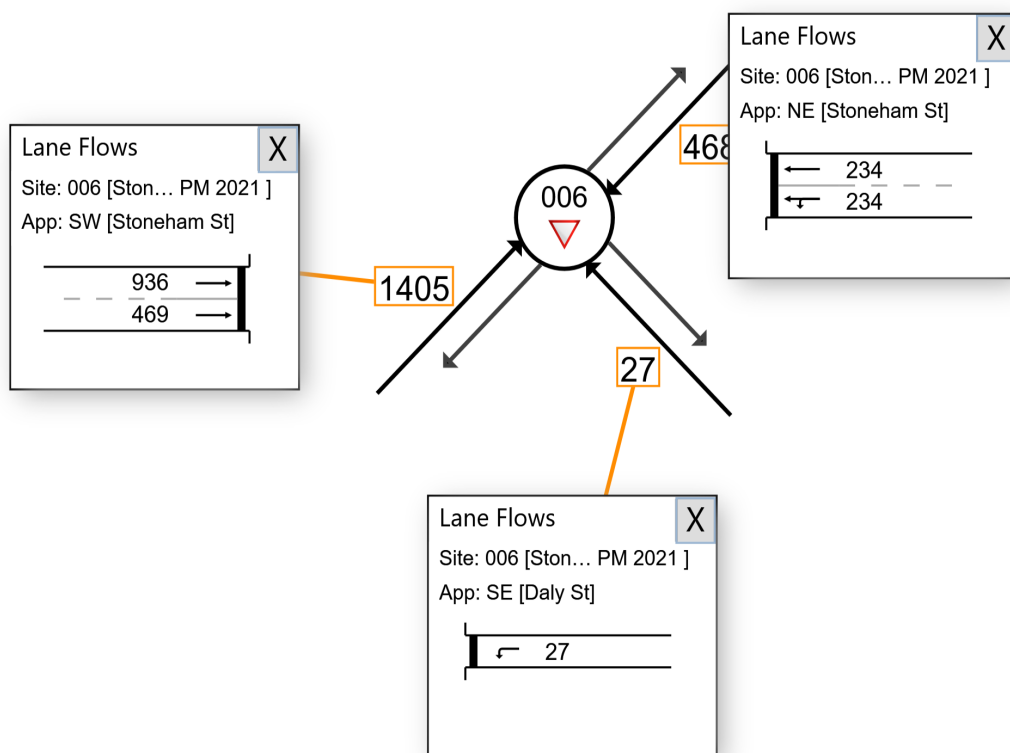
▼ Site: 006 [Stoneham Daly PM 2021 (Site Folder: 2021 PM Peak)]

■ Network: N101 [2021 PM Peak (Network Folder: General)]

Stoneham St / Daly St  
Left out only, Give Way  
2021 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

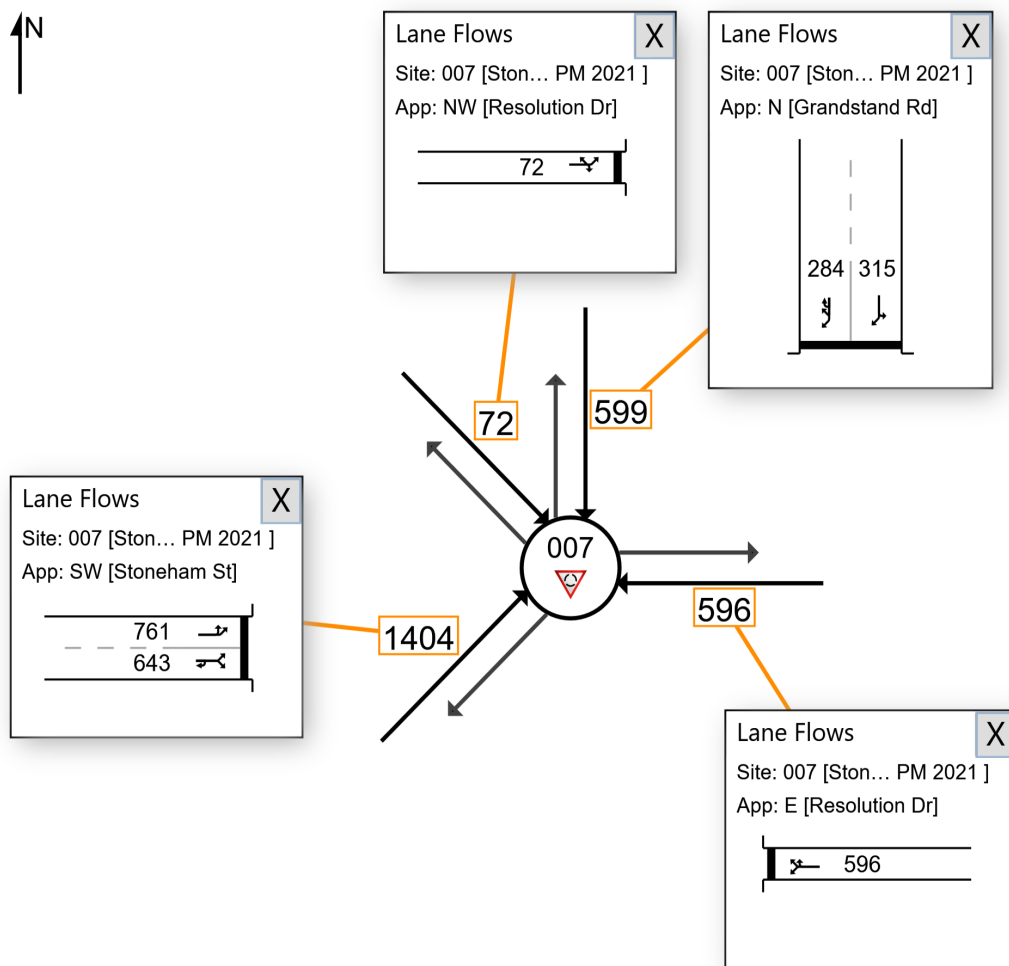
### All Movement Classes

Site: 007 [Stoneham Grandstand Resolution PM 2021 (Site Folder: 2021 PM Peak)] Network: N101 [2021 PM Peak (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 PM Peak  
Site Category: Existing Design  
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

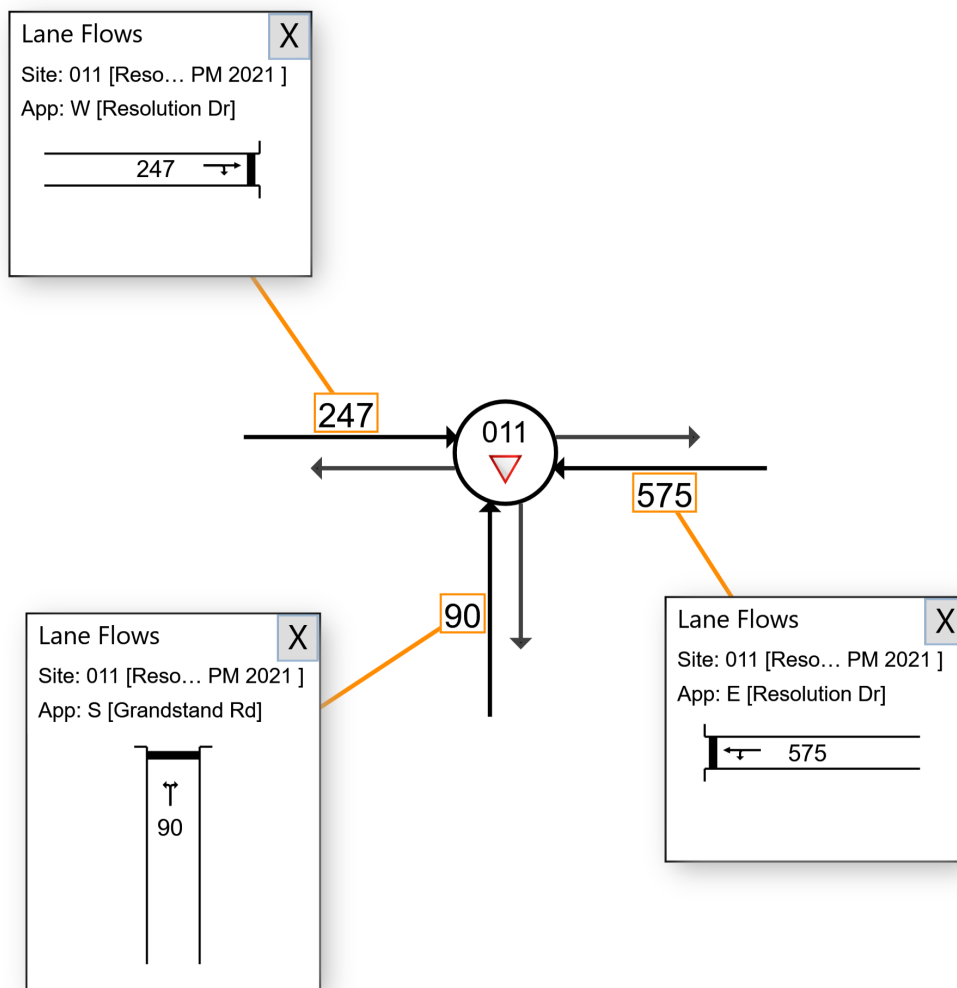
Network: N101 [2021 PM

Site: 011 [Resolution Grandstand PM 2021 (Site Folder: 2021 PM Peak (Network Folder: General))

Resolution Dr / Grandstand Rd  
Give Way  
2021 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

■ Network: N101 [2031 AM

Site: 106 [GEH Stoneham Belgravia AM 2031 (Site Folder: 2031 Peak (Network Folder: General)) AM Peak]]

GEH / Stoneham St / Belgravia St

Traffic signals

2031 AM Peak

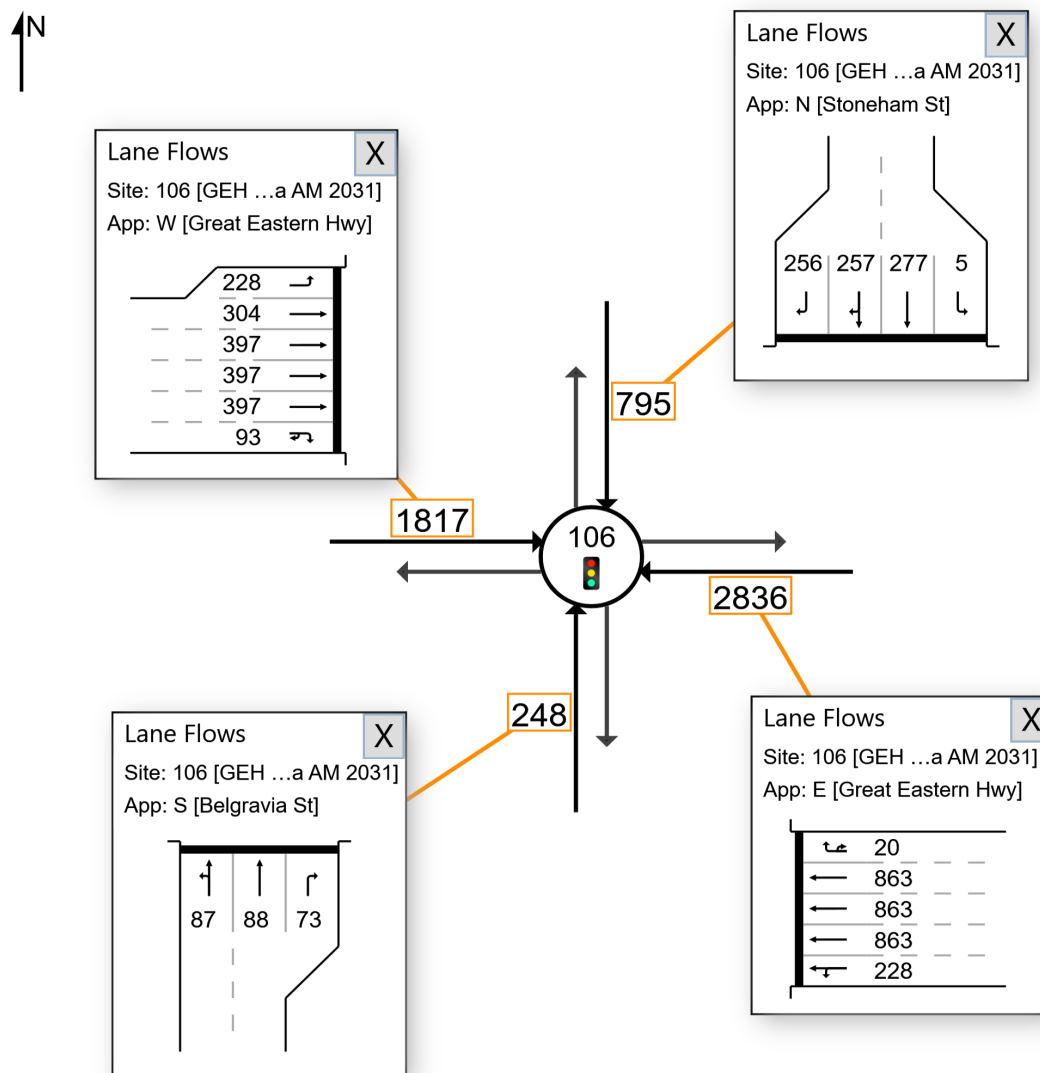
Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.

Click and drag popup boxes to move to preferred positions.

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Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

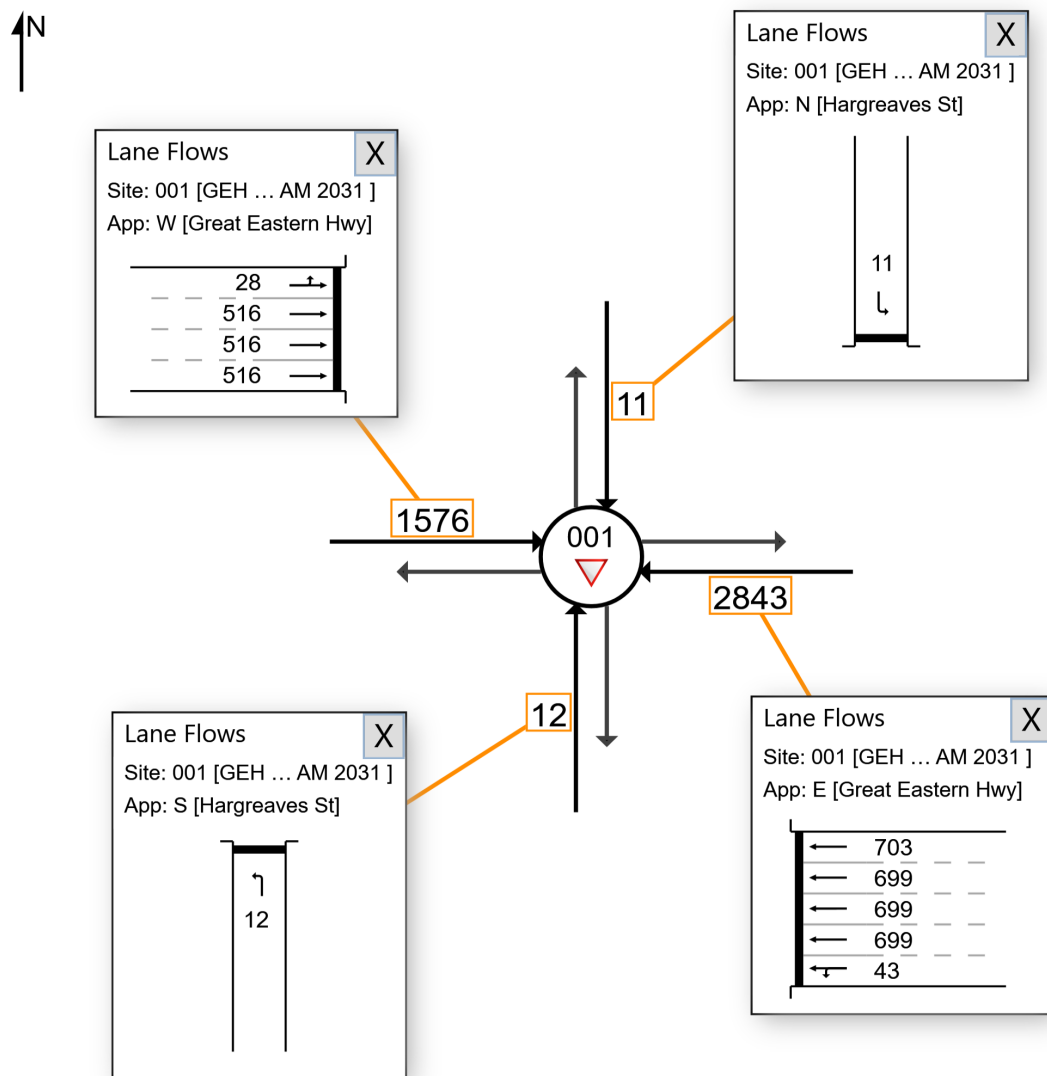
Site: 001 [GEH Hargreaves AM 2031 (Site Folder: 2031 AM Peak)]

Network: N101 [2031 AM Peak (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2031 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

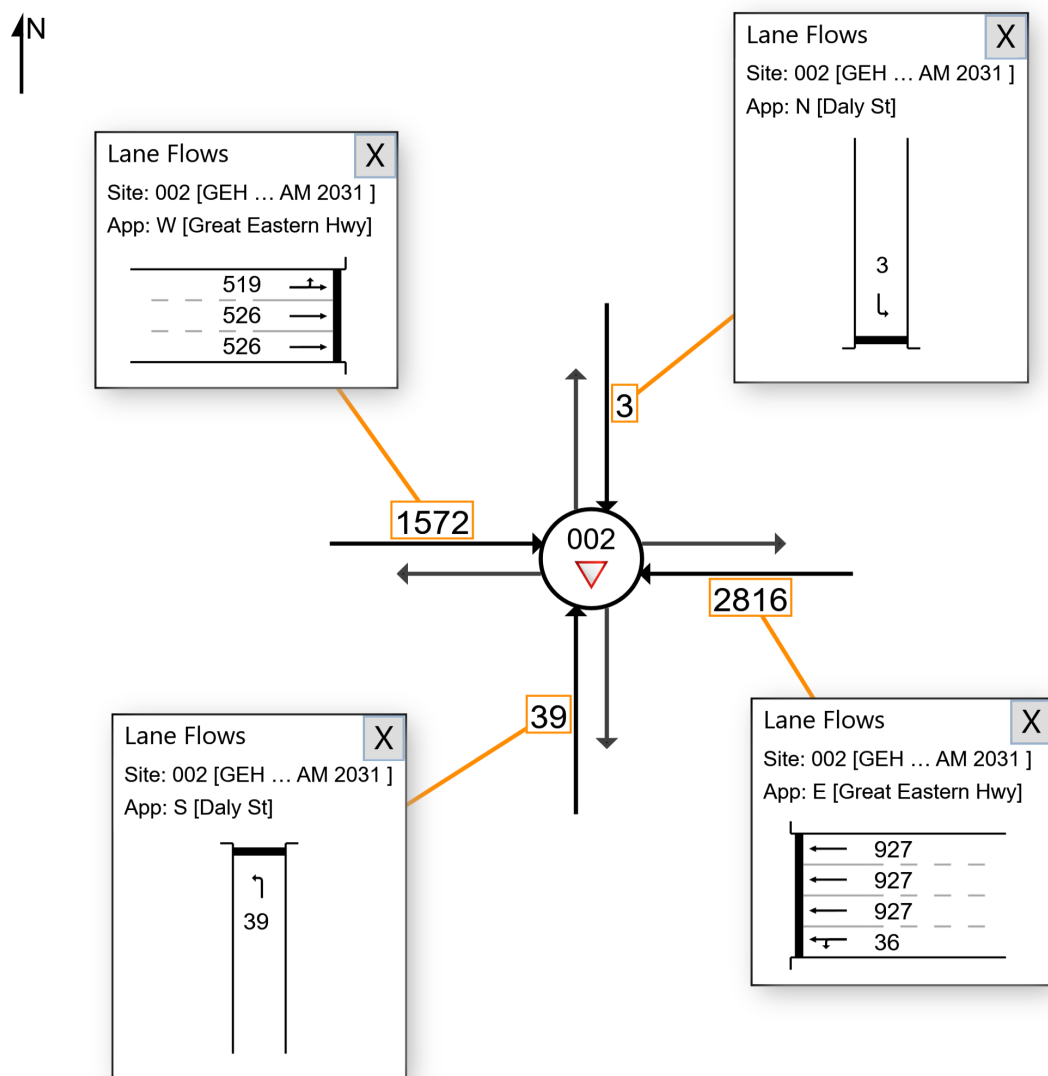
Site: 002 [GEH Daly AM 2031 (Site Folder: 2031 AM Peak)]

Network: N101 [2031 AM Peak (Network Folder: General)]

GEH / Daly St  
Left in Left out, Give Way  
2031 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

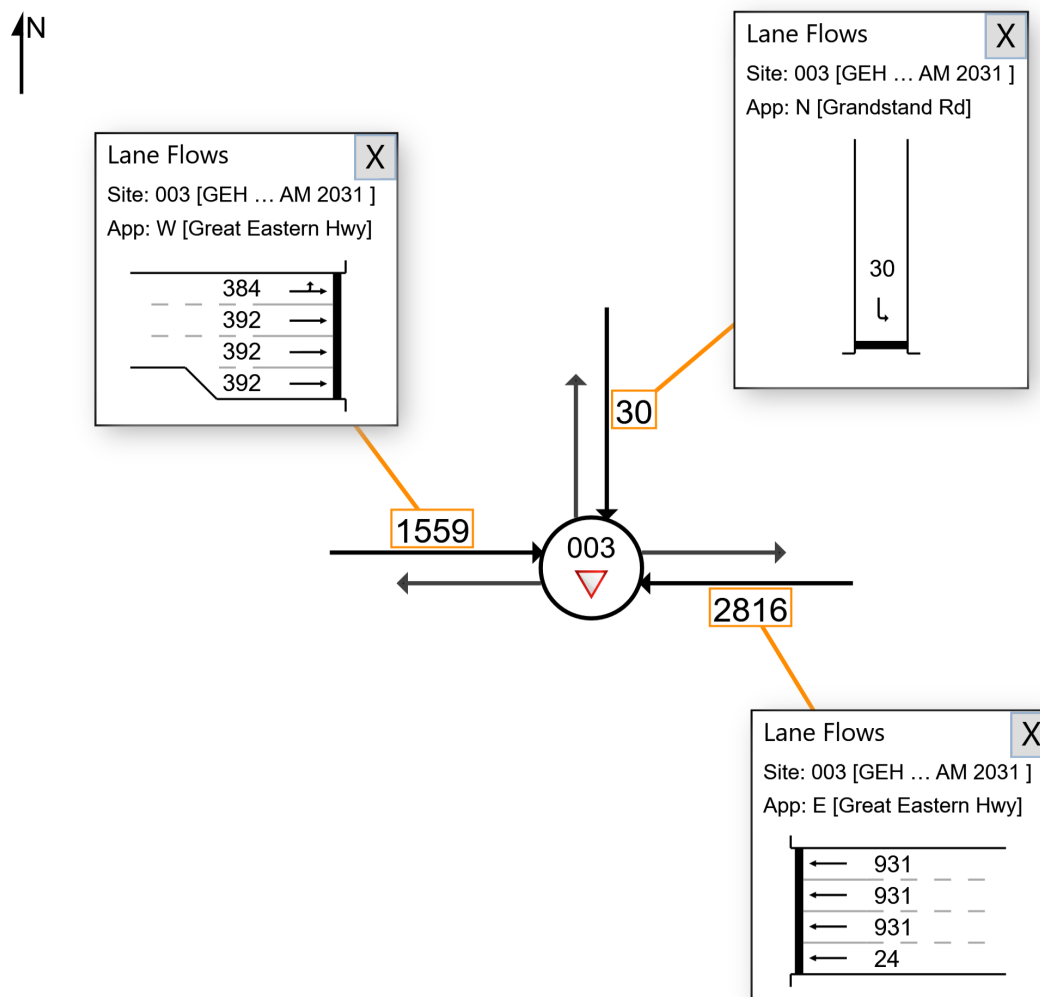
Site: 003 [GEH Grandstand AM 2031 (Site Folder: 2031 AM Peak)]

Network: N101 [2031 AM Peak (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2031 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey AM 2031 (Site Folder: 2031 AM Peak)]

Network: N101 [2031 AM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

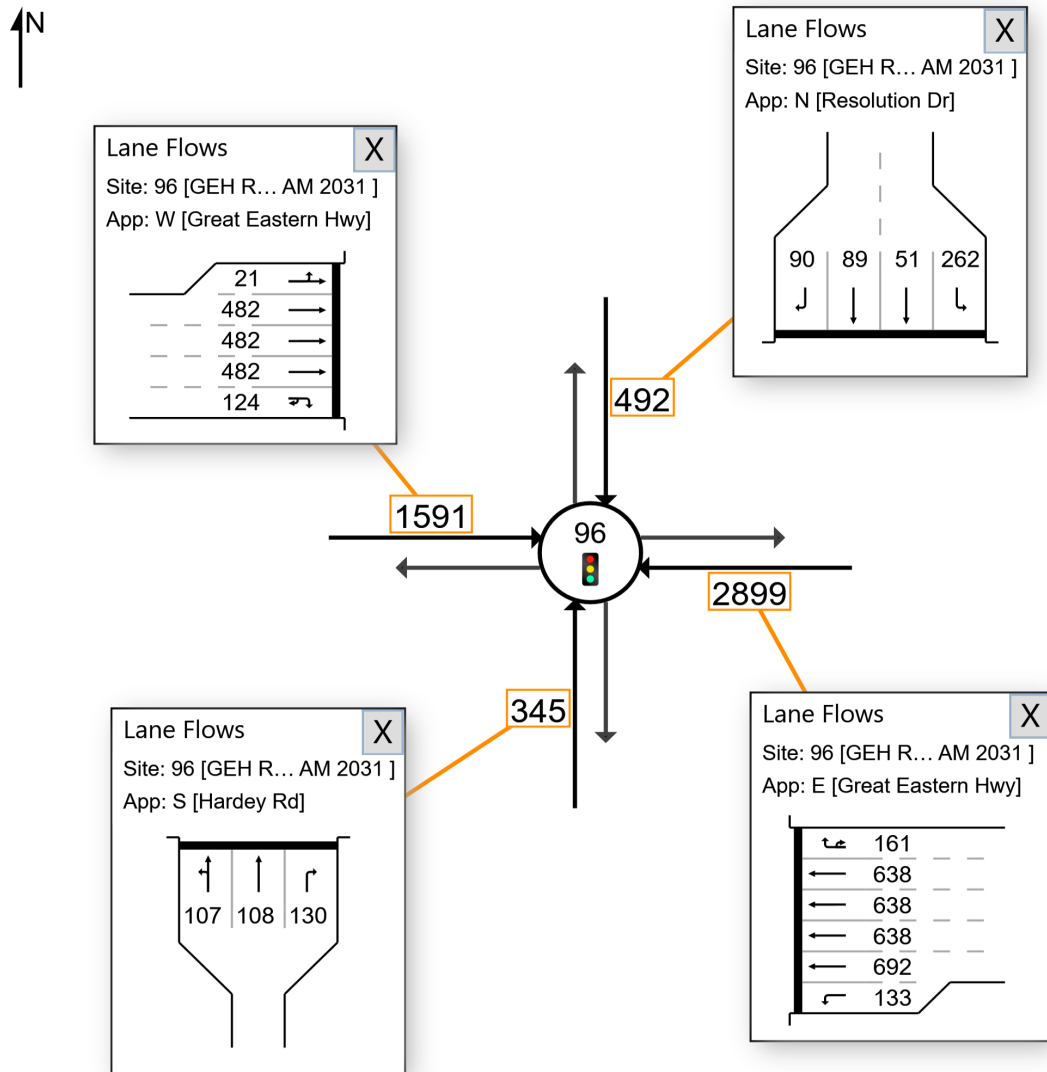
2031 AM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

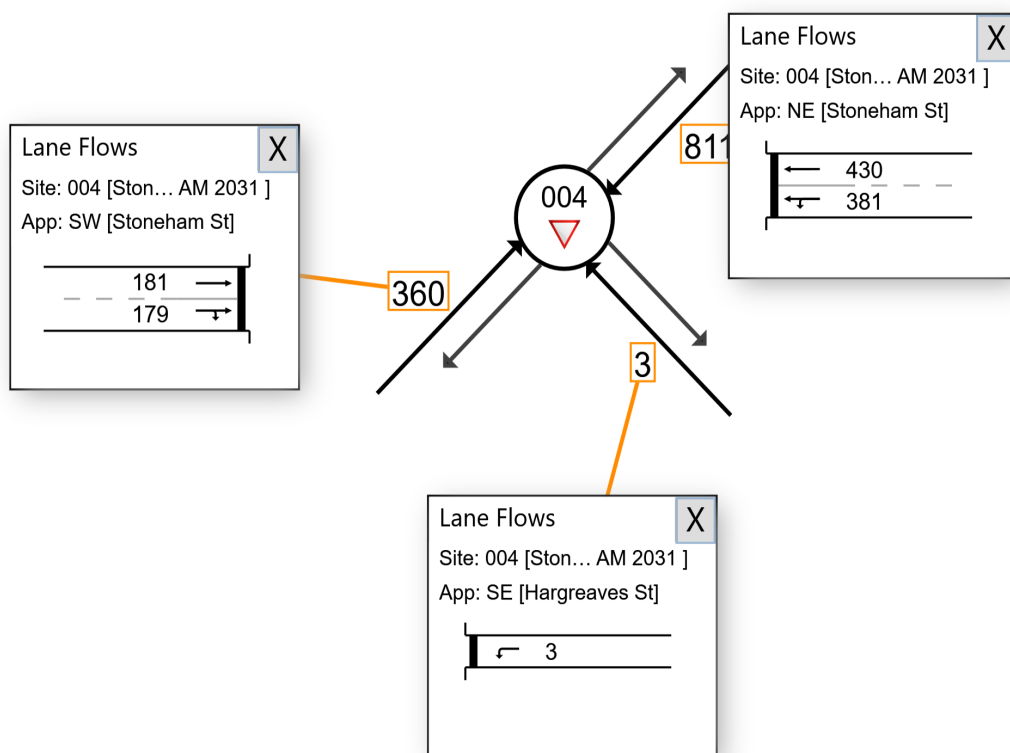
### All Movement Classes

Site: 004 [Stoneham Hargreaves AM 2031 (Site Folder: 2031 AM Peak)] Network: N101 [2031 AM Peak (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2031 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

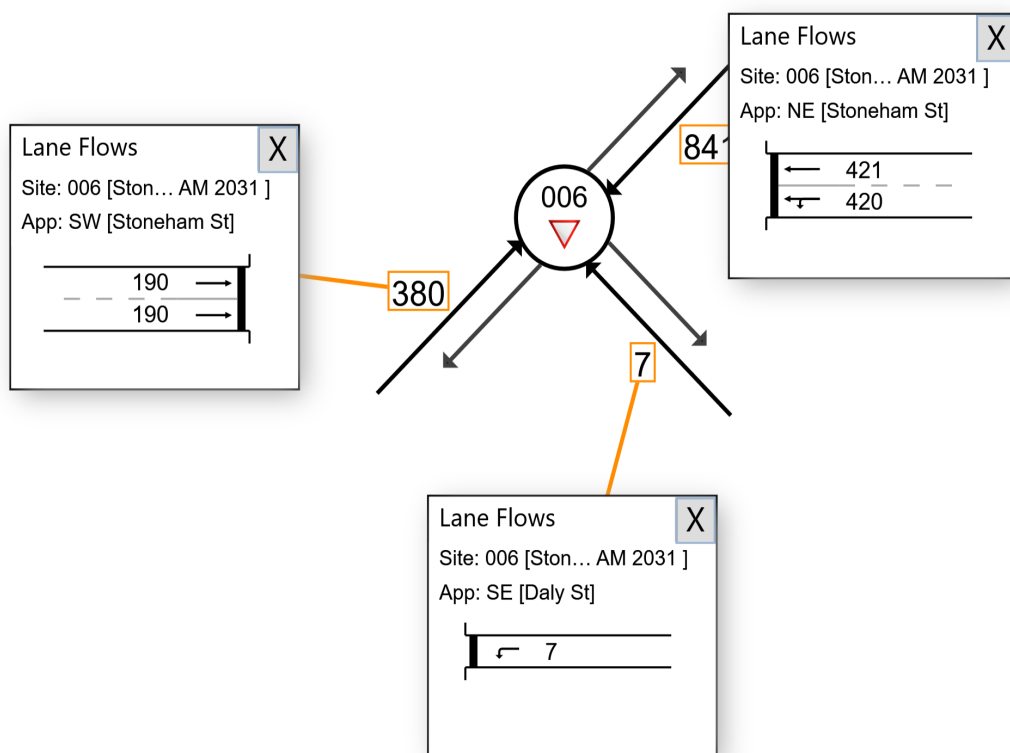
▼ Site: 006 [Stoneham Daly AM 2031 (Site Folder: 2031 AM Peak)]

■ Network: N101 [2031 AM Peak (Network Folder: General)]

Stoneham St / Daly St  
Left out only, Give Way  
2031 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

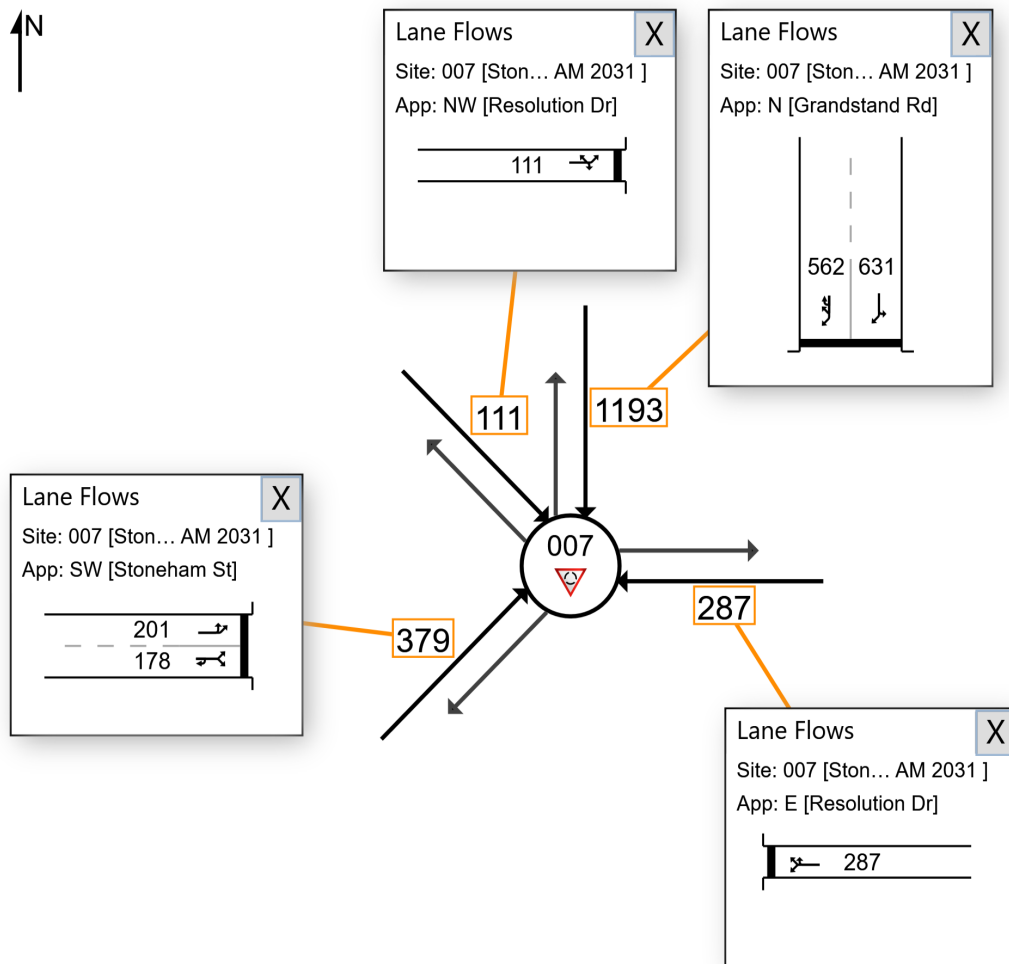
### All Movement Classes

Site: 007 [Stoneham Grandstand Resolution AM 2031 (Site Folder: 2031 AM Peak)] Network: N101 [2031 AM Peak (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 AM Peak  
Site Category: Existing Design  
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Close All Popups



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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

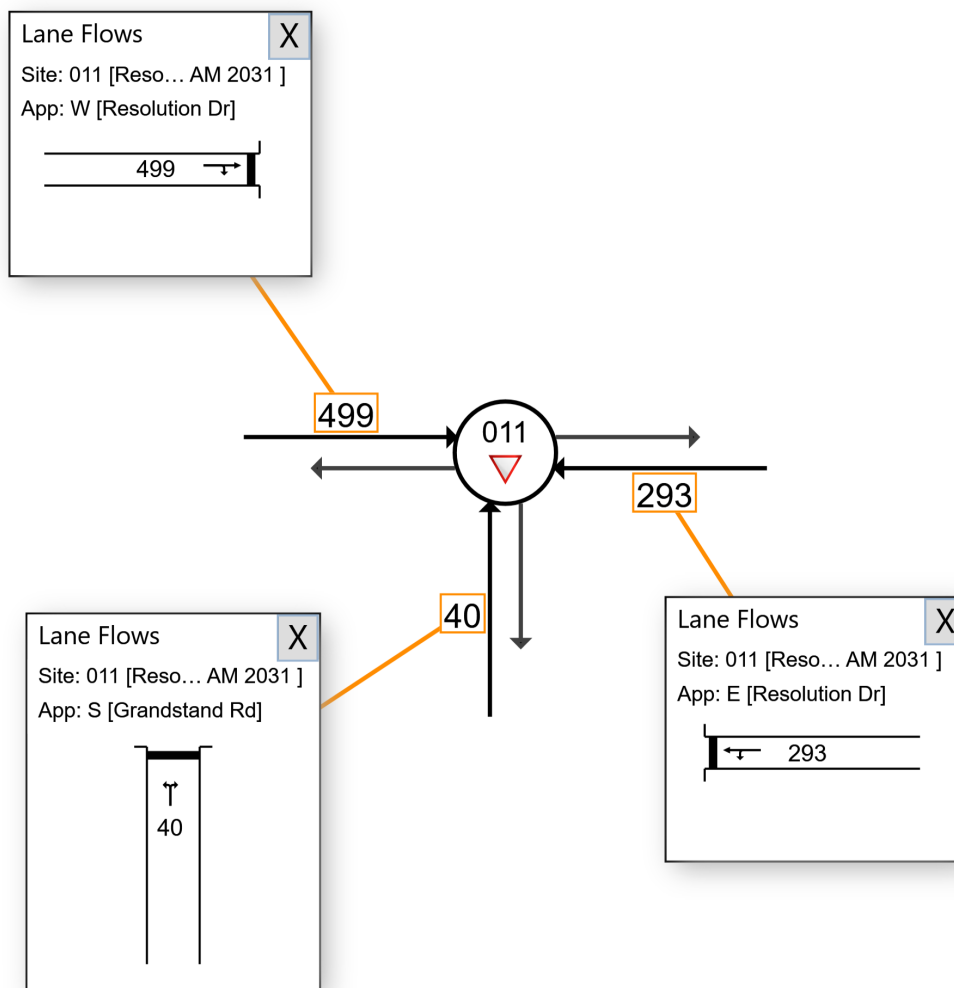
Network: N101 [2031 AM

Site: 011 [Resolution Grandstand AM 2031 (Site Folder: 2031 AM Peak) (Network Folder: General)]

Resolution Dr / Grandstand Rd  
Give Way  
2031 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia PM 2031 (Site Folder: 2031 PM Peak)]

Network: N101 [2031 PM Peak (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

2031 PM Peak

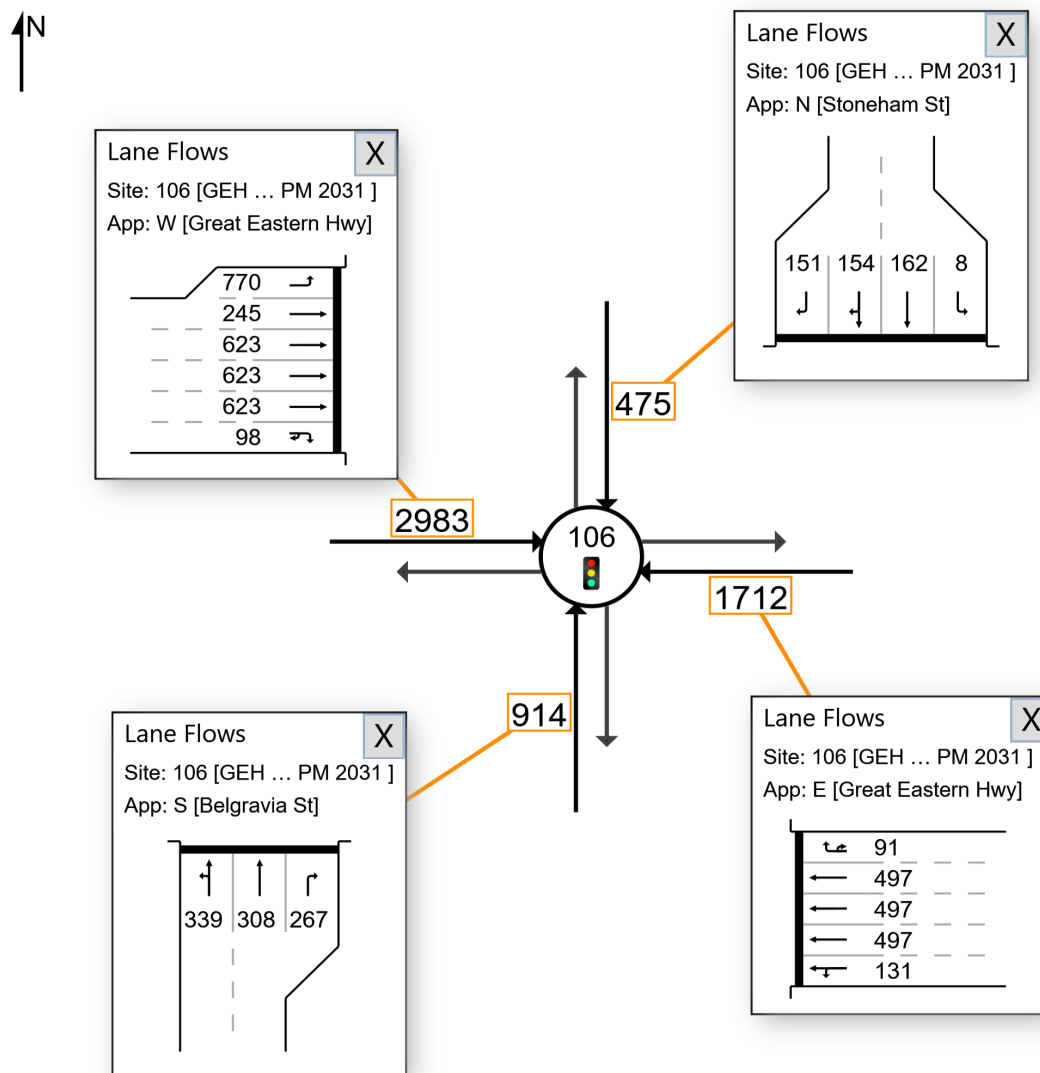
Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

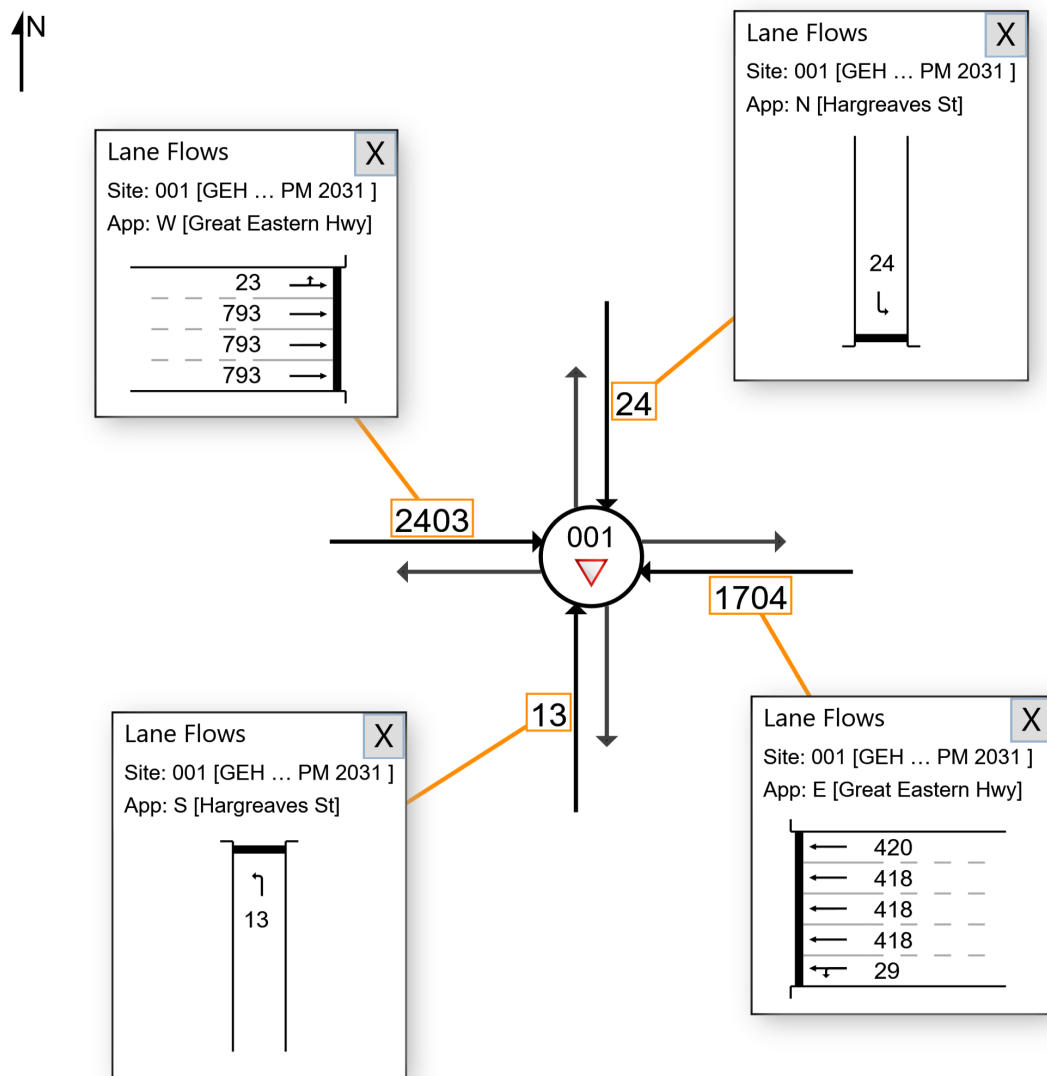
Site: 001 [GEH Hargreaves PM 2031 (Site Folder: 2031 PM Peak)]

Network: N101 [2031 PM Peak (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2031 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 002 [GEH Daly PM 2031 (Site Folder: 2031 PM Peak)]

Network: N101 [2031 PM Peak (Network Folder: General)]

GEH / Daly St

Left in Left out, Give Way

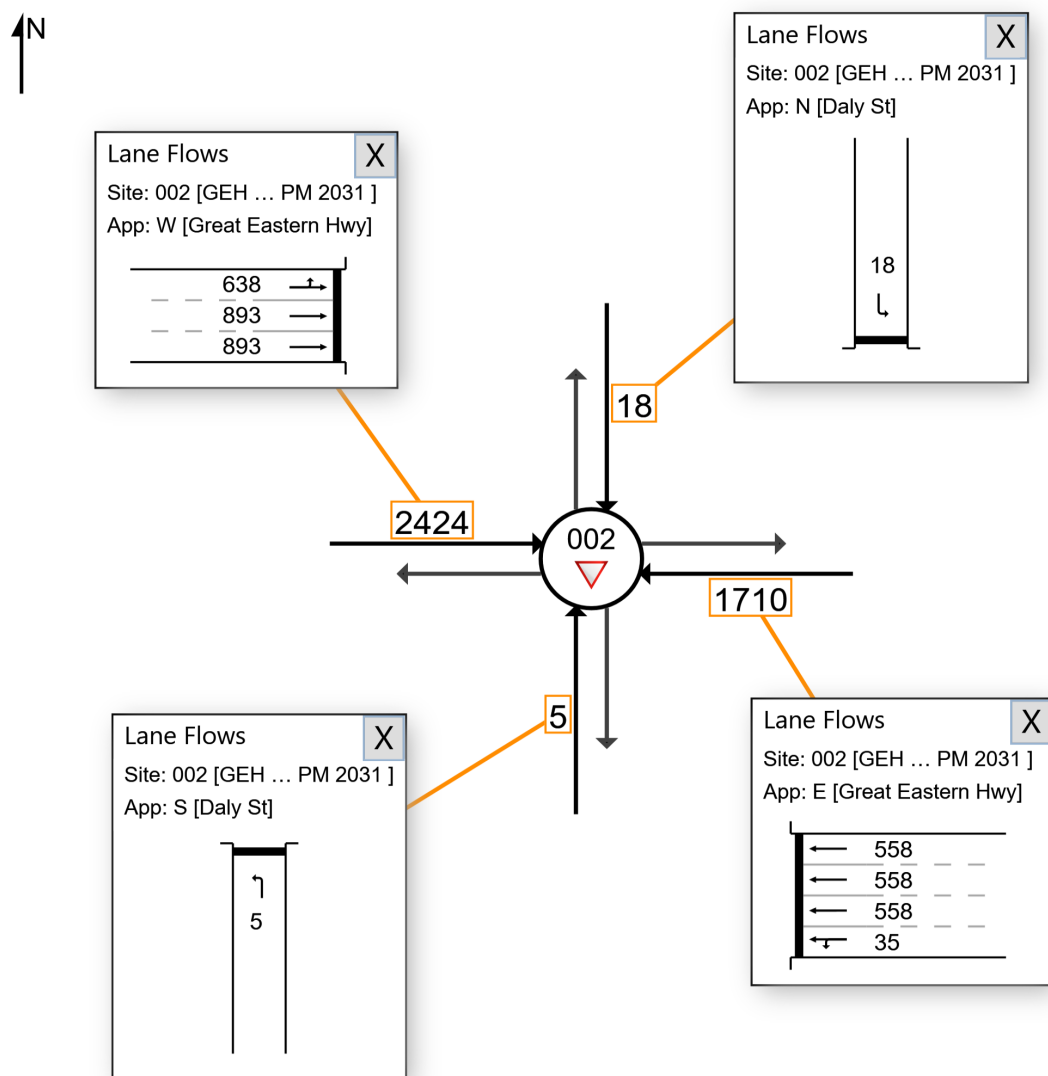
2031 PM Peak

Site Category: Existing Design

Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

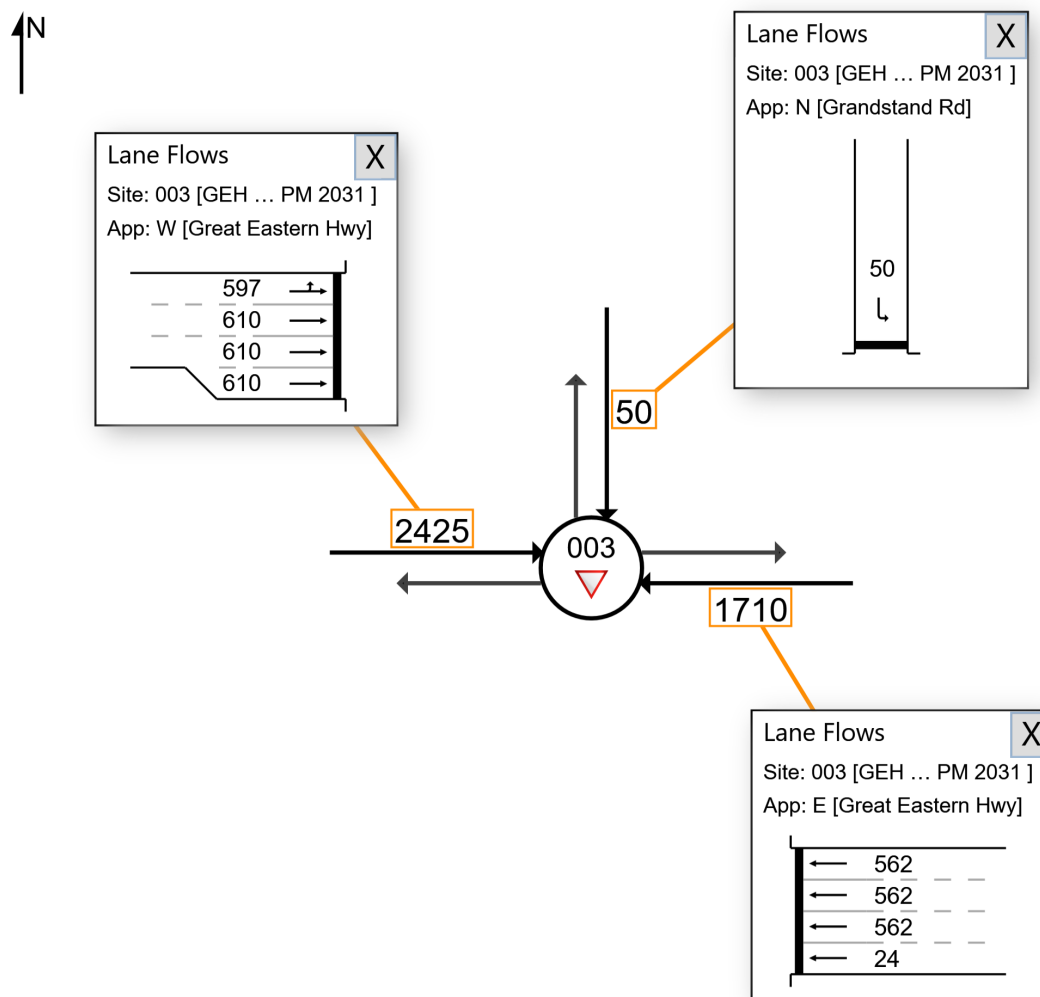
Site: 003 [GEH Grandstand PM 2031 (Site Folder: 2031 PM Peak)]

Network: N101 [2031 PM Peak (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2031 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey PM 2031 (Site Folder: 2031 PM Peak)]

Network: N101 [2031 PM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2031 PM Peak

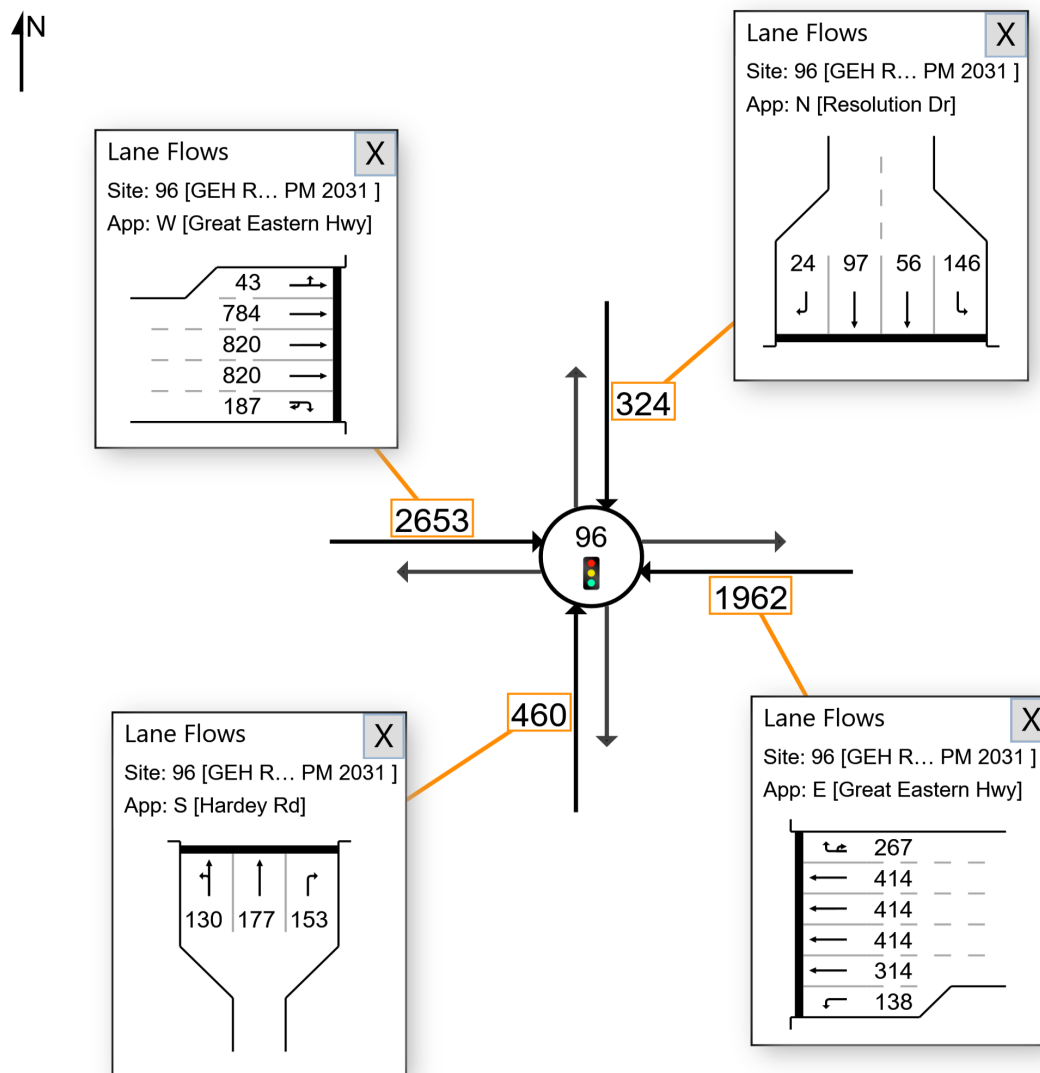
Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

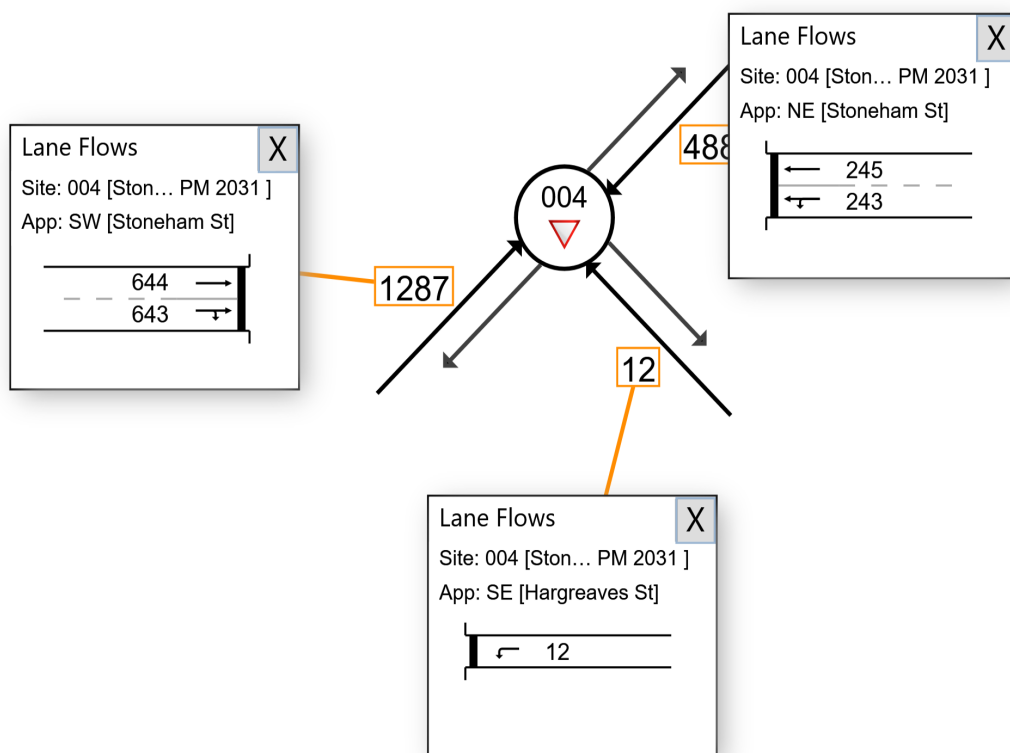
### All Movement Classes

Site: 004 [Stoneham Hargreaves PM 2031 (Site Folder: 2031 PM Peak)] Network: N101 [2031 PM Peak (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2031 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

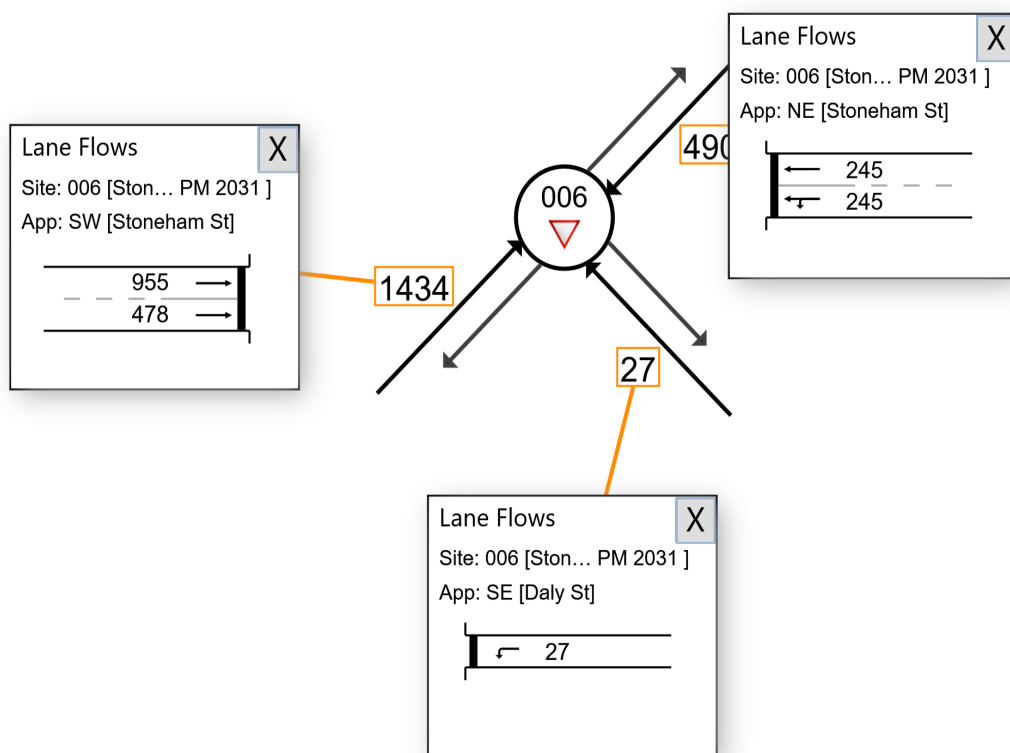
▼ Site: 006 [Stoneham Daly PM 2031 (Site Folder: 2031 PM Peak)]

■ Network: N101 [2031 PM Peak (Network Folder: General)]

Stoneham St / Daly St  
Left out only, Give Way  
2031 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

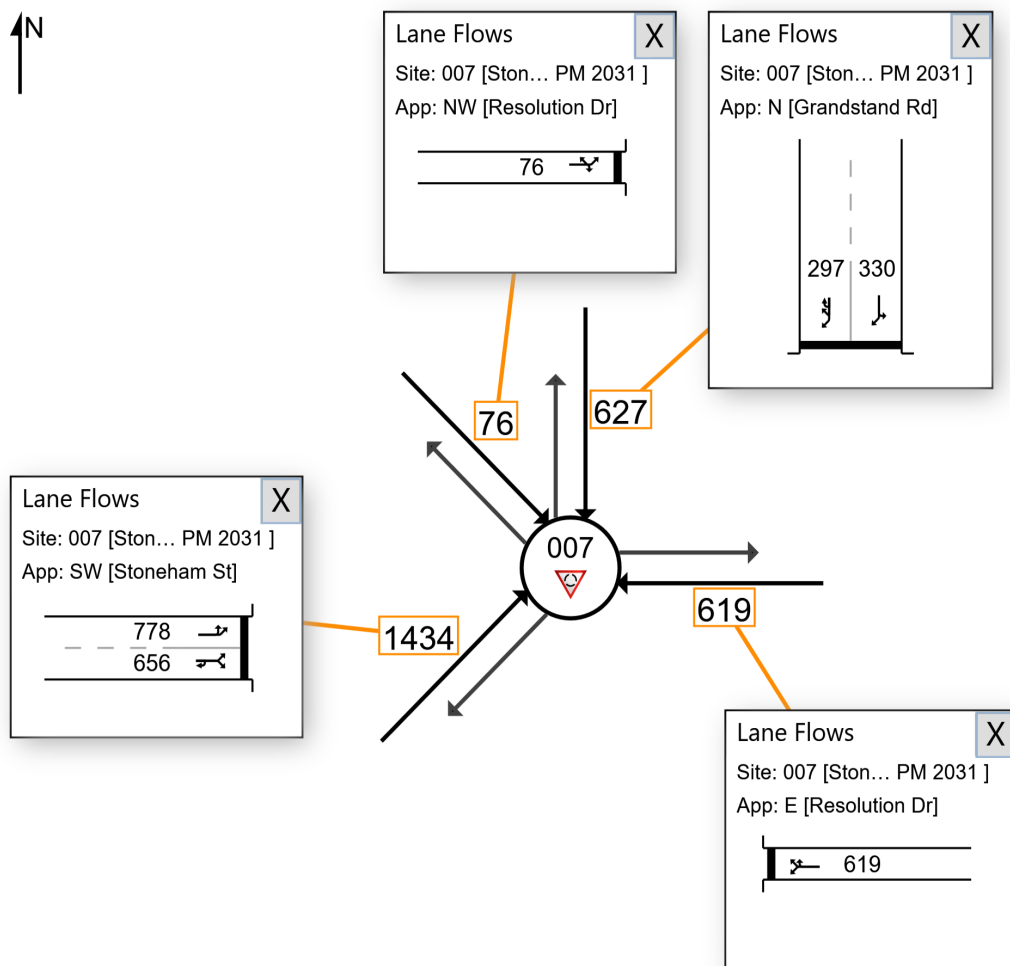
### All Movement Classes

Site: 007 [Stoneham Grandstand Resolution PM 2031 (Site Folder: 2031 PM Peak)] Network: N101 [2031 PM Peak (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 PM Peak  
Site Category: Existing Design  
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

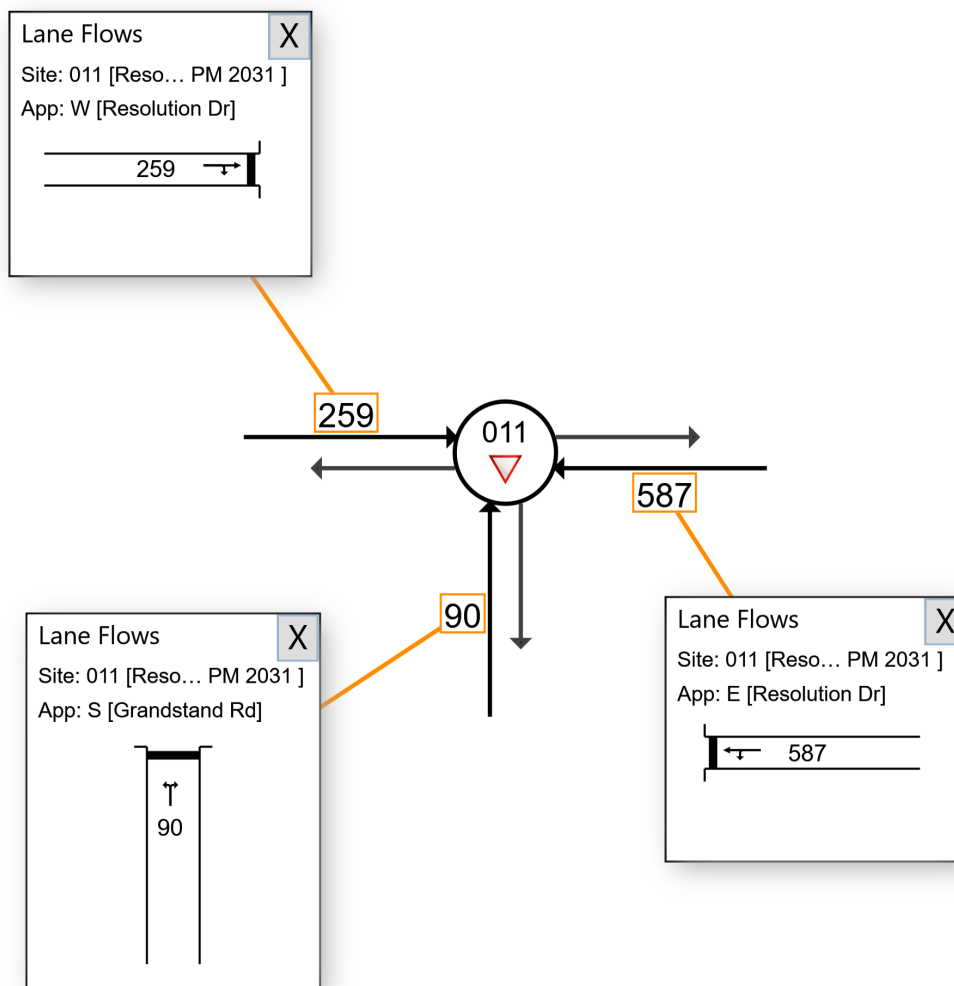
■ Network: N101 [2031 PM

▽ Site: 011 [Resolution Grandstand PM 2031 (Site Folder: 2031 PM Peak (Network Folder: General))

Resolution Dr / Grandstand Rd  
Give Way  
2031 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia AM 2041 (Site Folder: 2041 AM Peak)]

Network: N101 [2041 AM Peak (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

2041 AM Peak

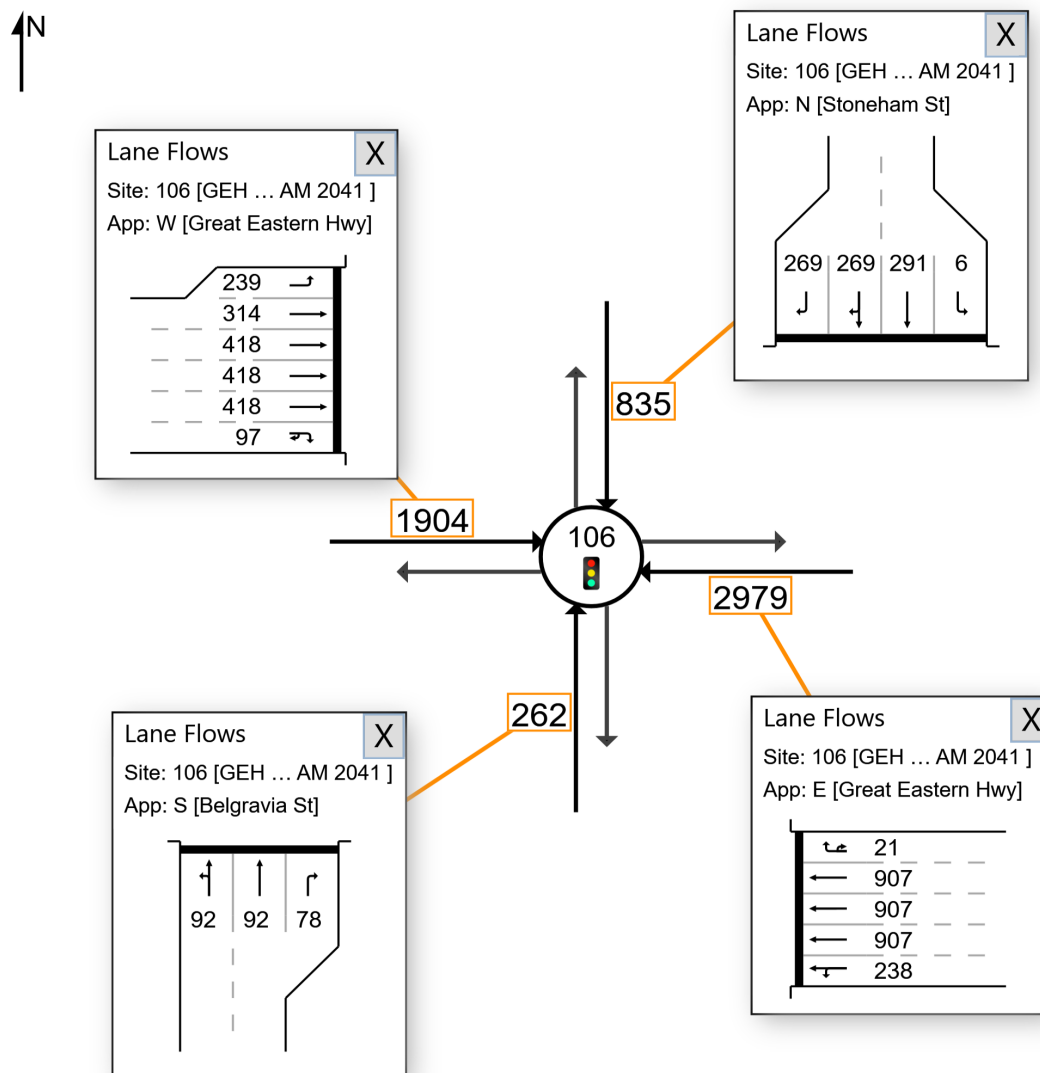
Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

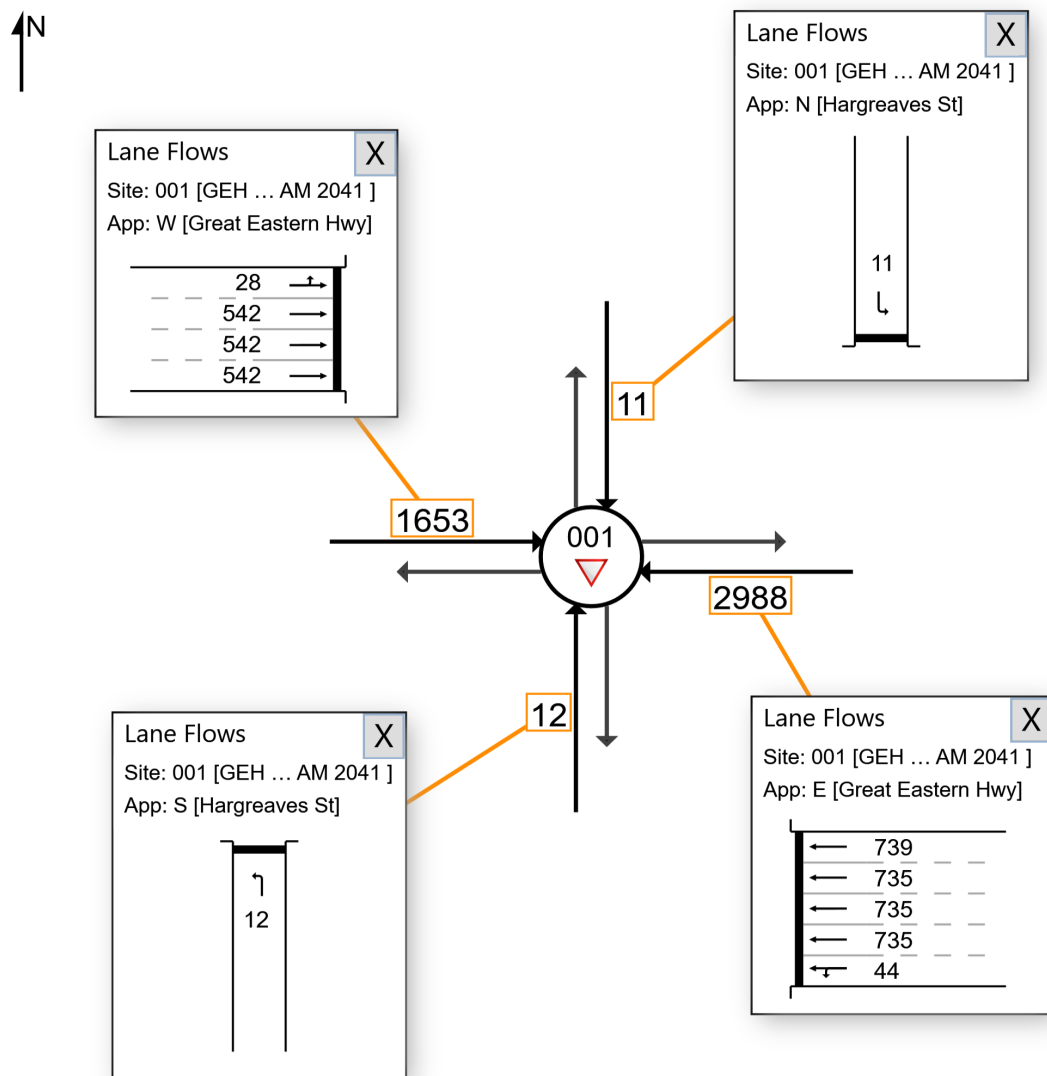
Site: 001 [GEH Hargreaves AM 2041 (Site Folder: 2041 AM Peak)]

Network: N101 [2041 AM Peak (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2041 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 002 [GEH Daly AM 2041 (Site Folder: 2041 AM Peak)]

Network: N101 [2041 AM Peak (Network Folder: General)]

GEH / Daly St

Left in Left out, Give Way

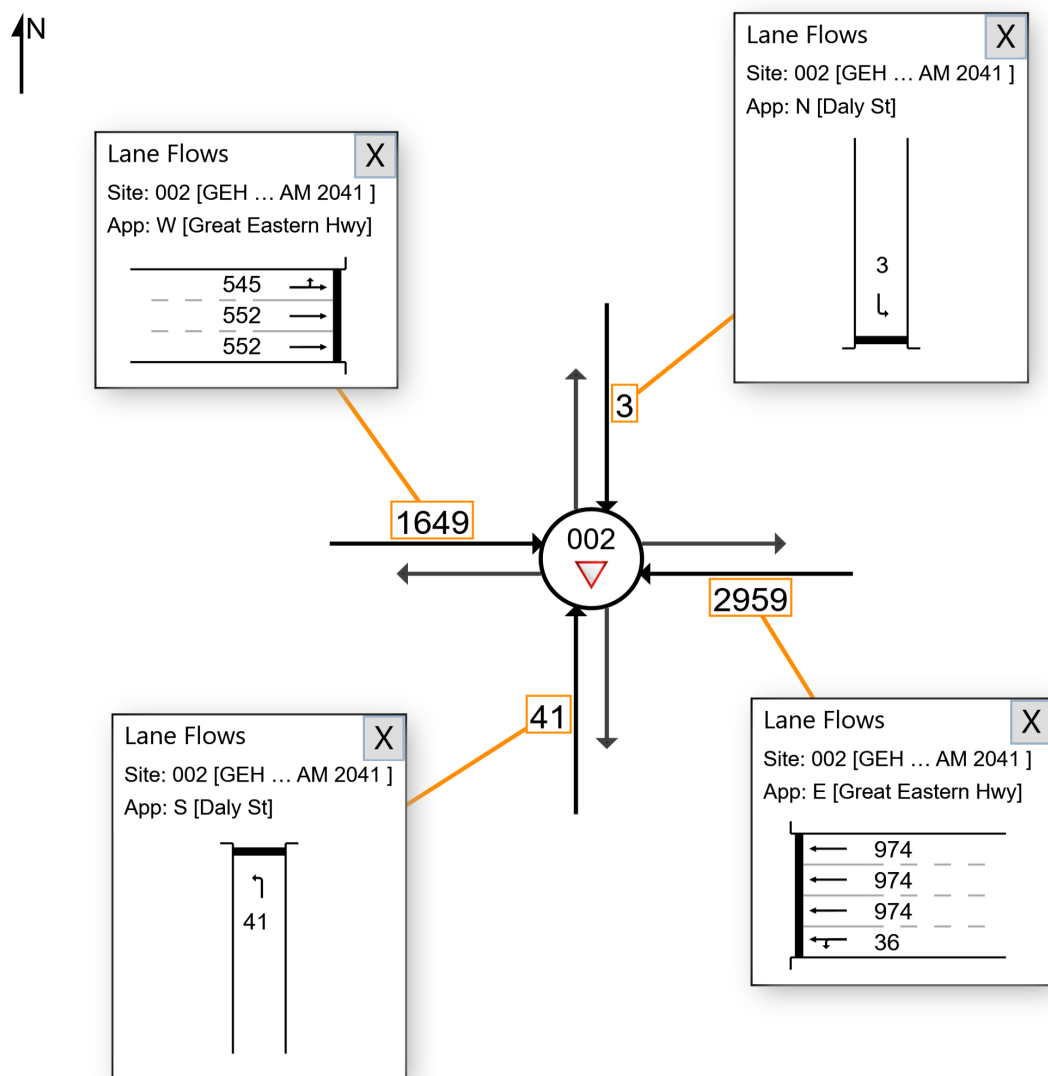
2041 AM Peak

Site Category: Existing Design

Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

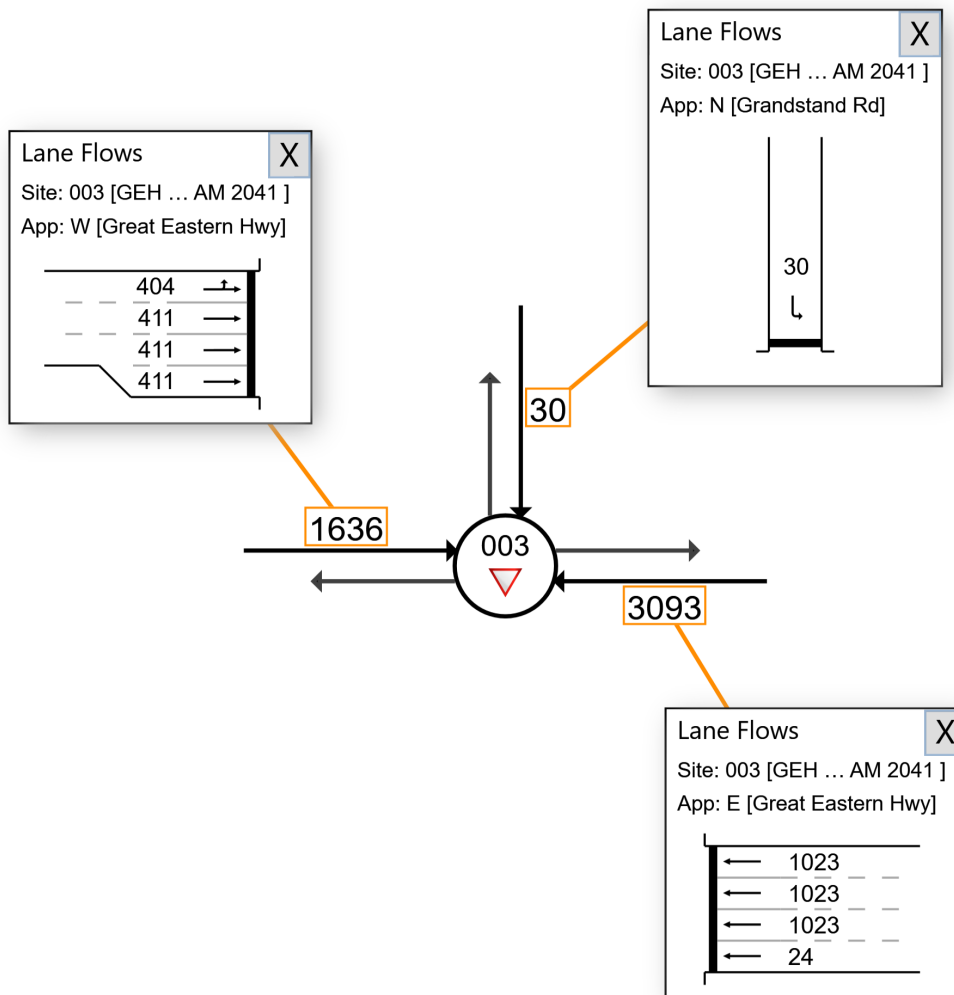
Site: 003 [GEH Grandstand AM 2041 (Site Folder: 2041 AM Peak)]

Network: N101 [2041 AM Peak (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2041 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey AM 2041 (Site Folder: 2041 AM Peak)]

Network: N101 [2041 AM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

2041 AM Peak

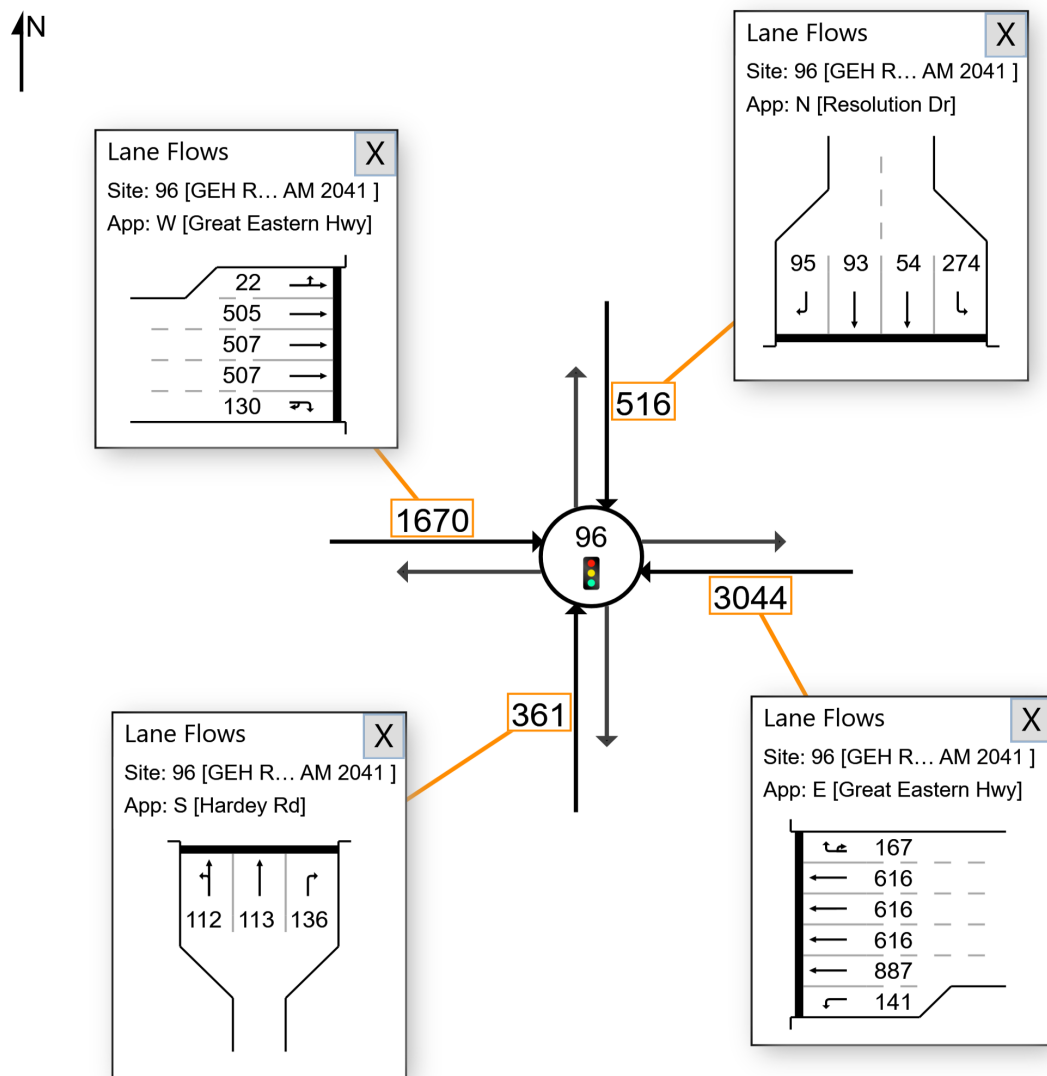
Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

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Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

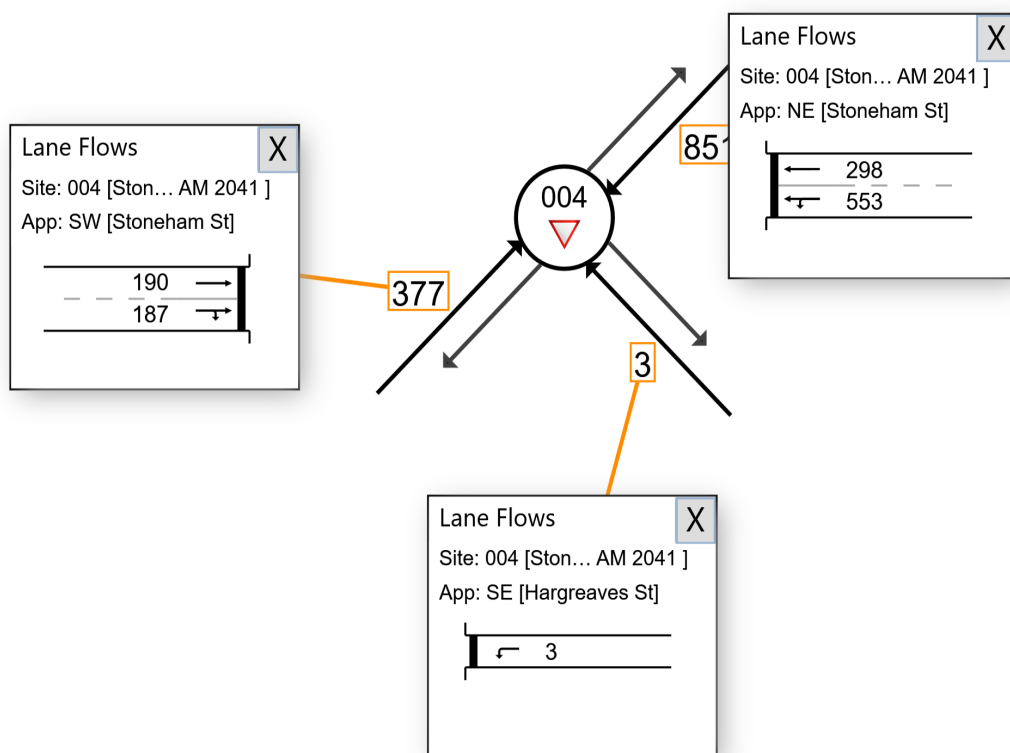
### All Movement Classes

Site: 004 [Stoneham Hargreaves AM 2041 (Site Folder: 2041 AM Peak)] Network: N101 [2041 AM Peak (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2041 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

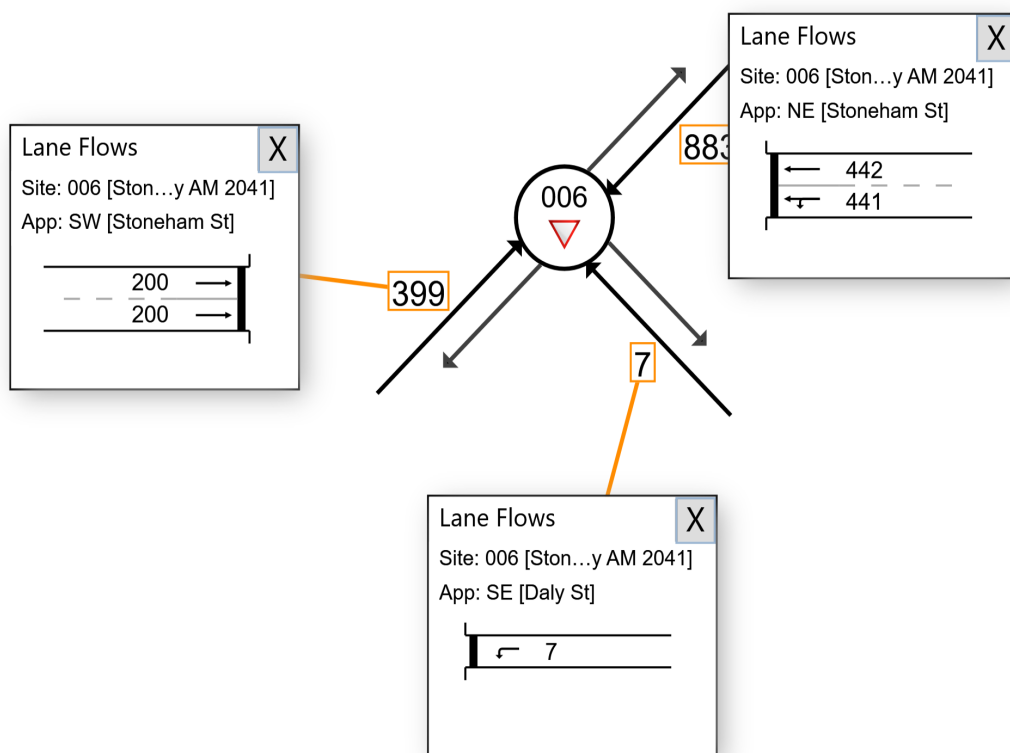
▼ Site: 006 [Stoneham Daly AM 2041 (Site Folder: 2041 AM Peak)]

■ Network: N101 [2041 AM Peak (Network Folder: General)]

Stoneham St / Daly St  
Left out only, Give Way  
2041 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

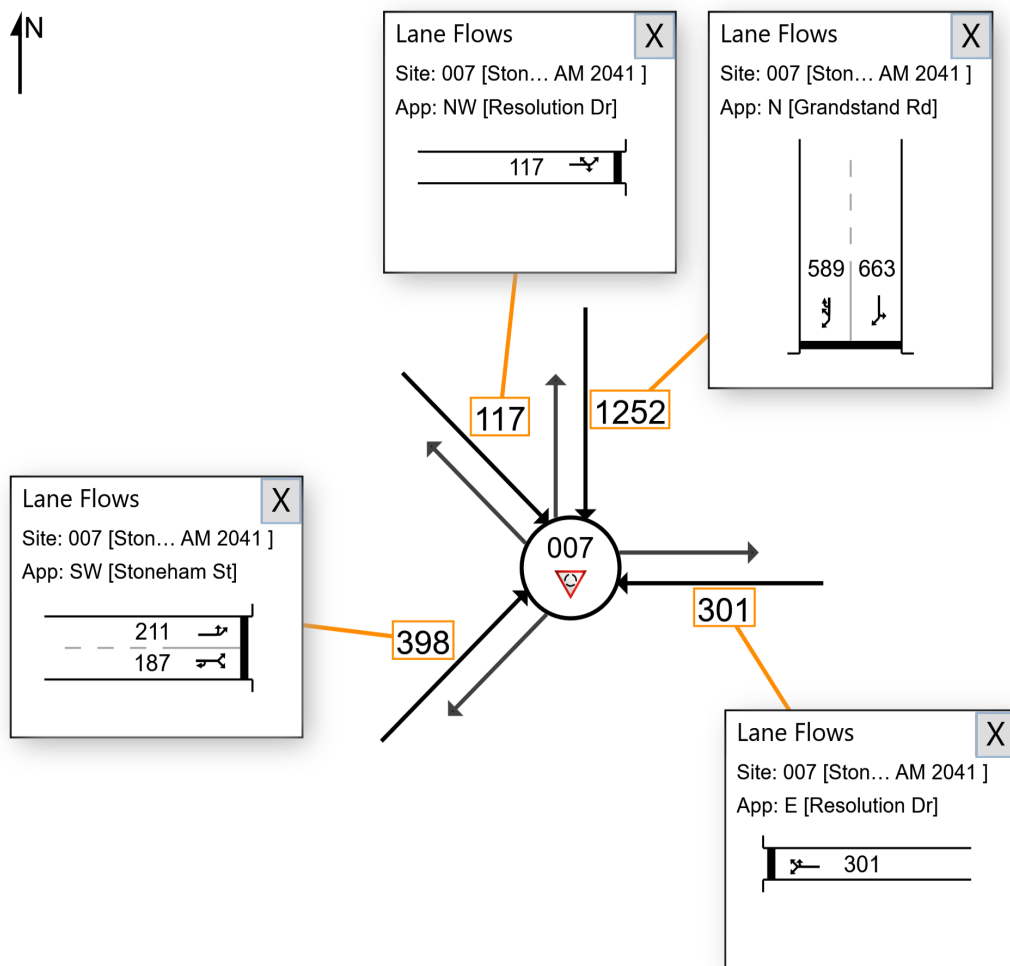
### All Movement Classes

Site: 007 [Stoneham Grandstand Resolution AM 2041 (Site Folder: 2041 AM Peak)] Network: N101 [2041 AM Peak (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 AM Peak  
Site Category: Existing Design  
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

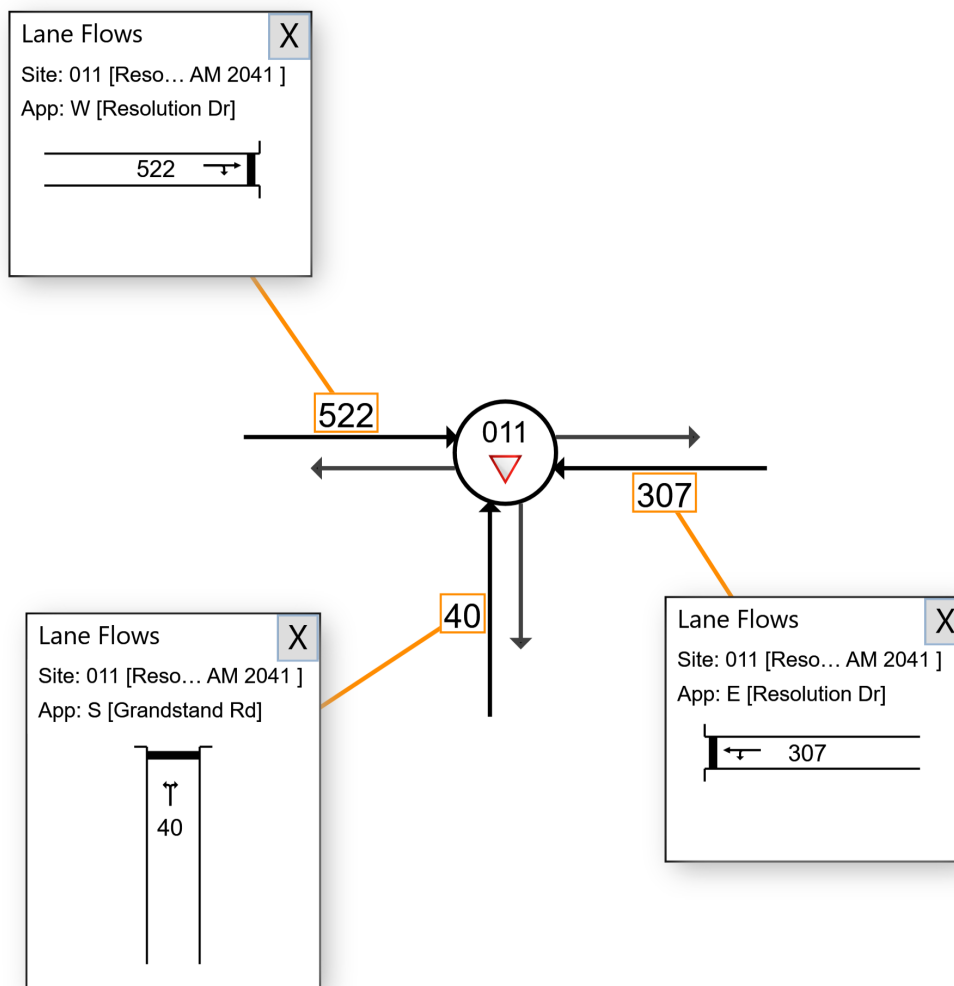
■ Network: N101 [2041 AM

▽ Site: 011 [Resolution Grandstand AM 2041 (Site Folder: 2041 AM Peak (Network Folder: General))]

Resolution Dr / Grandstand Rd  
Give Way  
2041 AM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia PM 2041 (Site Folder: 2041 PM Peak)]

Network: N101 [2041 PM Peak (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

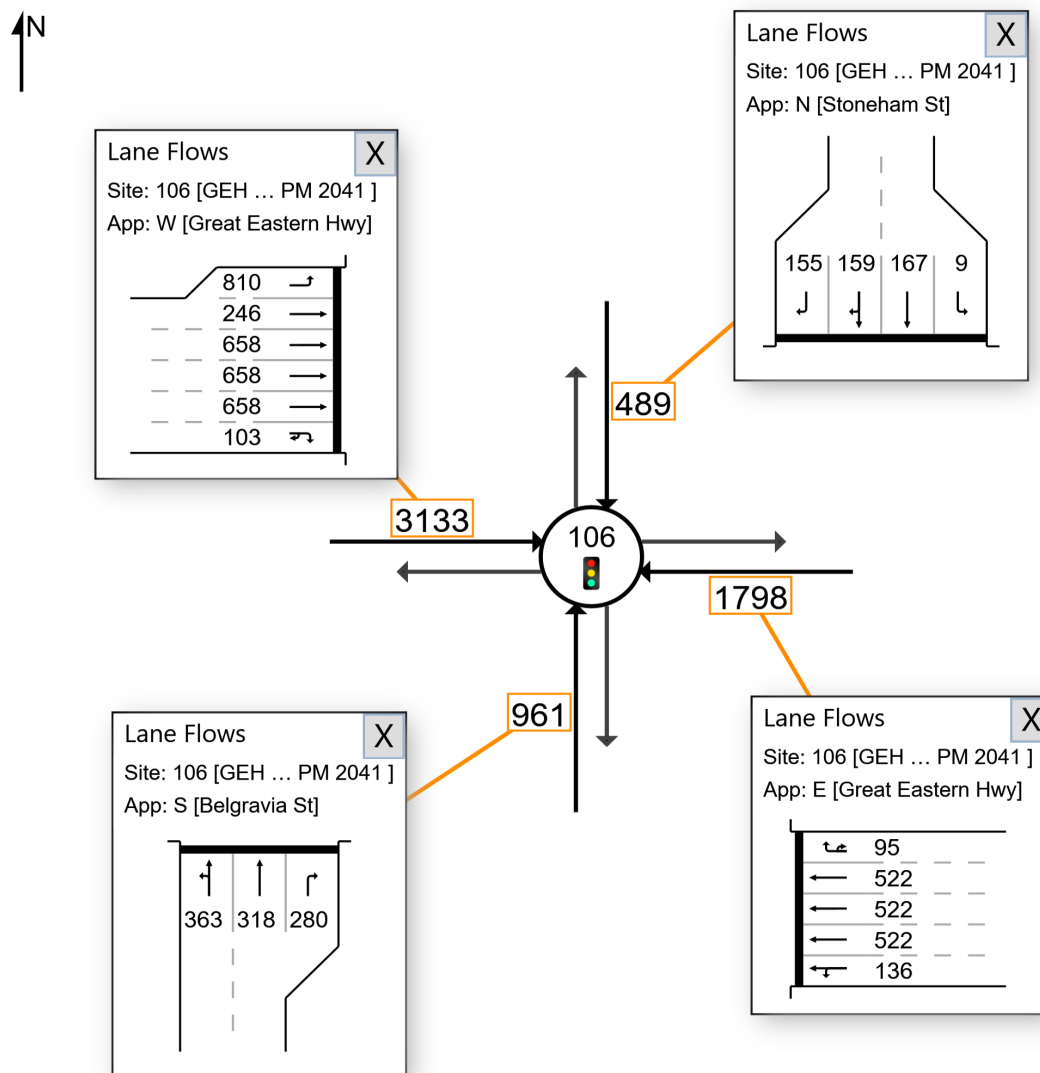
2041 PM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

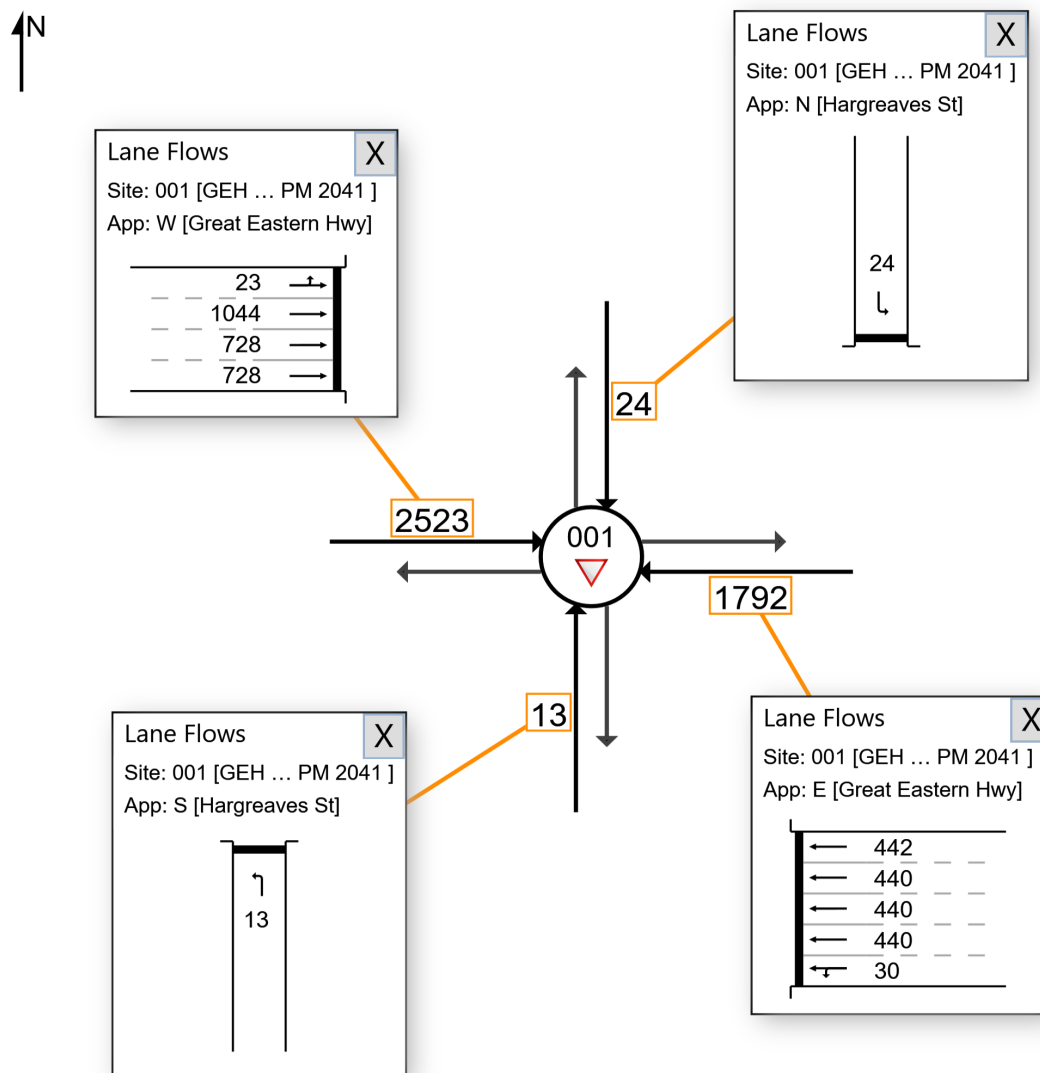
Site: 001 [GEH Hargreaves PM 2041 (Site Folder: 2041 PM Peak)]

Network: N101 [2041 PM Peak (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2041 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 002 [GEH Daly PM 2041 (Site Folder: 2041 PM Peak)]

Network: N101 [2041 PM Peak (Network Folder: General)]

GEH / Daly St

Left in Left out, Give Way

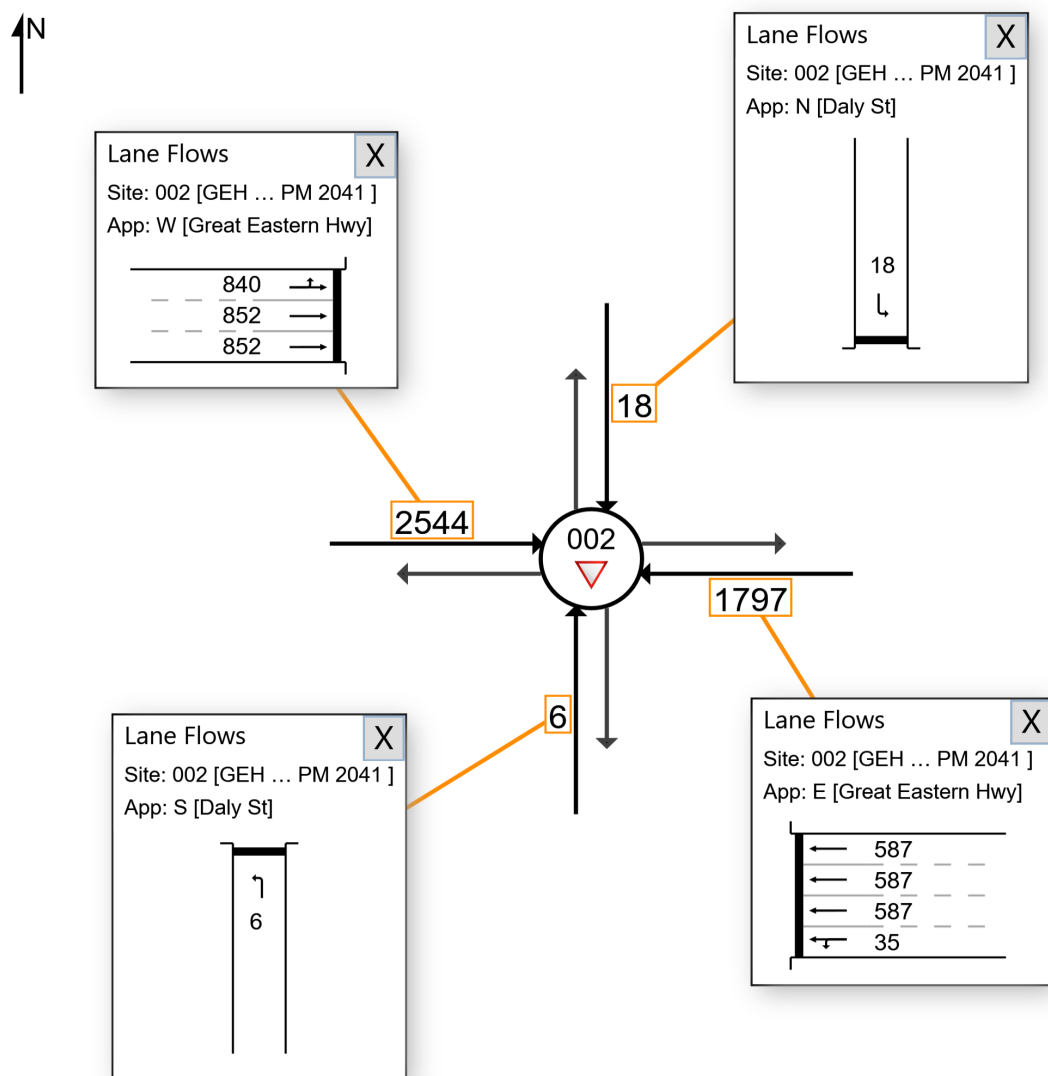
2041 PM Peak

Site Category: Existing Design

Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

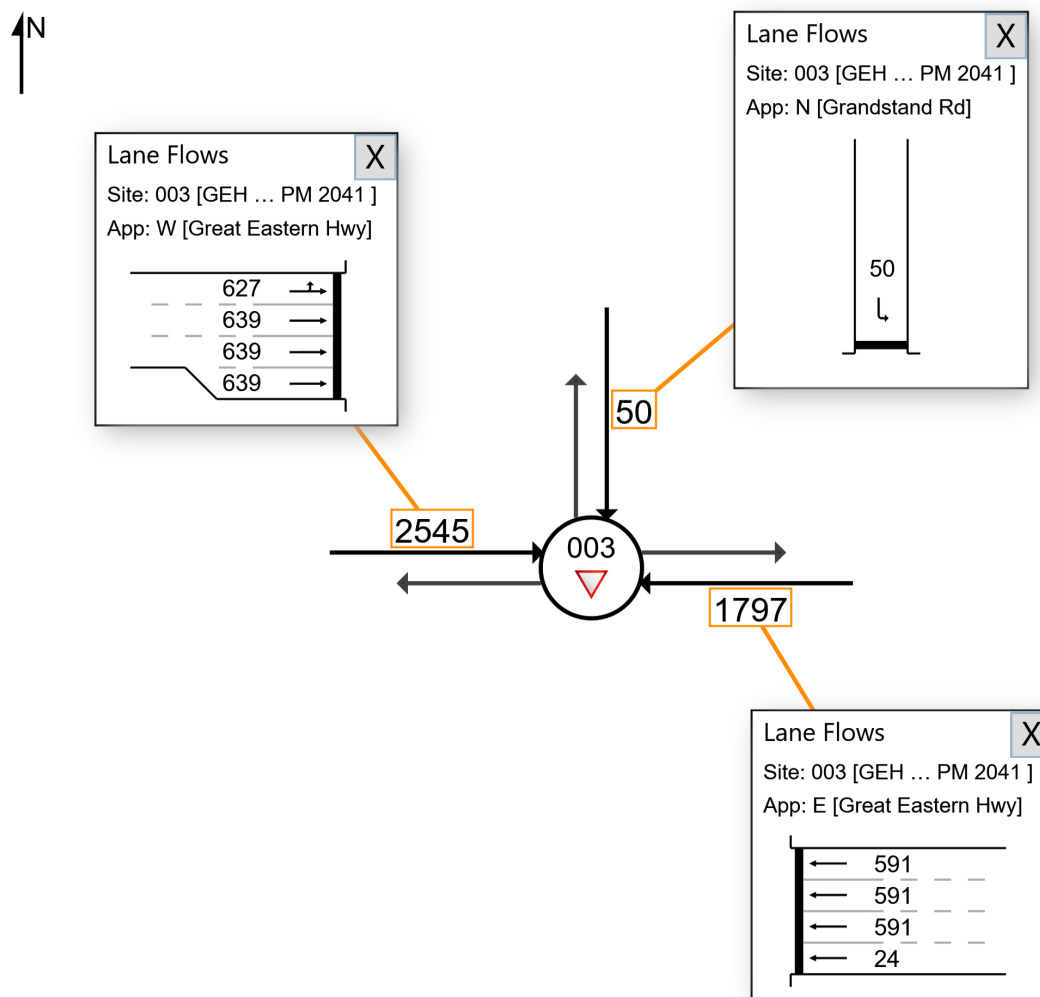
Site: 003 [GEH Grandstand PM 2041 (Site Folder: 2041 PM Peak)]

Network: N101 [2041 PM Peak (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2041 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey PM 2041 (Site Folder: 2041 PM Peak)]

Network: N101 [2041 PM Peak (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

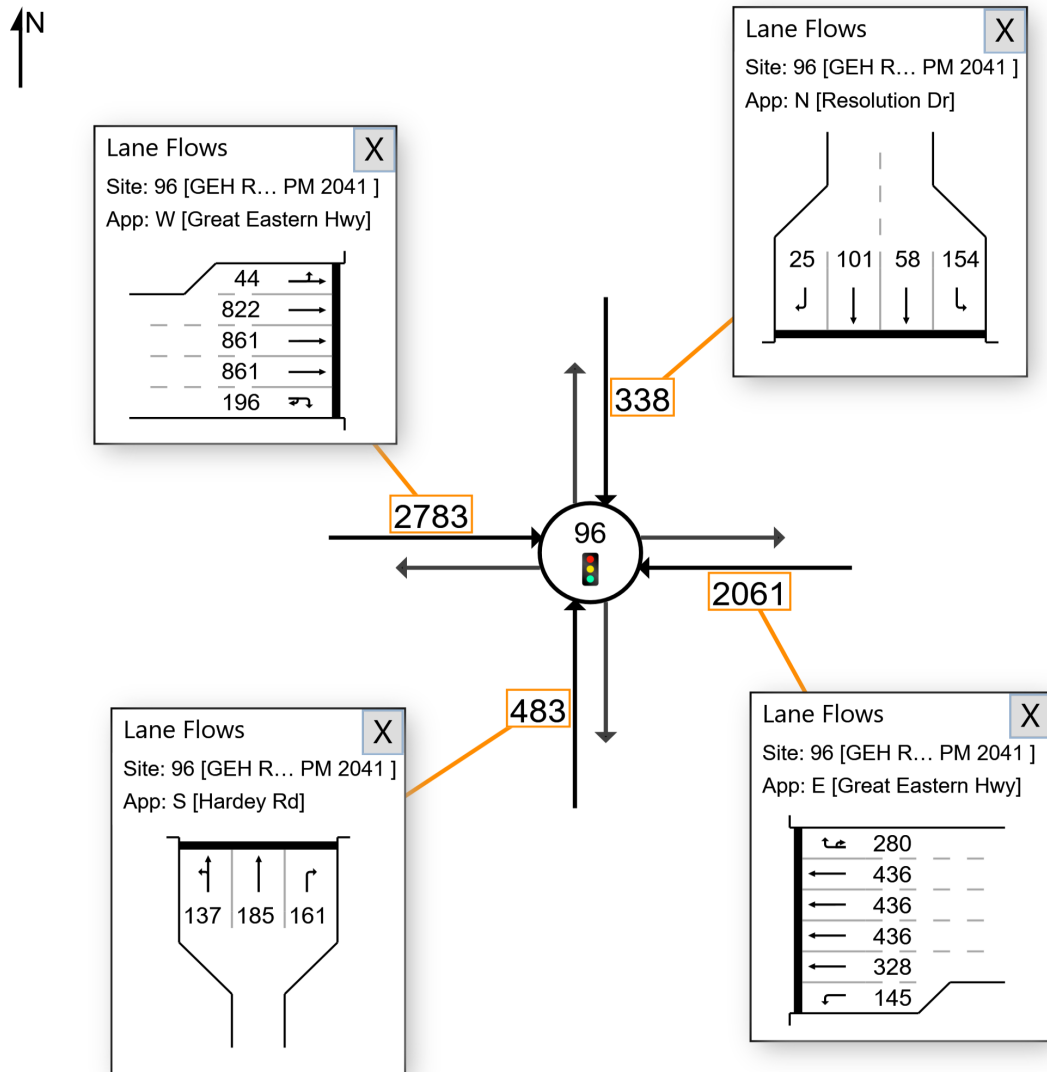
2041 PM Peak

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

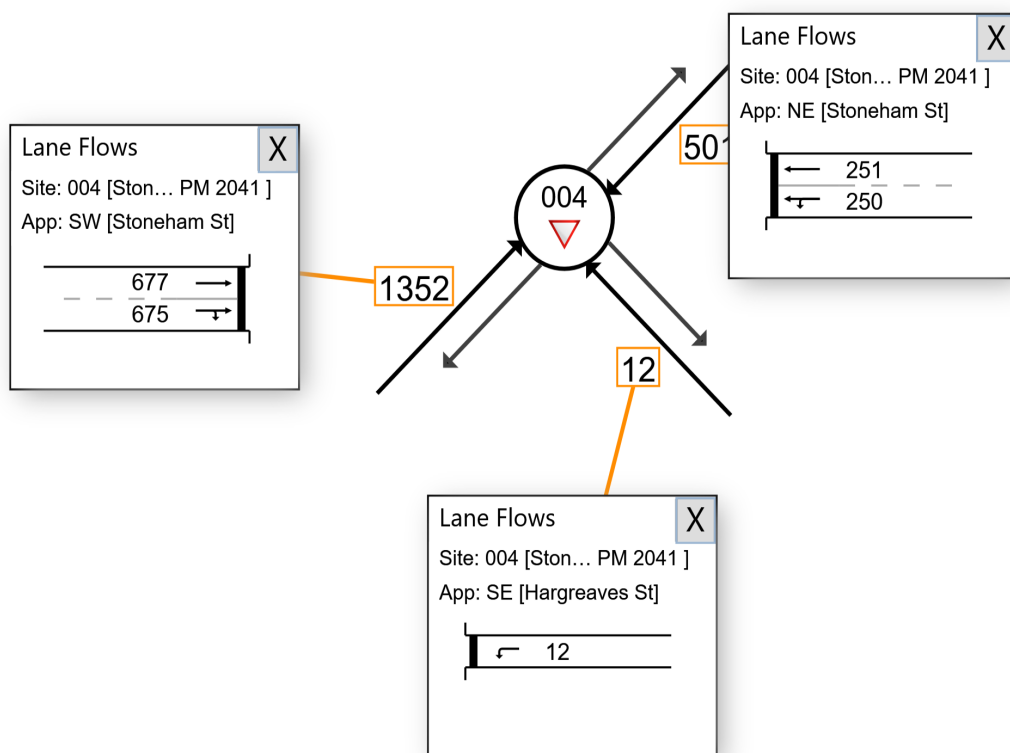
### All Movement Classes

Site: 004 [Stoneham Hargreaves PM 2041] (Site Folder: 2041 PM Peak) Network: N101 [2041 PM Peak (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2041 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

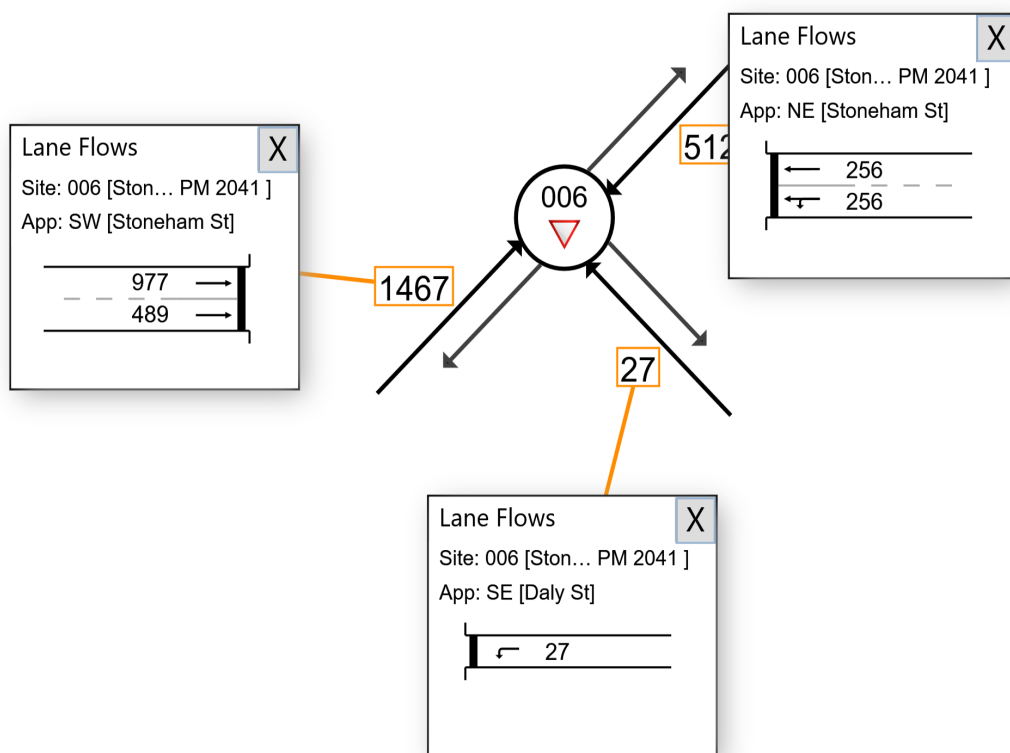
▼ Site: 006 [Stoneham Daly PM 2041 (Site Folder: 2041 PM Peak)]

■ Network: N101 [2041 PM Peak (Network Folder: General)]

Stoneham St / Daly St  
Left out only, Give Way  
2041 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

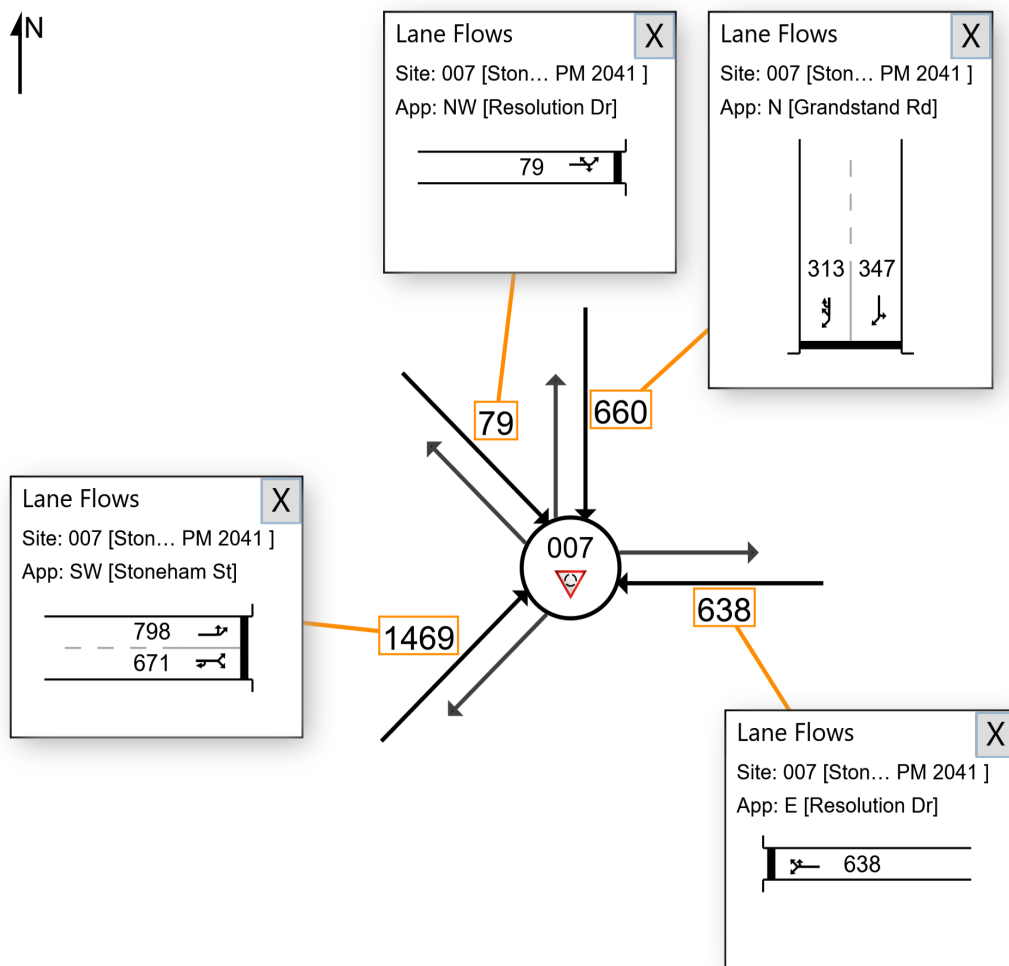
### All Movement Classes

Site: 007 [Stoneham Grandstand Resolution PM 2041 (Site Folder: 2041 PM Peak)] Network: N101 [2041 PM Peak (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 PM Peak  
Site Category: Existing Design  
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

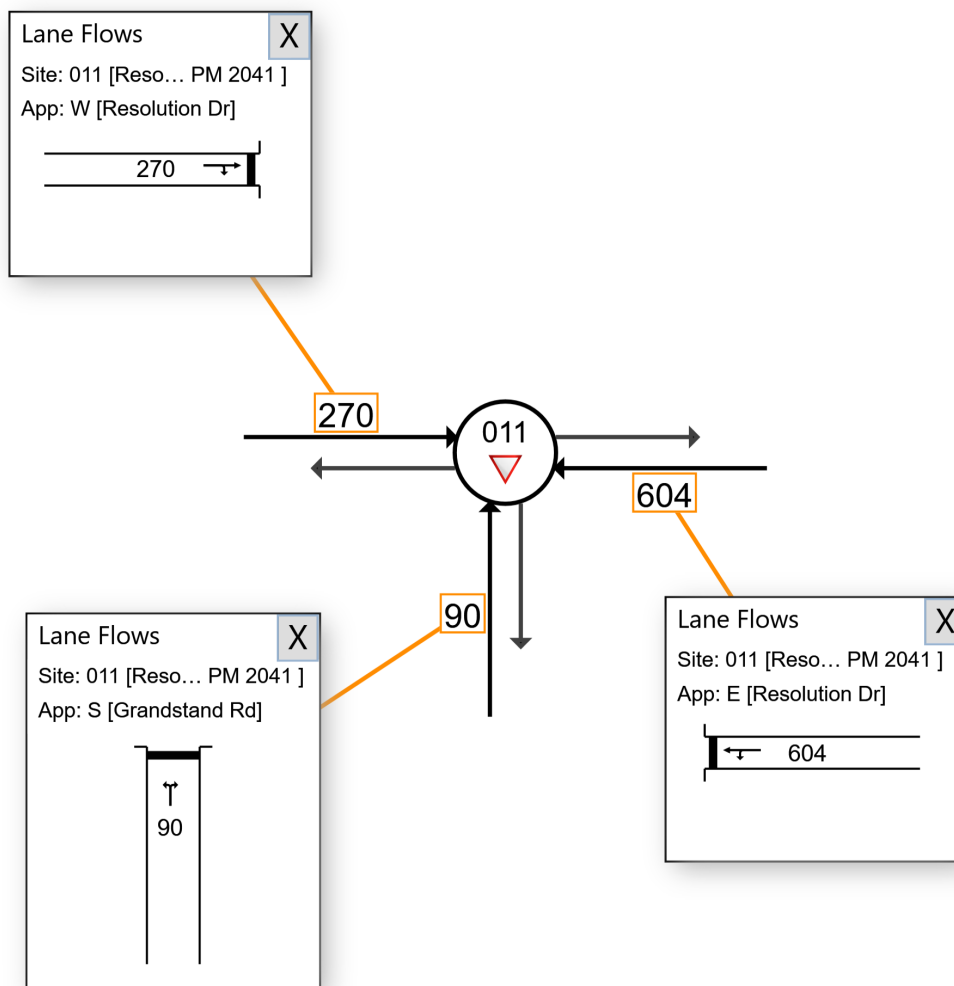
■ Network: N101 [2041 PM

▽ Site: 011 [Resolution Grandstand PM 2041 (Site Folder: 2041 PM Peak (Network Folder: General))

Resolution Dr / Grandstand Rd  
Give Way  
2041 PM Peak  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]

Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

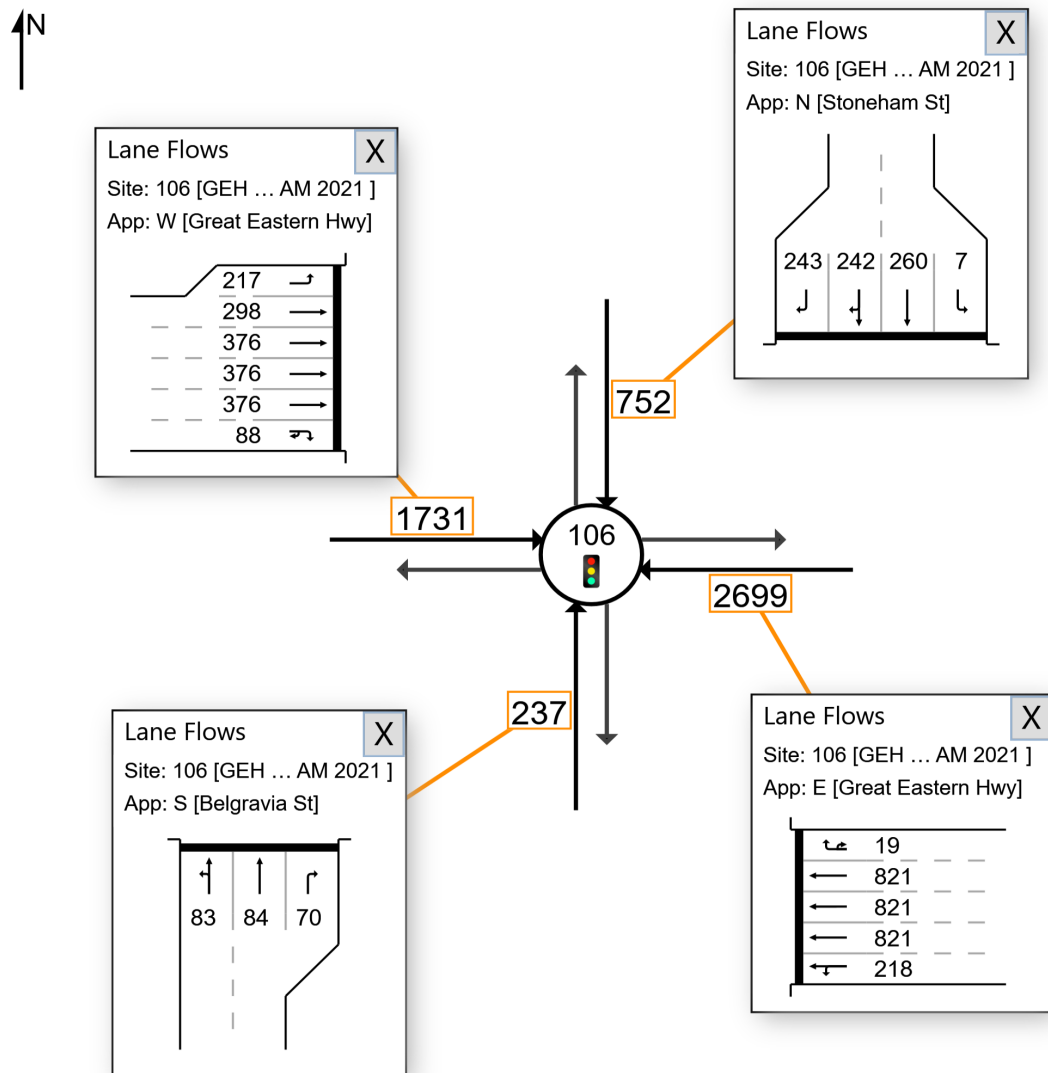
2021 AM Peak with proposed road network

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Close All Popups





## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

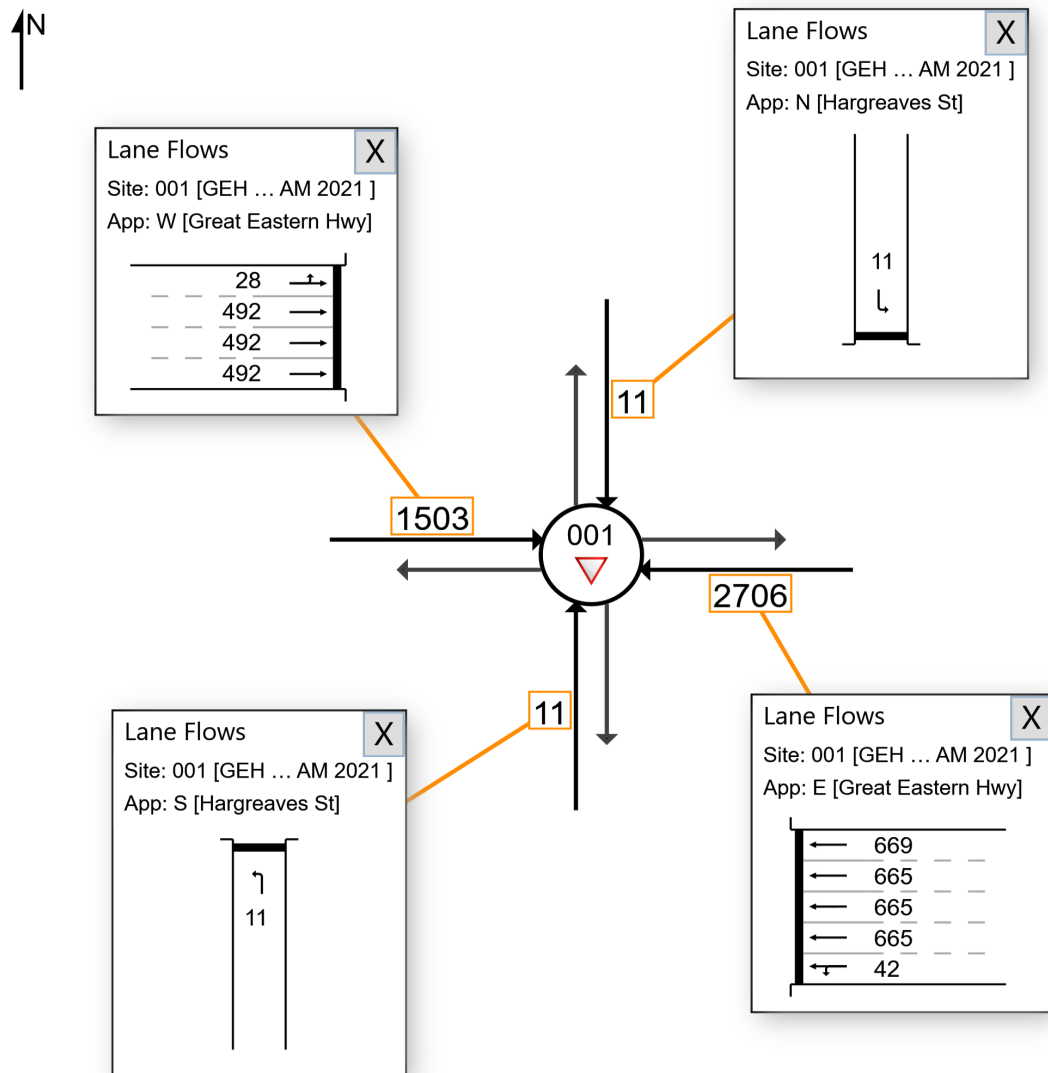
▼ Site: 001 [GEH Hargreaves AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]

■ Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2021 AM Peak with proposed road network  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 002 [GEH Daly AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]

■ Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]

GEH / Daly St

Left in Left out, Give Way

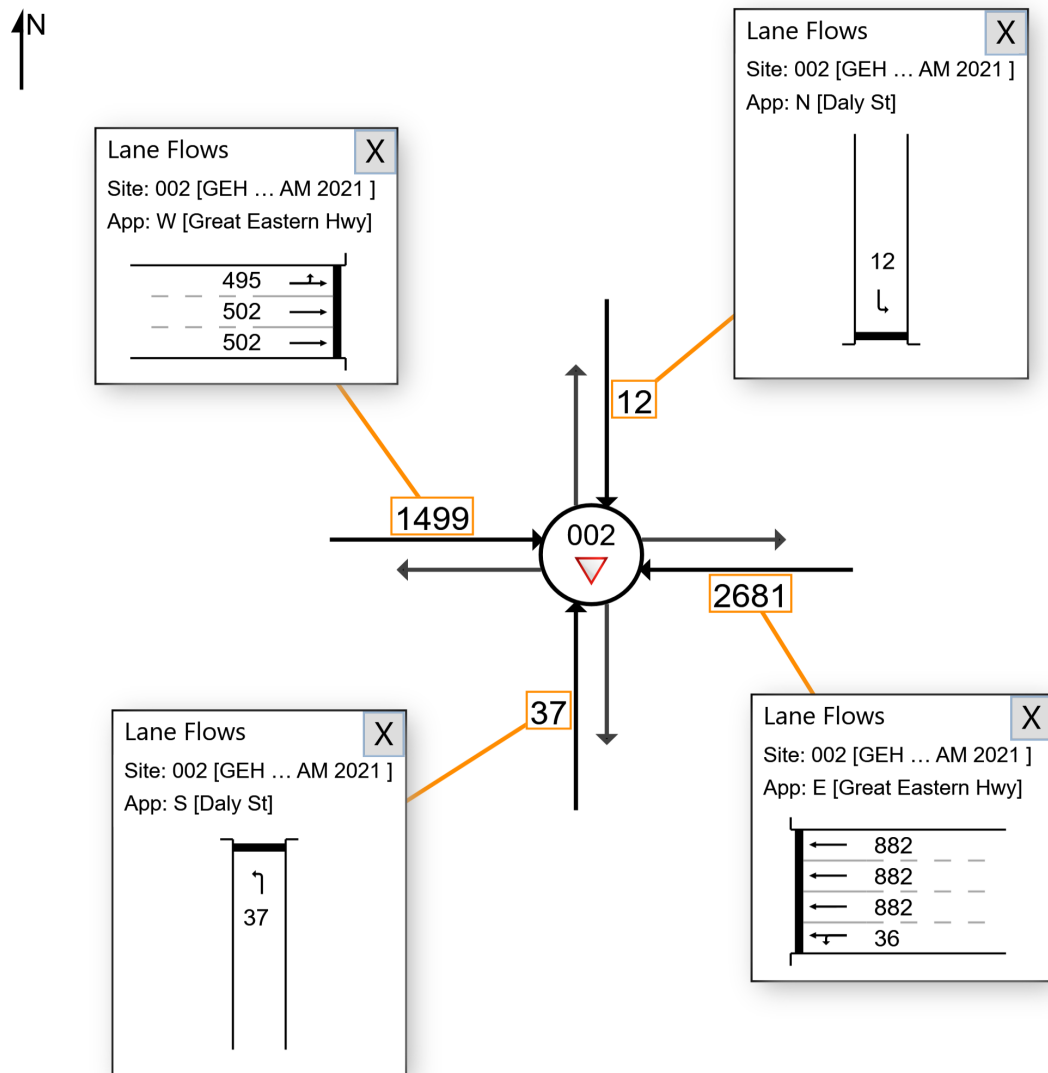
2021 AM Peak with proposed road network

Site Category: Existing Design

Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

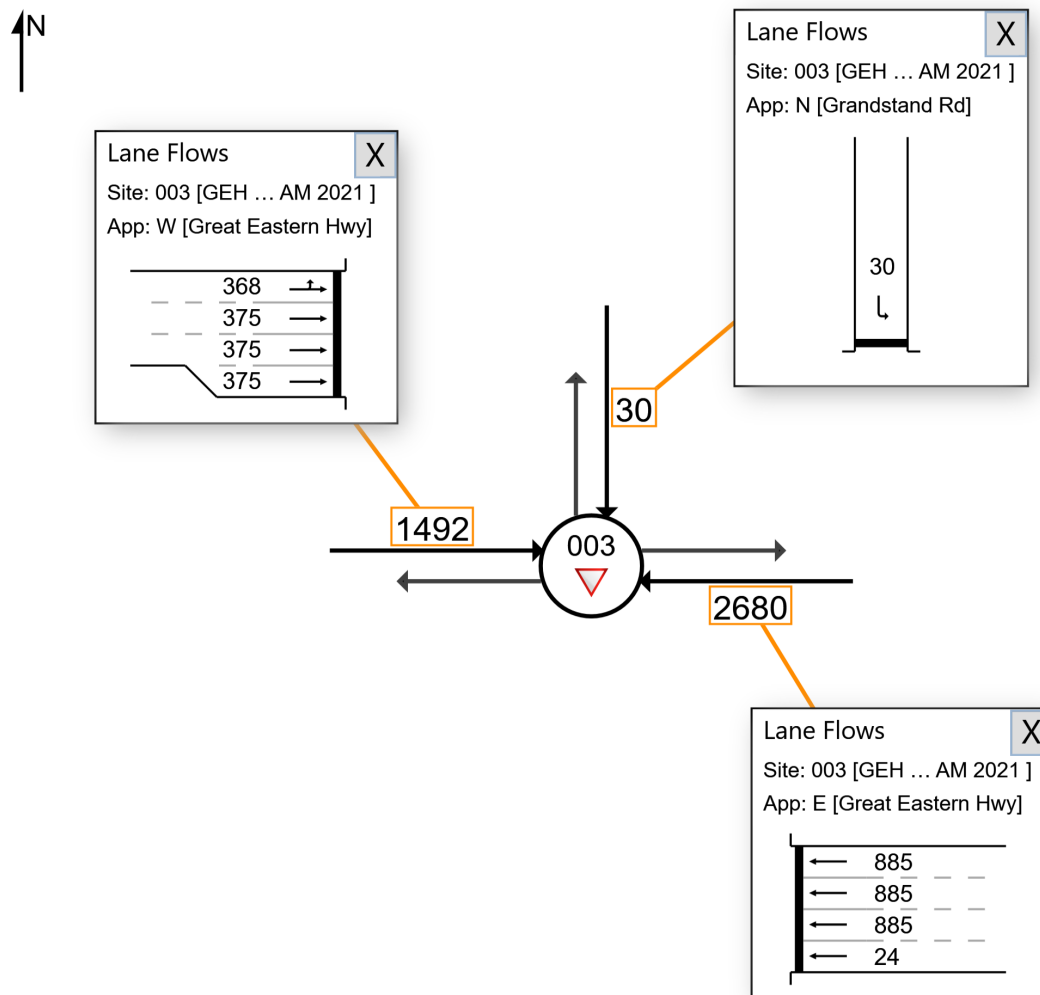
▼ Site: 003 [GEH Grandstand AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]

■ Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2021 AM Peak with proposed road network  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]

Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

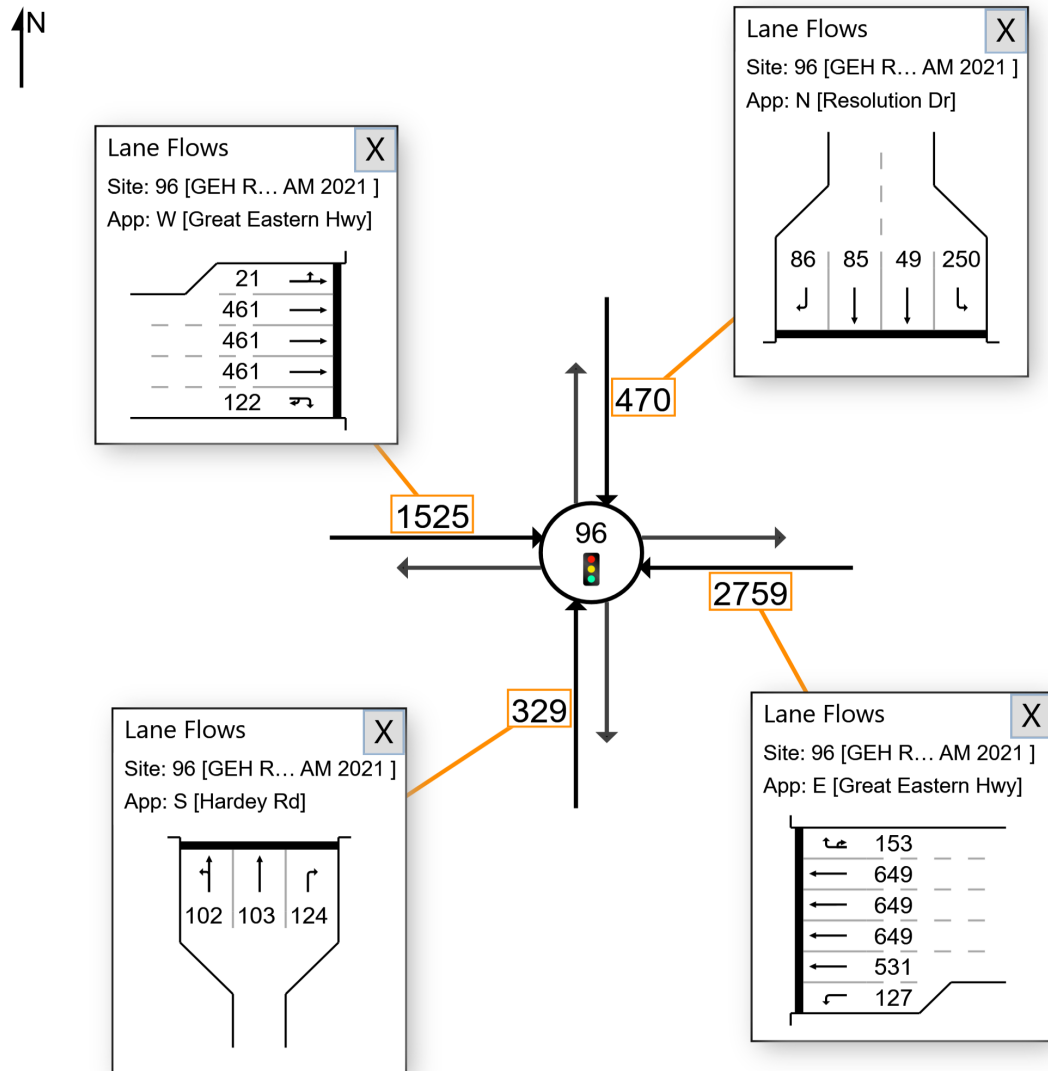
2021 AM Peak with proposed road network

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

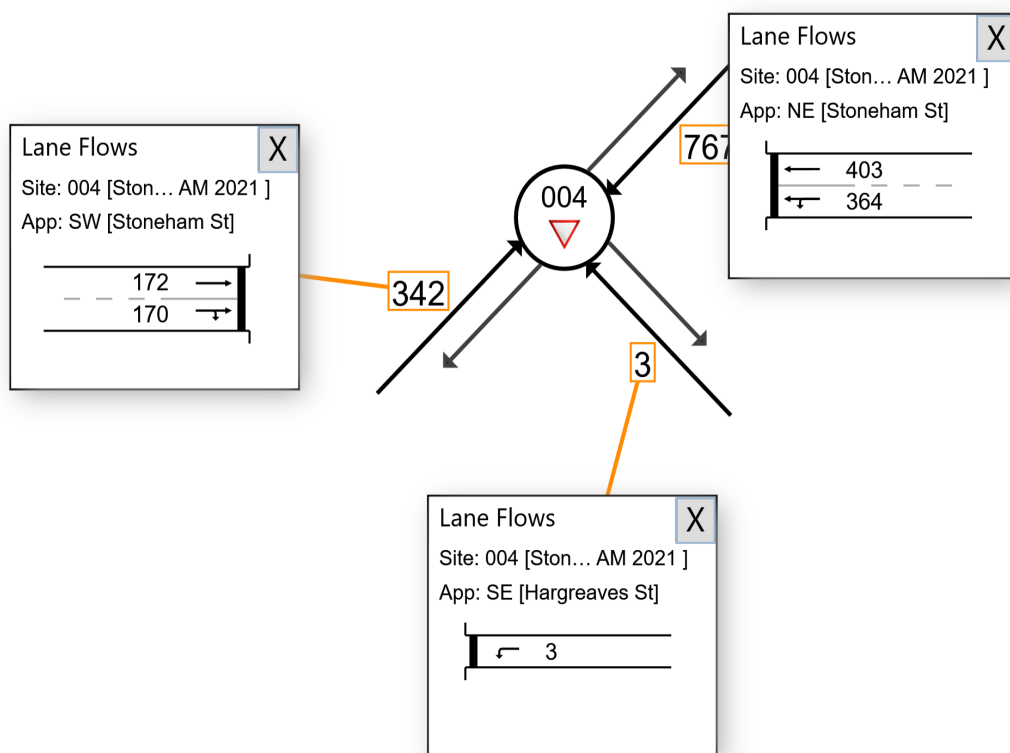
▼ Site: 004 [Stoneham Hargreaves AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]

■ Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2021 AM Peak with proposed road network  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups





## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

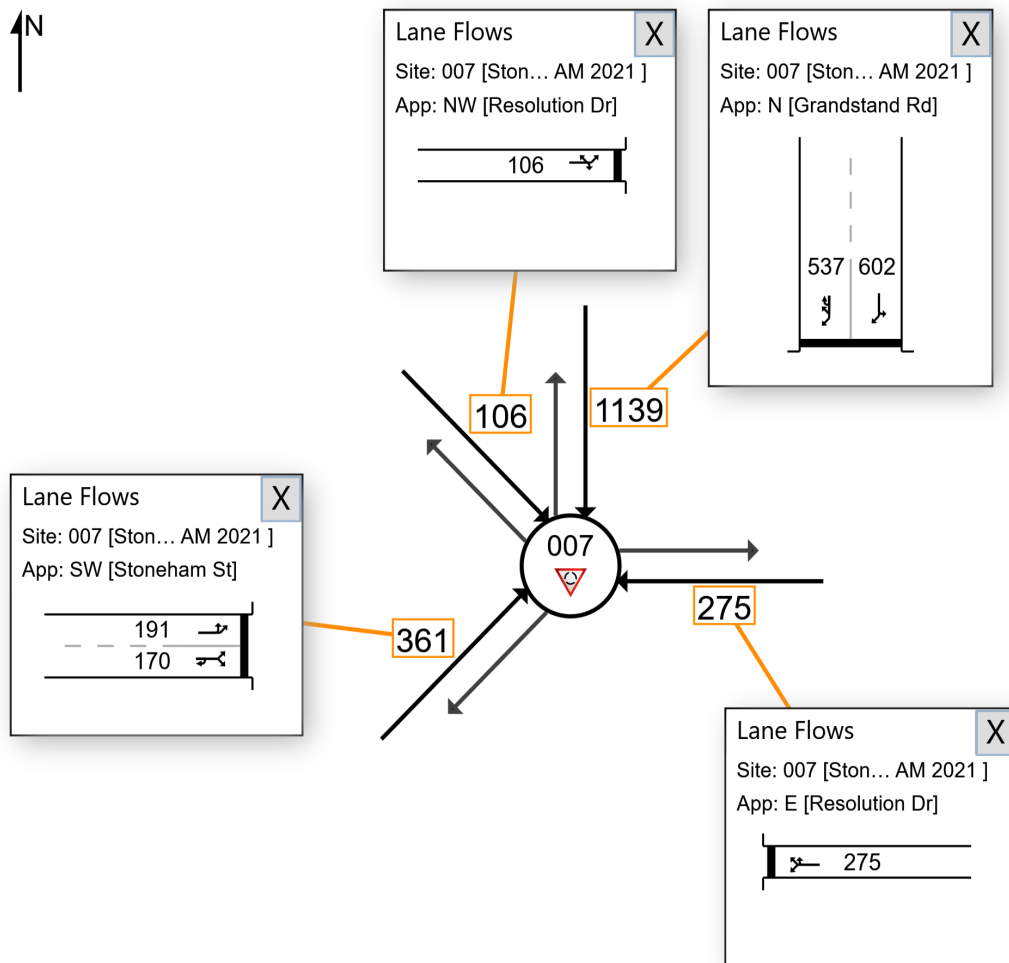
 **Site: 007 [Stoneham Grandstand Resolution AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]**

 **Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 AM Peak with proposed road network  
Site Category: Existing Design  
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 011 [Resolution Grandstand AM 2021 (Site Folder: 2021 AM Peak Proposed Network)]

■ Network: N101 [2021 AM Peak Proposed Network (Network Folder: General)]

Resolution Dr / Grandstand Rd

Give Way

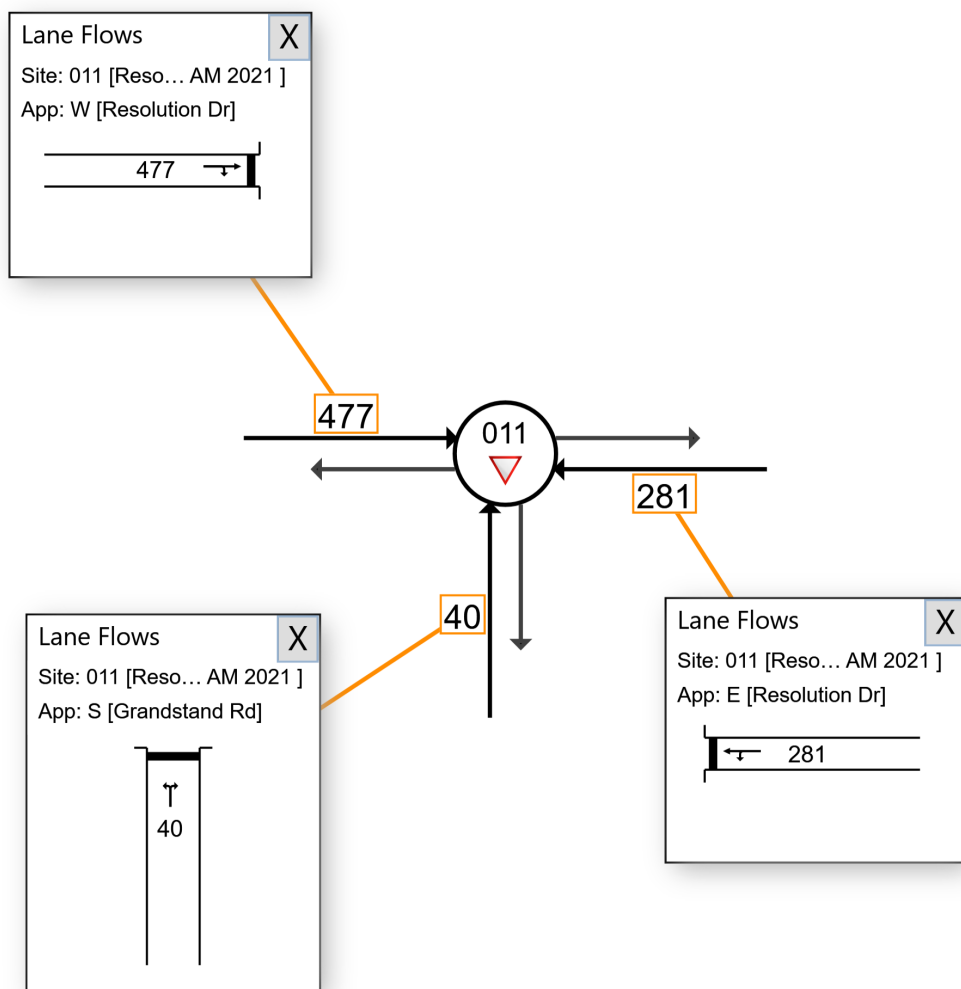
2021 AM Peak with proposed road network

Site Category: Existing Design

Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]

Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

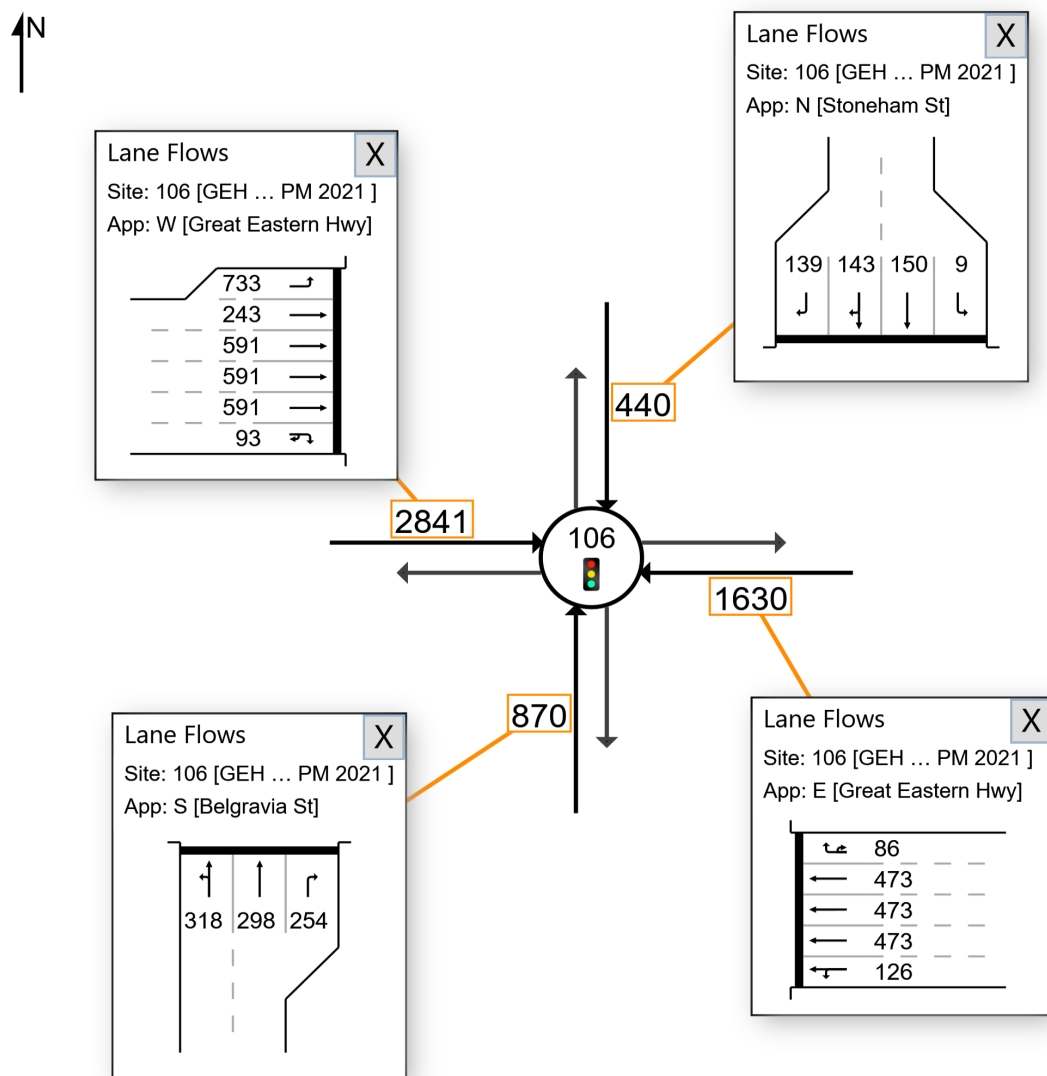
2021 PM Peak with proposed road network

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
Click and drag popup boxes to move to preferred positions.

Close All Popups



Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

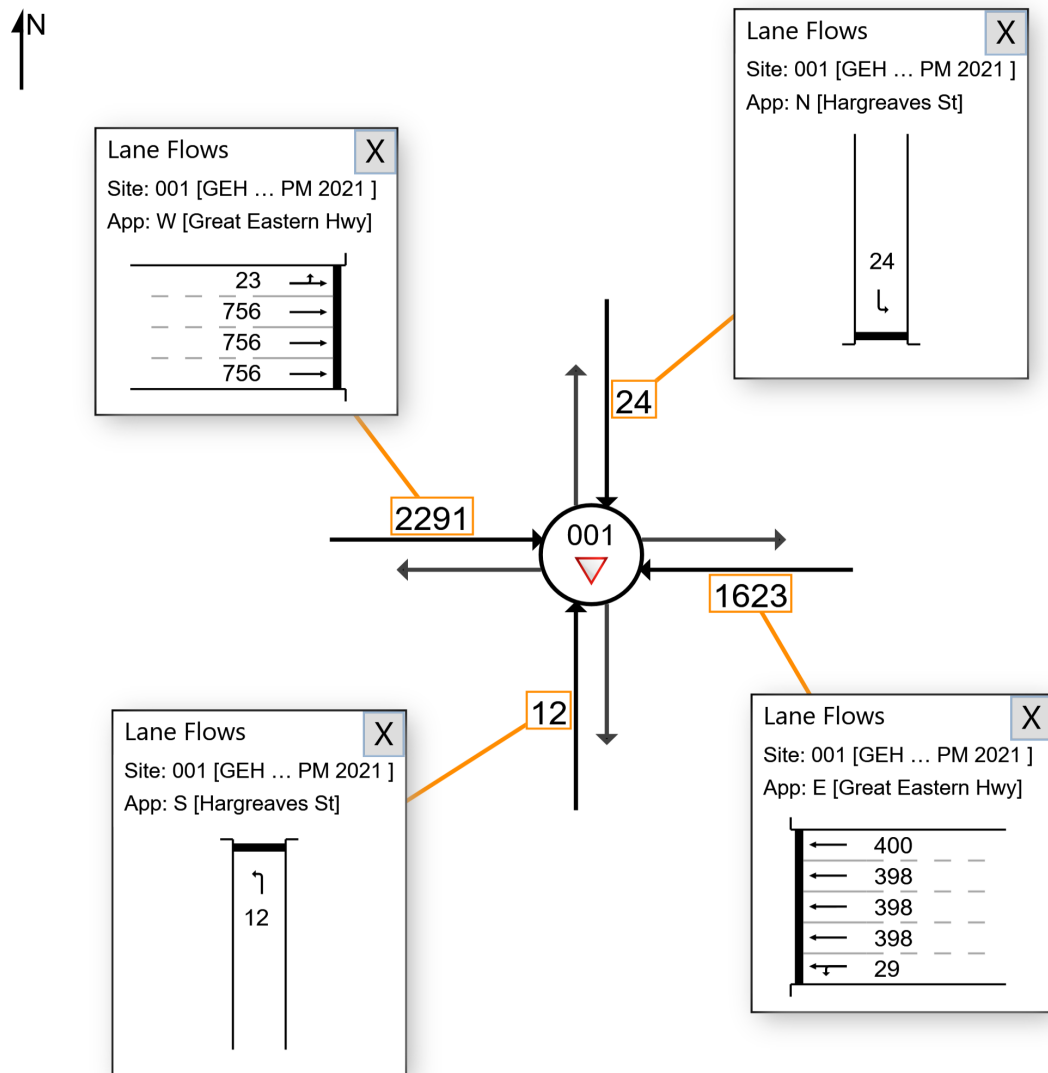
▼ Site: 001 [GEH Hargreaves PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]

■ Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2021 PM Peak with proposed road network  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 002 [GEH Daly PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]

■ Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]

GEH / Daly St

Left in Left out, Give Way

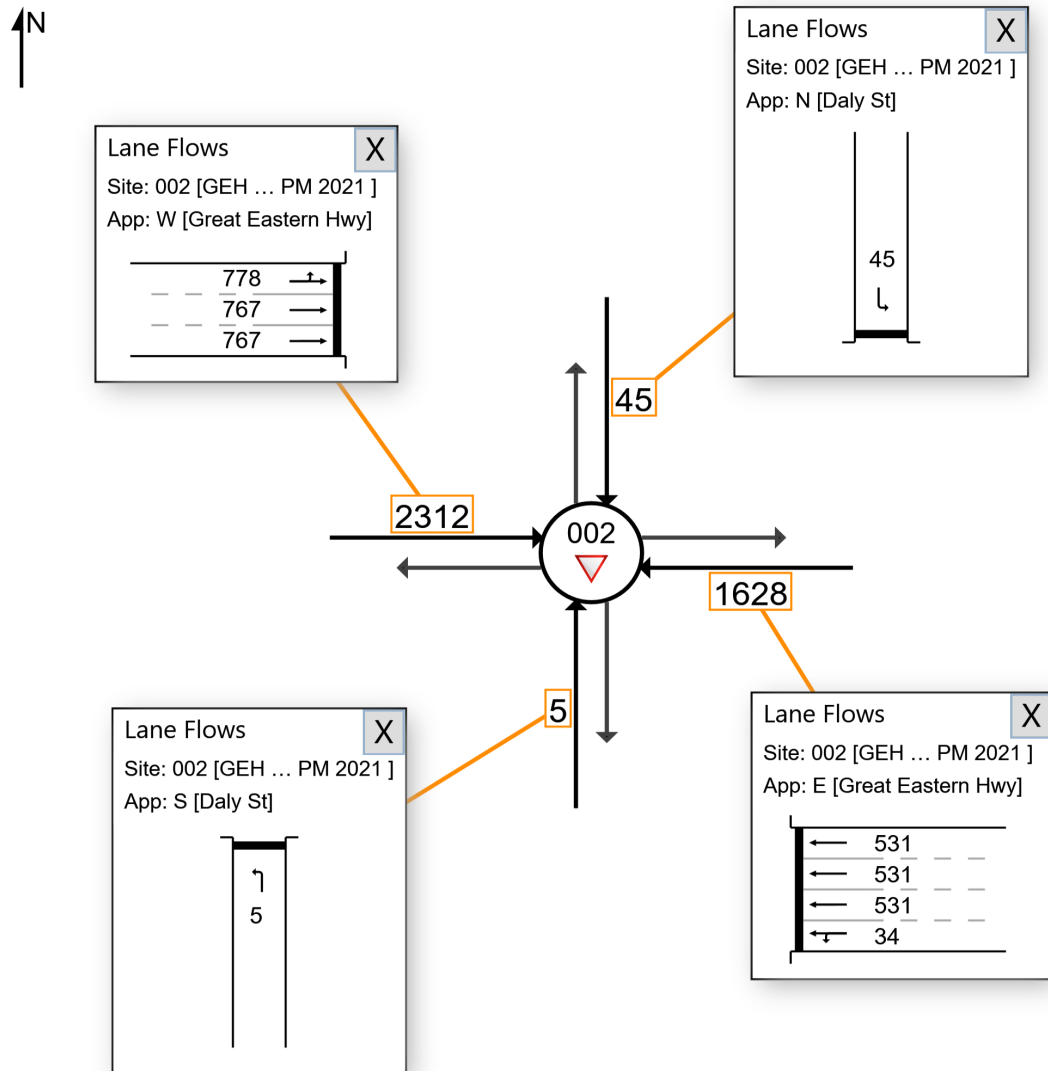
2021 PM Peak with proposed road network

Site Category: Existing Design

Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

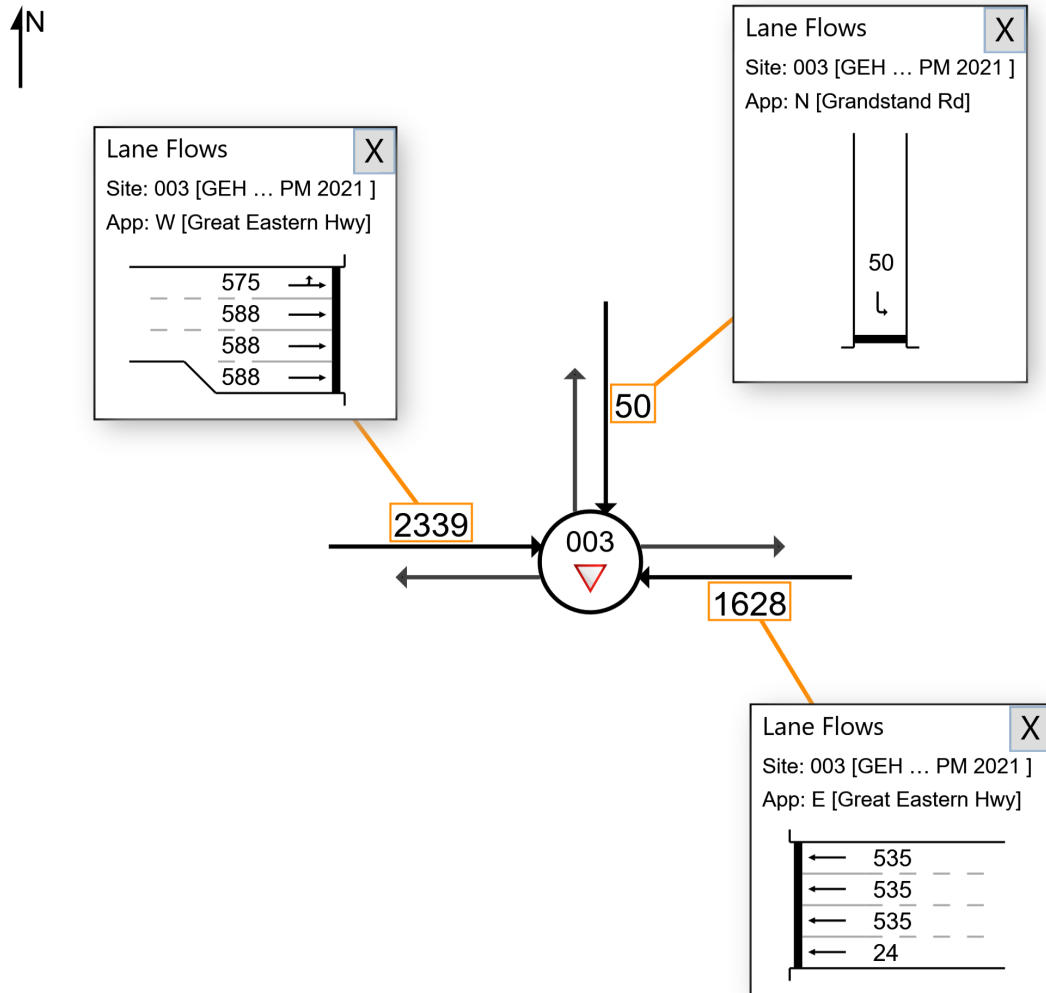
▼ Site: 003 [GEH Grandstand PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]

■ Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2021 PM Peak with proposed road network  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows

## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]

Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

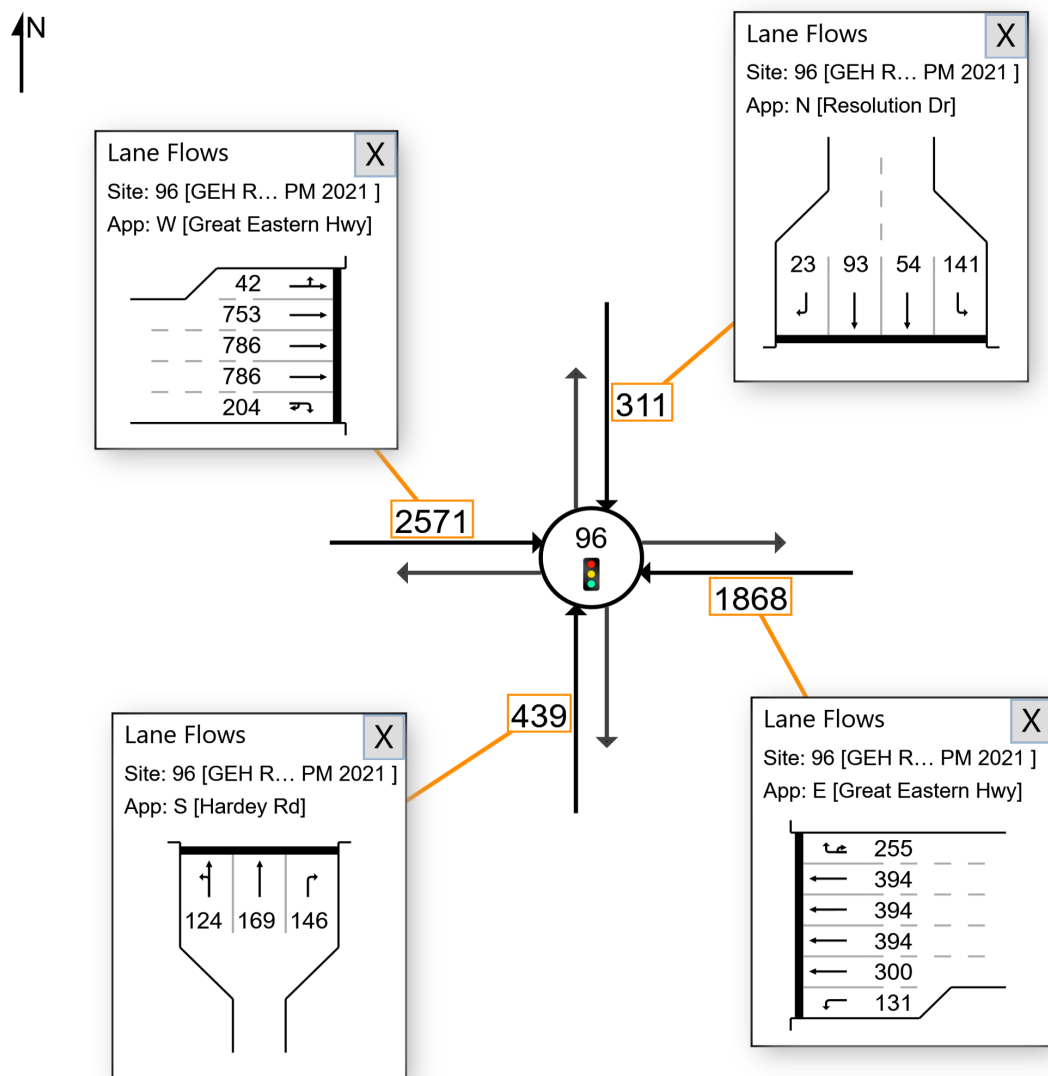
2021 PM Peak with proposed road network

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

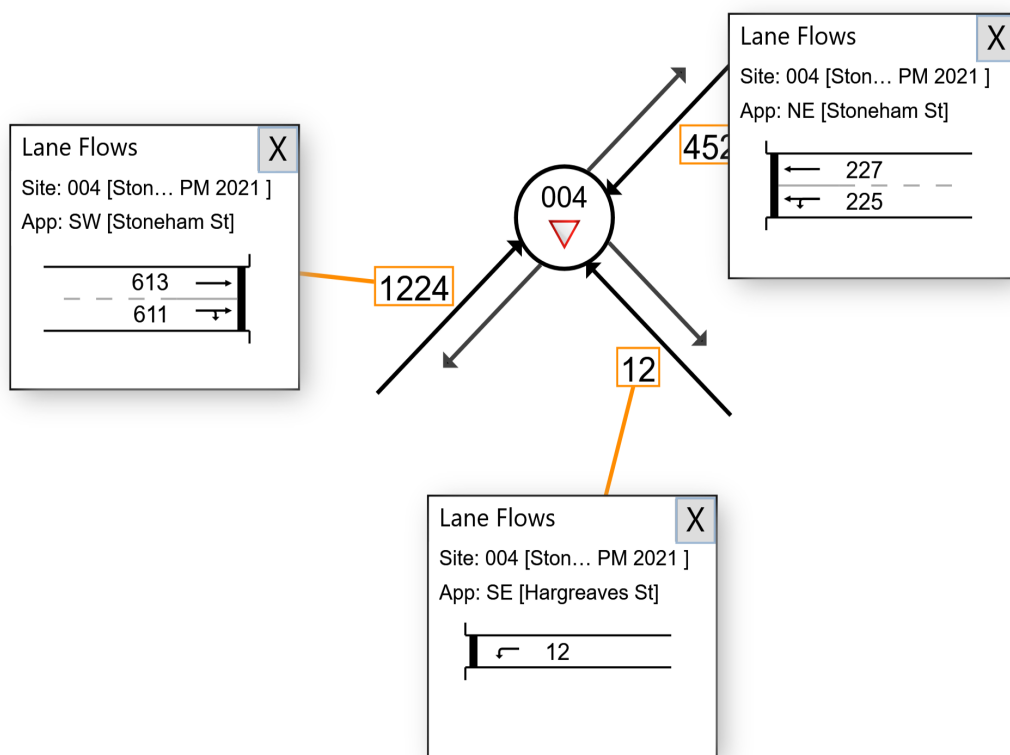
▼ Site: 004 [Stoneham Hargreaves PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]

■ Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2021 PM Peak with proposed road network  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

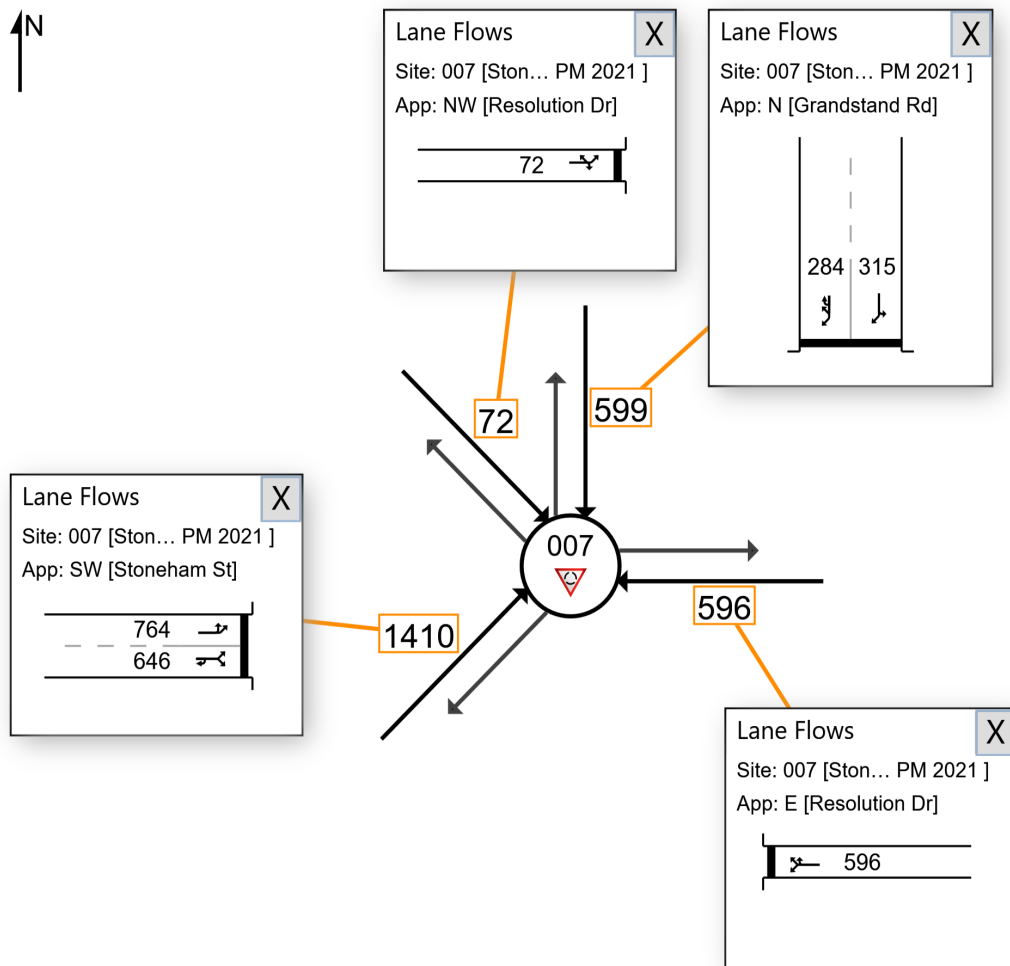
 **Site: 007 [Stoneham Grandstand Resolution PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]**

 **Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]**

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 PM Peak with proposed road network  
Site Category: Existing Design  
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

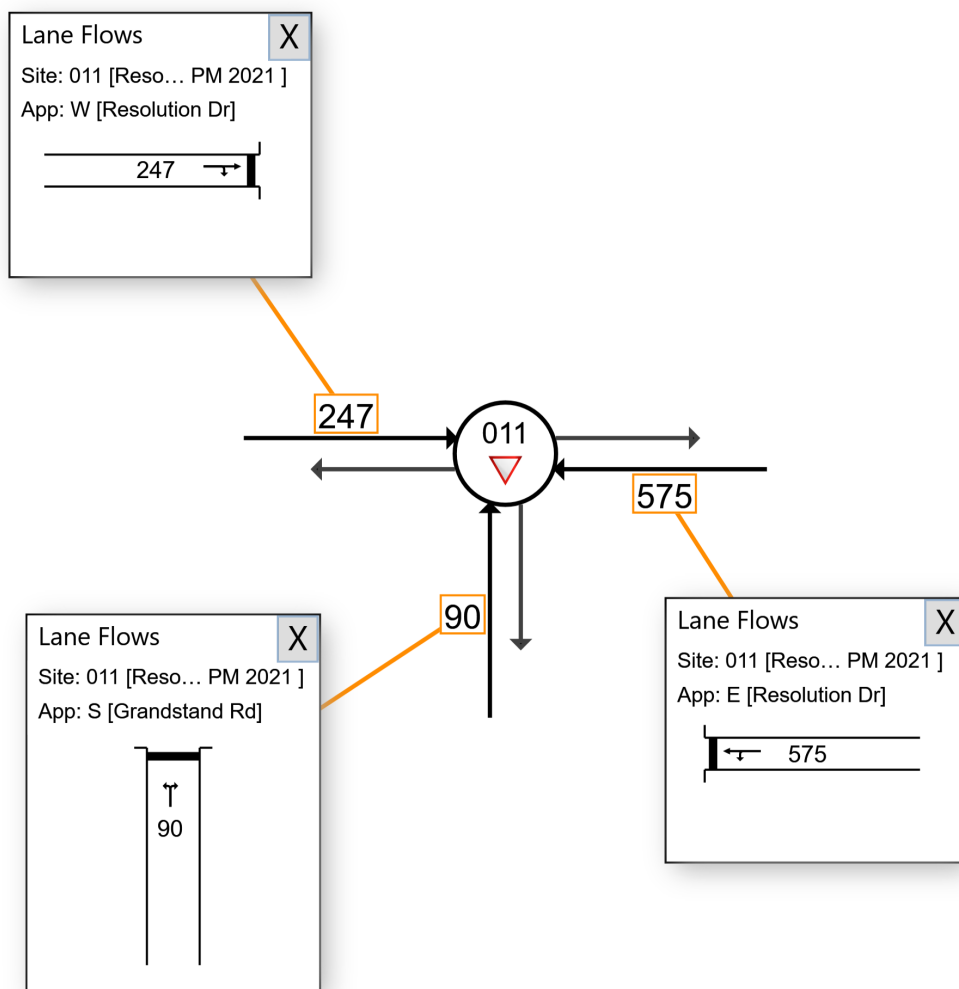
Site: 011 [Resolution Grandstand PM 2021 (Site Folder: 2021 PM Peak Proposed Network)]

Network: N101 [2021 PM Peak Proposed Network (Network Folder: General)]

Resolution Dr / Grandstand Rd  
Give Way  
2021 PM Peak with proposed road network  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows




## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

 Site: 106 [GEH Stoneham Belgravia AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]

 Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

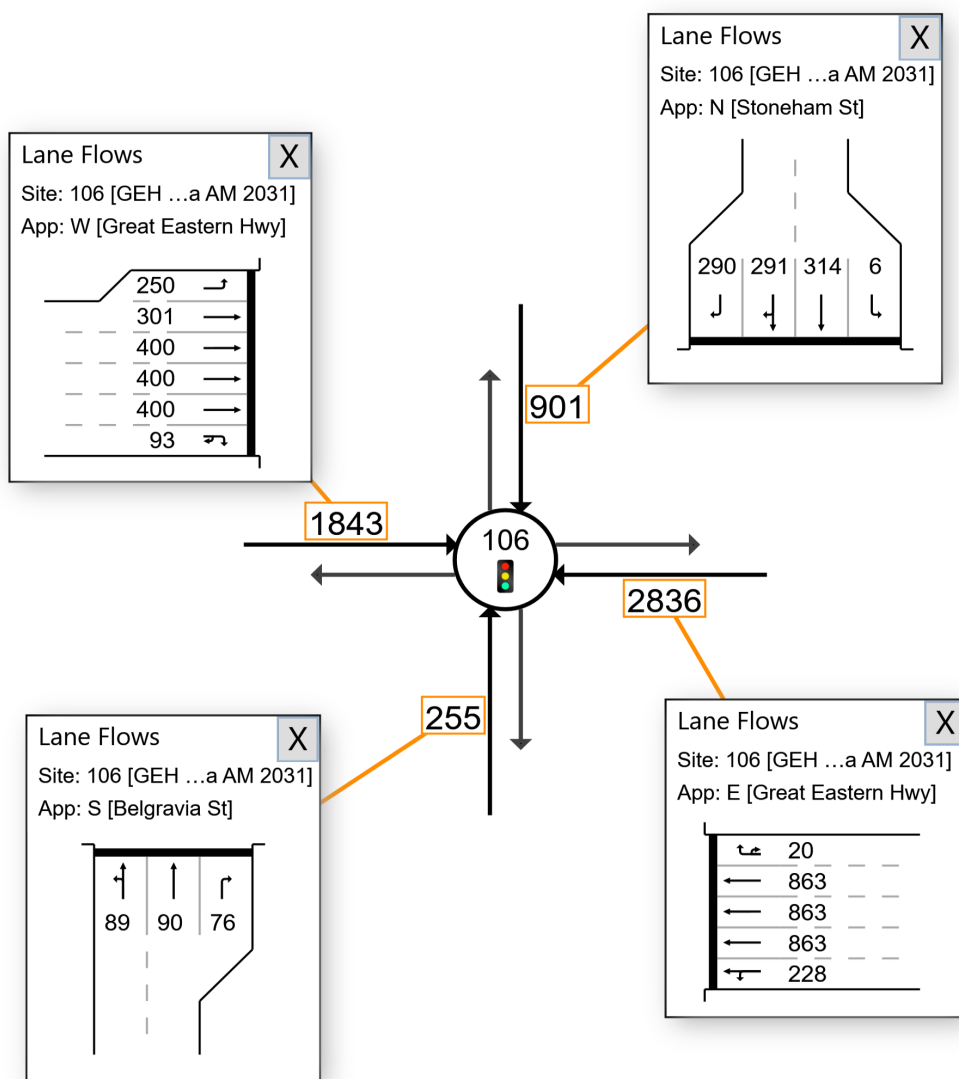
2031 AM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

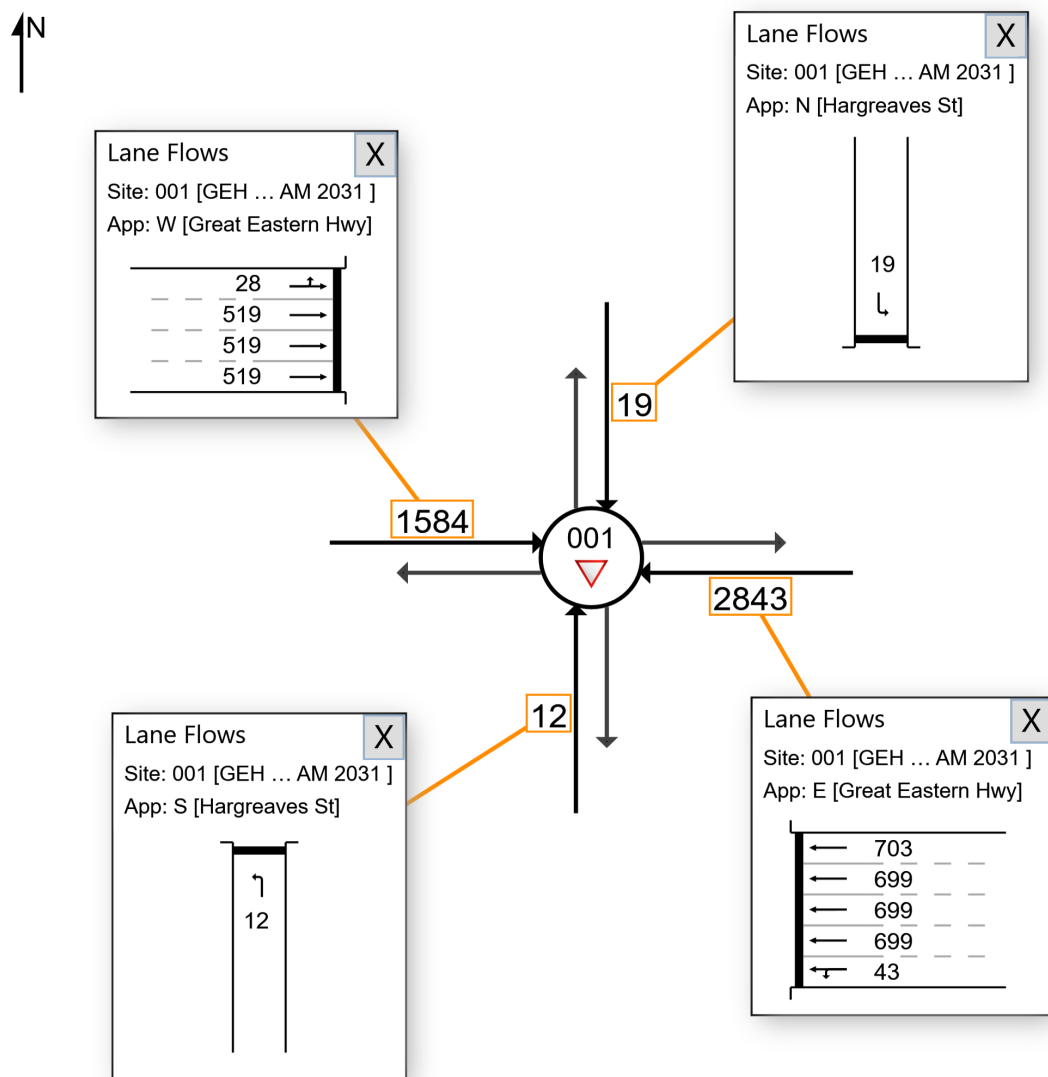
▼ Site: 001 [GEH Hargreaves AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2031 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

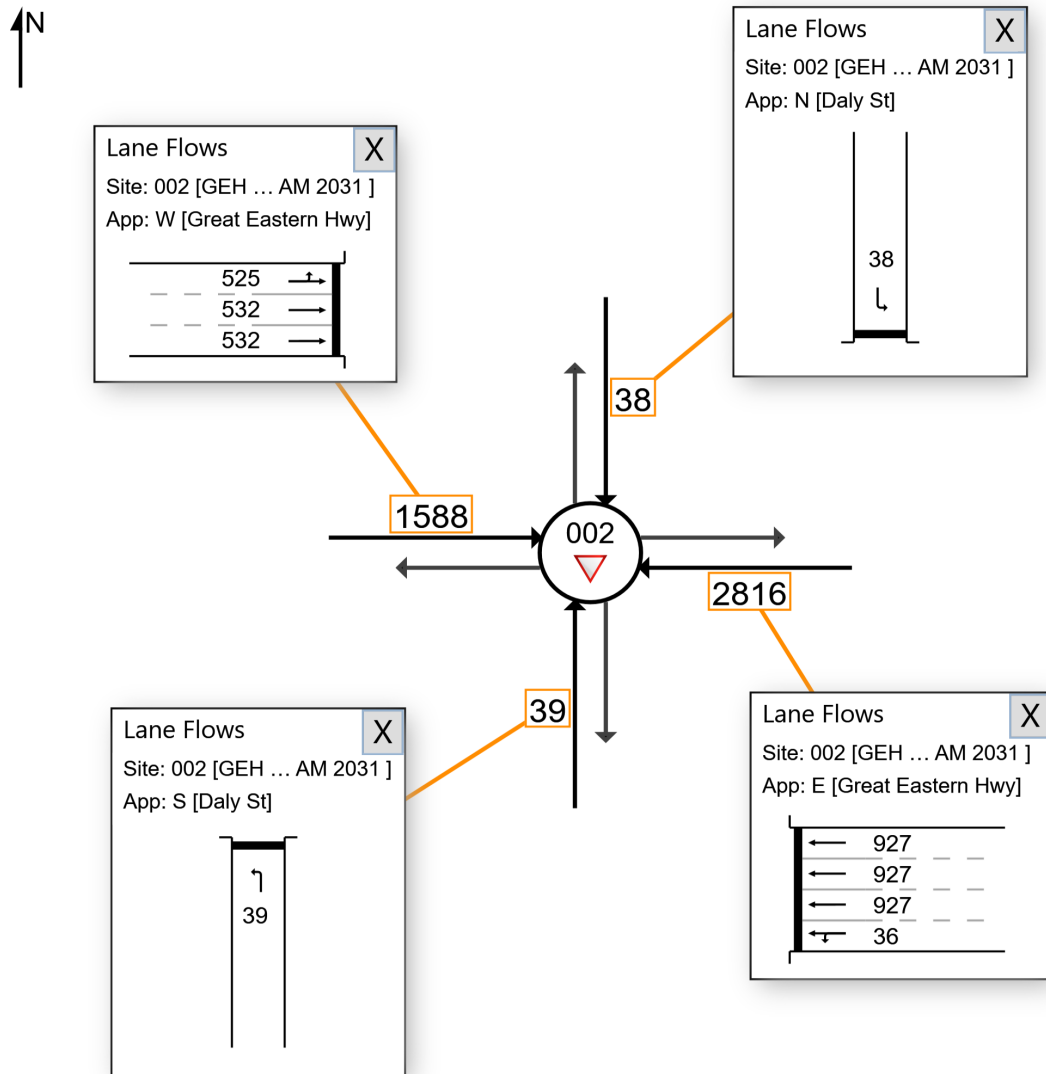
▼ Site: 002 [GEH Daly AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Daly St  
Left in Left out, Give Way  
2031 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

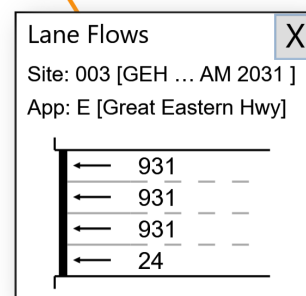
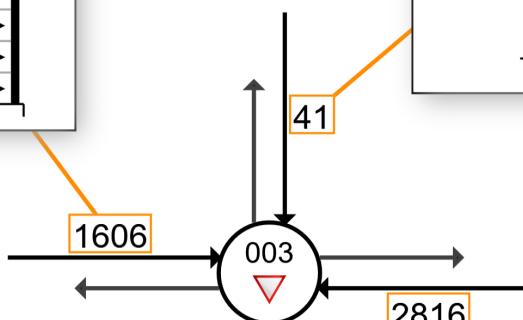
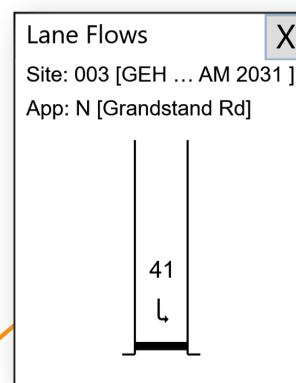
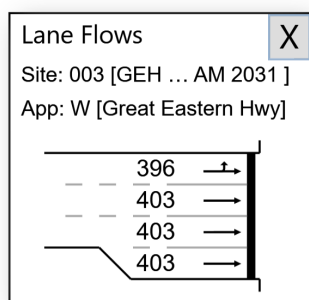
▼ Site: 003 [GEH Grandstand AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2031 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

 Site: 96 [GEH Resolution Hardey AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]

 Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

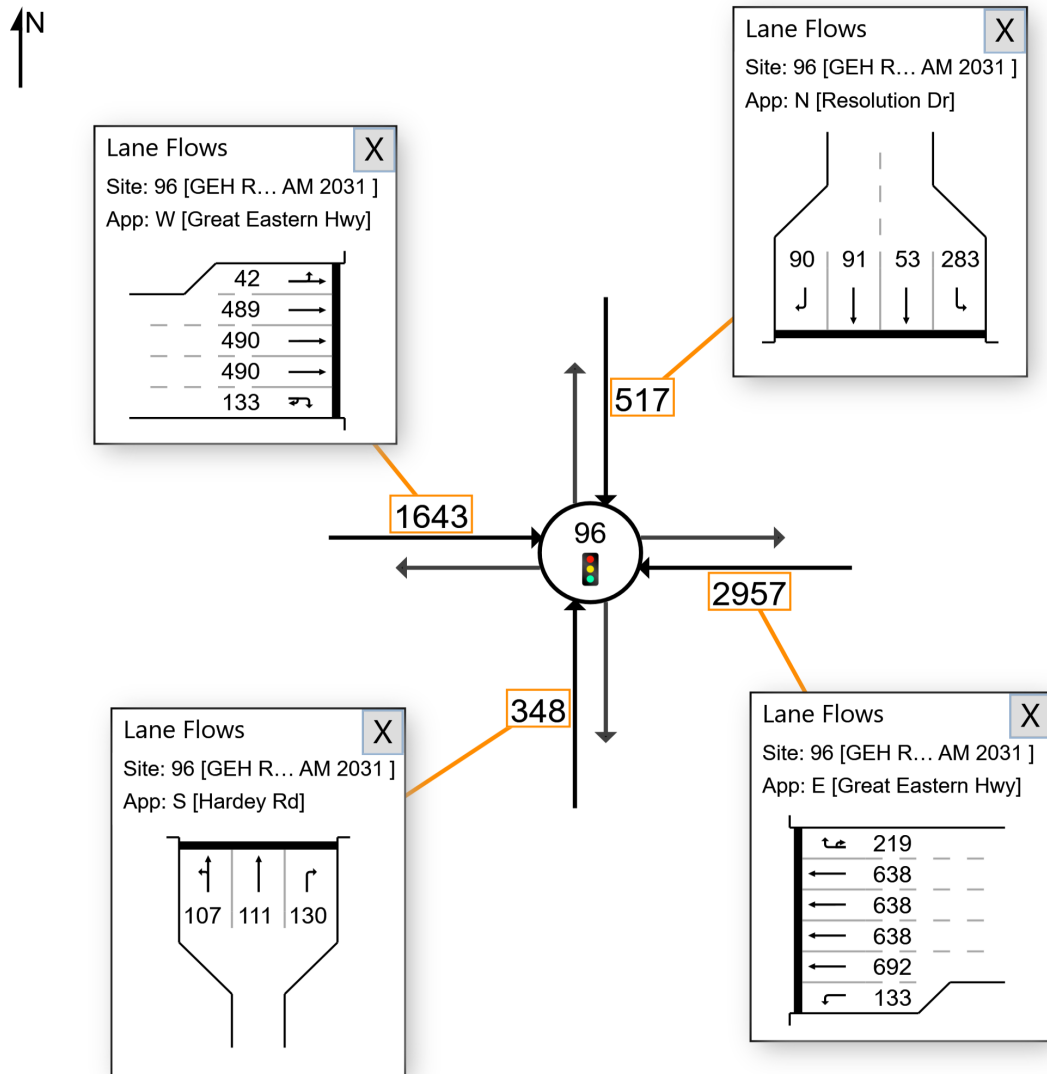
2031 AM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

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Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

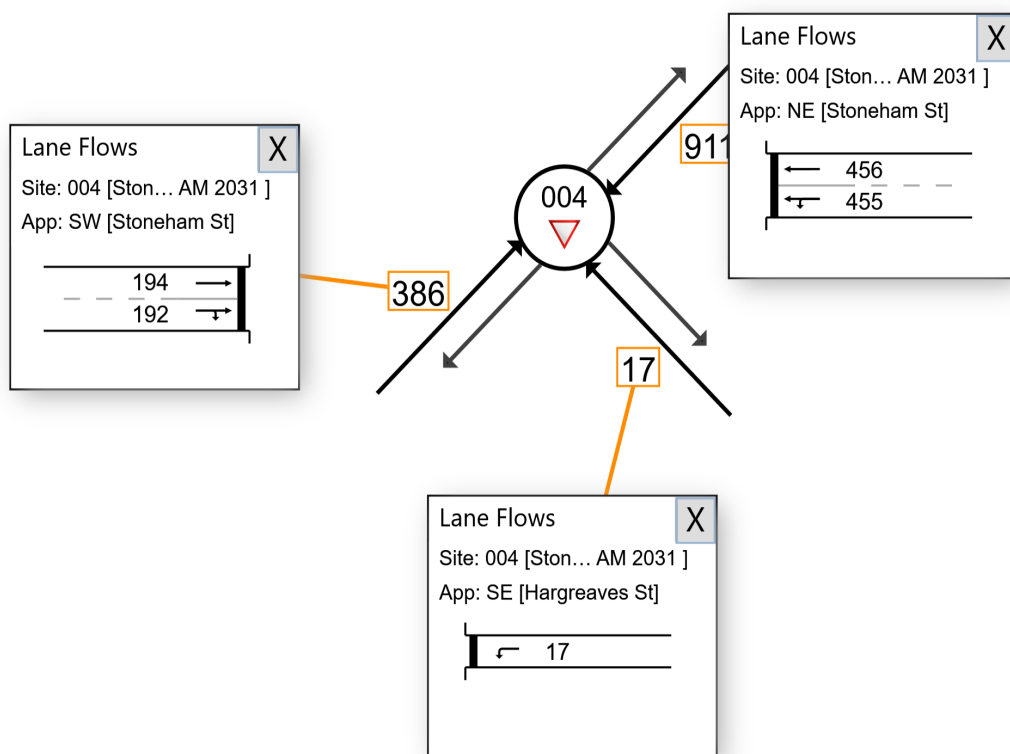
▼ Site: 004 [Stoneham Hargreaves AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2031 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

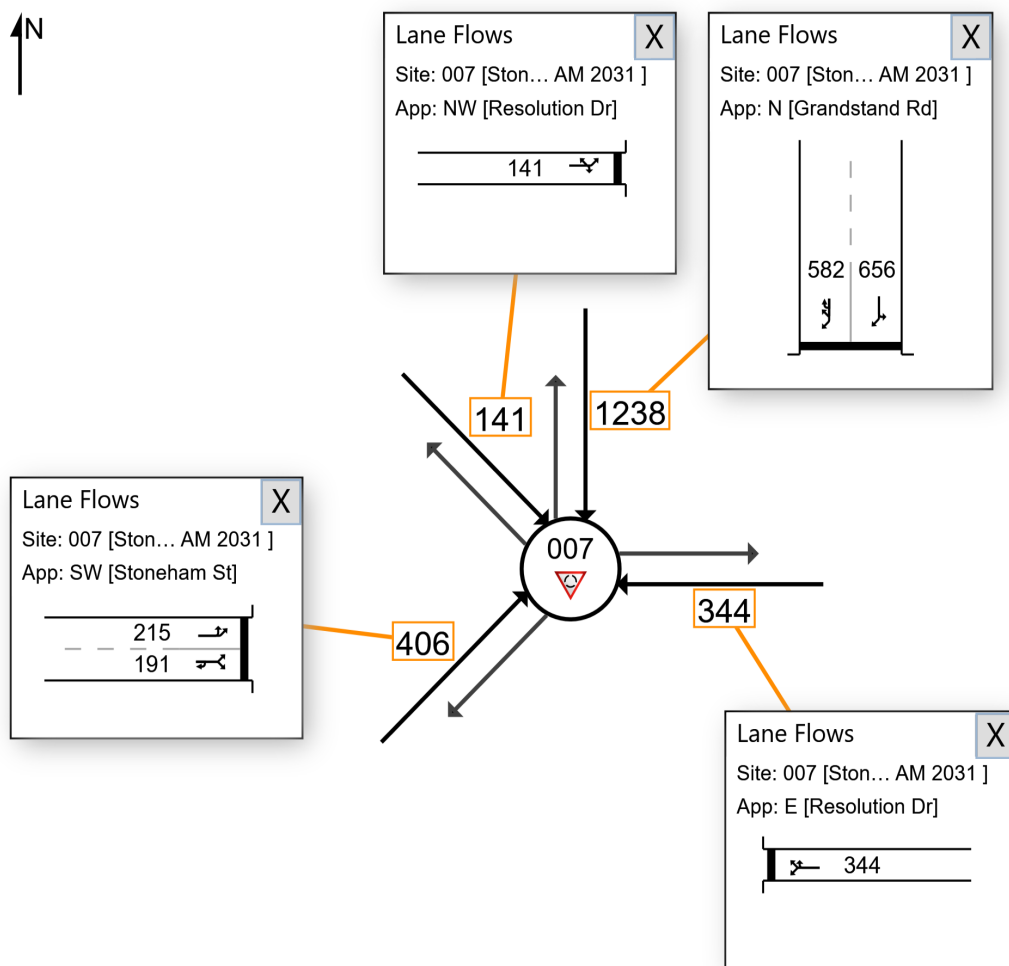
 Site: 007 [Stoneham Grandstand Resolution AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]

 Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 011 [Resolution Grandstand AM 2031 (Site Folder: 2031 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 AM Peak Proposed Network and Land Use (Network Folder: General)]

Resolution Dr / Grandstand Rd

Give Way

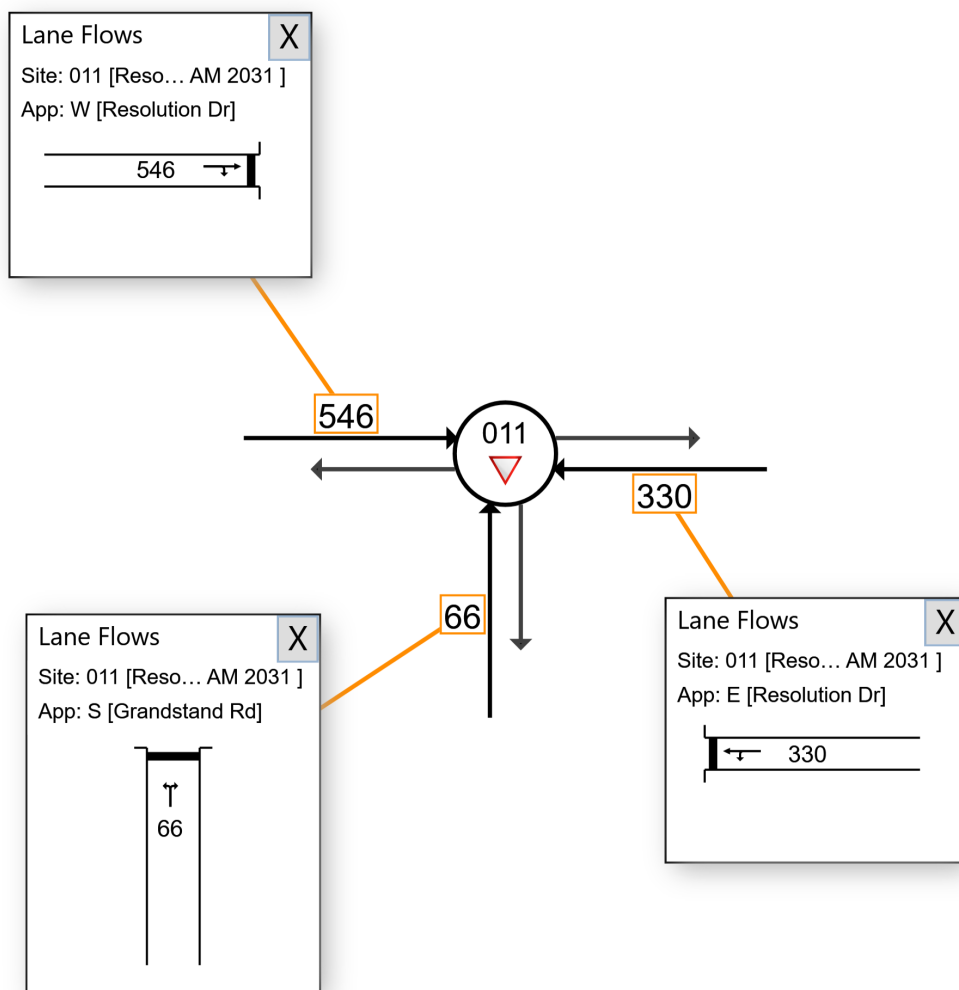
2031 AM Peak with proposed road network and land uses

Site Category: Existing Design

Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

 Site: 106 [GEH Stoneham Belgravia PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]

 Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

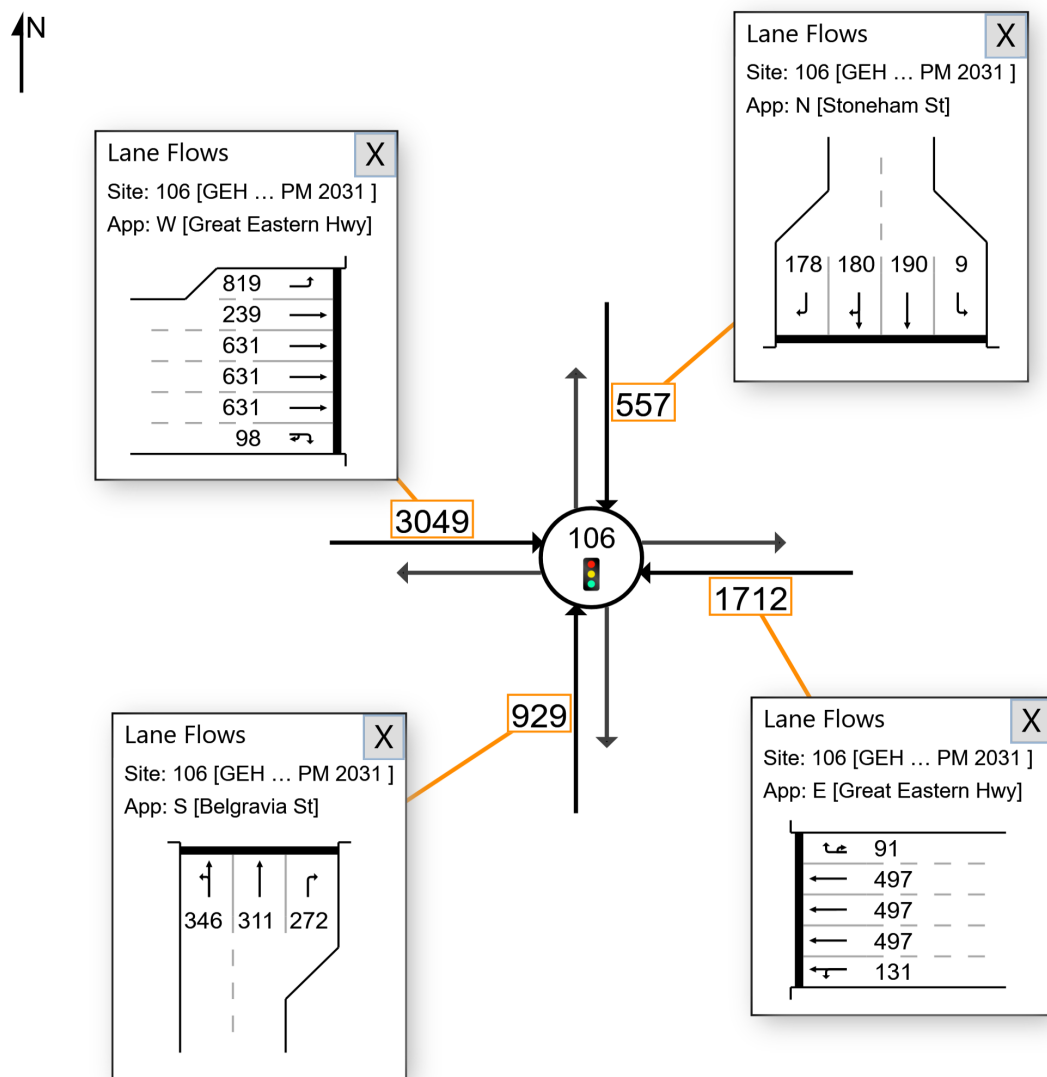
2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## Attachment 12.1.4 Movement and Access Strategy

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

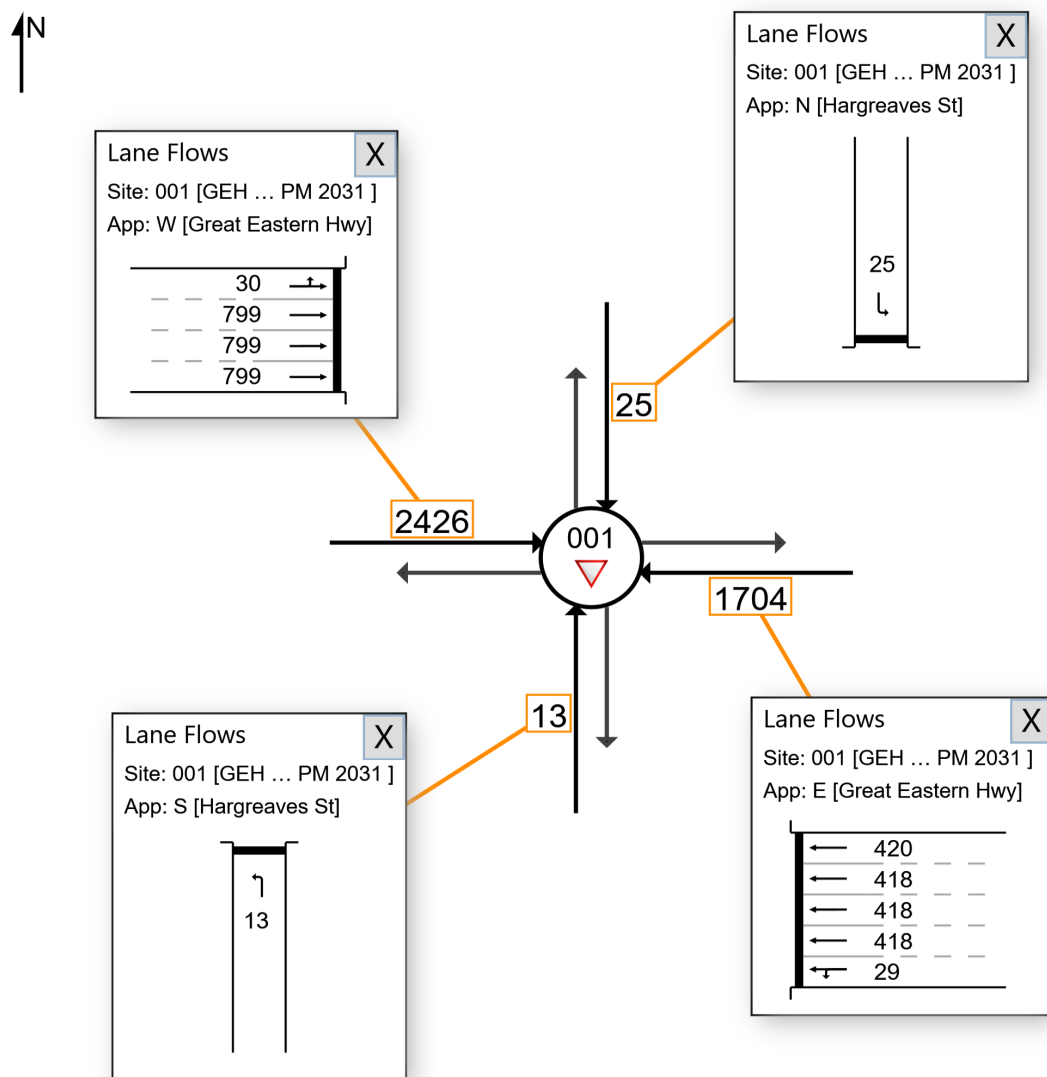
▽ Site: 001 [GEH Hargreaves PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 002 [GEH Daly PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Daly St

Left in Left out, Give Way

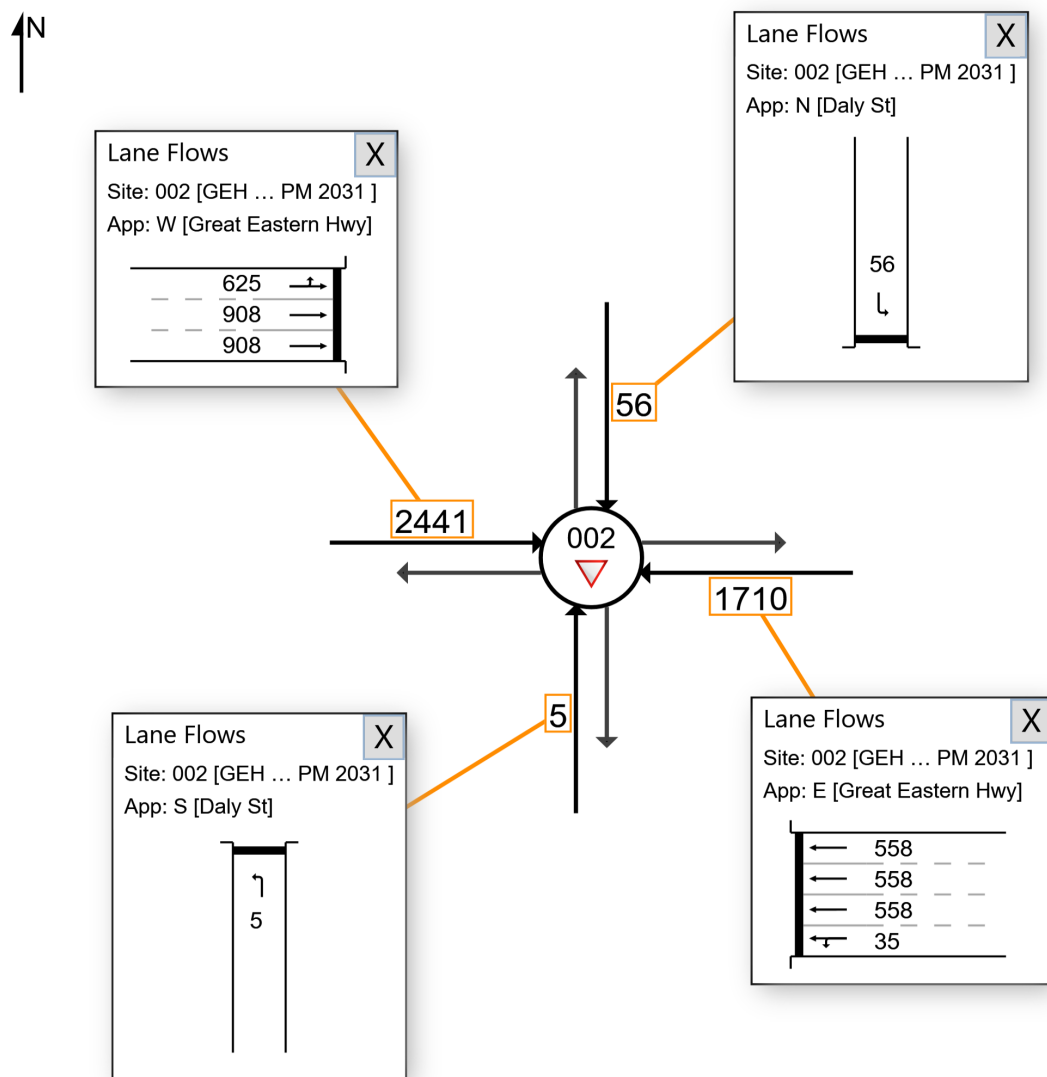
2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

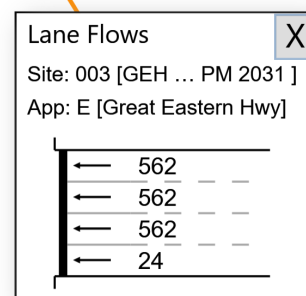
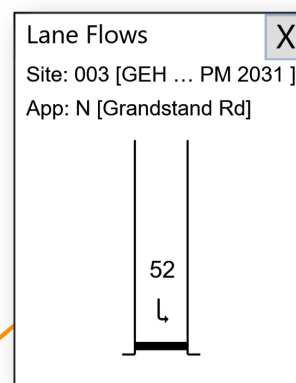
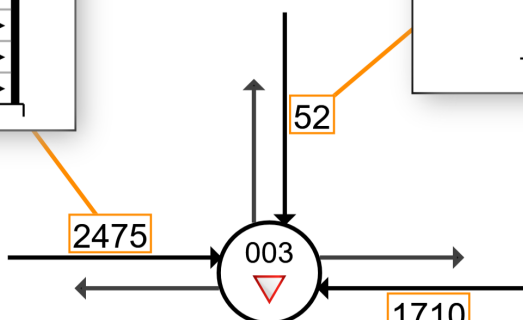
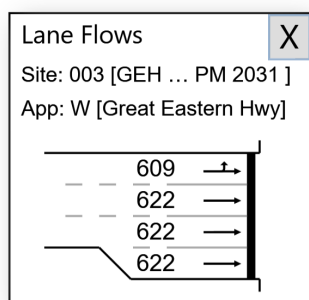
▼ Site: 003 [GEH Grandstand PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

 Site: 96 [GEH Resolution Hardey PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]

 Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

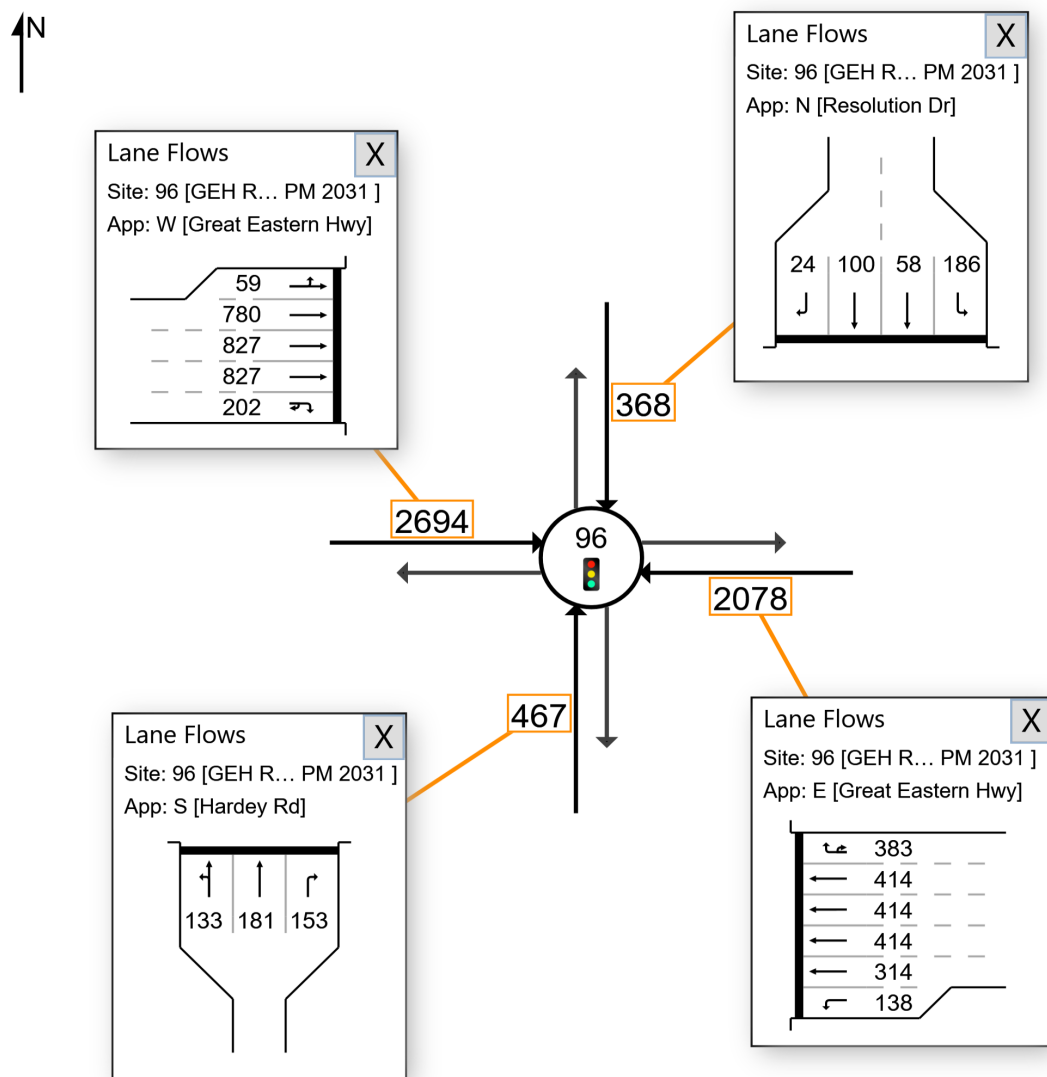
2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

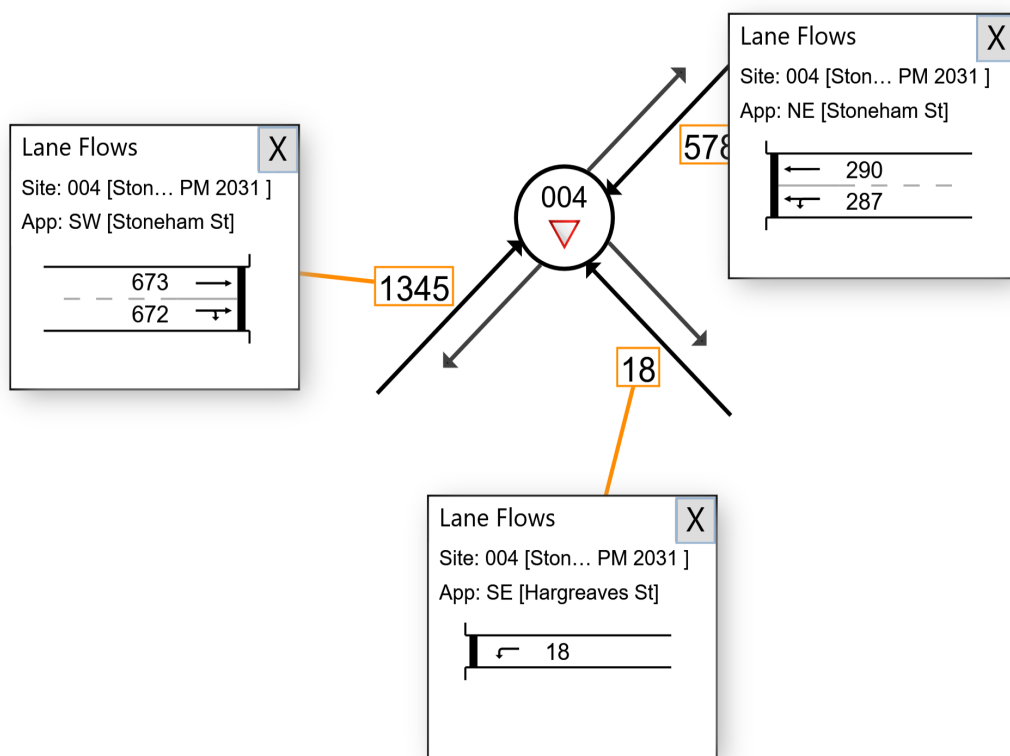
▼ Site: 004 [Stoneham Hargreaves PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

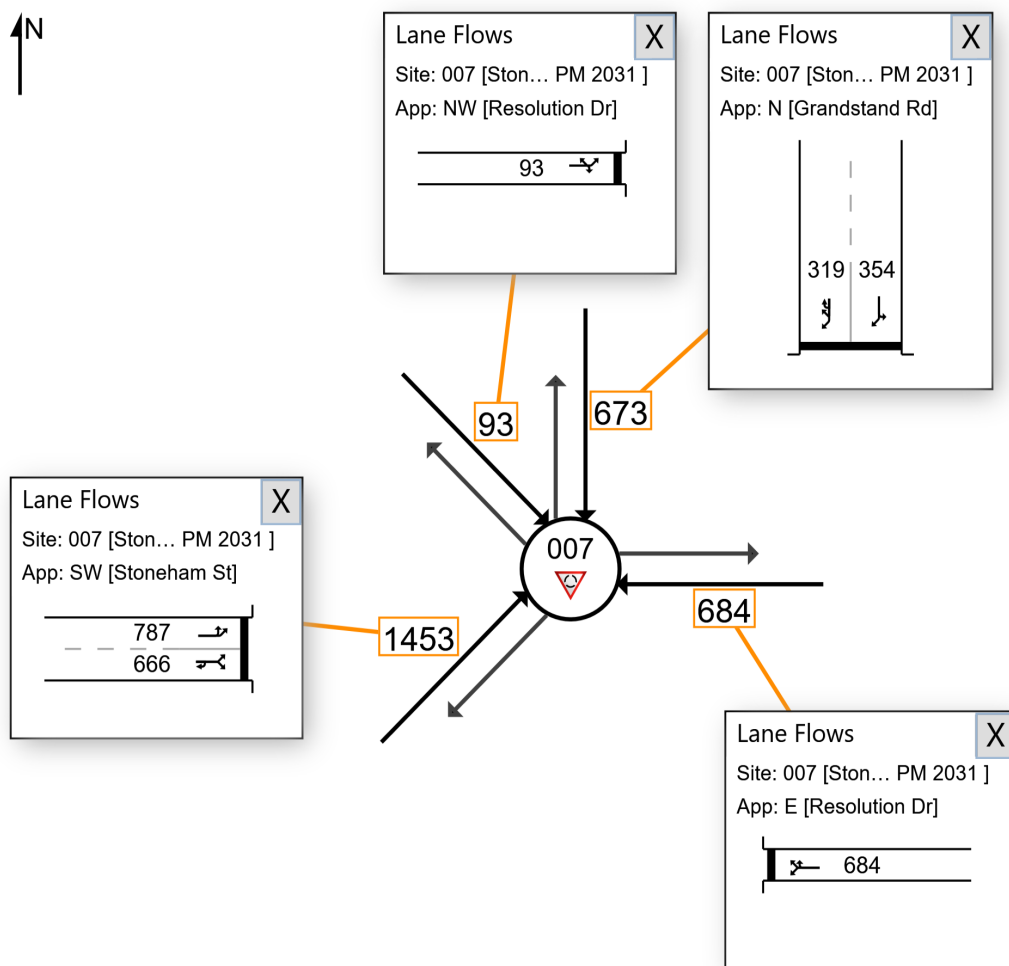
 Site: 007 [Stoneham Grandstand Resolution PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]

 Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 011 [Resolution Grandstand PM 2031 (Site Folder: 2031 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2031 PM Peak Proposed Network and Land Use (Network Folder: General)]

Resolution Dr / Grandstand Rd

Give Way

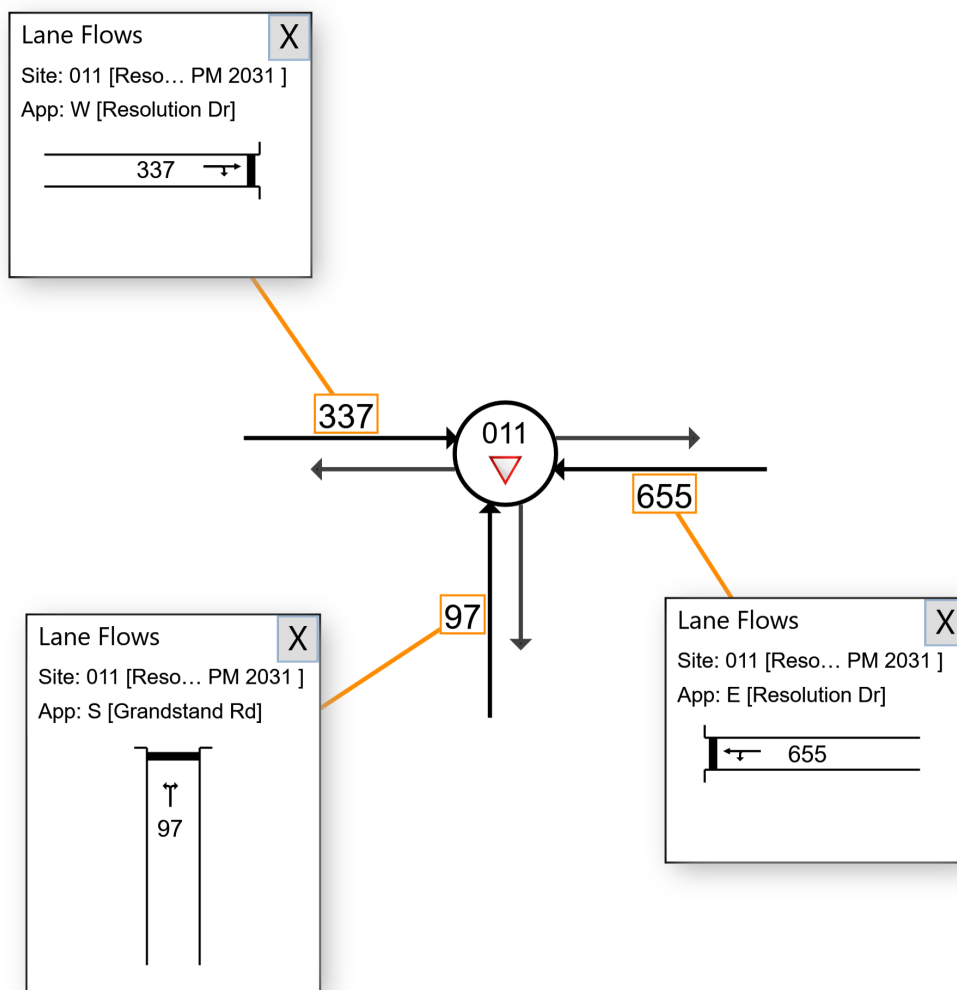
2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]

Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

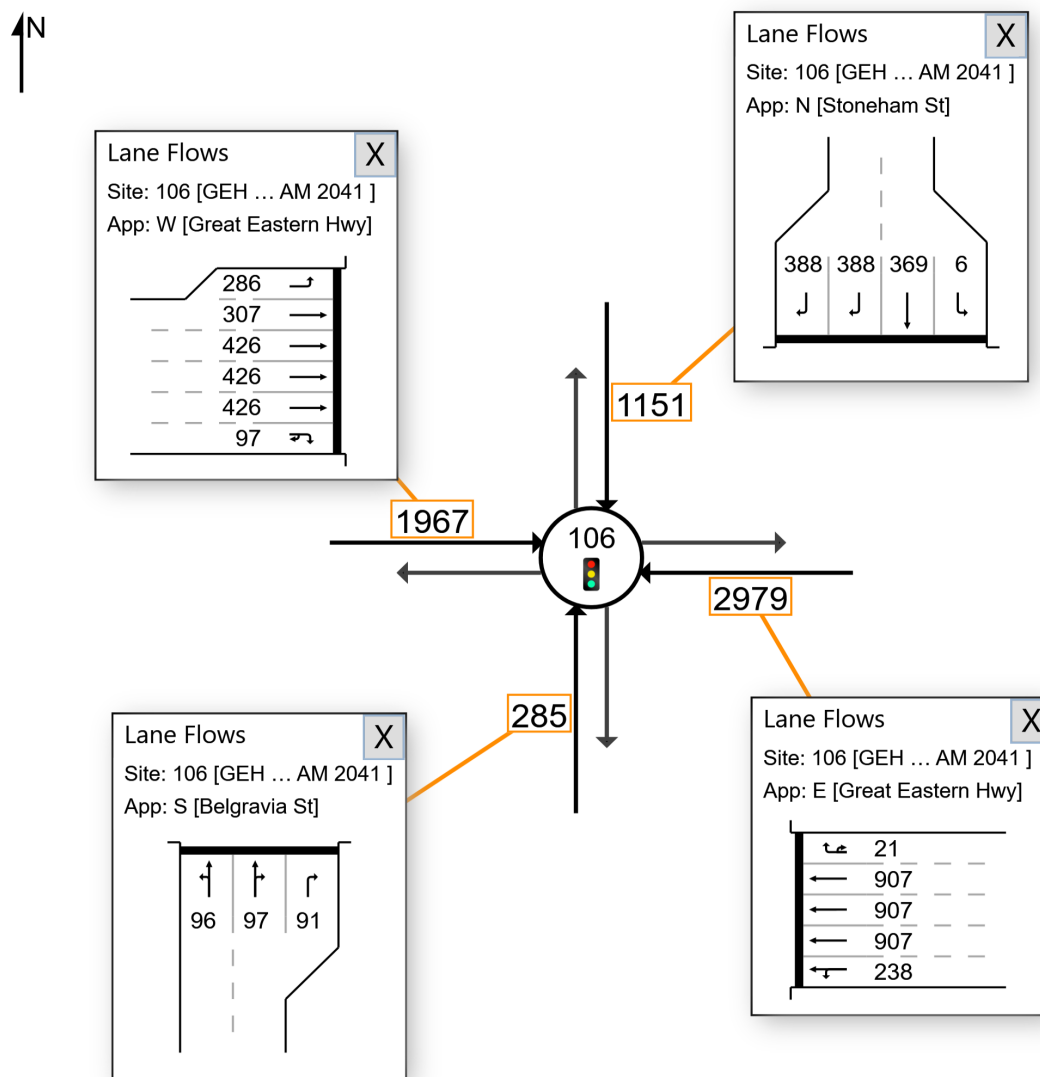
2041 AM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Site User-Given Phase Times)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

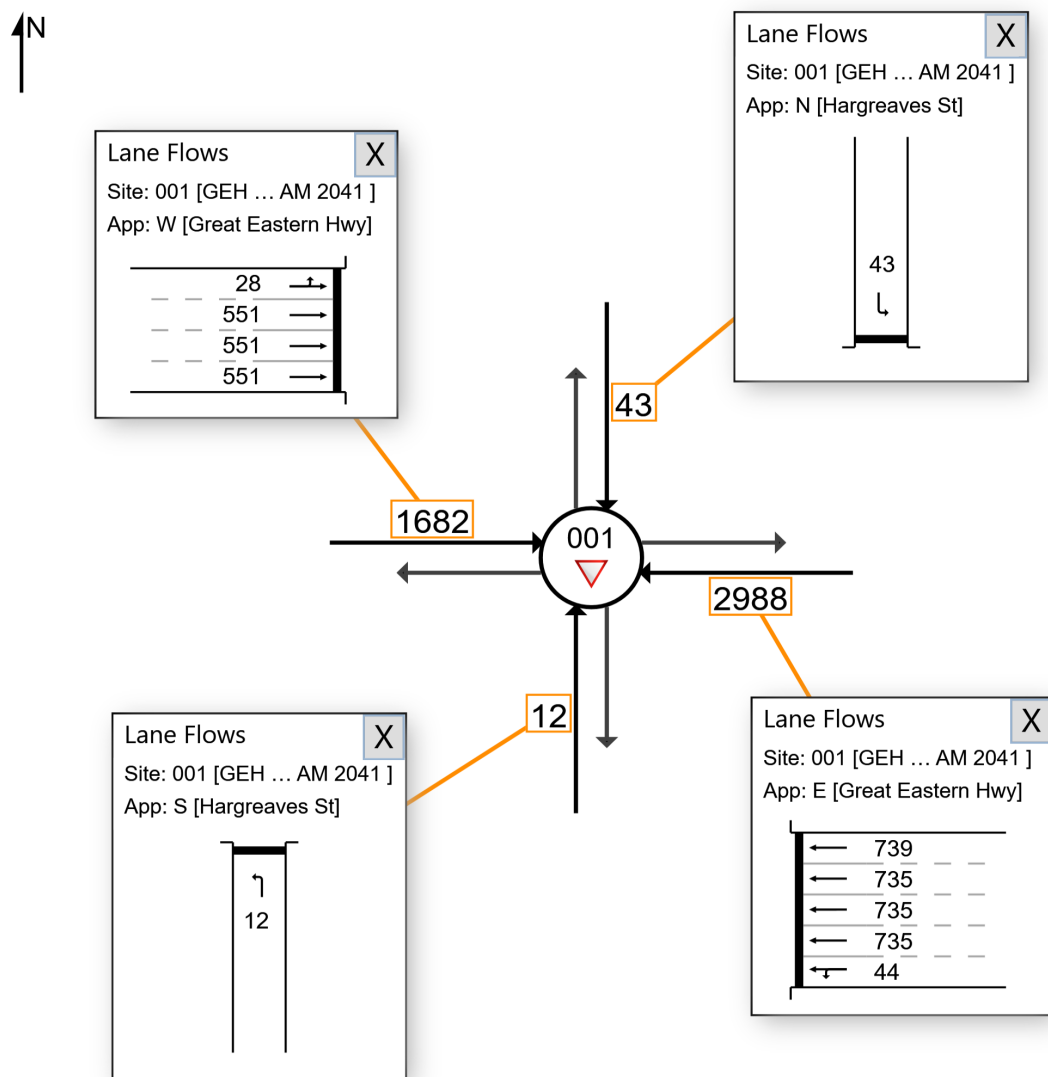
▼ Site: 001 [GEH Hargreaves AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2041 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 002 [GEH Daly AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Daly St

Left in Left out, Give Way

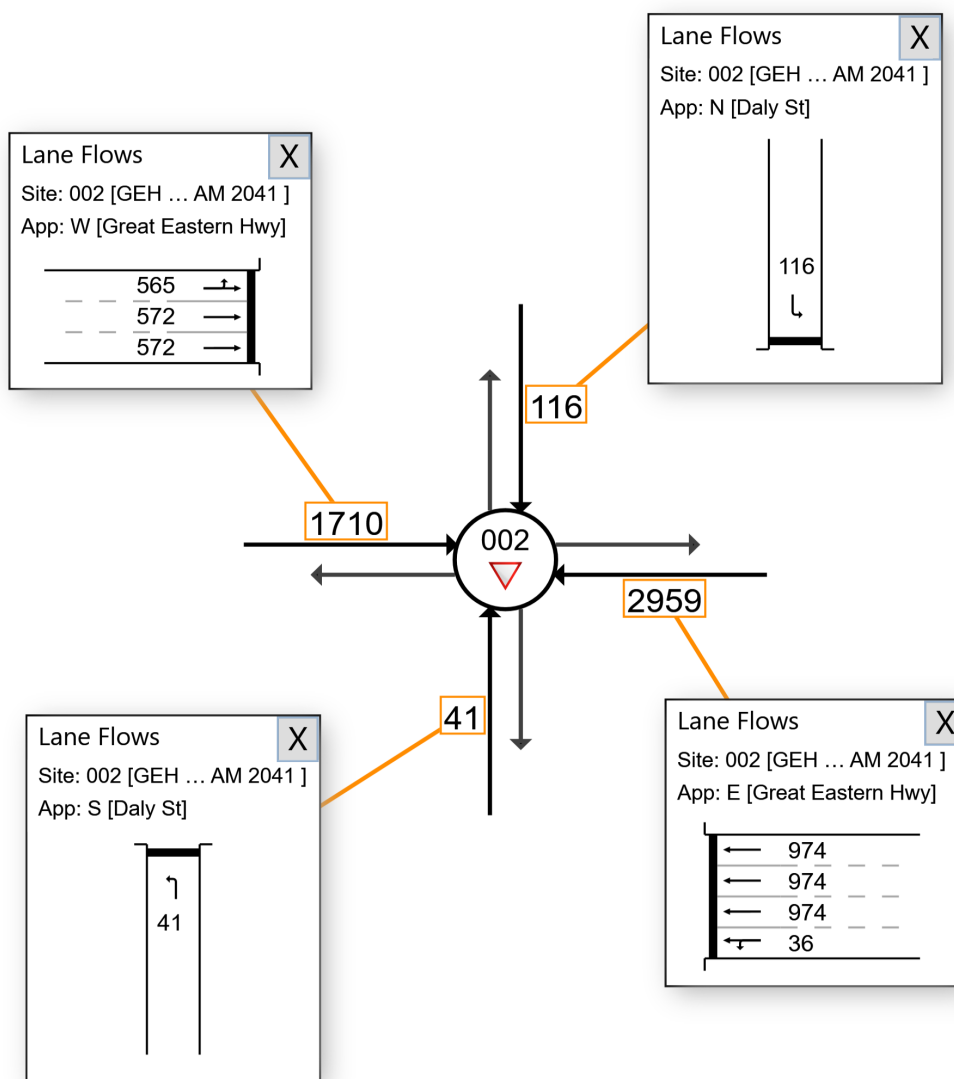
2041 AM Peak with proposed road network and land uses

Site Category: Existing Design

Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

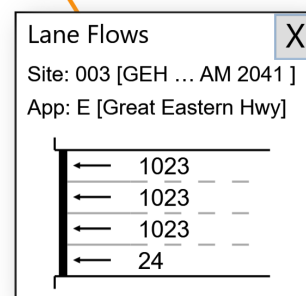
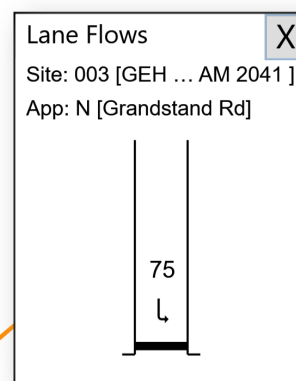
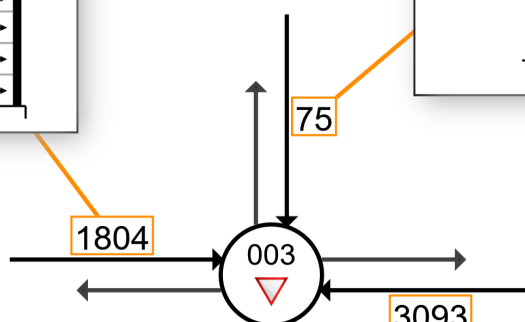
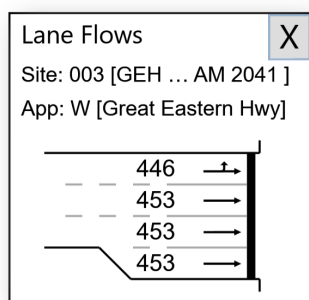
▼ Site: 003 [GEH Grandstand AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2041 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

 Site: 96 [GEH Resolution Hardey AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]

 Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

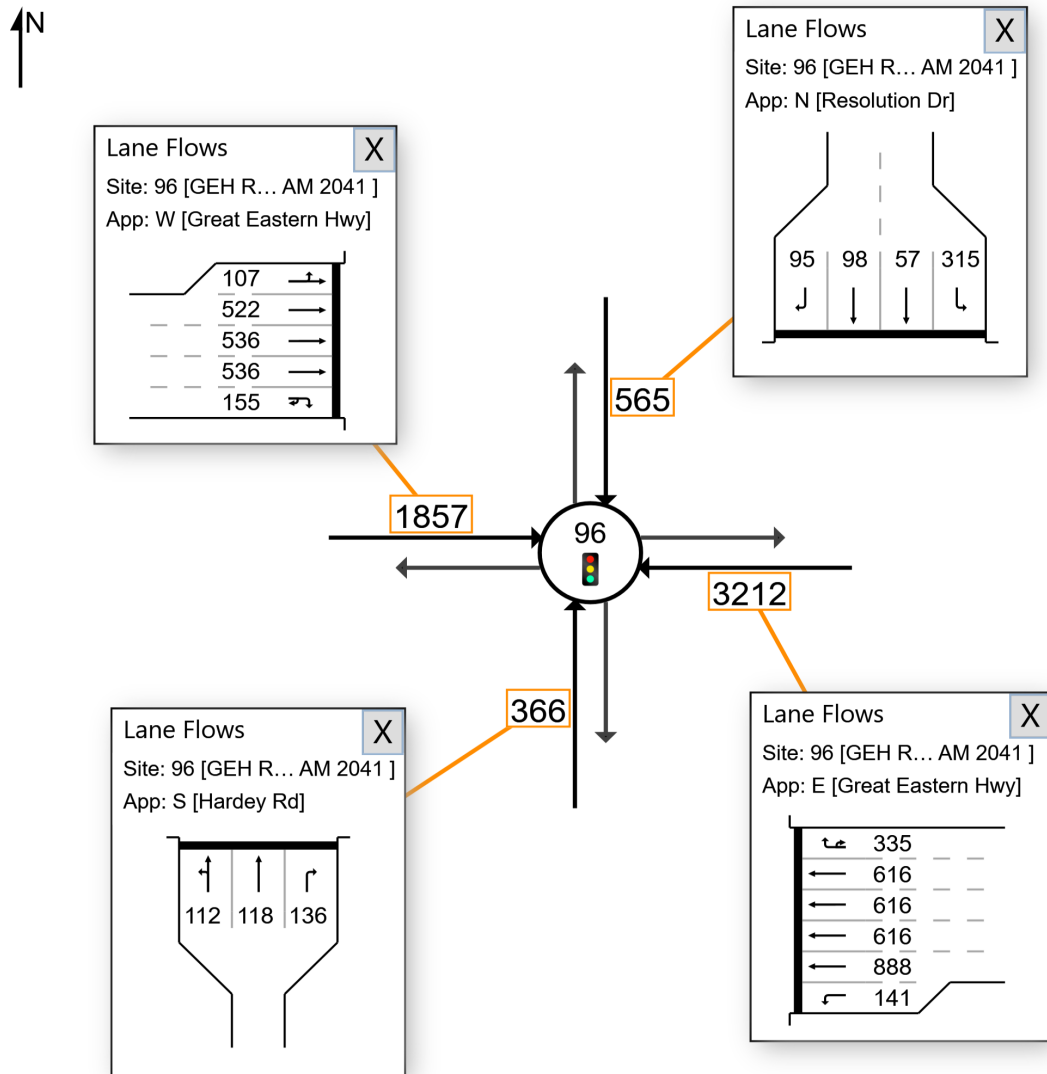
2041 AM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 134 seconds (Site User-Given Phase Times)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

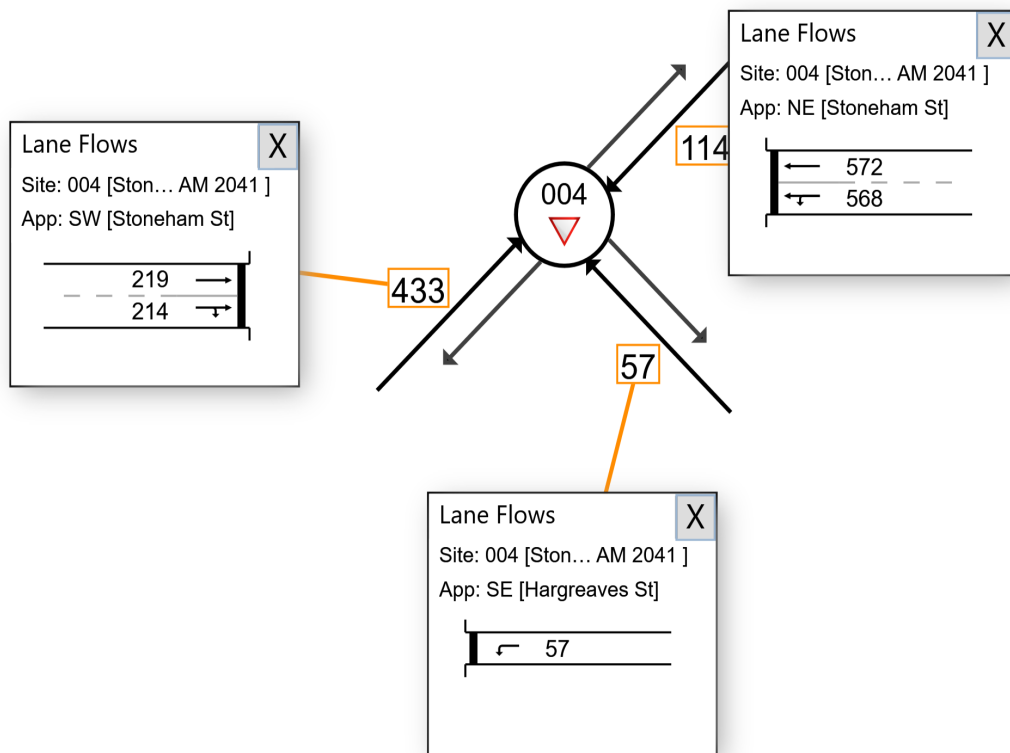
▼ Site: 004 [Stoneham Hargreaves AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2041 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

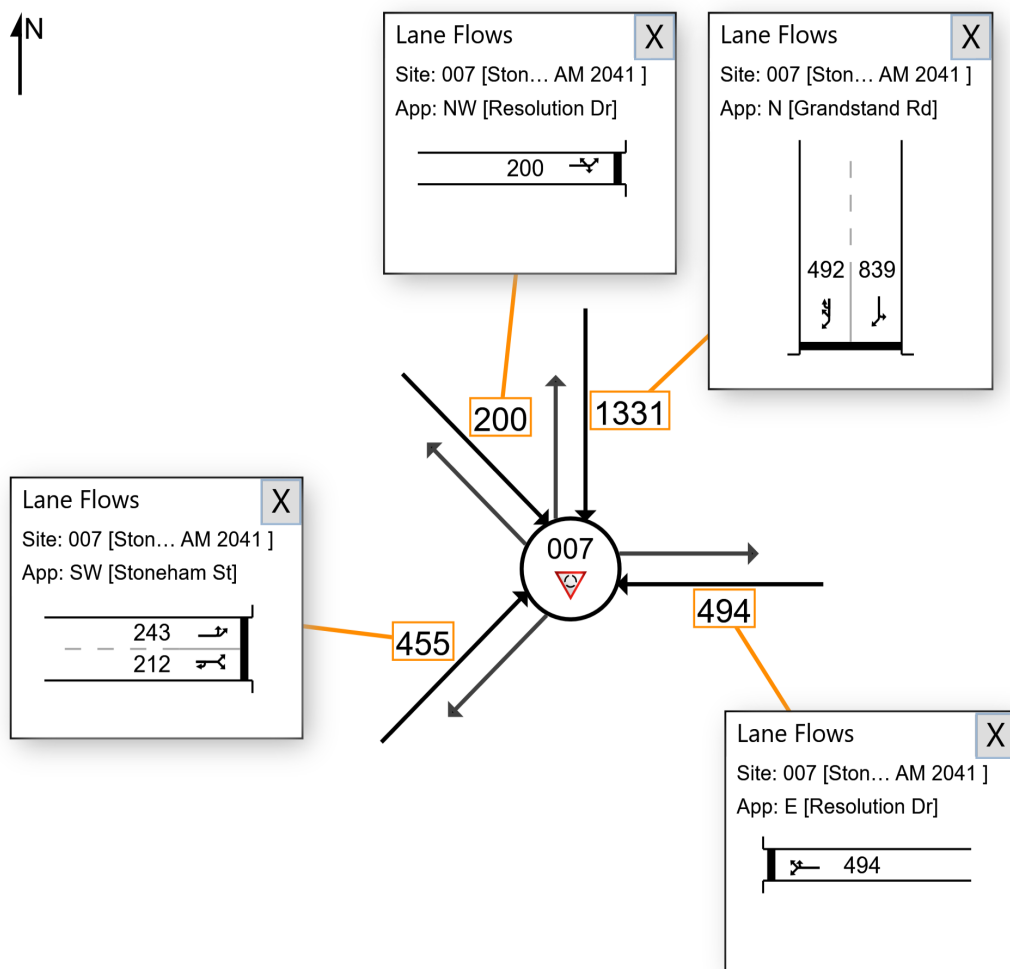
 Site: 007 [Stoneham Grandstand Resolution AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]

 Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 AM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 011 [Resolution Grandstand AM 2041 (Site Folder: 2041 AM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 AM Peak Proposed Network and Land Use (Network Folder: General)]

Resolution Dr / Grandstand Rd

Give Way

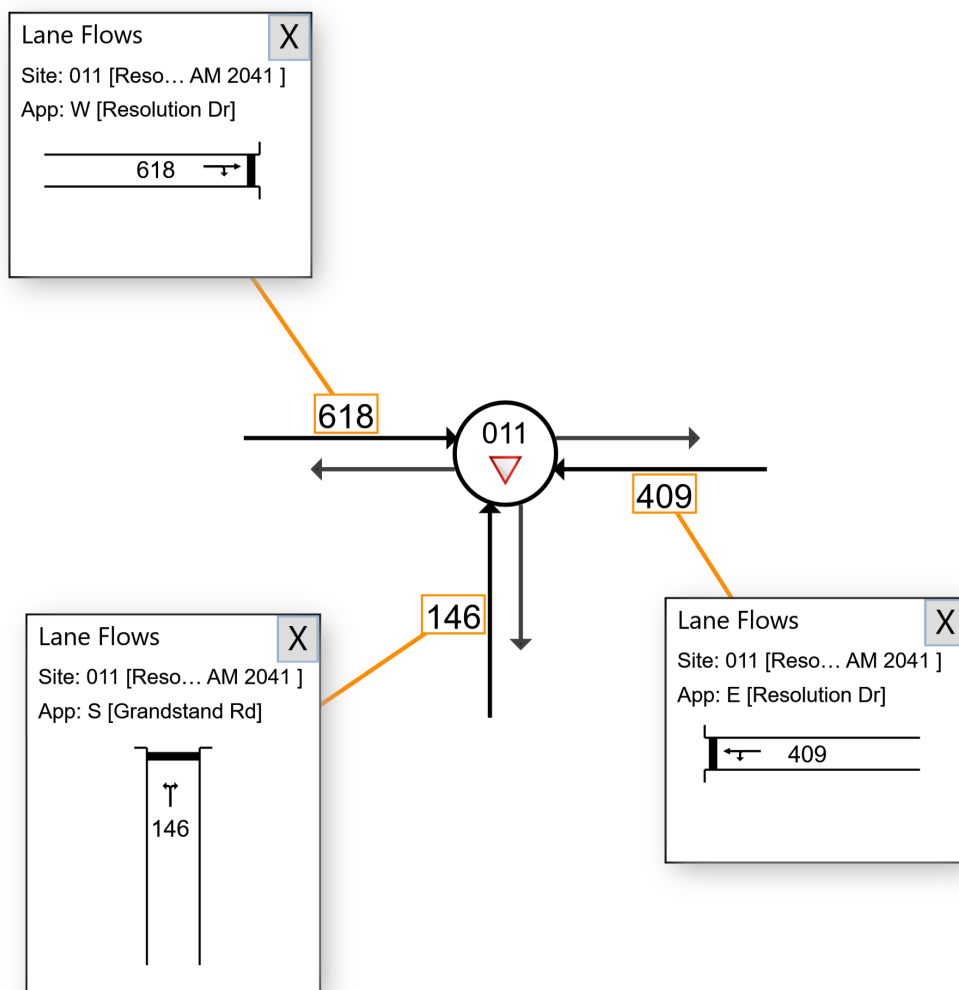
2041 AM Peak with proposed road network and land uses

Site Category: Existing Design

Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

 Site: 106 [GEH Stoneham Belgravia PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]

 Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

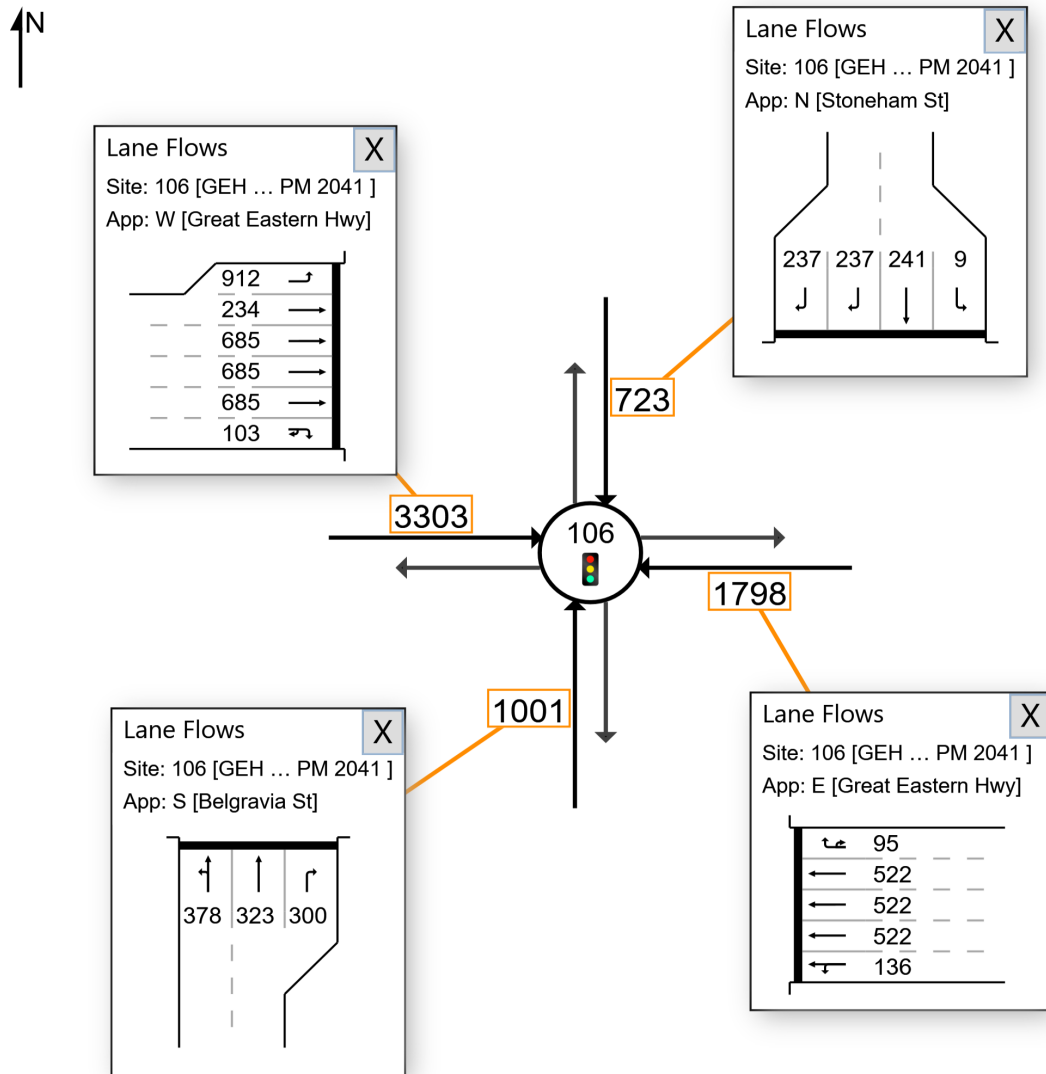
2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

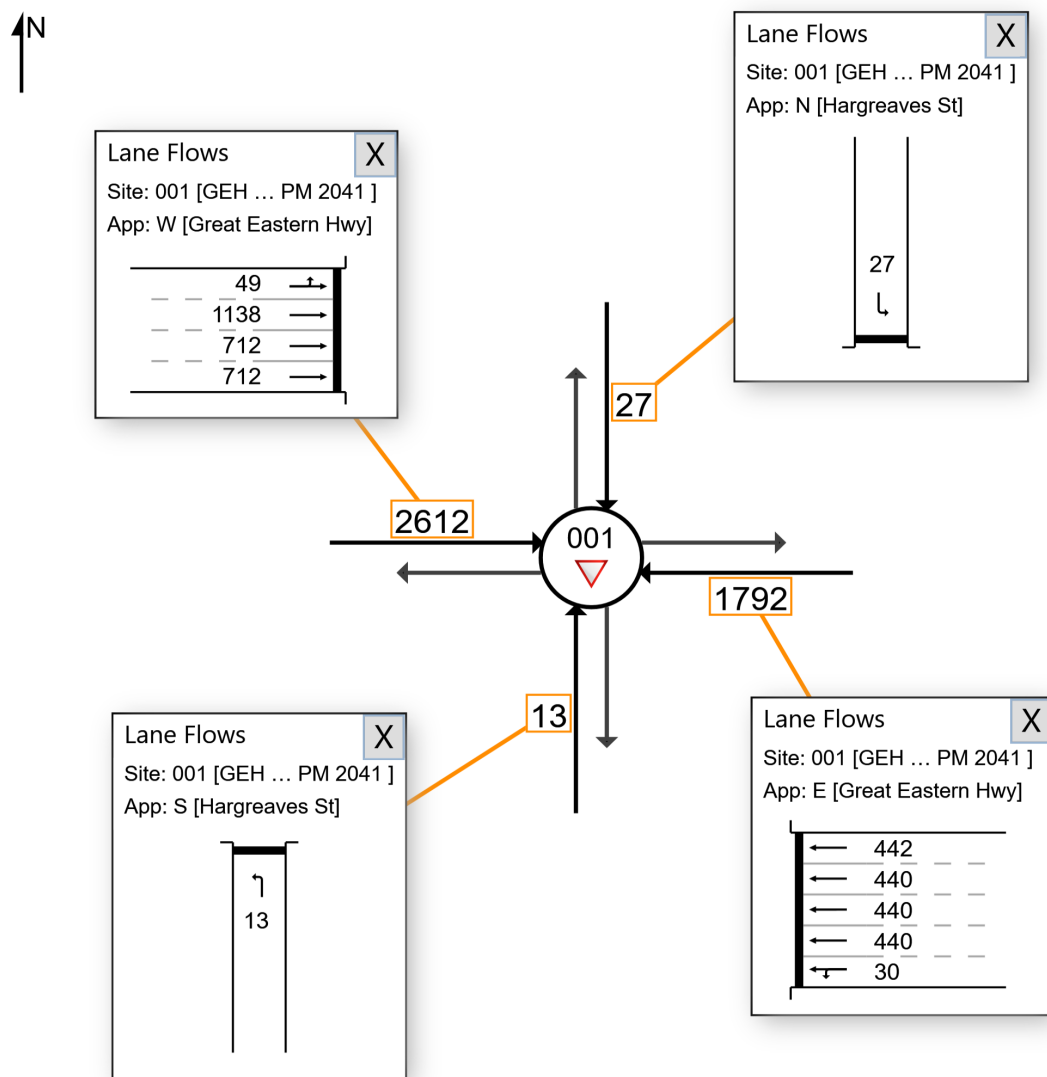
▼ Site: 001 [GEH Hargreaves PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

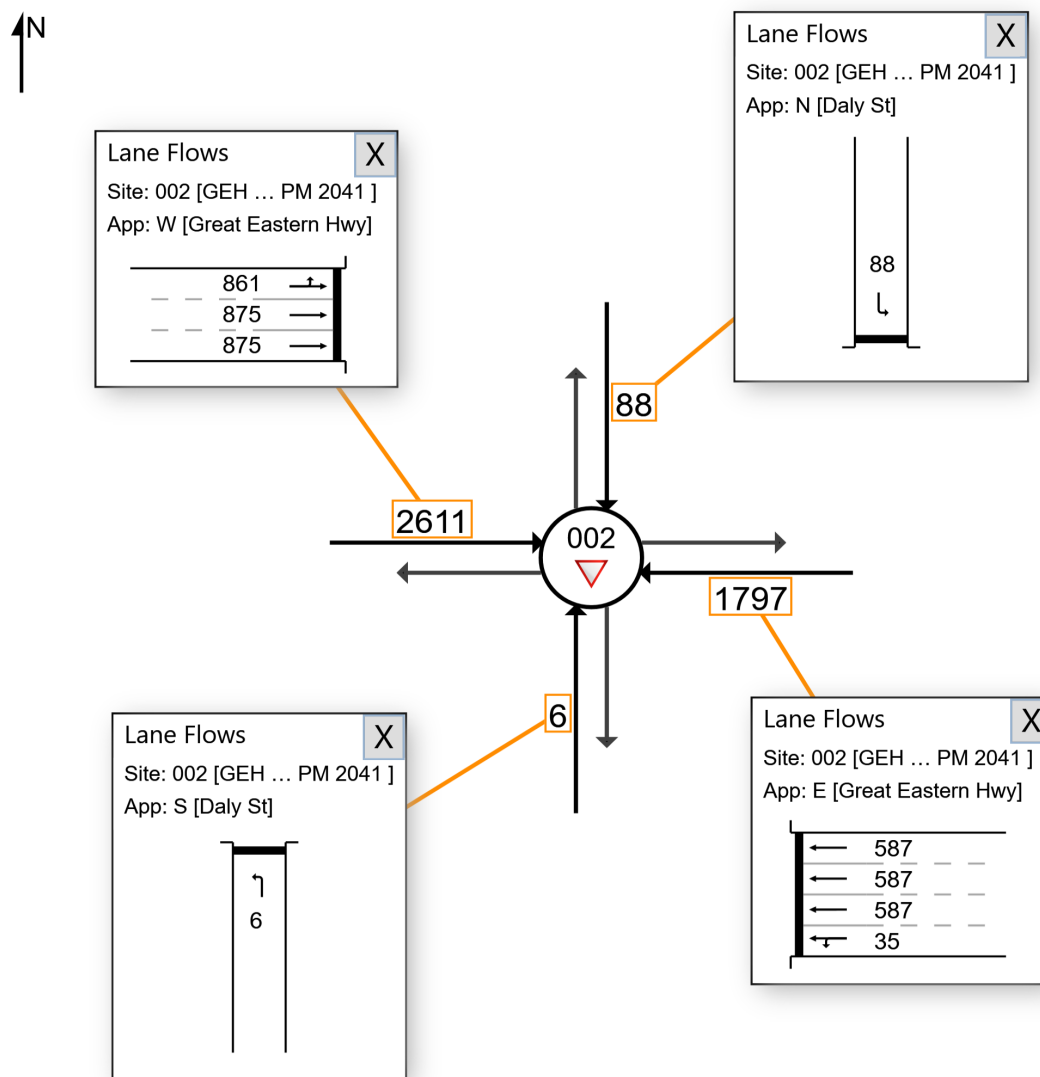
▼ Site: 002 [GEH Daly PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Daly St  
Left in Left out, Give Way  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

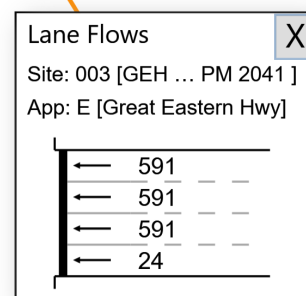
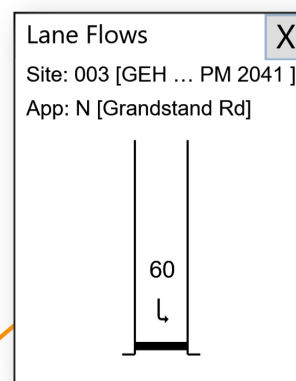
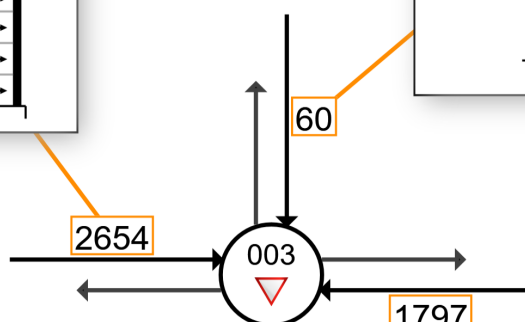
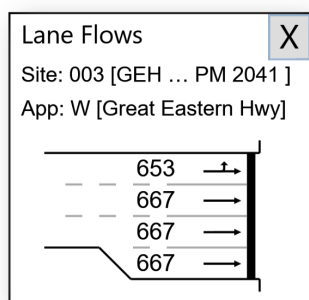
▼ Site: 003 [GEH Grandstand PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]

Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

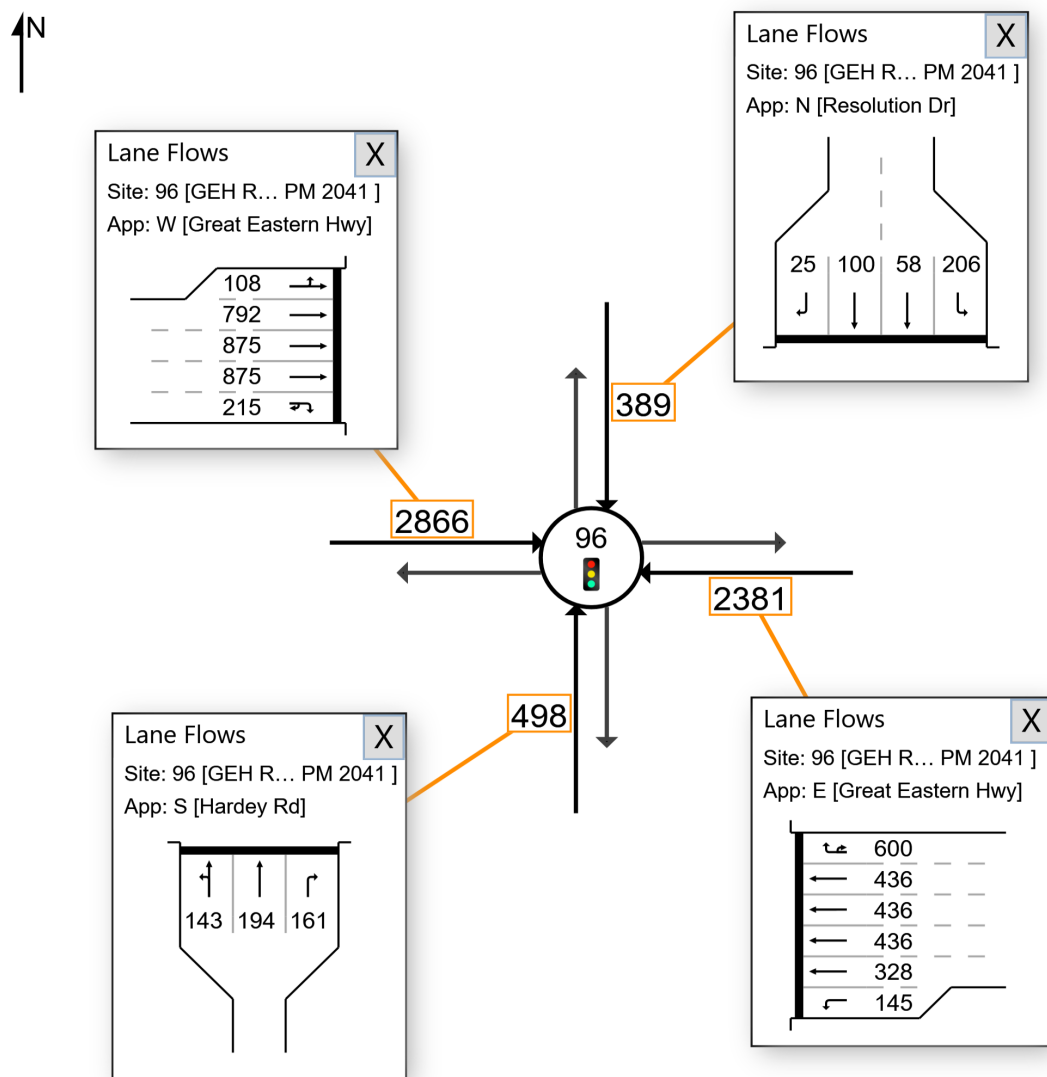
2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

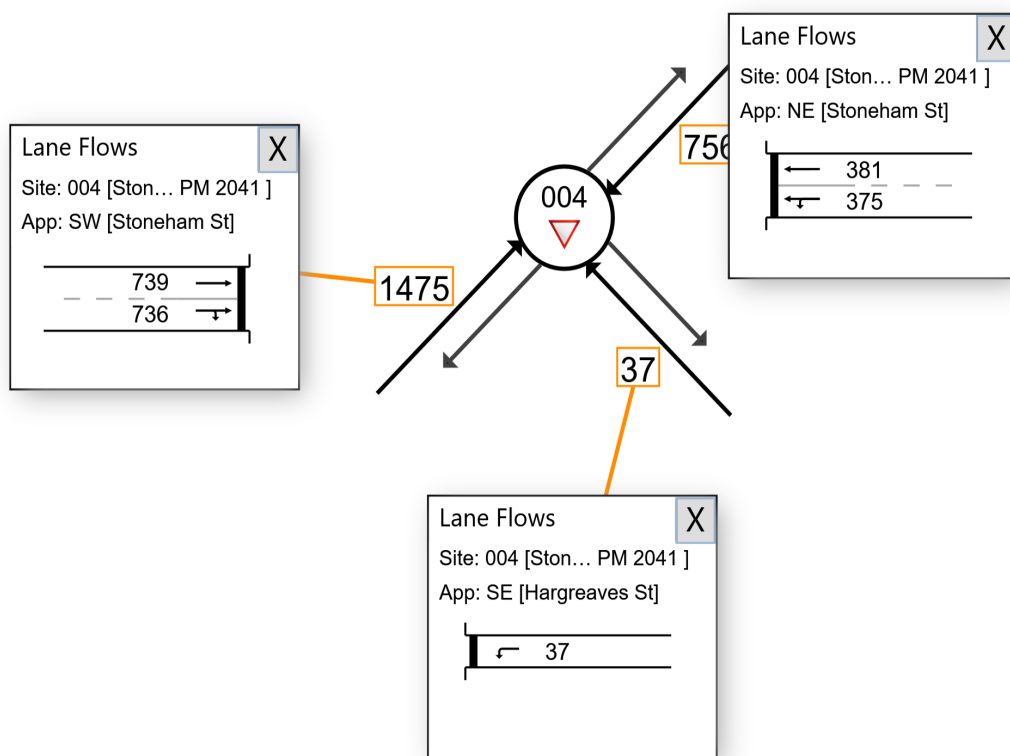
▼ Site: 004 [Stoneham Hargreaves PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

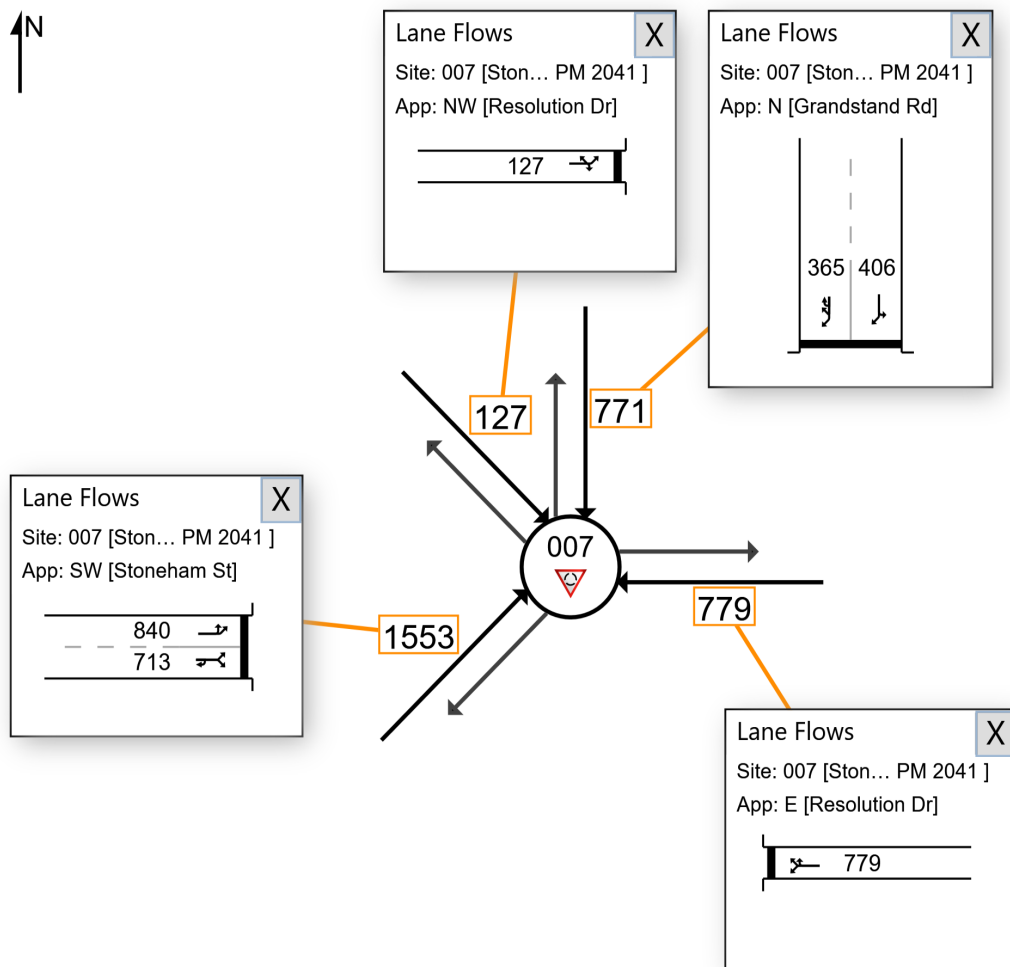
 Site: 007 [Stoneham Grandstand Resolution PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]

 Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 011 [Resolution Grandstand PM 2041 (Site Folder: 2041 PM Peak Proposed Network and Land Uses)]

■ Network: N101 [2041 PM Peak Proposed Network and Land Use (Network Folder: General)]

Resolution Dr / Grandstand Rd

Give Way

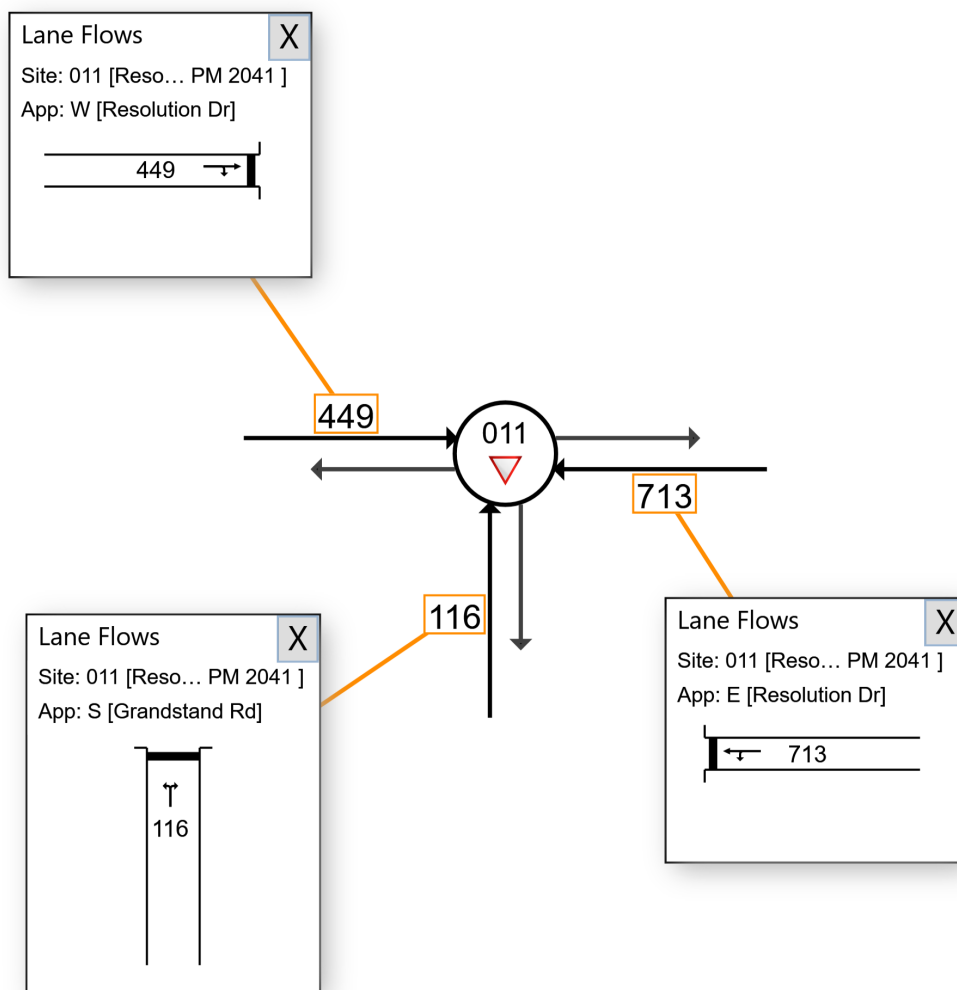
2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]

Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

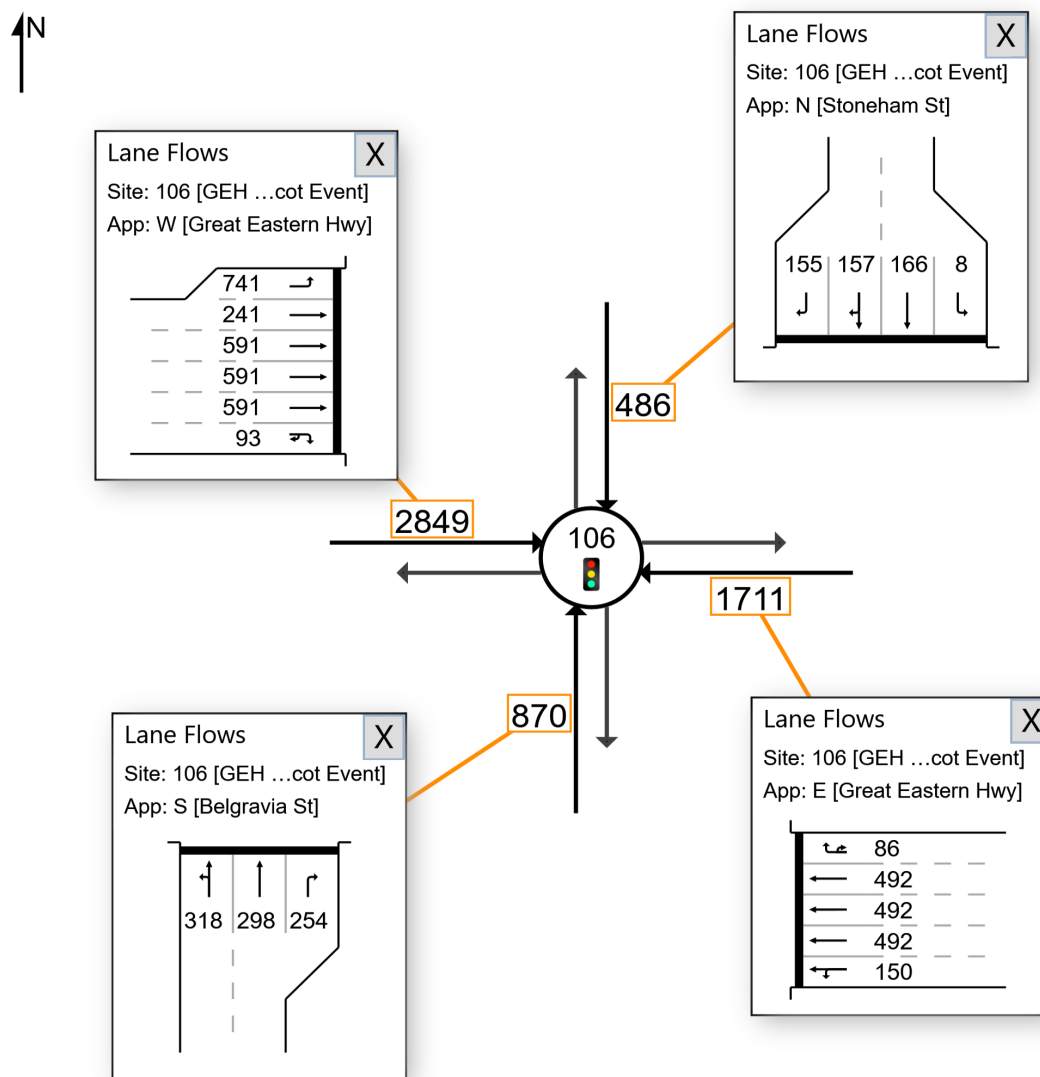
2021 PM Peak with proposed road network Ascot Event

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

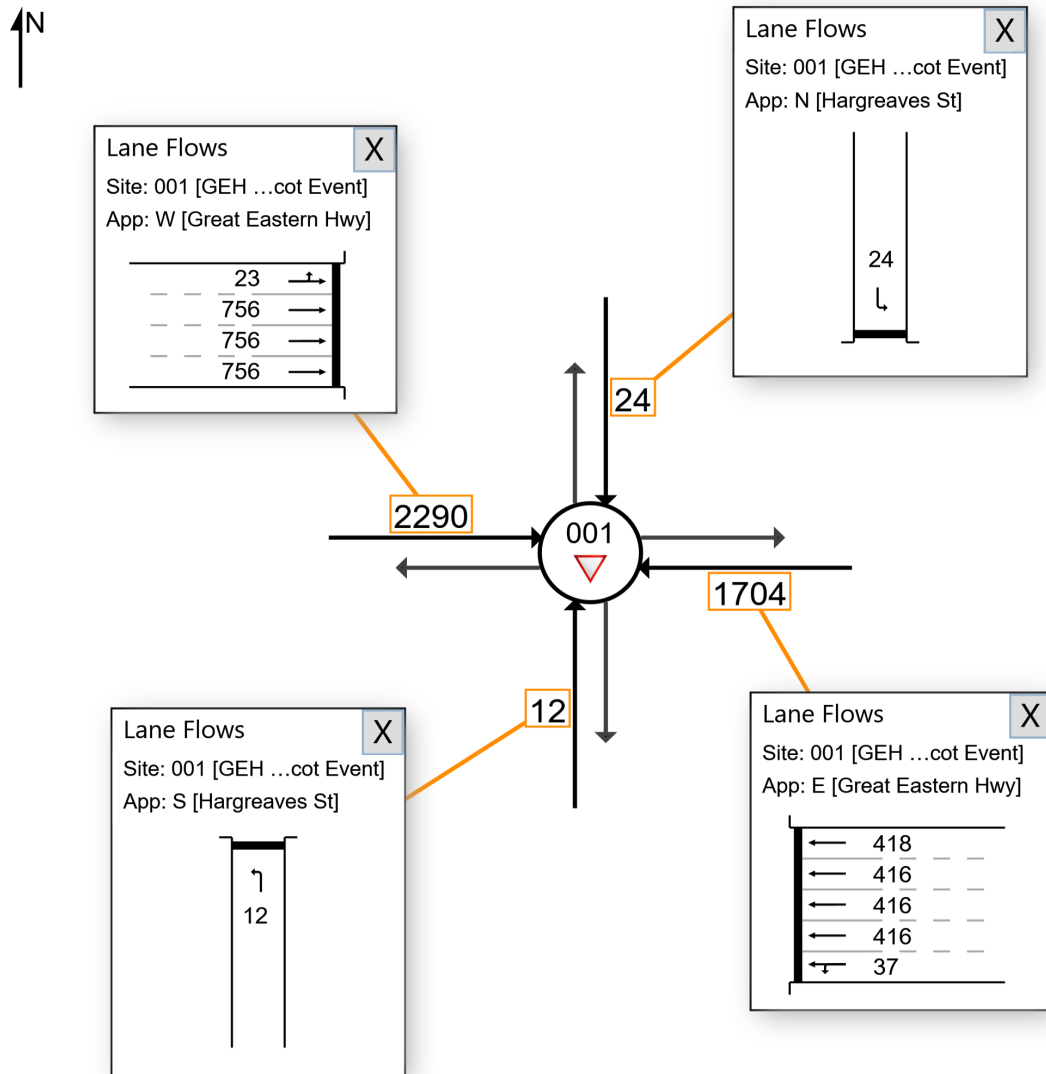
Site: 001 [GEH Hargreaves PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]

Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2021 PM Peak with proposed road network Ascot Event  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

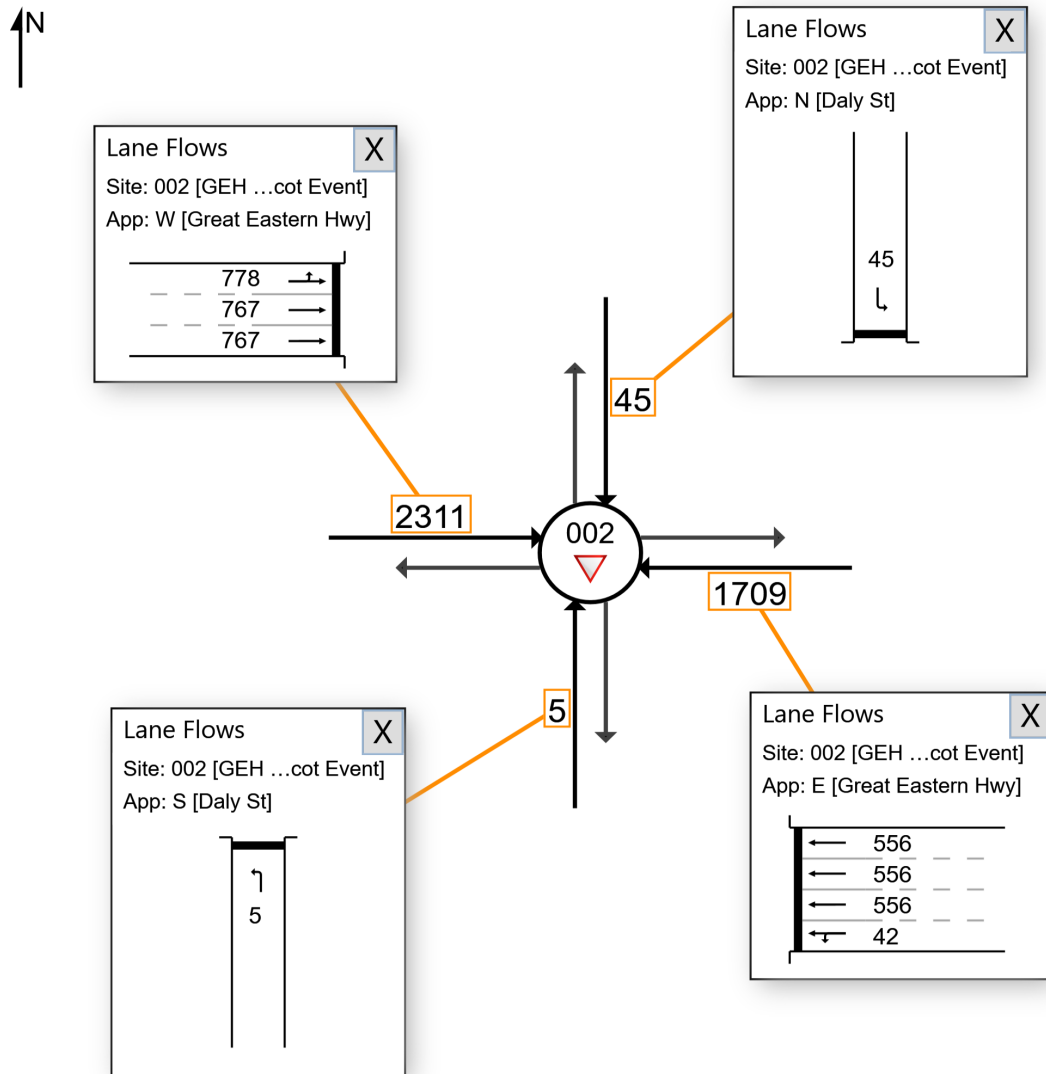
▼ Site: 002 [GEH Daly PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]

■ Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]

GEH / Daly St  
Left in Left out, Give Way  
2021 PM Peak with proposed road network Ascot Event  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

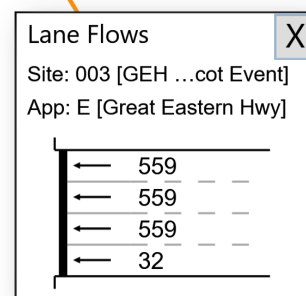
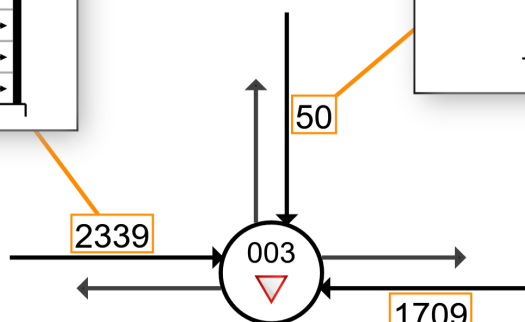
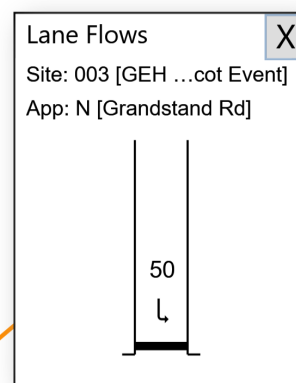
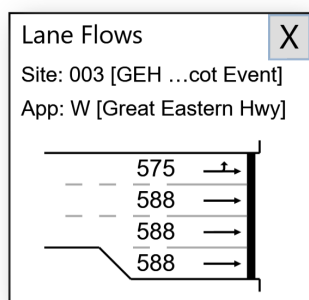
▼ Site: 003 [GEH Grandstand PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]

■ Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2021 PM Peak with proposed road network Ascot Event  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]

Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

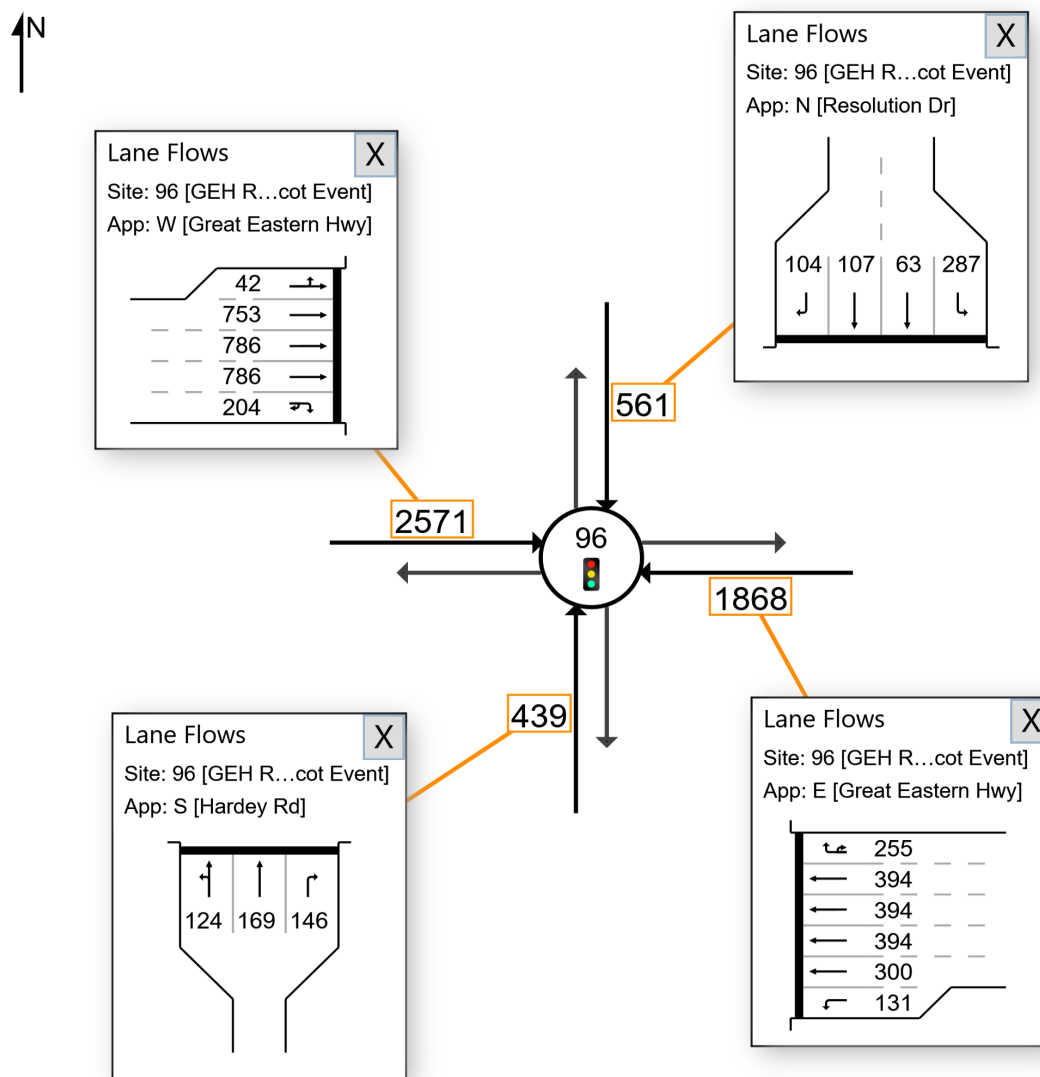
2021 PM Peak with proposed road network Ascot Event

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## Attachment 12.1.4 Movement and Access Strategy

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

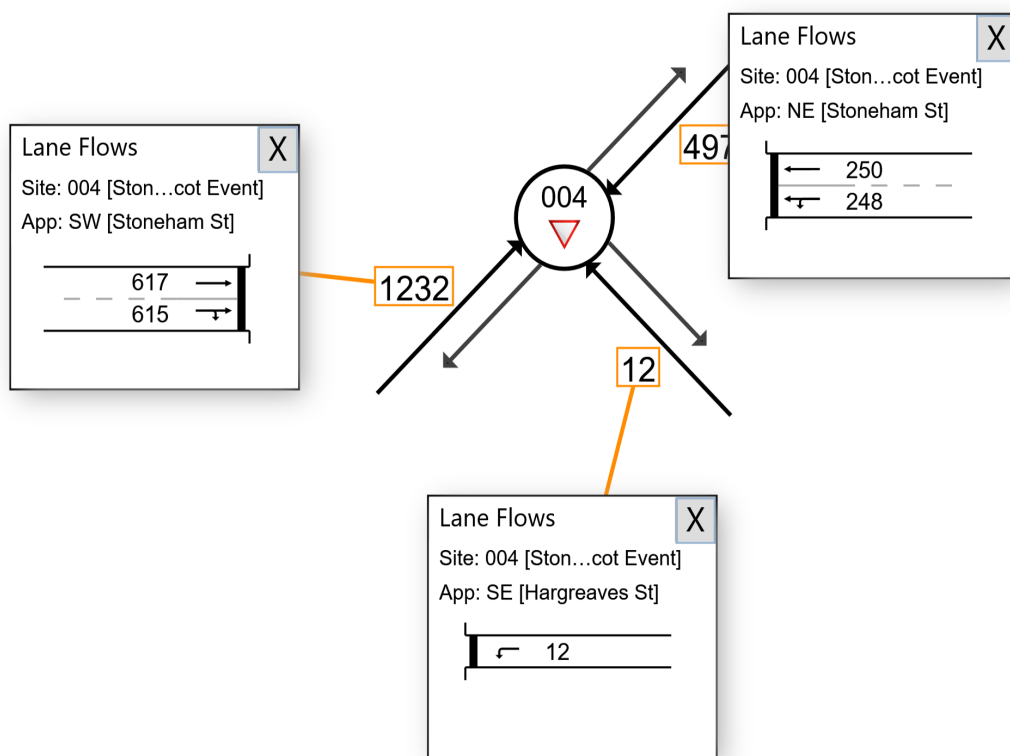
▼ Site: 004 [Stoneham Hargreaves PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]

■ Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2021 PM Peak with proposed road network Ascot Event  
Site Category: Existing Design  
Give-Way (Two-Way)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

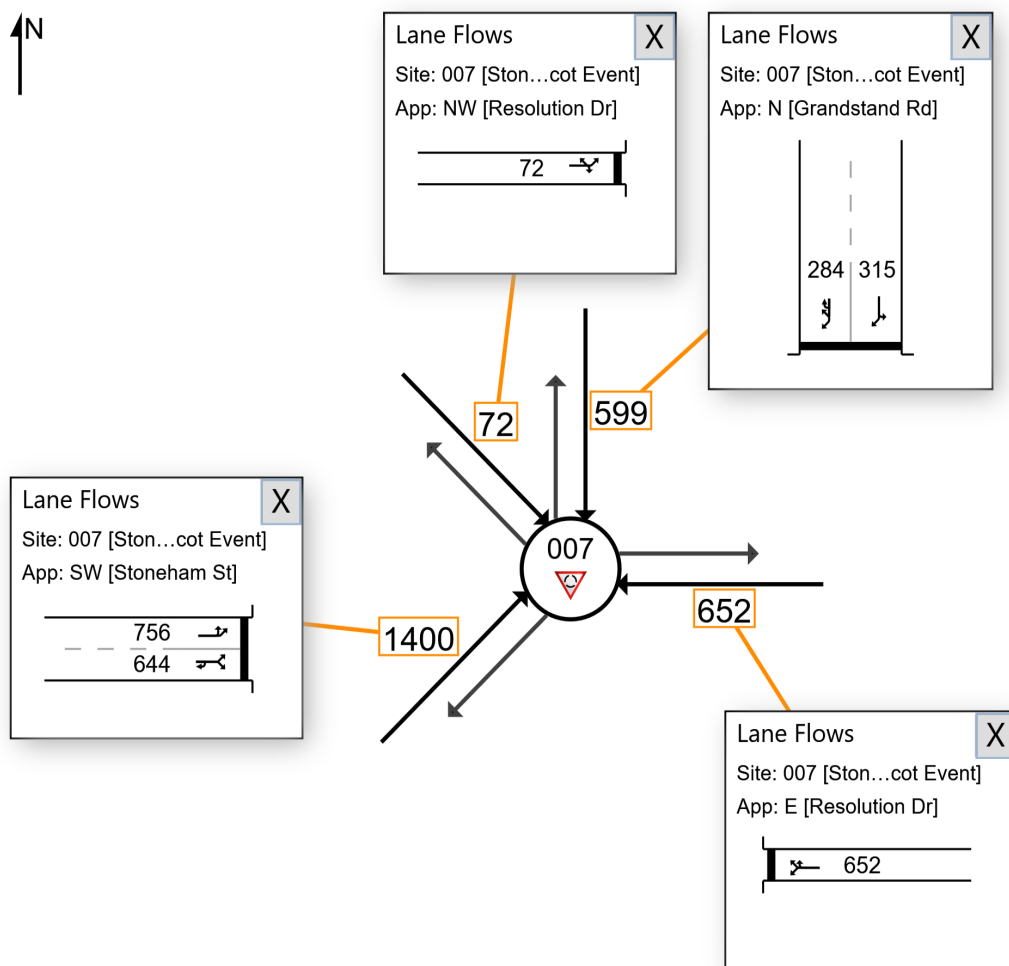
Site: 007 [Stoneham Grandstand Resolution PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]

Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2021 PM Peak with proposed road network Ascot Event  
Site Category: Existing Design  
Roundabout

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

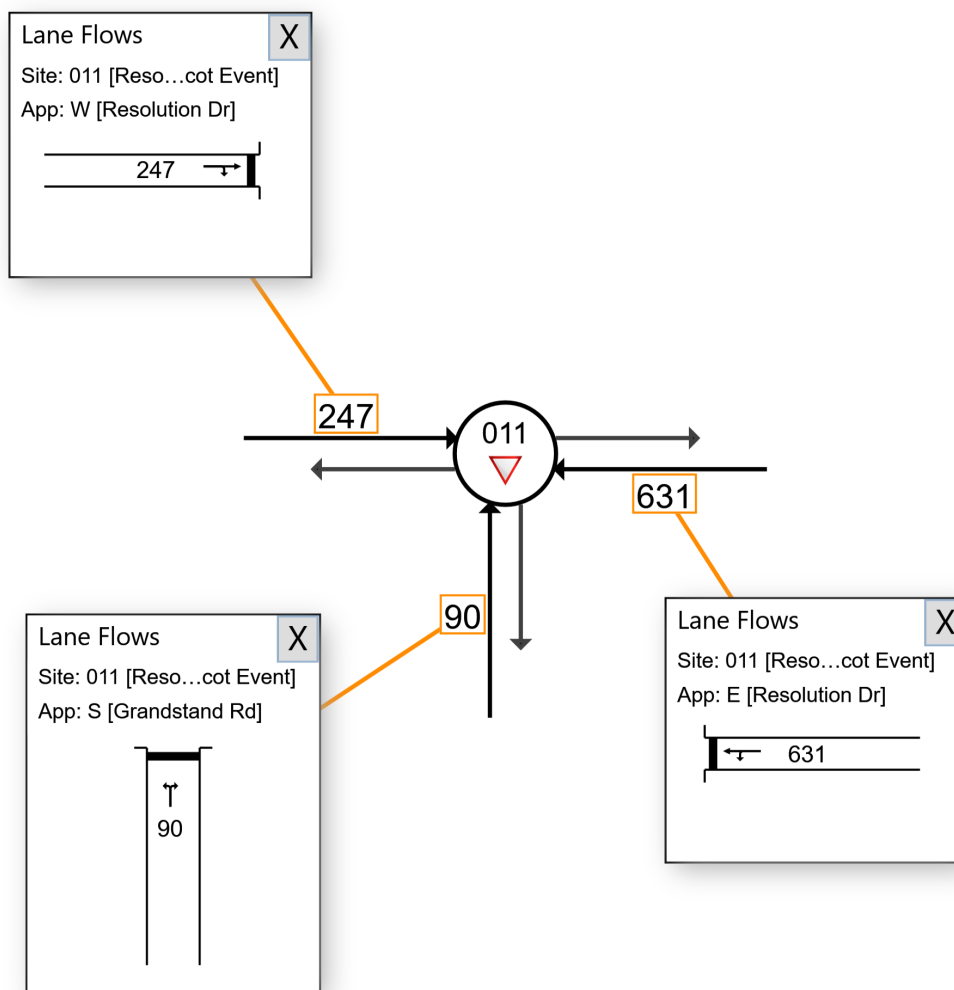
▼ Site: 011 [Resolution Grandstand PM 2021 Ascot Event (Site Folder: 2021 PM Peak Proposed Network ASCOT TEST)]

■ Network: N101 [2021 PM Peak Proposed Network Ascot Weekday Event (Network Folder: General)]

Resolution Dr / Grandstand Rd  
Give Way  
2021 PM Peak with proposed road network Ascot Event  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia PM 2031 Ascot Event (Site Folder: 2031 PM Peak Proposed Network and Land Uses ASCOT TEST)]

Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

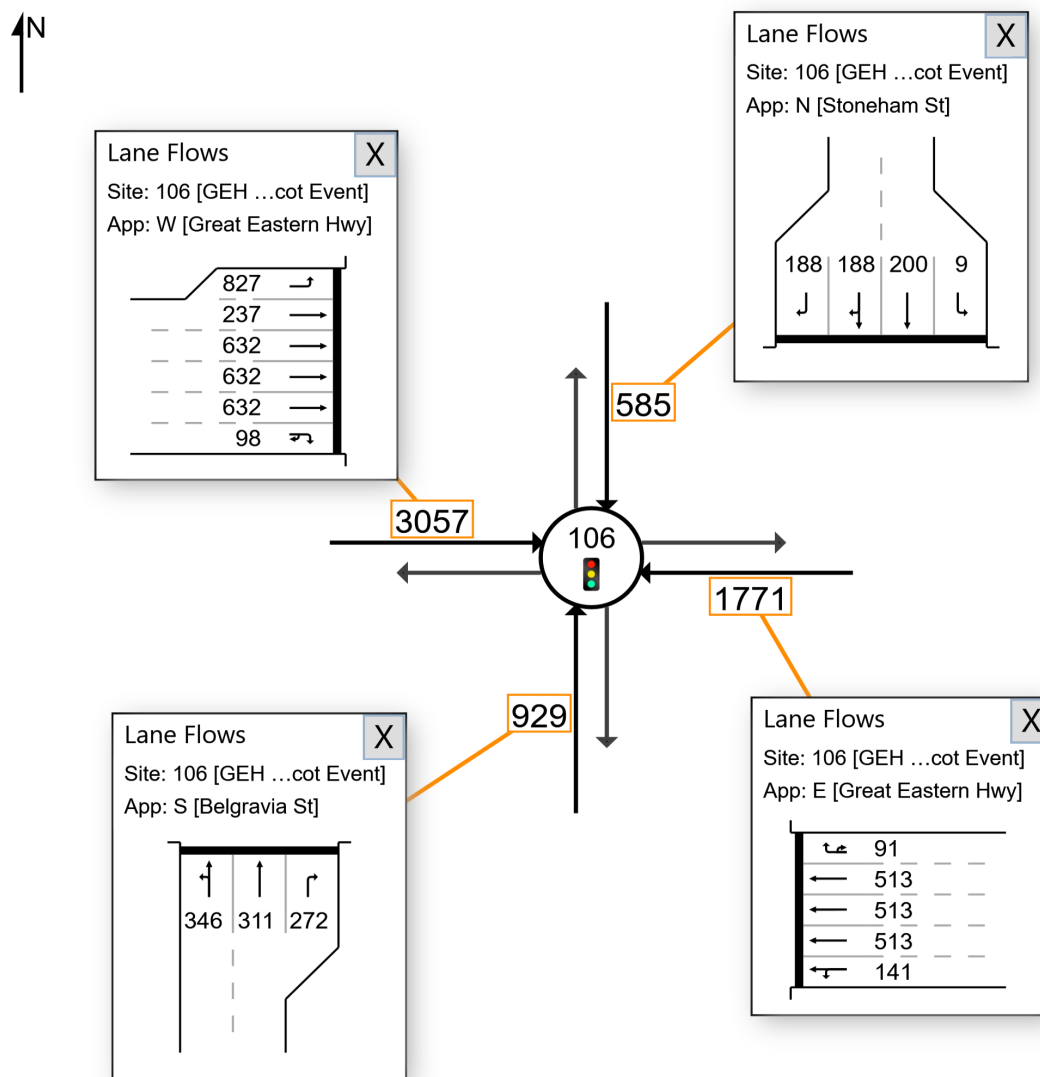
2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

Use the button below to open or close all popup boxes. Click value labels to open selected ones.  
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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

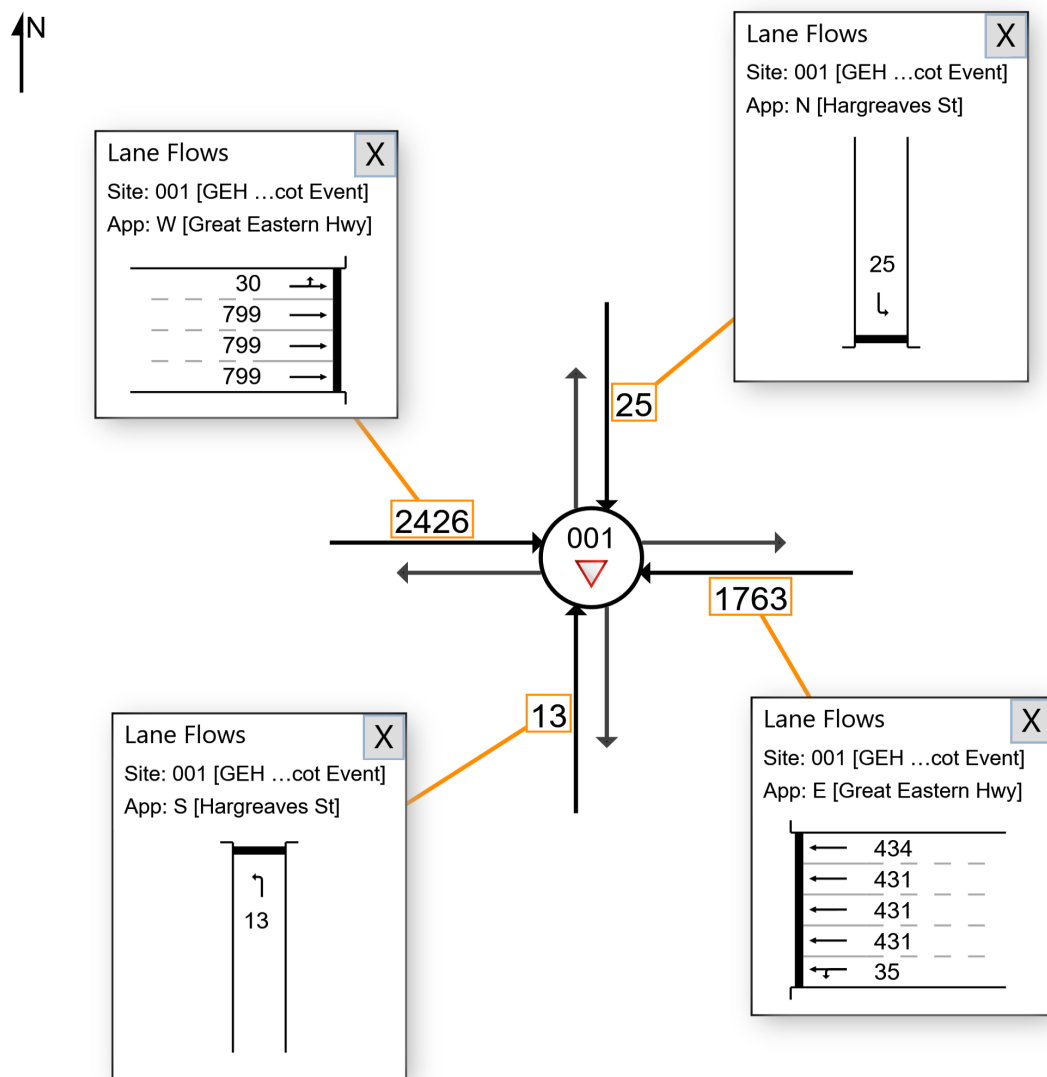
Site: 001 [GEH Hargreaves PM 2031 Ascot Event (Site Folder: 2031 PM Peak Proposed Network and Land Uses ASCOT TEST)]

Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

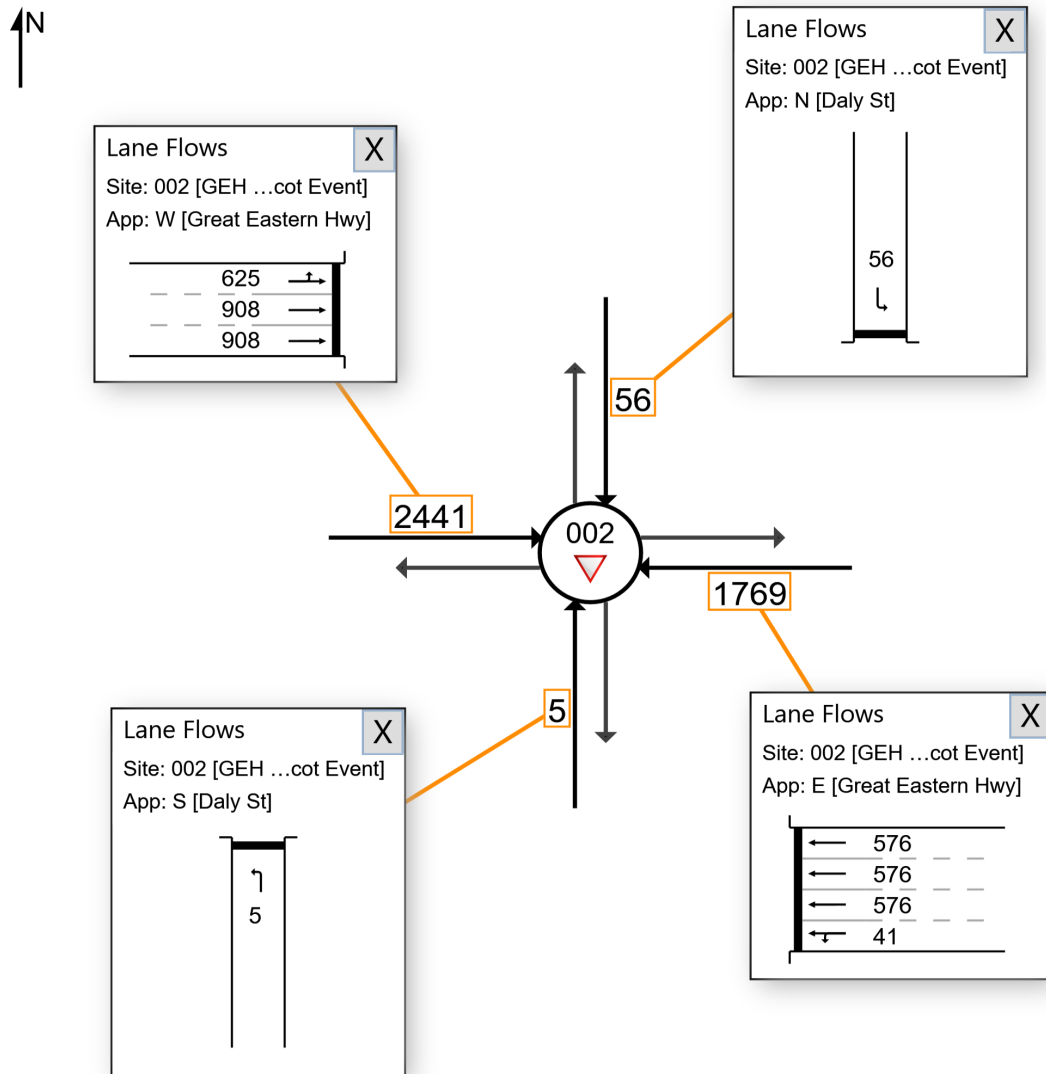
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■ Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

GEH / Daly St  
Left in Left out, Give Way  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

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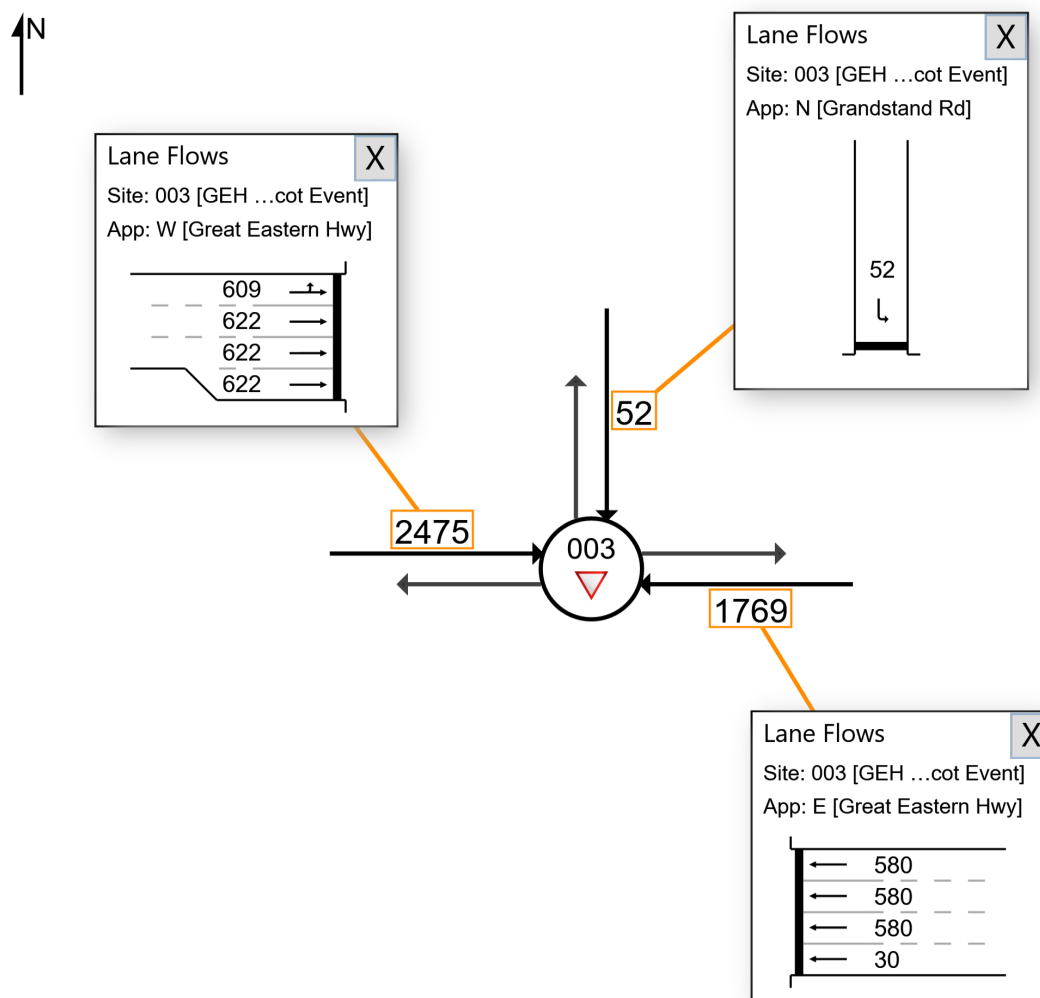
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■ Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 96 [GEH Resolution Hardey PM 2031 Ascot Event (Site Folder: 2031 PM Peak Proposed Network and Land Uses ASCOT TEST)]

Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

GEH / Resolution Dr / Hardey Rd

Traffic signals

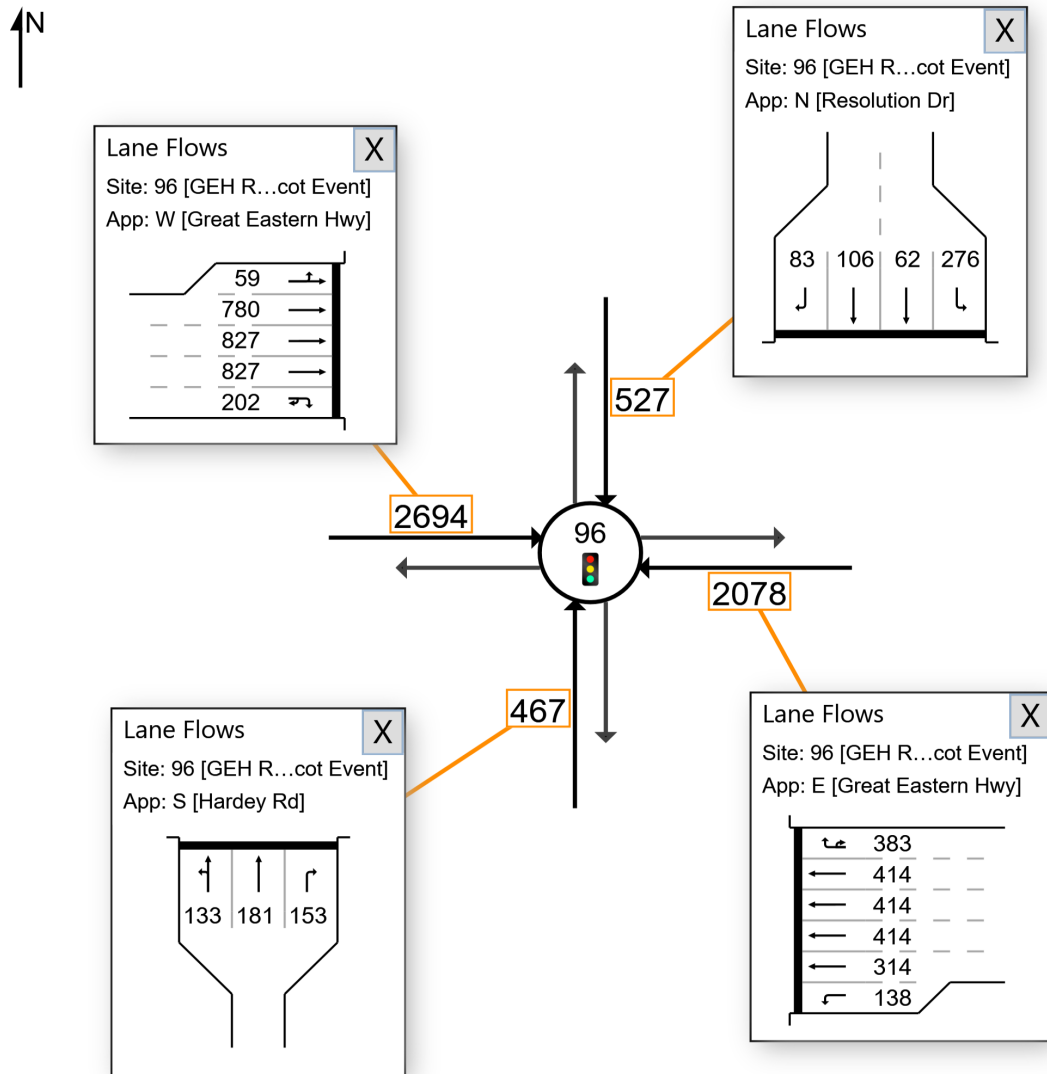
2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

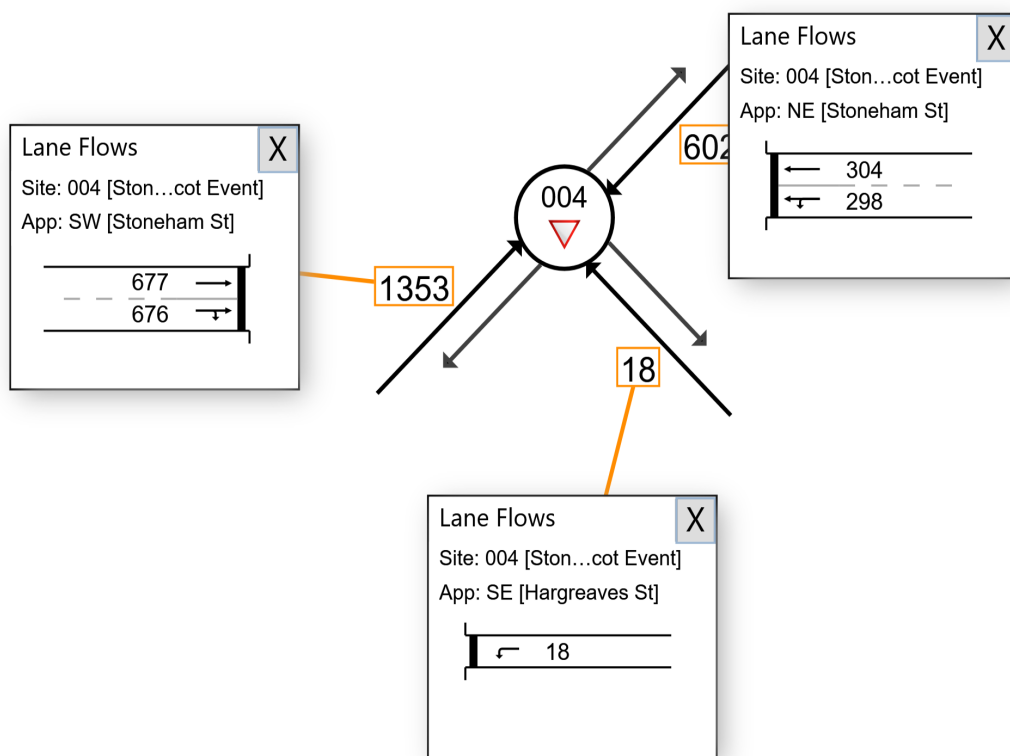
Site: 004 [Stoneham Hargreaves PM 2031 Ascot Event (Site Folder: 2031 PM Peak Proposed Network and Land Uses ASCOT TEST)]

Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

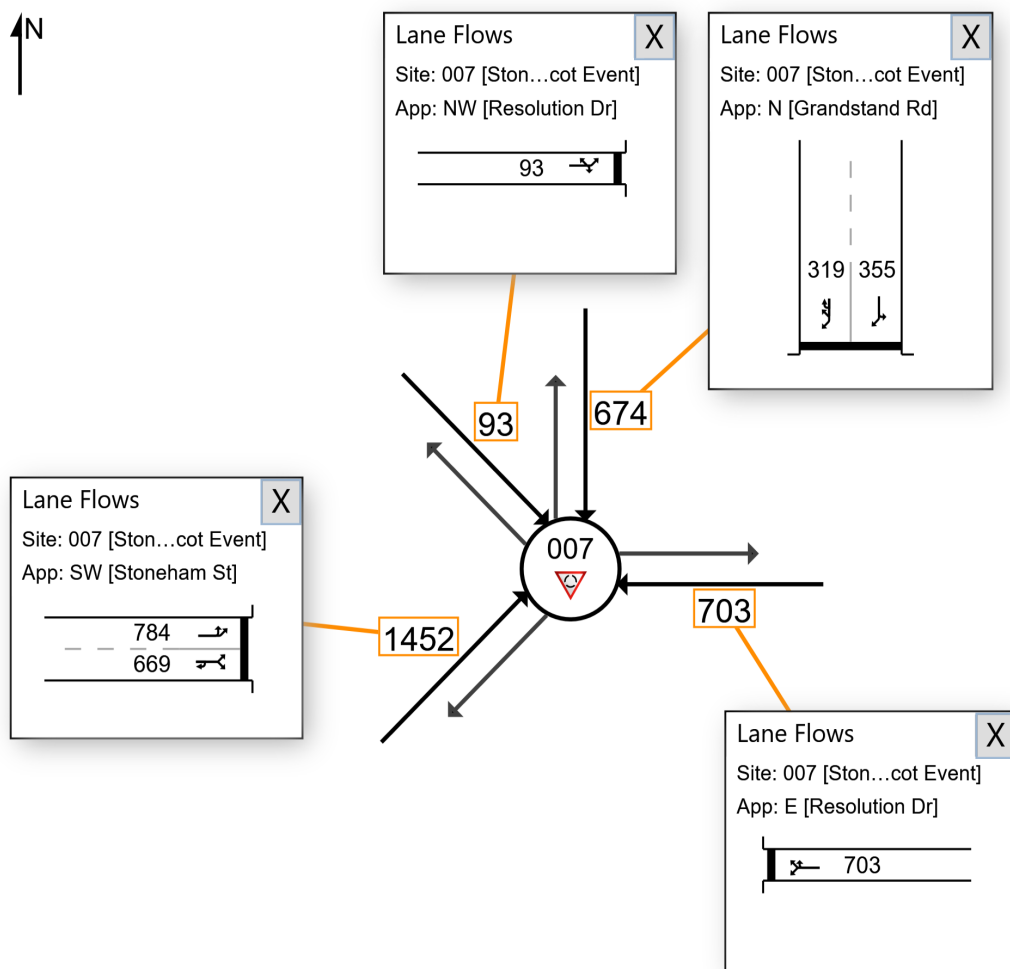
Site: 007 [Stoneham Grandstand Resolution PM 2031 Ascot Event (Site Folder: 2031 PM Peak Proposed Network and Land Uses ASCOT TEST)]

Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2031 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 011 [Resolution Grandstand PM 2031 Ascot Event (Site Folder: 2031 PM Peak Proposed Network and Land Uses ASCOT TEST)]

■ Network: N101 [2031 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

Resolution Dr / Grandstand Rd

Give Way

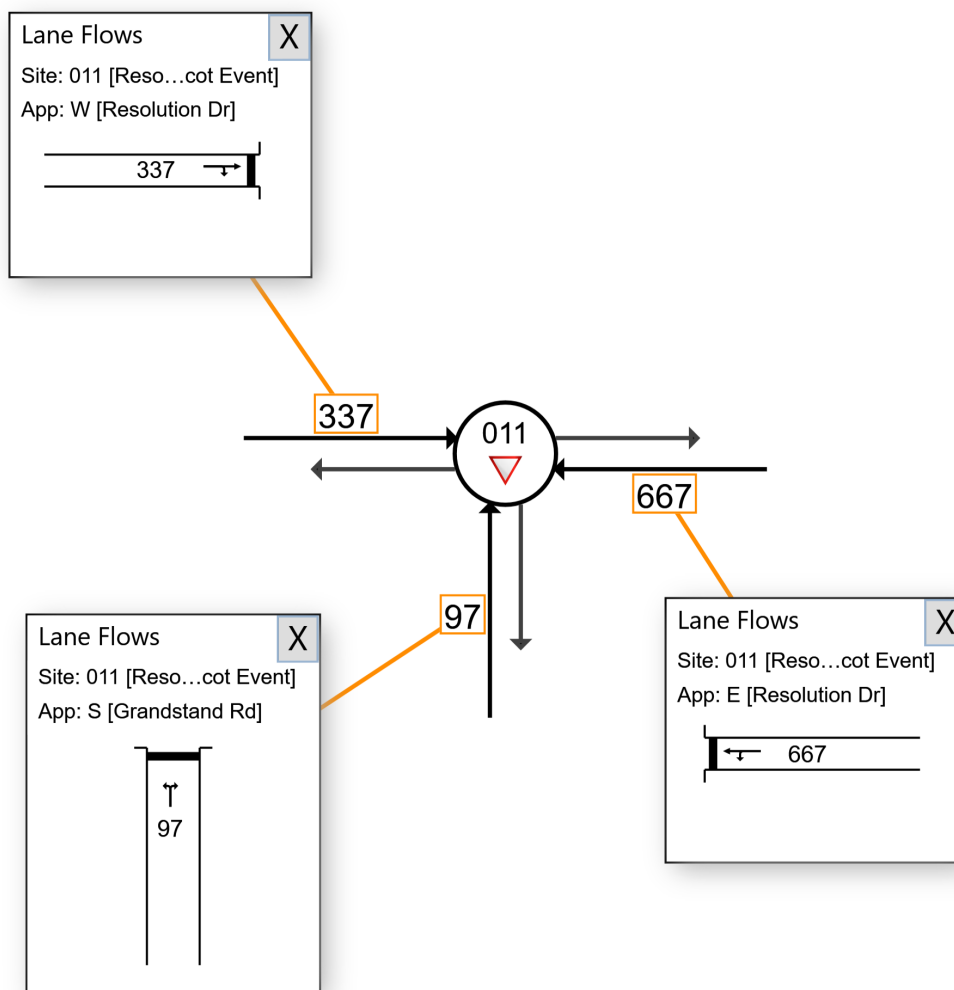
2031 PM Peak with proposed road network and land uses

Site Category: Existing Design

Give-Way (Two-Way)

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

Site: 106 [GEH Stoneham Belgravia PM 2041 Ascot Event (Site Folder: 2041 PM Peak Proposed Network and Land Uses ASCOT TEST)]

Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

GEH / Stoneham St / Belgravia St

Traffic signals

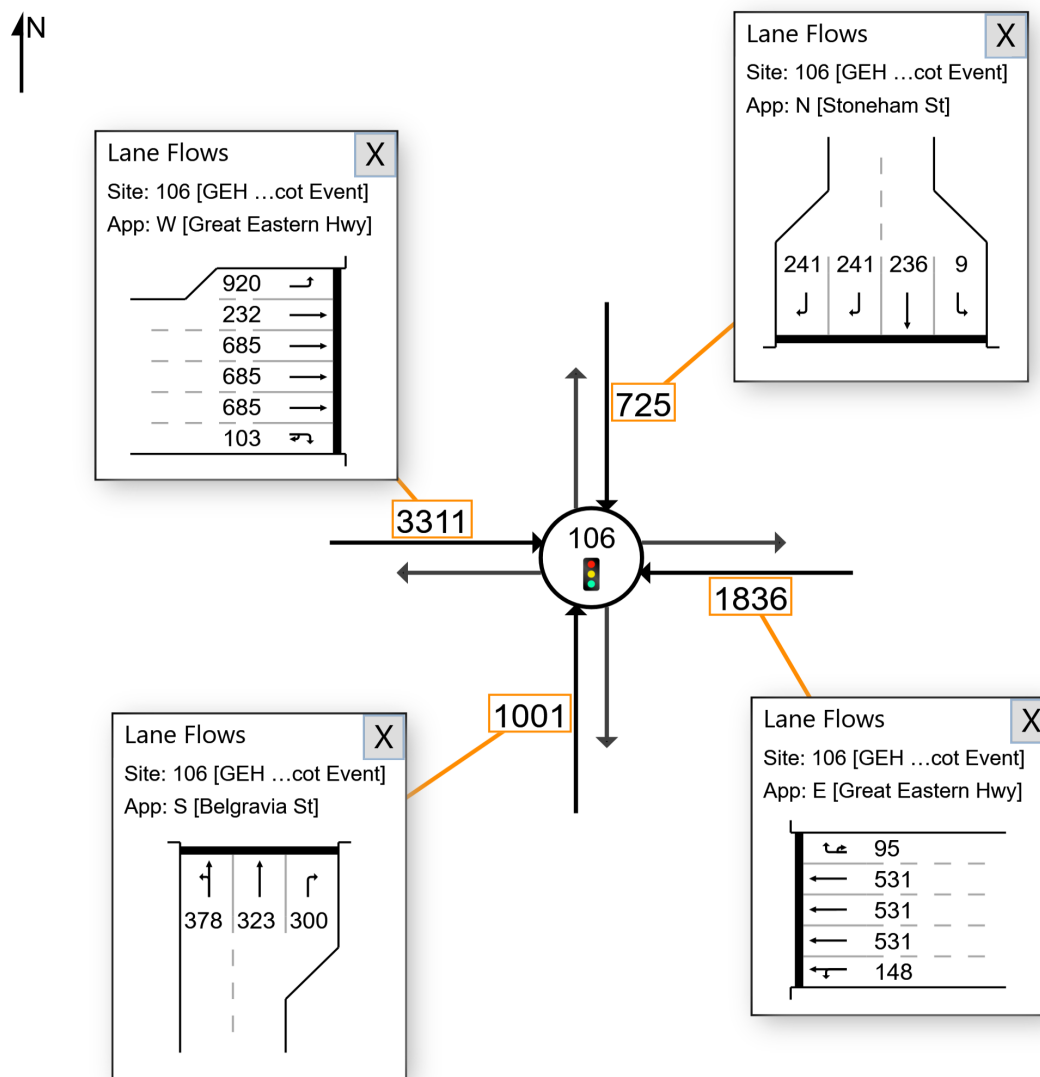
2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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## Attachment 12.1.4 Movement and Access Strategy

Some reduced upstream exit flow rates exist due to capacity constraint applied to oversaturated approach lanes. See Arrival Flows in Lane Summary reports.

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

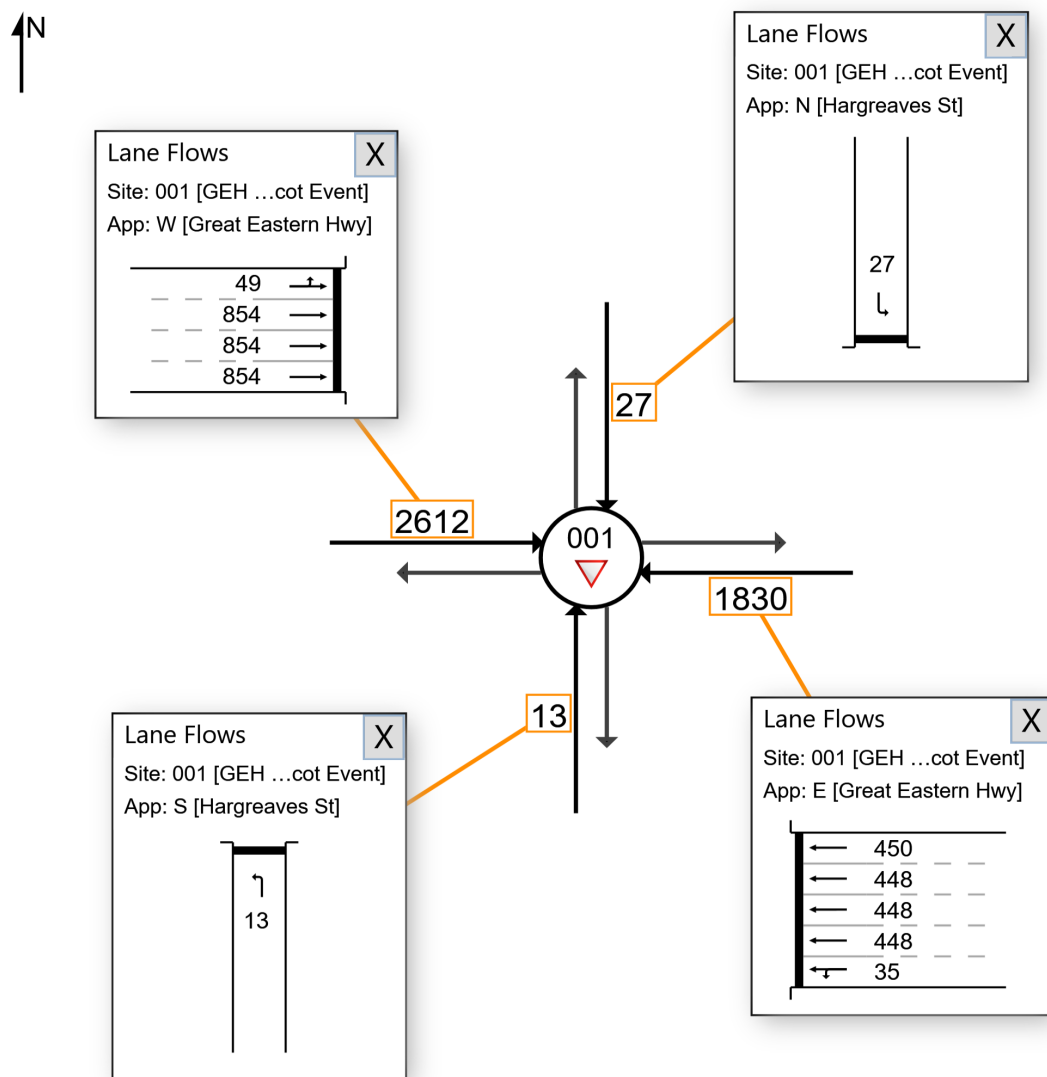
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Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

GEH / Hargreaves St  
Left in Left out, Give Way  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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\Computer Models\SIDRA\Base Model\Golden Gateway Options July 2024.sip9



## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

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■ Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

GEH / Daly St

Left in Left out, Give Way

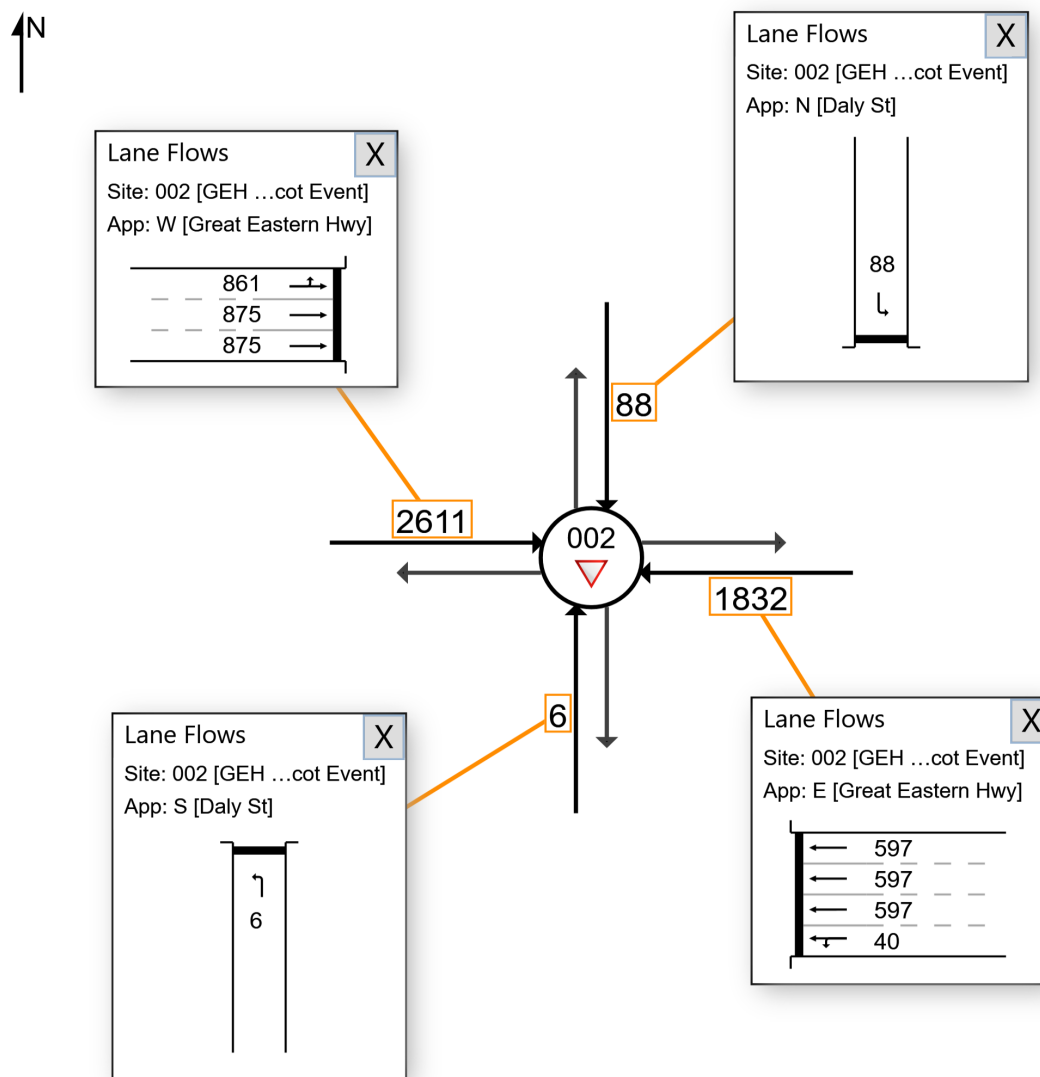
2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Give-Way (Two-Way)

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### All Movement Classes

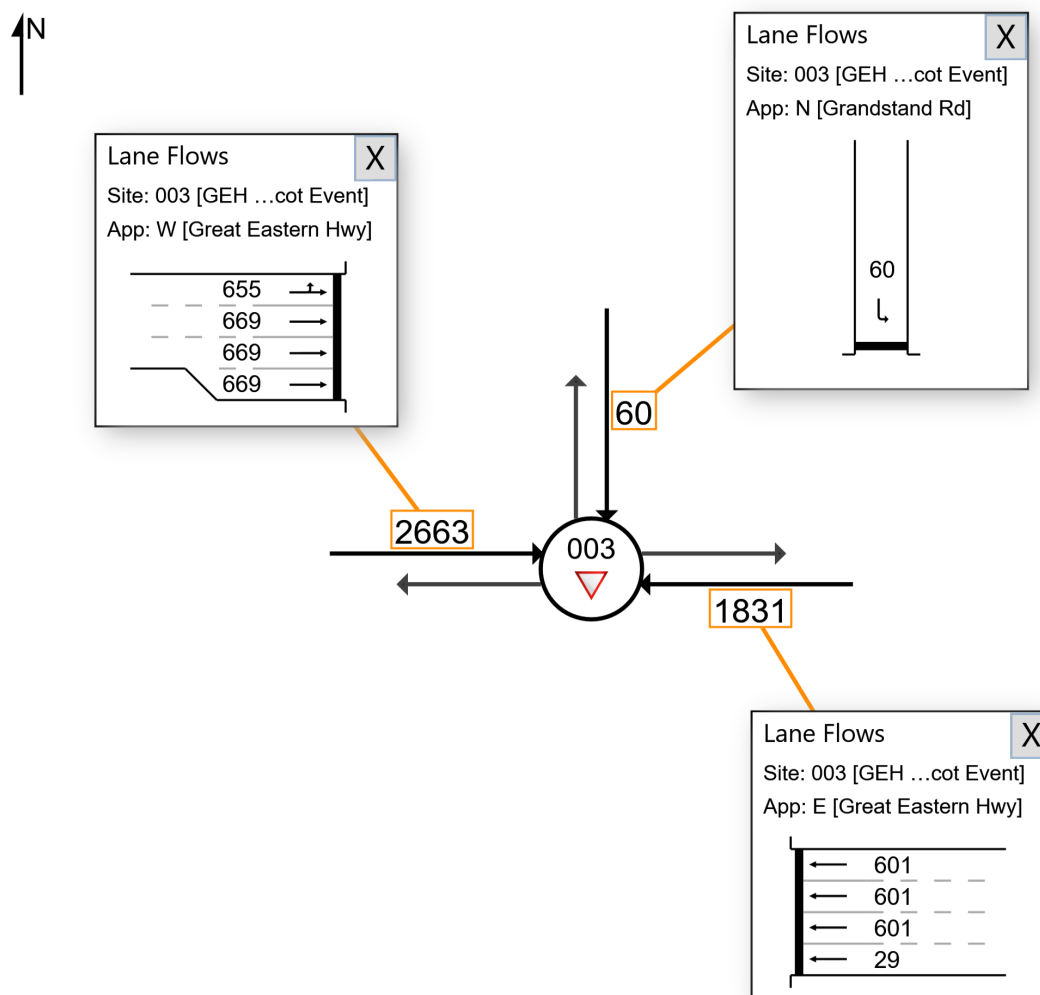
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■ Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

GEH / Grandstand Rd  
Left in Left out, Give Way  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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## APPROACH LANE FLOWS

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### All Movement Classes

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**Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]**

GEH / Resolution Dr / Hardey Rd

Traffic signals

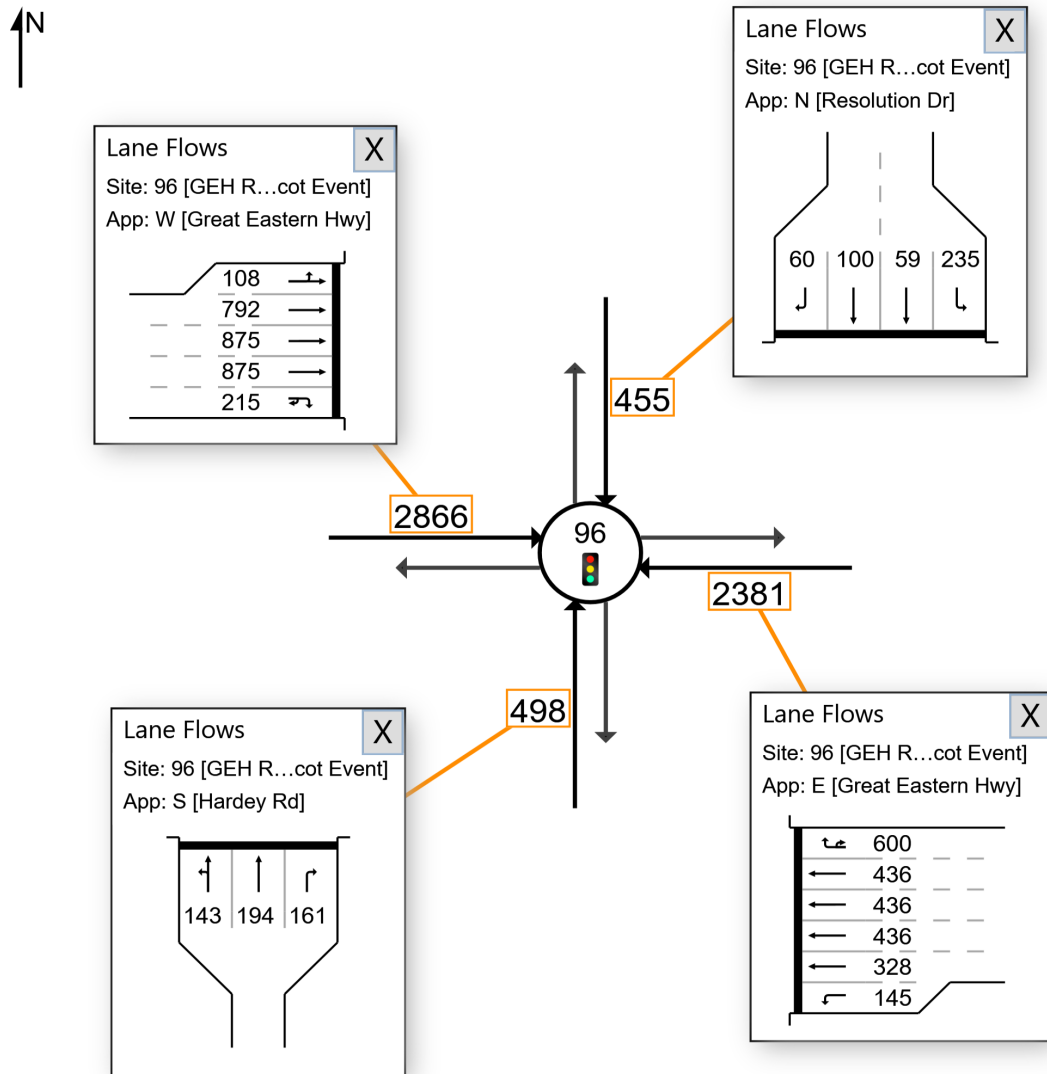
2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 139 seconds (Site User-Given Phase Times)

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### All Movement Classes

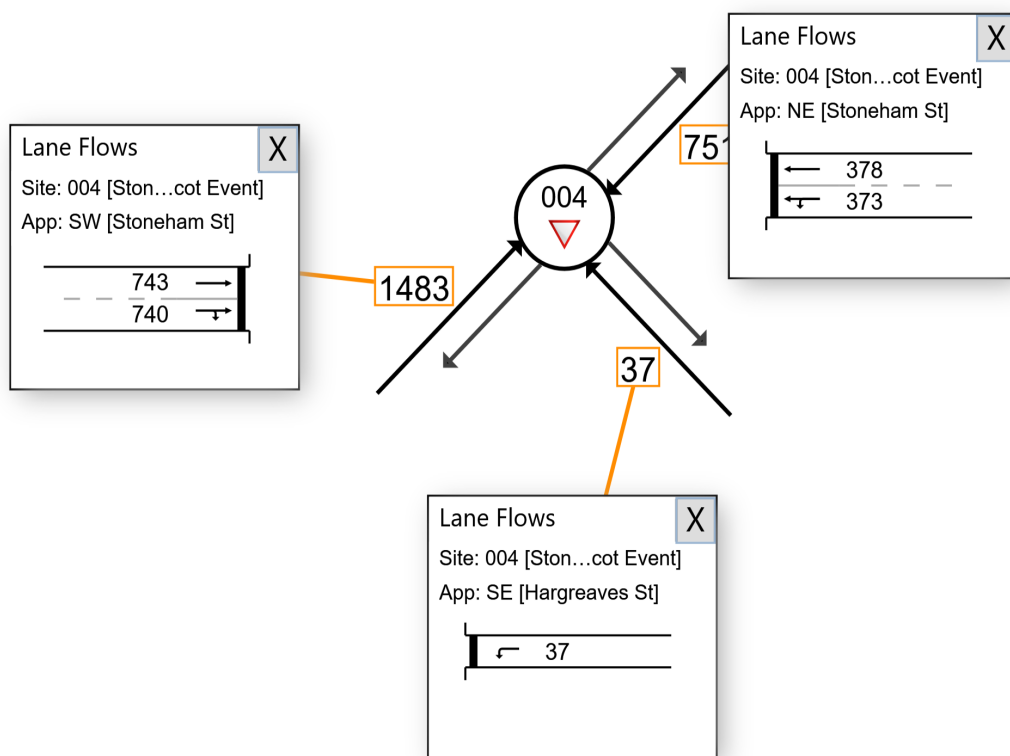
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■ Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

Stoneham St / Hargreaves St  
All in Left out, Give Way  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Give-Way (Two-Way)

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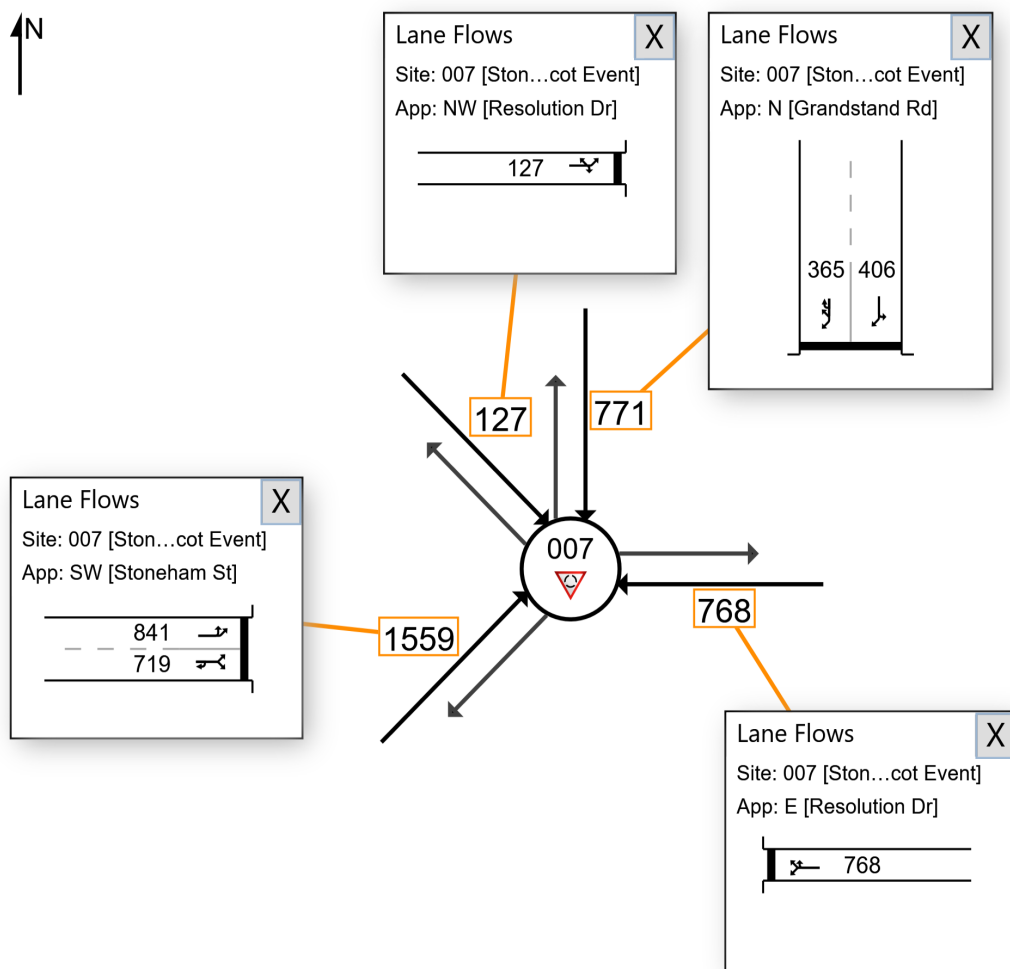
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Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

Stoneham St / Grandstand Rd / Resolution Dr  
Roundabout  
2041 PM Peak with proposed road network and land uses  
Site Category: Existing Design  
Roundabout

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## APPROACH LANE FLOWS

Lane flow rates based on arrival flows including the effect of capacity constraint in Site analysis (veh/h)

### All Movement Classes

▼ Site: 011 [Resolution Grandstand PM 2041 Ascot Event (Site Folder: 2041 PM Peak Proposed Network and Land Uses ASCOT TEST)]

■ Network: N101 [2041 PM Peak Proposed Network and Land Use Ascot Weekday Event (Network Folder: General)]

Resolution Dr / Grandstand Rd

Give Way

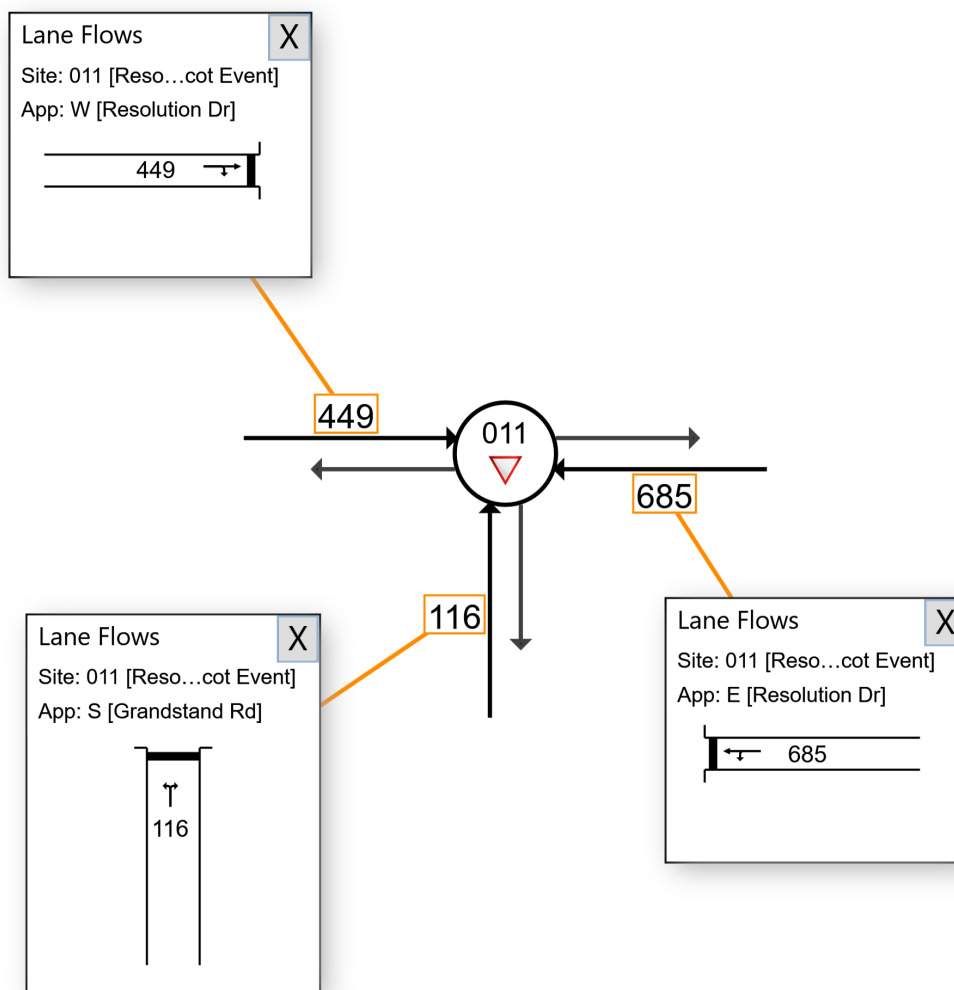
2041 PM Peak with proposed road network and land uses

Site Category: Existing Design

Give-Way (Two-Way)

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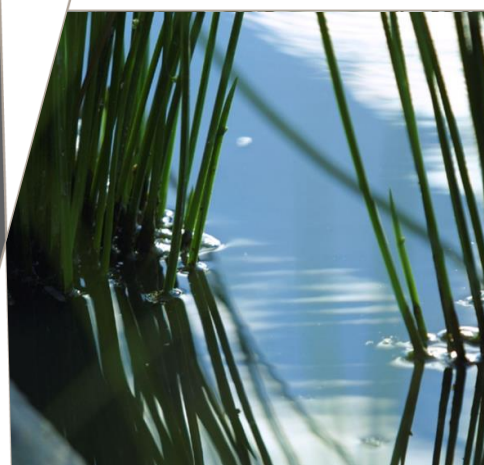
A501

# Infrastructure Assessment Report

Golden Gateway Precinct

Prepared for  
City of Belmont

5 May 2017



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Approved By:

Peter Royle  
 Senior Civil Engineer

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## Executive Summary

The Golden Gateway Structure Plan provides a framework for the redevelopment of the Golden Gateway Precinct area into a “major growth area by 2031”.

Through close liaison with the relevant service providers, Cardno has researched and reported on the current capacity of the infrastructure and services within the Golden Gateway area. Cardno has also provided detailed findings and recommendations regarding the future infrastructure and servicing requirements that are needed to accommodate the redevelopment of the area as proposed by the Structure Plan.

In summary, Cardno’s assessment of the Golden Gateway Precinct in terms of required infrastructure for the Golden Gateway Structure Plan area is as follows:

- The Golden Gateway Precinct area faces a shortage in wastewater infrastructure to service the proposed increase in residential and commercial activity.
- There is currently capacity in the existing HV feeders to supply the proposed development with power. However, Western Power advise power capacity cannot be reserved, and that subject to other developments in the area, a new HV feeder may be required to fully support the development.
- Upgrades other than the required major infrastructure upgrades as outlined in this report infrastructure will be rolled out in response to new development within the subject area.
- It is recommended that a working group between the City of Belmont and Water Corporation is set up in order to help plan and coordinate precinct development and staging with any Water Corporation trunk infrastructure capital works.
- National Broadband Network (NBN) Co. has not yet rolled their infrastructure across the Golden Gateway Precinct. It is recommended that the City of Belmont liaise with NBN Co. as per the *Best practice guide for Councils when initially dealing with NBN Co* document.

In conclusion, based on advice received by Cardno from the relevant service authorities, there should be no reason from a servicing point of view that the Golden Gateway Precinct Structure Plan could not be implemented with the proposed infrastructure upgrades outlined in this report.

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# 1 Background

## 1.1 Introduction

Cardno was engaged to assist the City of Belmont, in conjunction with the Department of Planning to undertake an infrastructure and services strategy for the Golden Gateway precinct, Ascot. The strategy will help guide the preparation of a Local Structure Plan over the area.

The scope of works includes:

- Review of planned growth area;
- Provide analysis of existing services infrastructure, including;
  - Water;
  - Sewer;
  - Power;
  - Gas; and
  - Telecommunications
- Identification of future service demands;
- Liaison and engagement of services providers; and
- Development of reports.

Cardno assessed the infrastructure to inform the City on decisions around the long-term provision of electrical energy, natural gas, potable water, wastewater disposal, along with high speed data /telecommunications for the growth areas.

The findings and advice presented in this report is based on Cardno's observations, experience from similar projects and responses from various service providers and stakeholders.

The investigations and preparation of this report have largely been based on preliminary advice from the various Service Authorities. The information is current as of April 2017 and is subject to change as development proceeds.

## 1.2 Location

The subject area is located in Ascot, and is generally bounded by Great Eastern Highway, Stoneham Street, Grandstand Road and Resolution Drive. It includes the Belmont Trust Land, a portion of the Ascot Racecourse site as well as the Western Australian Turf Club headquarters and Ascot Kilns. The extent of the subject area is shown in **Figure 1-1**.

Figure 1-1 Golden Gateway Subject Area





## 2 Water

Water Corporation Western Australia is the state authority regulating the distribution infrastructure for water reticulation in the area.

### 2.1 Existing Infrastructure

The Serpentine Trunk Main runs along Grandstand Road and Daly Street. There is also a 915 steel distribution main running along Grandstand Road through the subject area. The existing lots are well serviced with a mixture of 100, 150 and 200 dia reticulation pipes made of asbestos cement, cast iron, PVC and steel.

Cardno Drawing *CW942300-CI-SK2* in **Appendix A** shows the location of the existing power infrastructure within and adjacent to the subject area.

### 2.2 Required Infrastructure

The Golden Gateway Precinct is located in the Supply Scheme area. It is difficult to ascertain exactly what capacity the current infrastructure network has without full water network modelling carried out by Water Corporation. However, Water Corporation does not foresee any issues with servicing the proposed scheme with potable water at the time of this report.

Exact water infrastructure upgrades will be determined when Water Corporation carries out full water network modelling. Water Corporation has advised that water reticulation planning and modelling will be done after Structure Plan and rezoning is confirmed, effectively at development application phase. The Water Corporation provided initial advice to Cardno and in their advice; they offered the following key points.

- Water Corporation will upgrade the headwork's, pipe equal to or greater than 300mm diameter and pump stations, as and when required. However, headwork's charges will be charged to the developer. Minor reticulation works, typically pipework less than 300mm diameter, are to be funded directly by the developer.
- All temporary works associated with any development within the Golden Gateway Precinct is to be funded directly by the developer.
- Redevelopment areas within the Golden Gateway Precinct need to integrate water efficiency technology and design approaches into the area and buildings in line with Water Corporation's 'Water Forever 2009' document. This will require a local water management strategy that includes local scale water balancing and identifying water efficiency measures such as; rainwater reuse, appropriate fittings, irrigation smart systems, planting and soil types and drainage collection and reuse.
- Water Corporation advises that a Development Area Plan be commissioned to support development in the Golden Gateway Precinct and submitted to Water Corporation once the Structure Plan has been finalised. This should include a plan identifying the proposed development, densities and likely staging and timeframe. Accompanying this should be a water management strategy outlining how water efficiencies are to be met along with engineering plans detailing proposed works and estimates. The water efficiency targets are to be determined by the City of Belmont in consultation with Water Corporation. Water Corporation runs a Waterwise Development Program that enables developments that have applied water efficient principles to be recognised and endorsed by Water Corporation.
- Water Corp recommends a consolidated approach to the requesting and programming of works to minimise disruptions and maximise cost efficiencies. Water Corporation recommends any reticulation reinforcement or new work should be managed by the City of Belmont due to the fractured land ownership within the area. It is recommended that a working group between the City of Belmont and Water Corporation is set up in order to help plan and coordinate precinct development and staging with any Water Corporation trunk infrastructure capital works.



Additionally, Water Corporation have advised that some existing cast iron water mains will need to be replaced as they are ageing and to increase capacity necessitated by increased demand arising from the proposed higher density development. These may need to be replaced by the developer or alternatively a request can be put to the Water Corporation cast iron replacement program.

Identification of required infrastructure upgrades requires detailed water modelling and more specific demand inputs. Water reticulation planning will be done after Structure Plan and rezoning is confirmed.

### 3 Wastewater

The Water Corporation (WC) of Western Australia is the main service provider regulating the distribution, storage and disposal infrastructure for wastewater in the Ascot area.

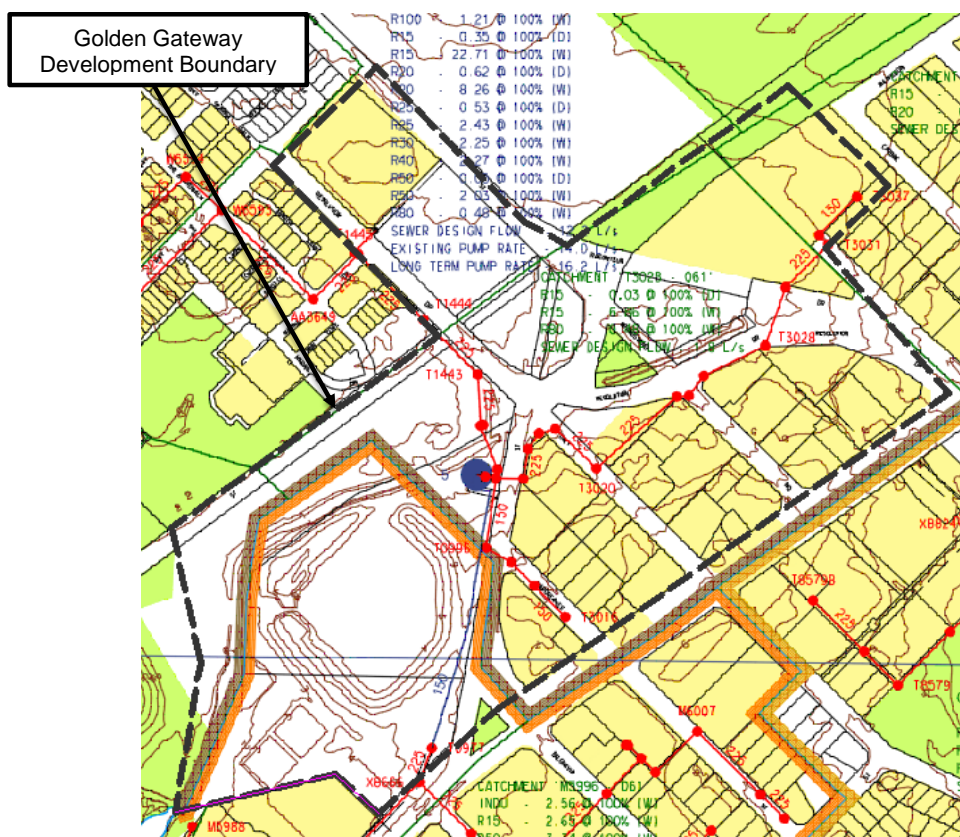
Wastewater infrastructure general to Ascot area is serviced by gravity style wastewater drainage infrastructure. A mixture of concrete and plastic arterial pipes on grade service all areas to local pump stations throughout the City of Belmont.

#### 3.1 Existing Infrastructure

Lots within and surrounding the proposed Golden Gateway Structure plan are serviced by two main arterial sewer routes; a 225mm collector flowing north to south and a 225mm collector flowing east to west. Both collectors flow to the Redcliffe Pump Station 5 located on Stoneham Street. The Redcliffe P.S 5 collects all sewerage west of the Ascot raceway within the Ascot Suburb and discharges it to the Redcliffe Pump Station 2 located on Abernethy Road.

Refer to Cardno Drawing CW942300-CI-SK1 in **Appendix A** for further details and drawings for the wastewater infrastructure in this area.

**Figure 3-1 Existing Sewer Infrastructure**



#### 3.2 Future Demand

**Table 3-1** identifies the additional sewer demand estimated for the proposed Golden Gateway re-zoning structure plan.

**Table 3-1 Local Scheme Zone Sewer Demand**

Local Scheme Zones	Area (ha)	Additional Dwellings (No.)*	Additional Sewer Demand (L/s)**
Mixed-Use (R-AC0)	10.3	1648	9.15
Residential (R20)	0.88	18	0.19
Residential (R40)	1.73	70	0.61
Residential (R100)	1.57	157	1.34
<b>Total</b>		<b>1893</b>	<b>11.29</b>

\* Refer Table 4.4 of DS 50 for Design & Construction Requirements for Gravity Sewers DN150 to DN600

\*\*Capacity based on Water Corporation DS50 Table 4.1.

### 3.2.2 Service Capacity

Service Capacity has been analysed for Redcliffe P.S 5 and Redcliffe P.S 2 to determine if the stations have adequate capacity to service the proposed Golden Gateway development

**Table 3-2 Pump Station Service Capacity**

Pumping Station	Additional Flow (L/s)	P.S Existing Sewer Flow (L/s)	Long Term P.S. Capacity (L/s)	Future Capacity / [Shortfall] (L/s)
Redcliffe PS 5	11.29	14.0	16.2	[9.09 L/s]
Redcliffe PS 2	11.29	20.1	37.0	5.61 L/s

As per **Table 3-2** the proposed development will have significant impacts to the current wastewater infrastructure. It is not envisaged the existing Redcliffe PS5 will have sufficient capacity with a shortfall of 9.09 L/s to service the proposed development and will require a significant upgrade. Redcliffe PS 2 will likely have capacity however further planning should be co-ordinated with the Water Corporation to ascertain other timing of other developments in the area.

### 3.3 Required Infrastructure

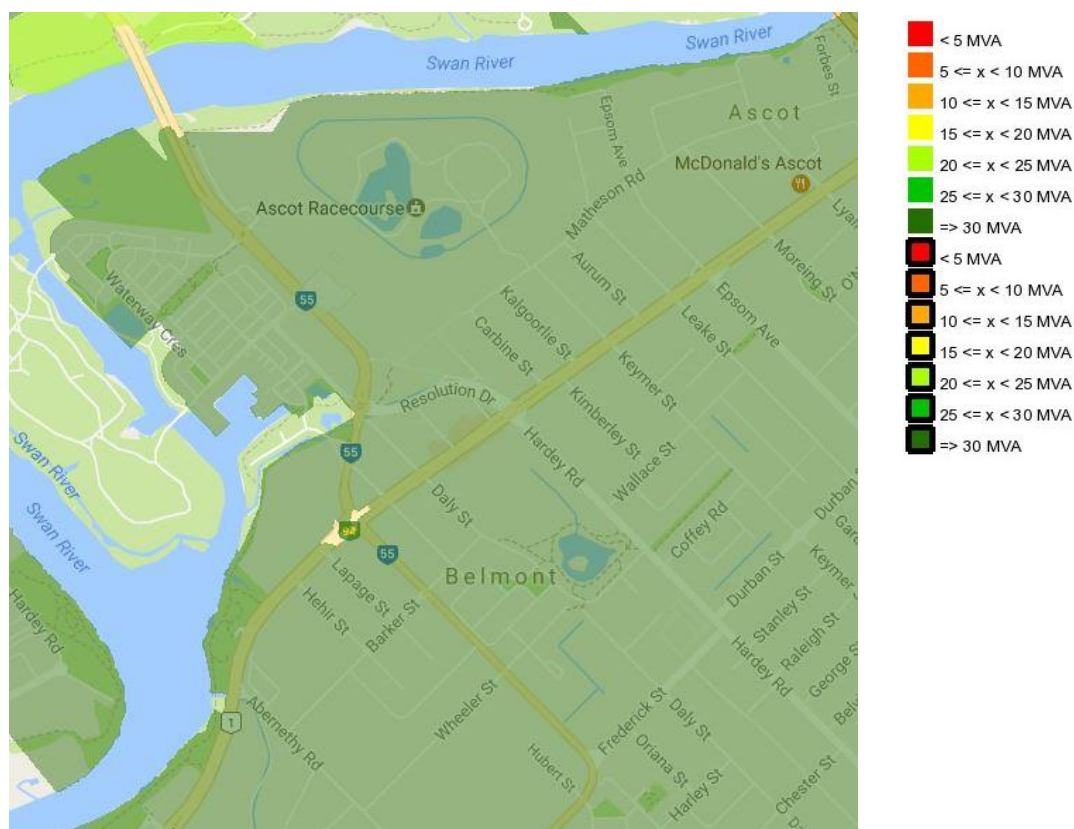
Due to wastewater flows increasing due to the high density development, a number of upgrades will be required to headworks infrastructure in the area. These include increasing the capacity of the Stoneham Street Wastewater Pump Station as well as a number of sewer mains. These will be scheduled in the Water Corporation Capital Investment Program at the appropriate time.

## 4 Power Supply

### 4.1 Existing Infrastructure

Power distribution and production is managed by Western Power. Data obtained from the Western Power *Network Mapping Tool* indicates that the area is serviced by the Belmont Substation and the forecast network capacity for 2015 is >30MVA, as shown in **Figure 4-1**. There are High and Low Voltage power lines in the vicinity of the site.

**Figure 4-1 Existing Power Network Capacity**  
 (Source: <http://ncmt.westernpower.com.au/index.cfm>)



Cardno Drawing *CW942300-CI-SK6* in **Appendix A** shows the location of the existing power infrastructure within and adjacent to the subject area.

### 4.2 Required Infrastructure

Maximum power requirement for the development has been calculated using Western Power's online Design Maximum Demand calculator. The estimated demand for the development is shown in **Table 4-1** below.

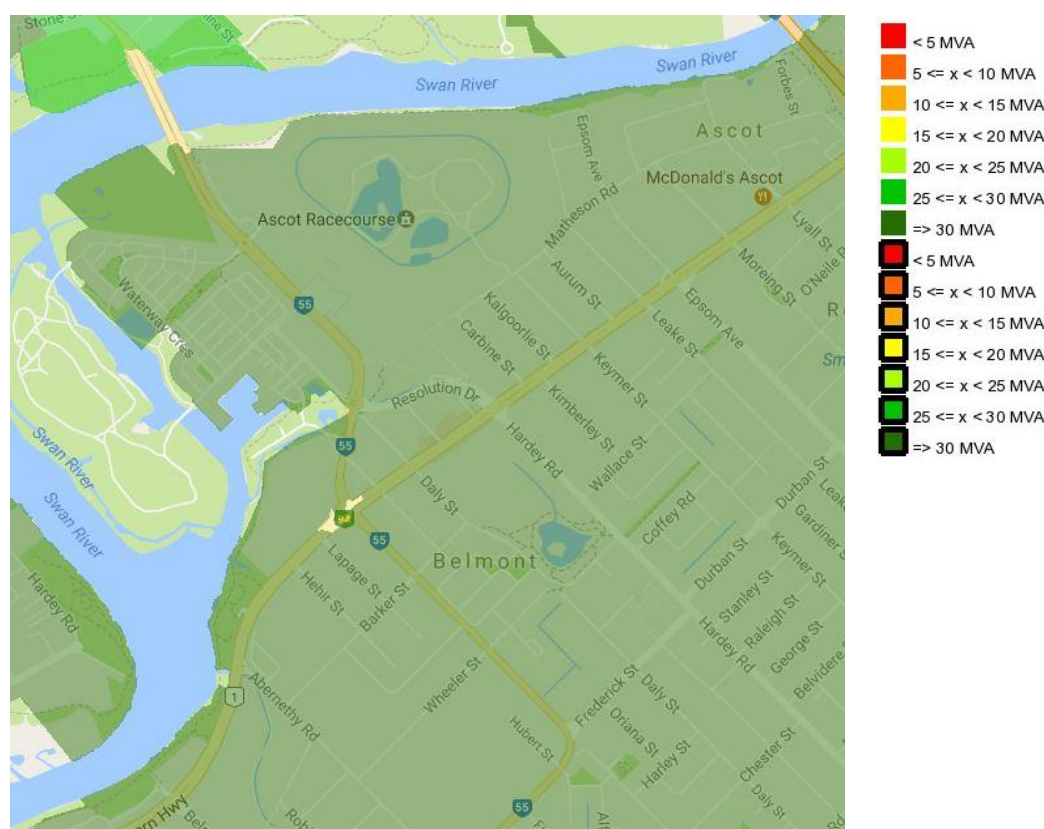


**Table 4-1 Estimated Maximum Power Demand**

Proposed Lot Use	Number of Units/Dwellings	Max. Demand/Unit (kVA)	Approx. Estimated Demand (kVA)
Single Dwelling Units	18	4.7	84.6
Grouped Residential (5-10 Units)	70	3.5	245
Grouped Residential (Over 10 Units)	1805	3.1	5,596
Mixed Use Commercial	1	2,400kVA	2,400
<b>Total Development</b>			<b>8,325.6</b>

Belmont substation falls under the Cannington load area. Western Power's *Annual Planning Report 2015/16* states "no substation capacity shortfall is forecast in the Cannington load area over the next five years." This takes into account committed and most likely to occur network expansion plans for the area. The Western Power *Network Mapping Tool* indicates that there is >30MVA spare capacity in the network until at least 2036 based on current and forecast demand (see **Figure 4-2**).

**Figure 4-2 Forecast Power Network Capacity 2036**  
 (Source: <http://ncmt.westernpower.com.au/index.cfm>)



Western Power has completed a feasibility report for the proposed development, which is attached in Appendix B. Western Power has advised the following:

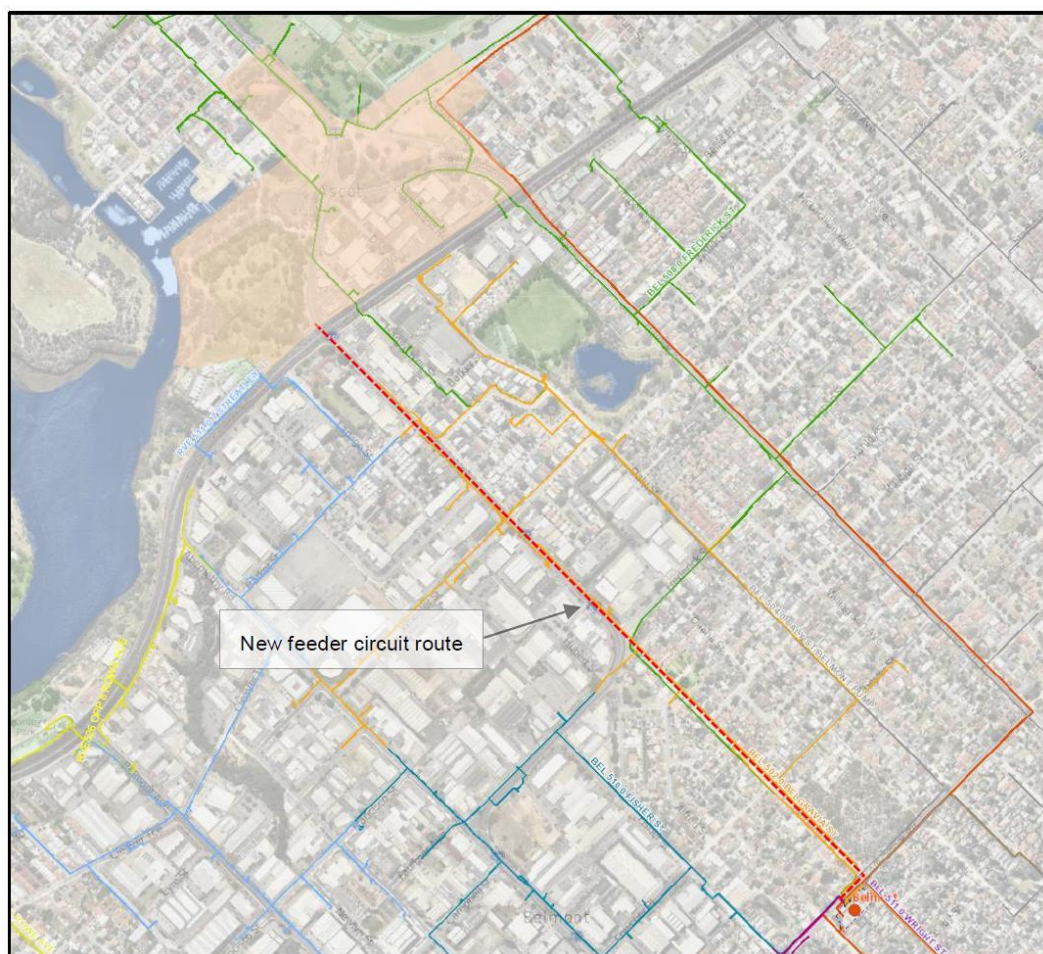


*“Network analysis has identified that there sufficient capacity on the present configured network, and new feeder circuit would not be required as there are adequate spare capacity available on the BEL508 and surrounding feeders (BEL502 & RVE526) to fully accommodate the 8.325MVA total load. However, as the load growth to the redevelopment area is not expected till 2031, it is deemed reasonable that the provision to install a new 2km long feeder from BEL to entirely supply the 8.325MVA load may be required.”*

The proposed route of a new feeder from the Belmont Substation is shown in **Figure 4-3**.

**Figure 4-3 Proposed Western Power Feeder Route**

(Source: Western Power Feasibility Report – MF010862 – Golden Gateway Precinct, May 2017)



## 5 Gas

---

### 5.1 Existing Infrastructure

Gas infrastructure and distribution in Western Australia is managed by ATCO Gas Australia.

Correspondence from ATCO Gas identifies Medium Pressure gas mains (pressure indicated at 70kPa) along most roads within the subject site.

Cardno Drawing CW942300-CI- SK4 in **Appendix A** contains information on gas infrastructure in the vicinity of the area.

### 5.2 Required Infrastructure

Correspondence received from Atco Gas advised that the existing infrastructure can support the proposed development as outlined in the Structure Plan.

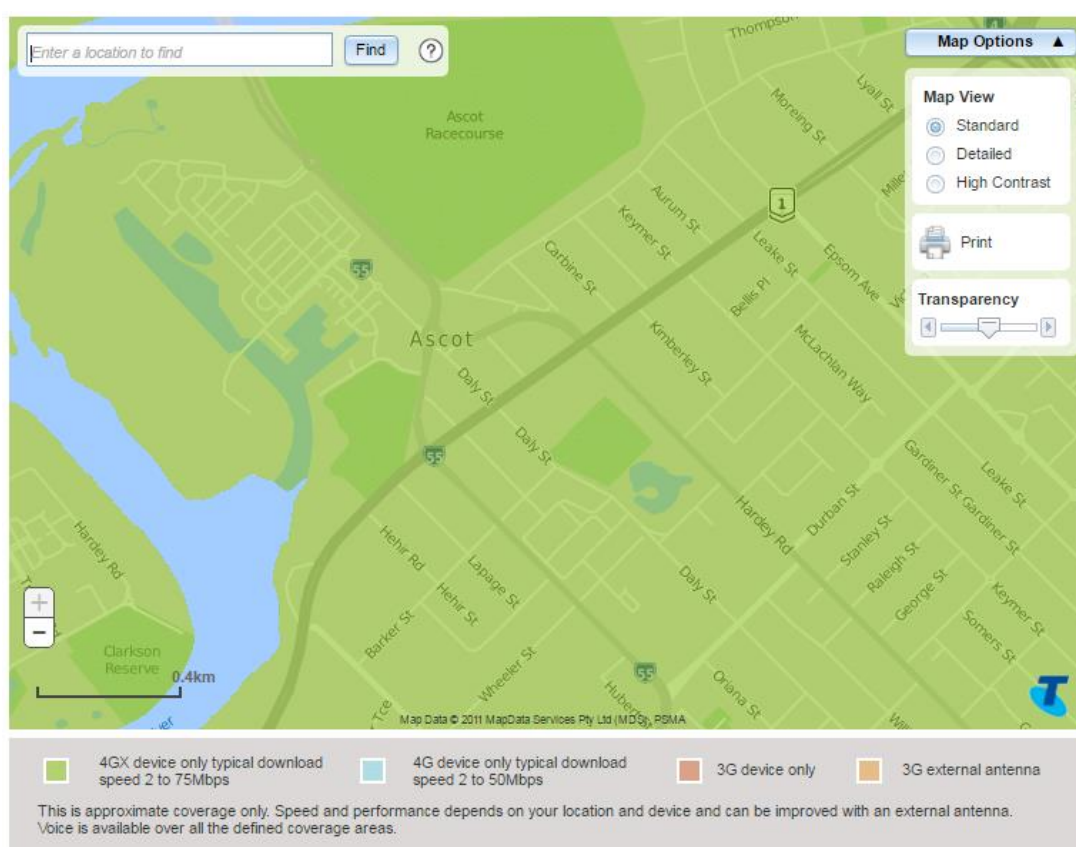
## 6 Communications

### 6.1 Existing Infrastructure

The subject area is well serviced by telecommunications infrastructure with optical fibre running in or adjacent to all precincts. This infrastructure is owned by various telecommunications providers including Telstra, Optus and others.

Refer to Cardno Drawing *CW942300-CI-SK5* in **Appendix A** for a detailed plan of the fibre optic cable locations.

**Figure 6-1 Telstra Mobile Network Coverage**  
 (Source: [www.telstra.com.au/coverage-networks/our-coverage](http://www.telstra.com.au/coverage-networks/our-coverage))



Mobile network coverage in the area is well serviced with 4G covering the entire subject area under the Telstra network (as shown in **Figure 6-1**); other network providers may vary.

The National Broadband Network (NBN) has yet to be rolled out in the subject area. However, NBN Co have advised that fibre to the node (FTTN) technology rollout has been planned for October-December 2017.

### 6.2 Required Infrastructure

#### 6.2.1 Telstra

Should a developer wish to register a development with Telstra smart communities; this must be done twelve weeks prior to construction.

The infrastructure within a development will be installed by the developer. Alternatively, Telstra can be engaged to install infrastructure within a development at the developer's expense.

Telstra's commercial pit and pipe service will generally not be offered in developments where NBN Co has confirmed agreement to install NBN Co fibre within a development stage.

### **6.2.2 NBN**

As NBN is still in the planning phase, it is recommended that the City of Belmont liaise with NBN Co as per the *Best practice guide for Councils when initially dealing with NBN Co* document published by the Australian Local Government Association and NBN Co.

In line with the new *Telecommunications Infrastructure in New Developments* policy, NBN is required to recover part of the cost of deploying network infrastructure by applying a deployment contribution charge. These deployment charges only apply to developers and builders.

- A charge of \$400 per premises in multi dwelling units (MDUs).
- A charge of \$600 per premises within a single dwelling unit (SDU).

A backhaul contribution charge may also apply to the development, NBN will clarify this requirement when the developer submits his application.

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APPENDIX

A

EXISTING INFRASTRUCTURE







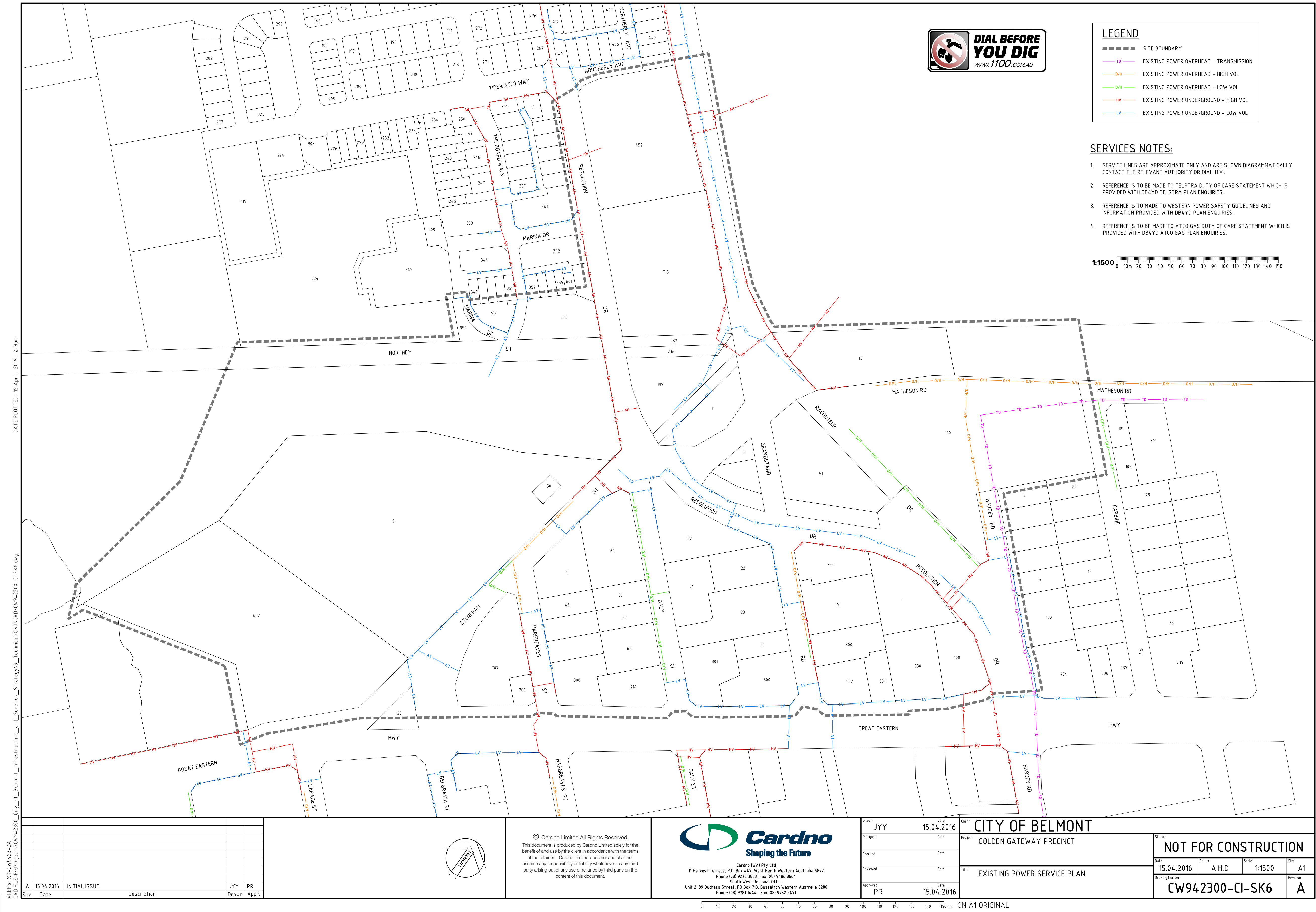












LEGEND	
---	SITE BOUNDARY
---	EXISTING POWER OVERHEAD - TRANSMISSION
---	EXISTING POWER OVERHEAD - HIGH VOL
---	EXISTING POWER OVERHEAD - LOW VOL
---	EXISTING POWER UNDERGROUND - HIGH VOL
---	EXISTING POWER UNDERGROUND - LOW VOL

SERVICES NOTES:

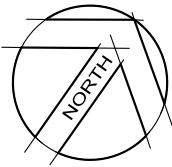
- 1. SERVICE LINES ARE APPROXIMATE ONLY AND ARE SHOWN DIAGRAMMATICALLY. CONTACT THE RELEVANT AUTHORITY OR DIAL 1100.
- 2. REFERENCE IS TO BE MADE TO TELSTRA DUTY OF CARE STATEMENT WHICH IS PROVIDED WITH DB4YD TELSTRA PLAN ENQUIRIES.
- 3. REFERENCE IS TO BE MADE TO WESTERN POWER SAFETY GUIDELINES AND INFORMATION PROVIDED WITH DB4YD PLAN ENQUIRIES.
- 4. REFERENCE IS TO BE MADE TO ATCO GAS DUTY OF CARE STATEMENT WHICH IS PROVIDED WITH DB4YD ATCO GAS PLAN ENQUIRIES.



DATE PLOTTED: 15 April, 2016 - 2:18pm

YREF: X9-CW9423-0A  
CAD FILE: F:\Projects\CW942300\_City\_of\_Belmont\_Infrastructure\_and\_Services\_Strategy\5\_Technical\Civil\CAD\CW942300-CI-SK6.dwg

Rev	Date	Description	Drawn	Appr
A	15.04.2016	INITIAL ISSUE	JYY	PR



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Drawn	JYY	Date	15.04.2016
Designed		Date	
Checked		Date	
Reviewed		Date	
Approved	PR	Date	15.04.2016

CITY OF BELMONT

GOLDEN GATEWAY PRECINCT

EXISTING POWER SERVICE PLAN

NOT FOR CONSTRUCTION

Date	Drawn	Scale	Size
15.04.2016	A.H.D	1:1500	A1
Revised	Revised	Revised	Revised

Drawing Number  
CW942300-CI-SK6

Revision  
A

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

A523

APPENDIX

B

WESTERN POWER FEASIBILITY  
STUDY



## Feasibility Report

### MF010862 – Golden Gateway Precinct

Large Mixed-Use Development – 8.325MVA Supply Options

5/05/2017

 **westernpower**



**Document release information**

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**Document prepared by:**

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Prepared by:

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Distribution Network Design Officer

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## **1 Introduction**

---

### **1.1 Background**

Cardno has submitted a feasibility study on behalf of the City of Belmont, in conjunction with the Department of Planning to undertake an infrastructure and services strategy for the Golden Gateway Precinct in Ascot. The strategy will help guide the preparation for the Local Structure Plan over the area. Cardno is seeking information on the available network capacity to supply the Golden Gateway Precinct.

### **1.2 Purpose**

The proposed outcomes from the feasibility study are;

- Desktop network assessment on the nearby distribution HV networks to determine the available capacity from these networks.
- Network planning capacity assessment (Distribution & Transmission) to determine available capacity from zone substations within proximity to the development.
- High level scope of works for the transmission and distribution works required to provide up to 8.325MVA of capacity (if reinforcement or extension is required).

### **1.3 Scope of Study**

The activities that will be undertaken to achieve the specified outcomes are;

1. Network Configuration Assessment
2. Network Impact Assessment
3. Western Power Scope of Works

## 2 Study Activities

### 2.1 Activity 1 – Network Configuration Assessment

The proposed development are is set amongst the BEL508 22kV feeder network emanating from the Belmont zone substation (BEL) located approximately 2.0km south. The BEL508 22kV feeder along with three other HV feeder networks (BEL502, RVE511 & RVE526) are the only networks within close proximity to the redevelopment (figure 1).

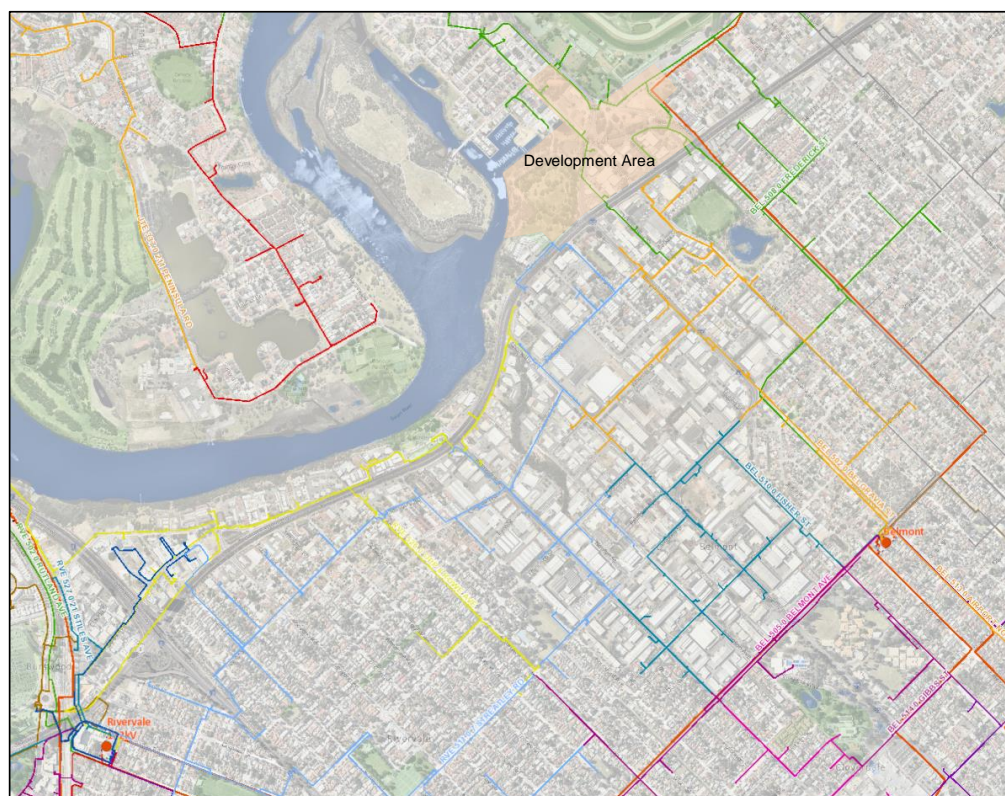


Figure 1 - Existing Distribution HV Network

### 2.2 Activity 2 – Network Impact Assessment

#### 2.2.1 Transmission

Network analysis was carried out on the closet zone substation to the redevelopment area. It has been identified that there is sufficient spare NCR capacity available from BEL to cater for this 8.325MVA undiversified load. The load forecast chart for BEL is provided in figure 2.

Currently, BEL is supplied from the Cannington Terminal via BEL-KDL 81 line and BEL-RVE/WE 81 line (with the pre-contingency being BEL-NT/EP 81 line open). In connecting this load, it is not expected for the affected 132 kV transmission lines to experience the issue relating to the thermal over-loading or under-voltage, during the N-1 contingency. As well, connection of this customer load is not expected to trigger any voltage instability issues in the load area, hence this load is cleared to connect to the Western Power BEL network.

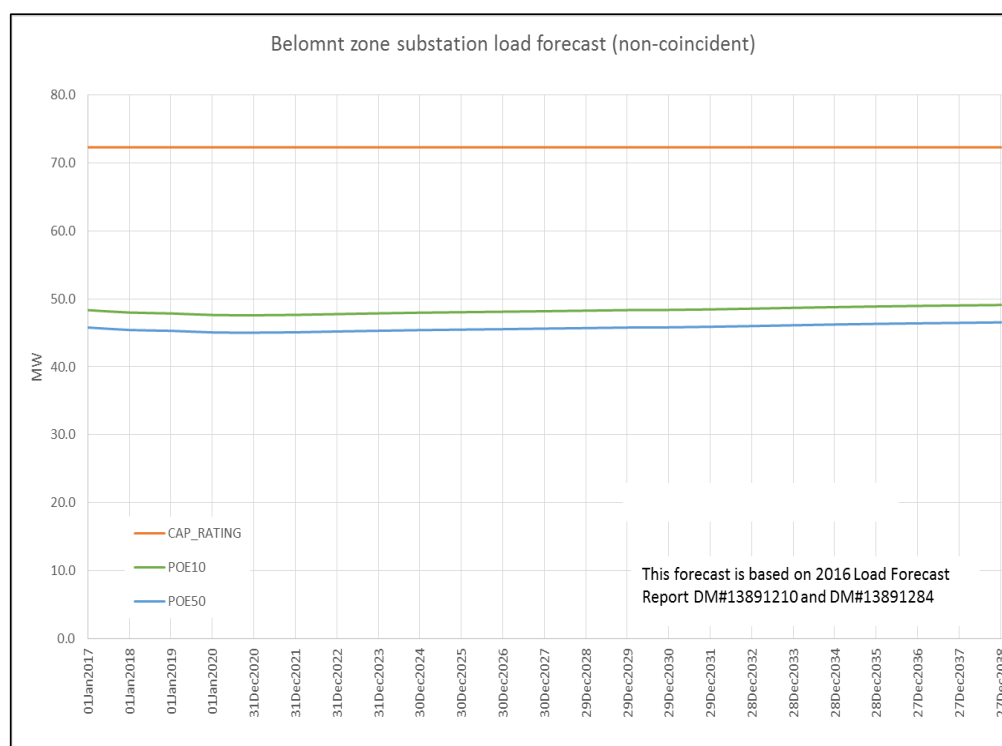


Figure 2 - BEL Zone Substation Forecast

### 2.2.2 Distribution

The entire redevelopment area is currently supplied by the BEL508 Frederick St feeder, including three other feeder networks (BEL502, RVE511 and RVE526) within close proximity. Based on the BEL508 feeder load readings (figure 3), there is approx. 3MVA of spare capacity available at this point of time that can be directly connected into. Additional network capacity can also be made available by network reconfiguration or extension, provided that there are significant spare capacity available on the nearby feeders at the time of connection. Hence, it is likely that the first few stages of development area can via supplied without any major network extension or reconfiguration.

Due to the expected timing of the power uptake, there is no certainty what spare capacity will still be available on the BEL508 feeder and other feeders around the proposed redevelopment area. Hence, it is not feasible to estimate what network extension will be required to create sufficient network capacity to supply the 8.325MVA load. An alternative option is to install of a new feeder from BEL to the proposed development boundary, near the intersection between Great Eastern Hwy and Stoneham St, to supply the entire 8.325MVA load. The new feeder circuit is likely to be installed along Belgravia St which will require approximately 2km of 400mm<sup>2</sup> Al XLPE 22kV cable. Although there is no spare feeder circuits available at BEL, arrangement can be made (such as double feeders termination) to allow new feeder connections to the BEL.

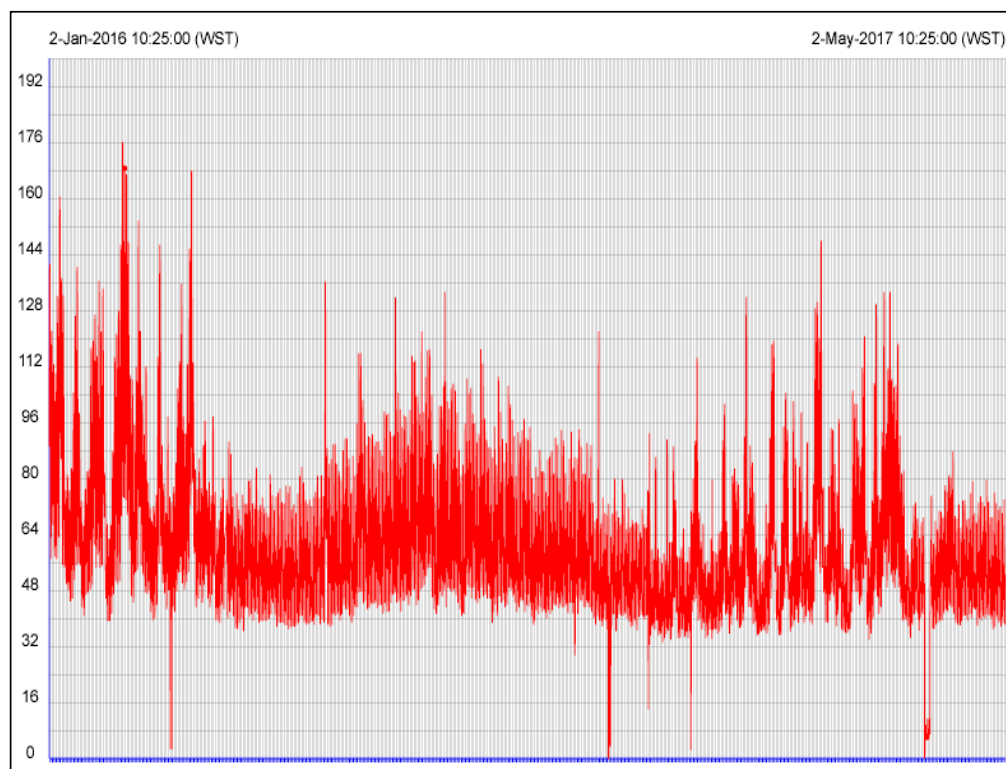


Figure 3 - BEL508 Feeder Utilisation



### 3 Technical Evaluation

---

#### 3.1 Supply Options

##### 3.1.1 Overview

As stated in section 2.2.2 of this report, there is approximately 3MVA of spare capacity available on the BEL508 Frederick St feeder with the opportunity to utilise the surrounding feeders (BEL502 & RVE526) to fully accommodate the total 8.325MVA load until either exhausted by the customer's development or other competing applications. A new feeder circuit can be provided for further capacity beyond the existing HV networks capacity limitations.

Considering the above information, there are two design options which have been identified to meet the customers' requirements;

1. Utilise the remaining capacity available on the BEL508 feeder and other nearby HV networks until exhausted. The scope of works for this option cannot be defined due to the unknown load uptake and location of connections to the redevelopment area.
2. Once depleted, install approximately 2.0km of new underground cable from the BEL to the redevelopment area expected along Belgravia St.

##### 3.1.2 Site Map

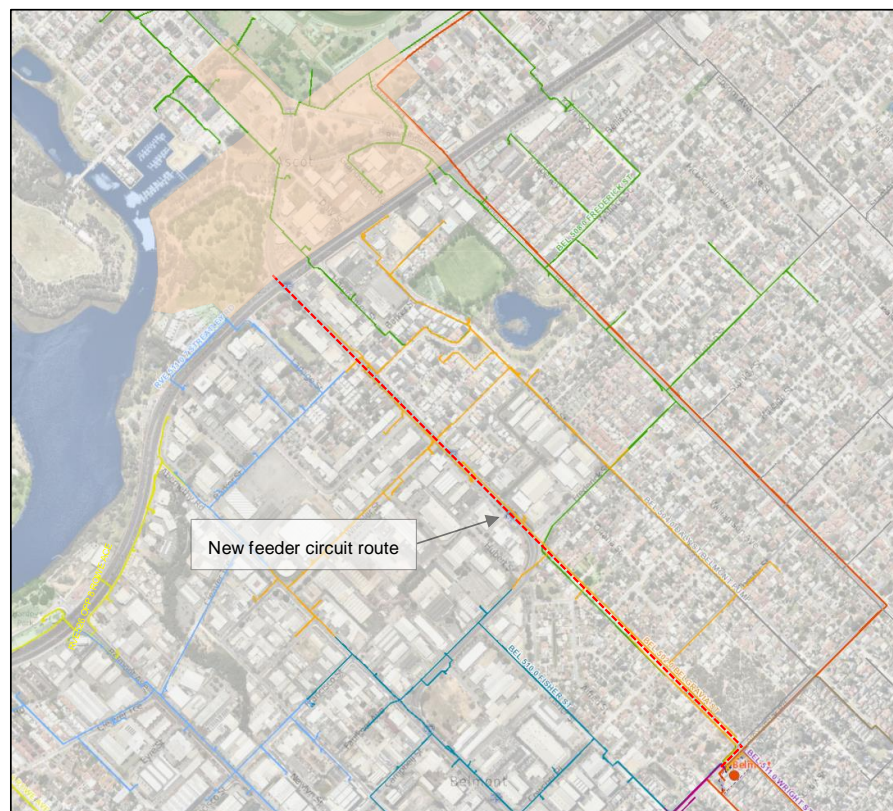


Figure 4 - Proposed Western Power Scope of Works

### 3.1.3 Western Power Scope of Works

With reference to the site map in section 3.1.2 of the document, the Western Power scope of works for the new feeder extension is as follows;

- The connection of the new circuit into the BEL zone substation.
- Cable installation by a combination of open trenching and directional drilling from the BEL to the corner of Great Eastern Hwy and Stoneham St.
- Cable jointing, including testing and commissioning.

### 3.1.4 Third Party Approvals

If any of the surrounding HV feeders are to be extended or a new feeder circuit is installed from BEL then it is likely that the proposed cable route will need to cross under the Great Eastern Fwy. This instalment of new cable will require the approval from Main Roads. The underground cable route will be determined when a formal application has been received and detailed planning studies have been conducted.

### 3.1.5 Assumptions

The customer contribution and scope of works are dependent on the following assumptions;

- No other connection requests and changes to network conditions prior to the formal application for this connection.
- The proposed design solution, estimated cost (non-binding) is based on the desktop information only & is subject to detailed design investigation.
- All new underground cables are assumed to be installed in at the Western Power standard depth (i.e. 850mm deep from finished level) and in the Western Power standard alignment (0-500m from property boundaries) apart from road crossings.
- Drilling depth of electrical cables under roadways must be between 1000 and 1500mm of ground level.
- Allowance of polypipe included for the proposed cable route where cable is crossing under roadway or deemed rock ground conditions.
- Main Roads approval is granted for works associated on Great Eastern Hwy
- The proposed works receive no objection from all involved parties (which may include local authorities, private land owners and/or other utilities).
- The interconnection works required within the development site boundary are not considered in the study.
- The load assessment on the submission of the formal application will support the customers load request.
- Environmental studies have not been undertaken for the purpose of this report.
- Detailed Load Flow and Power Quality studies have not been undertaken for this study.

## 4 Conclusions and Recommendations

---

Network analysis has identified that there sufficient capacity on the present configured network, and new feeder circuit would not be required as there are adequate spare capacity available on the BEL508 and surrounding feeders (BEL502 & RVE526) to fully accommodate the 8.325MVA total load. However, as the load growth to the redevelopment area is not expected till 2031, it is deemed reasonable that the provision to install a new 2km long feeder from BEL to entirely supply the 8.325MVA load may be required.

Applicants need to be aware that the information herein is provided in good faith and is accurate at the time of issue. Power systems are dynamic in nature, due to the connection of new users and changes in consumer behaviour. As such, Western Power's distribution electricity networks will change over time - this may have a bearing on the amount of reinforcement required to accommodate new developments.

As capacity cannot be reserved, it is possible that requirements will also be altered resulting in a variation in power infrastructure requirements. There may be other competing applications for new loads or upgrades which may use the available spare capacity.

Please be aware that Western Power's response may become out-of-date, resulting in a significant variation in power infrastructure requirements. To provide a firm connection proposal and cost, a formal application to Western Power will need to be made, in accordance with current connection policies.

A534

### About Cardno

Cardno is a professional infrastructure and environmental services company, with expertise in the development and improvement of physical and social infrastructure for communities around the world. Cardno's team includes leading professionals who plan, design, manage and deliver sustainable projects and community programs. Cardno is an international company listed on the Australian Securities Exchange [ASX:CDD].

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# Golden Gateway PUBLIC REALM STRATEGY



July 2024

# DOCUMENT HISTORY AND STATUS

Golden Gateway - Public Realm  
Strategy

THIS REPORT WAS ORIGINALLY PRODUCED  
BY TAYLOR BURRELL BARNETT (TBB) ON  
BEHALF OF THE CITY OF BELMONT (COB).  
THIS HAS SINCE BEEN AMENDED BY THE CITY  
OF BELMONT.

Revision	Reviewer	Date Issued
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15/100-2	ST	24.05.18
15/100-3	LB	02.07.18
15/100-4	CG	30.07.24



# EXECUTIVE SUMMARY

This Public Realm Strategy has been prepared as part of the suite of detailed strategies and studies supporting the Local Structure Plan (LSP) for the Golden Gateway precinct in Belmont.

The purpose of this Strategy is to develop a clear vision, principles and objectives to inform development of the public realm. The design intent and functional requirements for elements of the public realm as articulated in this overarching framework will inform further detailed planning, design and management. Any graphical representations included in this Strategy are indicative only and demonstrate how the public realm could be developed.

The strategy creates an approach to the public realm that will create a distinctive urban character. The public realm will accommodate pedestrians and vehicles in a safe uncluttered manner and the streets and spaces will be shaded by trees that will form a strong visual landscape framework.

Existing local streetscapes are predominantly reflective of the commercial environment, particularly within the commercial 'triangle'. The standard of verge maintenance ranges from good quality reticulated lawns through to poorly maintained verges damaged by random, uncontrolled, overflow parking.

The extent and quality of the existing pedestrian infrastructure within, and surrounding, the site is of a standard commensurate with the nature of existing development across the subject land (i.e. primarily light industrial/commercial unit style development). Each of the major road corridors running through the precinct (Grandstand Road, Resolution Drive and Stoneham Street) include footpaths along one side of the street. The extent and quality of the existing cycling infrastructure within and surrounding the site is of a high standard, partly as a result of the Great Eastern Highway upgrades.

The Strategy sets out to provide a high quality urban framework that promotes pedestrian circulation, accommodates vehicles in a safe and logical manner and is an environment that presents a desirable destination to live, work and recreate. Placemaking should inform the detailed design of spaces throughout the precinct. The spaces need to be able to facilitate and accommodate diverse uses that may emerge from community social investment.

Places across the site will achieve a successful balance between physical attributes, the vehicle circulation and dynamic social, cultural and economic vitality. Its inherent qualities are strongly related to its proximity to the Swan River and its heritage related to the Ascot Kilns.

In accordance with best practice, the public realm should be designed to maximise universal access for all members of the community. Designs will need to comply with prevailing legislation but should also strive to safely accommodate ease of safe use encouraging full accessibility through all areas.

The strategy for the site comprises a number of different public realm space types ranging from the public open space (POS) area in the redundant portion of the Daly Street road reserve, boulevard high-use roads, and small streets. A cohesive approach across the public realm will consist of an urban landscape that reinforces a fluid and flowing spatial arrangement starting from the river parklands and extending this character throughout the subject land.

In terms of implementation, under normal circumstances, the development of the public realm is typically undertaken by a private developer/s as part of their private land subdivision process; however, given that the majority of the public realm already exists in the form of Crown Reserves (e.g. existing road reserves and Parks and Recreation reserved land) and the private land is under fragmented ownership, the City of Belmont will need to assume responsibility for implementing the Public Realm Strategy. The cost of this work and any mechanism to recover cost from private landowners through a Developer

## Attachment 12.1.6 Public Realm Strategy

Contribution Plan or alternative funding mechanism to be determined by the City will require further consideration.

It is not anticipated that public realm improvements will be implemented at once, rather it should be progressively rolled out commensurately with the delivery of other key infrastructure particularly the modification of Daly Street into a cul-de-sac and subdivision works that may be required to create the environment for private redevelopment.

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## 1. INTRODUCTION

### 1.1 PURPOSE

This Public Realm Strategy has been prepared as part of the suite of detailed strategies and studies supporting the Local Structure Plan (LSP) for the Golden Gateway precinct in Belmont (refer **Figure 1**). The Public Realm Strategy does not apply to land designated as subject to further detailed planning by the Structure Plan. It is expected that the public realm for these land parcels will be carefully considered through further detailed planning.

The creation of a high quality and functional public realm, in the streets and open spaces, is a pivotal element in planning for a more intensified urban environment to create a liveable and well connected community.

The Public Realm Strategy has been developed in conjunction with the Golden Gateway Development Concept Plan that ultimately forms the cornerstone of the Golden Gateway LSP.

This document summarises the main issues/opportunities and design outcomes for the creation of a public realm, similar to the concept of an urban village. The purpose of this report is to inform the LSP and should be read in conjunction with it.



Figure 1 - Local Structure Plan (Plan 1)

1.2 SITE CONTEXT

The subject land is located approximately 5 kilometres (km) north east of the Perth Central Business District (CBD), 3 km north of Belmont Forum and 5 km north east of Victoria Park entertainment precinct (refer **Figure 2**). It is close to the Swan River and Ascot Racecourse and forms a triangular land parcel that is well connected to the regional roads. Further details on the planning context and background can be found in the LSP Part Two, Section 1 Planning Background.

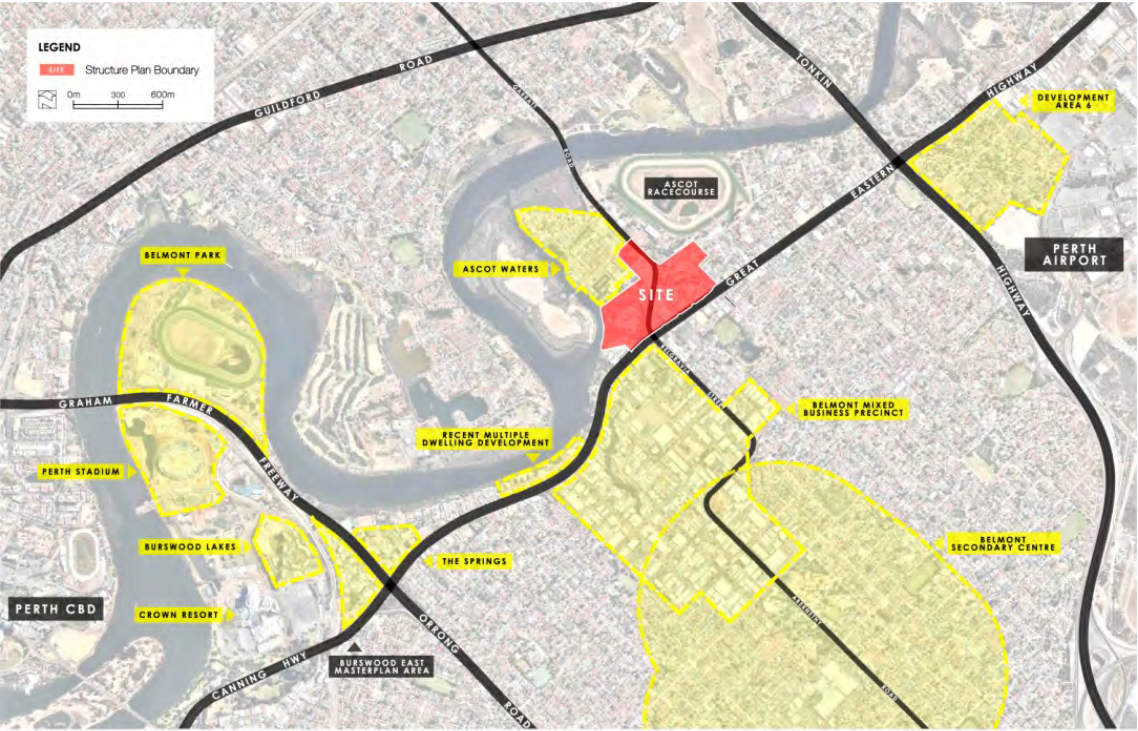


Figure 2 - Site Context Plan



## 2. SITE ANALYSIS

### 2.1 URBAN FORM

The existing urban form of the site is very much influenced by its strategic location at the axis of a number of key movement corridors, dominated by Great Eastern Highway, Stoneham Street and Resolution Drive. The 'triangle' of land bounded by these roads contains a mix of office and commercial uses, including some more intensive retail/food and beverage outlets towards the eastern edge at Resolution Drive and Great Eastern Highway.

Outside of the 'triangle', the remainder of the LSP area consists of a number of different sub-precincts with very diverse functions and characteristics. These include a mix of land uses, including the administration headquarters of the WA Turf Club (WATC), the Ascot Kilns, overflow parking for the Ascot Racecourse, a substantial riverfront area held by the Belmont Trust, and a patchwork of residual government landholdings created by the past realignment of Resolution Drive and Stoneham Street.

While the existing urban form is largely unremarkable, the key features that are notable, in terms of future planning, include:

1. The Ascot Kilns, in particular the chimneys, which present an important visual and historical reference point in the precinct (refer **Figure 3**); and
2. The Belmont Trust land, which presents an opportunity for a strong public link to the Swan River, albeit presently isolated by Stoneham Street (refer **Figure 4**).

### 2.2 STREETSCAPE

Existing local streetscapes are predominantly reflective of the commercial environment, particularly within the commercial 'triangle' (refer **Figure 5**). The existing road reserves are typically 20m wide with wide carriageways to accommodate commercial vehicle movement as well as on-street parking. The standard of verge maintenance ranges from good quality reticulated lawns through to poorly maintained verges damaged by uncontrolled overflow parking.



Figure 3 - The Ascot Kilns Chimneys



Figure 4 - Belmont Trust Land

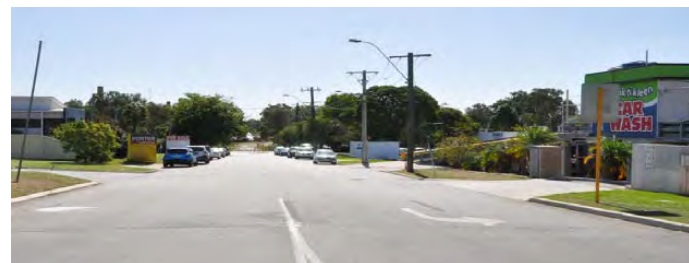


Figure 5 - Typical 'Commercial' Streetscape

## Attachment 12.1.6 Public Realm Strategy

In 2014 Great Eastern Highway was widened/ upgraded to improve regional traffic movement. The result is a heavily engineered, highly efficient arterial road, with four lanes of through-traffic, increasing to 6-7 lanes in places where there are long turning pockets and bus/cycle lanes at the intersections.

The footpath is approximately 3m wide and occupies the whole verge from kerb to boundary, with no street trees or other landscaping, as illustrated in **Figure 6**. This combined with the significant traffic activity immediately adjacent, presents an unappealing environment for pedestrians.

Resolution Drive and Stoneham Street are also heavily engineered arterial roads that offer little attraction to the pedestrian, although the Stoneham Street environment is somewhat softened by its interface with heavy vegetation along the periphery of the Belmont Trust land and the landscaped drainage area to the north.



Figure 6 - Great Eastern Highway

### 2.3 MOVEMENT AND ACCESS

#### 2.3.1 VEHICLE MOVEMENT

The LSP report provides a detailed analysis of the existing and proposed vehicle movement network. From a public realm perspective the key factors are as follows:

- The regional road system, comprising Great Eastern Highway, Stoneham Street, Resolution Drive and Grandstand Road, offer excellent connections in all directions; however, they also serve to segregate parts of the precinct, and isolate the site from the most attractive existing public realm asset, being the Swan River foreshore.
- The local road system, particularly through the commercial 'triangle', provide a high level of access and permeability for both vehicles and pedestrians, and offers an effective framework for future development of the site; and
- The local road system features wide (20m) road reserves, which, if retained, offer opportunities to design high standard streetscapes, with generous space available to devote to landscaping, pedestrians, street parking etc.
- Local access streets (Hargreaves Street and Grandstand Road (southern section) providing access in a northerly direction from Great Eastern Highway with poor pedestrian amenity and no existing footpaths present.

#### 2.3.2 PEDESTRIAN NETWORK

The extent and quality of the existing pedestrian infrastructure within, and surrounding, the site (with the exception of Great Eastern Highway) is poor and of a standard commensurate with the nature of existing development across the subject land (i.e. primarily light industrial/commercial unit style development).

However, Great Eastern Highway bordering the site to the south features good quality footpaths on both sides of the corridor, although as previously mentioned, it is not a particularly appealing environment for pedestrians.

Within the vicinity of the site, the safe crossing of Great Eastern Highway by pedestrians is facilitated via traffic signal controlled intersections at both Stoneham Street/Belgravia Street and Resolution Drive/Hardey Road intersections with Great Eastern Highway.

Each of the major road corridors running through the precinct (Grandstand Road, Resolution Drive and Stoneham Street) include footpaths along one side of the street – Grandstand Road along the eastern side adjacent to the Ascot Racecourse, Raconteur Drive along the northern side to connect to Grandstand Road, Resolution Drive along the eastern side adjacent to the Ascot Waters development and Stoneham Street along the western side adjacent to the Belmont Trust land.

#### 2.3.3 CYCLING

The extent and quality of the existing cycling infrastructure within and surrounding the site is of a high standard, partly as a result of the Great Eastern Highway upgrades.

A number of existing shared paths and cycling connections are located along primary routes, including Stoneham Street, Raconteur Drive and Grandstand Road providing local connections. There is demand to upgrade facilities on Stoneham Street and Resolution Drive. Protected bicycle lanes and a shared path on Resolution Drive is essential.

A number of shared paths are also located within the Ascot Waters development directly to the north-west of the site. The Graham Farmer Freeway Principal Shared Path (PSP) provides regional cycling connections and can be accessed via the shared path along the southern side of the Swan River.

### 3. DESIGN OBJECTIVES

#### 3.1 AN URBAN LANDSCAPE

The site forms an important gateway announcing the City of Belmont when approached from the south-west and north-east. The site is traversed with major roads and as discussed, its triangular form presents challenges in vehicular circulation and pedestrian accessibility. This location currently presents as a transient place that is passed through, however the design of the public realm will result in the creation of a cohesive network of spaces enabling the locality to be an identifiable place.

As a busy location, the public realm offers the opportunity to be transformative, linking uses and people to the nearby valued Swan River, its parklands and the heritage and interest of the Ascot Kilns.

The public realm spaces made up of streets and a park, combine to be a defining element of this location, that importantly the users, employees and residents will experience and define the qualities of the public realm.

The overall landscape design objectives for the public spaces are set out below:

#### 3.2 IDENTIFIABLE CHARACTER

- Create a contemporary urban environment that promotes safe and easy pedestrian experiences.
- Create new diverse urban landscapes that reflect the subject land's unique characteristics and close links to the river parklands.
- Create spaces that encourage and accommodate local community use and engagement.

- Establish an aesthetic that promotes positive development and investment in the location.
- Celebrate the heritage significance of the Ascot Kilns.

#### 3.3 VALUABLE LANDSCAPES

- Create a microclimate in public realm spaces and streets which encourages use and enjoyment.
- Provide key views and relationships that assist in orientation and legibility.
- Create highly utilised and valued public realm streets and spaces.

#### 3.4 ENVIRONMENTAL/SUSTAINABILITY

- Create a durable urban landscape.
- Reduce urban heat sink characteristics.
- Create urban tree canopy (in compliance with The City of Belmont's Urban Forest Strategy 2014 and The Canopy Plan 2019-2024).
- Retain vegetation wherever practical.
- Promote the use of low water demand plants.
- Pursue water harvesting, passive irrigation and integrated urban water management.

## 4. PUBLIC REALM OVERALL APPROACH

The site comprises a number of different public realm space types ranging from the POS area in the redundant portion of the Daly Street road reserve, boulevard high-use roads, and small streets.

A cohesive approach across the public realm will consist of an urban landscape that reinforces a fluid and flowing spatial arrangement starting from the river parklands and extending this character throughout the subject land. The creation of smaller pockets of activity and open space will be defined by street trees, tree groups and sinuous tree lines. Pedestrian spaces will be sheltered by a substantial tree canopy and vehicular routes flanked by boulevard plantings. A unified paving design and materials for pedestrian areas will extend throughout the subject land. This will both unify and delineate the different pedestrian and vehicular spaces.

Placemaking should inform the detailed design of spaces throughout the precinct. The spaces need to be able to facilitate and accommodate diverse activities that may emerge from community social investment. The location and development of the public spaces will be achieved through the successful balance between physical attributes, the vehicle circulation and dynamic social, cultural and economic vitality. The site's inherent qualities are strongly related to its proximity to the Swan River and its heritage related to the Ascot Kilns. It is the intention that distinctive physical spaces will be encouraged to evolve beyond the design, responding to the growing community and social and commercial opportunities. Spaces will consolidate a strong identity and character that is easily recognised by local users and visitors.

In accordance with best practice, the public realm should be designed to maximise universal access for all members of the community. Designs will need to comply with prevailing legislation but should also strive to safely accommodate ease of safe use encouraging full accessibility through all areas.

To reduce maintenance and water consumption, where possible, consideration should be made as to the use of hard surfaces or low water alternatives instead of turf. Water harvesting of hard surfaces is also exploited where possible using swales, channels and ground amendments to reduce the need for overall water consumption.



## 5. PARKS

POS is to be provided generally in accordance with the development Concept Plan included as **Figure 7** and should be vested in the Crown and managed by the local government. The development of land included within the Swan River Trust Development Control Area will be subject to the approval of the Department of Biodiversity, Conservation and Attractions (DBCA). The POS is to provide for both informal active and passive recreation uses. These uses will not utilise large spaces for sports but provide activities for the community that may include a children’s play area, walking paths, and grassed spaces for recreation purposes. The POS areas may accommodate stormwater generated from the proposed development of the site and this will be designed in such a manner that its function as local open space is not compromised.



Figure 7 - Development Concept Plan



### 5.1 FORESHORE RESERVE

The 'Foreshore Reserve' creates a valued open space adjacent to the Swan River. The nature of the space, its future and development, is controlled largely by the Belmont Trust and is not the subject of this Public Realm Strategy but will be addressed by a separate study.

### 5.2 DALY STREET PARK

Daly Street is proposed to be converted into a cul-de-sac, in line with the Main Roads Western Australia vehicle access strategy for this section of Great Eastern Highway. This change presents a unique opportunity to create a POS area over the now redundant road reserve, as depicted in **Figure 7** on the previous page.

The new park will establish a vital connection to the Foreshore Reserve, enhancing the recreational space available to residents. This area may consist of native planting, walkways, children's play areas, and space for recreational activities. This transformation will not only improve local amenities but also strengthen the integration between the residential area and the natural beauty and POS function of the Foreshore Reserve.

# 6. ROADS AND STREET TREATMENTS

## 6.1 GENERAL

Road hierarchies and overall legibility of the subject land will be reinforced by the type of tree planting associated with the scale of the road. The paving treatments within all streets and roads will feature a consistent material palette to reinforce the distinctive character of the area.

The scale and robust nature of proposed street tree species relate to the potential scale and height of built form. Street trees have an important role in the urban environment, improving microclimate and urban heat sink characteristics, reducing storm runoff rates and contributing to the character and qualities of neighbourhoods. The detailed design of roads will need to ensure the provision of adequate soil volumes within road reserves to ensure sufficient root development for street trees.

## 6.2 ROAD TREATMENTS

Road hierarchies and overall legibility of the precinct can be enhanced with the use of varied road and footpath paving treatments. Consideration should be given to the use of block pavers at road junctions or to create varying precincts within the development.

The selected paving treatments of local streets should emphasise the overall precinct character. All paving detailing at junctions and associated with pedestrian circulation should address both the need to reduce traffic speeds, manage drainage and create a distinctive character. Raised tables can be used to provide traffic calming and to add texture to the urban streetscape reinforcing a character that promotes pedestrian safety.

Cycle lanes throughout the site will be red asphalt except where they are incorporated into areas of feature pedestrian paving where colour differentials will relate to paving patterns, and if necessary, lanes defined by studs. Paving material changes will be used to accentuate areas such as major pedestrian road crossings, civic areas and hazards. Parking bays should be differentiated from the road reserve through the use of alternative paving treatments as shown in **Figure 8**.

The materials used for road pavement can assist with drainage management within the area. This may include the use of permeable paving and/or porous brick paving and/or porous asphalt. These materials can play a significant role in managing drainage in a water sensitive manner and where 'soft' open space is not an extensive feature of this location.



Figure 8 - Material Palette (illustration of indicative paving material palette, colour, type)

6.3 RESOLUTION DRIVE AND STONEHAM STREET

Whilst Resolution Drive and Stoneham Street will be largely vehicle dominated, the landscape aesthetic will be dominated by tree planting of larger species, creating a canopy boulevard along its length. Verge and median planting will create a formalised sinuous corridor of canopy trees that are recognisably different to the scale and nature of other landscapes in the area (refer **Figure 9**). Street trees will be planted to create a boulevard aesthetic the length of the street, aiding in wayfinding (refer to section 10.2 for proposed tree species).



Figure 9 - Resolution Drive and Stoneham Street (Plan Extract and Indicative Section)

6.4 CENTRAL STREETS

Hargreaves Street, Daly Street and Grandstand Road will comprise street tree planting that is not a monoculture but uses a mix of street trees (refer **Figure 10**) in varying combinations, to provide a dynamic and varied street tree canopy (refer to section 10.3 for proposed tree species). These streets will extend the overall public realm character established within the precinct but in a simpler manner. Street tree planting is proposed to create a canopied streetscape and to be positioned abutting the parallel parking embayments.

6.5 GATEWAYS

In key locations within the streetscape and public realm, highlight tree species will be used to create a visual accent. This can aid in creating distinctive spaces, and provide physical cues within a legible street network. These highlight species will be used to create gateways, focal points or to emphasise uses. The specific location for these gateways will be subject to more detailed investigation and planning at a later stage. Refer to section 10.4 for proposed tree species.

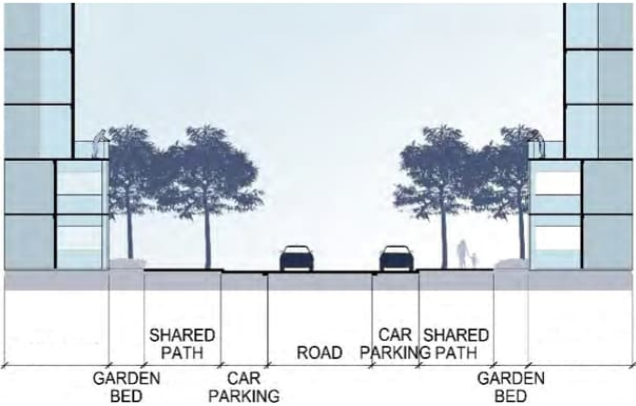


Figure 10 - Central Streets (Plan Extract and Indicative Section)



# 7. INTEGRATED DRAINAGE MANAGEMENT

The use and promotion of Water Sensitive Urban Design (WSUD) techniques and approaches are to be utilised wherever possible throughout the site. The space for nutrient stripping is limited. As the urban area is not producing a nutrient load, the focus is on slowing runoff and reducing hydrocarbons. The use of linear and incidental 'rain gardens' and 'nutrient sinks' as demonstrated below and overleaf can be implemented discretely within paving in streets and areas of open space. These devices should be fully integrated with the road drainage promoting passive irrigation of street tree vegetation and controlling hydrocarbon runoff.

Within the context of a dense inner urban area, the design of these WSUD devices need not be natural in appearance but can be incorporated within the urban public realm infrastructure as a contemporary feature as demonstrated below and overleaf.

It is intended that the POS space within the redundant portion of the Daly Street road reserve will contain soft landscape areas. These areas present an opportunity to accommodate local drainage that is managed through swale type structures that infiltrate water and passively irrigate trees and other vegetation used in the public realm. This will be subject to further investigation and more detailed design at a later stage.

The use of permeable pavements and porous asphalt treatments in key locations is recommended, possibly associated with lower level threshold treatments of road junctions, should be incorporated as a component of the approach to integrated drainage management.



Examples of Rain Gardens & Swale Designs in an Urban Context (Jolimont Parkside Walk)





Source: <https://watersensitivecities.org.au/content/evolving-concept-wsud-statutory-land-planning/>



Source: <http://www.water.wa.gov.au/urban-water/urban-development/urban-water-design>



Source: <http://tclf.org/sites/default/files/microsites/landscape-patronage/riverbank-park.html>



Source: <https://landscapeperformance.org/case-study-briefs/randall-childrens-hospital>



Source: <http://www.landezine.com/index.php/2012/10/edinburgh-gardens-raingarden-by-ghd-pty-ltd/edinburgh-gardens-raingarden-by-ghd-pty-ltd-01/>



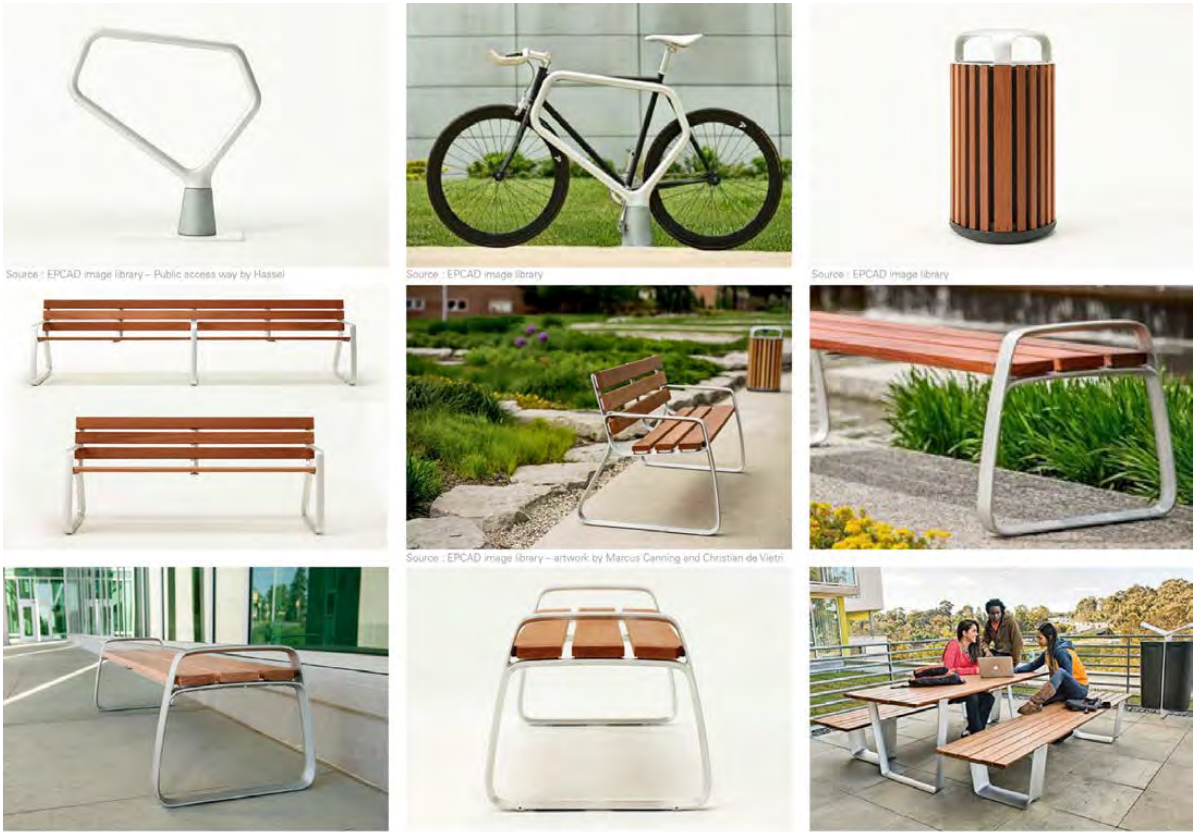
Source: <http://www.sfestuary.org/projects/detail.php?projectID=41>

Examples of Rain Gardens and Swale Designs in an Urban Context



# 8. STREET FURNISHING

Street furniture should be a selected single suite of items that are consistent across the site. The furniture should be reflective of the heritage and character of the area and located where it can function as more than a single use. For example, seats and benches should be located in a manner to restrict undesired errant access to protect and guide pedestrians as well as performing their obvious use. All furnishing will be from the same suite so that bicycle storage, seats and bollards are seen as one cohesive design style.



# 9. PUBLIC ART

Public art enhances spaces, makes places, adds to the community enjoyment of space and has a significant role to play within the Precinct. Public art can be of a scale that in itself is a focal point of interest, defining character and being a reason for space. Public art can also be an intimate smaller installation that relates to people when using areas of rest and repose, such as seating areas. The creation of ‘place’ can be enhanced through a sense of identity provided by the artworks. The creation of identifiable landmarks that can be observed and experienced as both a pedestrian and vehicle user can aid in legibility of the development. Importantly, in this location, creative installations could interpret the cultural and historic narrative of the area and enable strong connections with its context.



Source: EPCAD image library – Jolimont Parkside Walk



Source : EPCAD image library – Public access way by Hassel



Source : EPCAD image library








Source : EPCAD image library – artwork by Marcus Canning and Christian de Vietri






Source : EPCAD image library

# 10. GOLDEN GATEWAY TREE SPECIES

## 10.1 PARK AND CIVIC SPACE SPECIES

Corymbia calophylla: Marri (large fruiting nuts) 30m+H	
Eucalyptus sideroxylon "Rosea" : Red Ironbark 15 -25m H	
Pheonix canariensis: Canary Palm 15m+	
Platanus x acerifolia: Spanish or London Plane 20 – 30m	
Tipuana tipu: South American <u>Rosewood</u> 7m	





## 10.2 STONEHAM STREET AND RESOLUTION DRIVE

Angophora costata: Smooth barked apple 15 – 25m high	
Eucalyptus sideroxylon "Rosea" : Red Ironbark 15 - 25m H	
Corymbia calophylla: Marri (large fruiting nuts) 30m+H	

## 10.3 CENTRAL STREETS

American Sweetgum or Liquidambar 12 – 18m high	
Eucalyptus torquate:	
Corymbia ficifolia: Red flowering Gum 8-15m	
Eucalyptus caesia	
Jacaranda mimosaeifolia: Jacaranda	



10.4 HIGHLIGHT SPECIES (GATEWAYS)	
Lophostemon confertus: Queensland Box	
Pheonix canariensis: Canary Palm 15m+	
Platanus x acerifolia: Spanish or London Plane 20 – 30m	
Tipuana tipu: South American Rosewood 7m	

## 11. IMPLEMENTATION

### 11.1 LANDSCAPE CONSTRUCTION AND MANAGEMENT

The public realm areas in the Golden Gateway area, will primarily be in government ownership; consequently, the City of Belmont will need to assume responsibility for implementing the Public Realm Strategy. However, given the significant potential for private redevelopment that is to be generated through the Golden Gateway LSP, it may be possible to recover some or all of the implementation cost from private development through development contributions or other funding mechanisms.

The LSP states that the City of Belmont could establish a funding strategy for the LSP Area. As part of the strategy, a Development Contribution Area (DCA) within LPS 15, under which a Development Contribution Plan (DCP) may be implemented to contribute to the funding of the public infrastructure requirements to facilitate development in the LSP Area would be considered.

Infrastructure items that would be eligible to be funded under a DCP should be in accordance with State Planning Policy 3.6 Development Contributions for Infrastructure (SPP 3.6) and may include:

- Land for POS and community facilities; and
- Landscape treatment for all public realm areas, including local roads.

Furthermore, detailed design of spaces throughout the precinct is encouraged through placemaking opportunities that emerge from community social investment.

### 11.2 WATER MANAGEMENT

Further to the recommendations of Section 7, in order to deliver wider environmental sustainability objectives, as well as providing attractive places in which residents and visitors can enjoy, consideration should be given to the conservation of water resources and quality of groundwater. The use of water efficiency measures is encouraged and should promote the investigation of best management practices for irrigation of POS.

The availability and quality of groundwater within the LSP area is limited at this stage. This will affect the ability of the City of Belmont to irrigate the proposed vegetation within the public realm areas. Therefore, due to the limitation of groundwater for irrigation purposes, the future irrigation of vegetation within the POS and public realm areas will need to be supplied by other sources. This may include scheme water, stormwater, irrigation (by agreement) from the Western Australian Turf Club's (now operating as Perth Racing) artesian groundwater licence, a new irrigation lake or other irrigation strategies will need to be investigated in the future. The City may encourage developers to consider the irrigation of abutting verge vegetation and street trees to ensure the high quality natural amenity of the public realm is maintained. Alternatively, non-irrigated (dry) landscape may need to be considered for the public realm areas.

### 11.3 STAGING

It is not anticipated that the entire landscape masterplan be implemented at once. It is anticipated that the work will be undertaken in stages and progressively rolled out commensurately with the delivery of other key infrastructure, particularly the various road realignments and subdivision works that are required to create the environment for private redevelopment.

## Attachment 12.1.6 Public Realm Strategy

These works would create the framework enabling the public realm works to be implemented. Priority should be given to establishing Daly Street as a cul-de-sac and developing the redundant portion of the road reserve as POS. Following that, streetscape upgrades should occur to set the scene for future redevelopment.

The Golden Gateway LSP includes an indicative staging strategy. The public realm delivery should work in parallel with this program.

A Landscape Management Plan will be prepared at each stage of the infrastructure works. Each Landscape Management Plan will address the landscape design, implementation and ongoing maintenance of landscape elements within the site, and should reflect the public realm principles contained in this Strategy.



**7.29pm The Manager Governance and Legal departed the meeting.**

**7.30pm The Manager Governance and Legal joined the meeting.**

**7.31pm Cr Sekulla joined the meeting.**

Cr Kulczycki disclosed at Item 3 of the Agenda "Disclosure of Interest" an Impartiality Interest in the following item in accordance with Regulation 22 of the *Local Government (Model Code of Conduct) Regulations 2021*.

## 12.2 Draft Golden Gateway Local Structure Plan

Voting Requirement	:	Simple Majority
Subject Index	:	116/113
Location/Property Index	:	Various Lots
Application Index	:	N/A
Disclosure of any Interest	:	N/A
Previous Items	:	28 August 2018 Ordinary Council Meeting Item 12.1 26 February 2019 Ordinary Council Meeting Item 12.6 23 June 2020 Ordinary Council Meeting Item 12.2
Applicant	:	City of Belmont
Owner	:	State Government, Local Government and Various Private Landowners
Responsible Division	:	Development and Communities

### Council role

**Legislative** Includes adopting local laws, local planning schemes and policies.

### Purpose of report

For Council to consider the updated draft Golden Gateway Local Structure Plan (LSP) for the purpose of public consultation.

### Summary and key issues

- The draft Golden Gateway LSP has been prepared to coordinate the future subdivision, zoning and development of a portion of land in Ascot.
- Council considered the draft LSP following public advertising at the 23 June 2020 Ordinary Council Meeting (OCM). At this meeting, Council resolved to investigate and make modifications to the draft LSP.
- Following investigations, the draft LSP has been revised, with key modifications relating to:
  - The road network;
  - The Central Belmont Main Drain and public open space;
  - Built form controls that consider current and future development feasibility; and
  - The designation of Perth Racing landholdings as subject to a separate planning process.
- It is recommended that Council support the modifications and
- re-advertising of the draft Golden Gateway LSP.

#### Officer Recommendation

##### **Sekulla moved, Kulczycki seconded**

That Council endorses the modified draft Golden Gateway Local Structure Plan for public advertising in accordance with *Schedule 2, Part 4, Clause 18 and Clause 19(2) of the Planning and Development (Local Planning Schemes) Regulations 2015 (WA)*.

##### **Carried Unanimously 7 votes to 0**

For: Davis, Kulczycki, Marks, Rossi, Ryan, Sekulla and Sessions

Against: Nil

## Location

The draft Golden Gateway LSP encompasses land generally bound by Great Eastern Highway, the Swan River, Resolution Drive (north), Grandstand Road (north), the south-eastern boundary of Ascot Racecourse, Carbine Street and Hardey Road as reflected in Figure 1 below.

Although the Belmont Trust Land is not subject to development controls under the LSP, it is included within the precinct due to its potential for providing public open space and connectivity to the Swan River.



Figure 1: Golden Gateway Local Structure Plan area (outlined red)

## Consultation

The draft Golden Gateway LSP was advertised in October 2019. Following advertising and consideration of submissions, Council resolved to investigate and make modifications to the draft LSP and supporting reports and readvertise these documents.

The *Planning and Development (Local Planning Schemes) Regulations 2015* (WA) requires a local government to advertise a structure plan for 42 days by publishing:

- The proposed structure plan;
- A notice of the proposed structure plan; and
- Any accompanying material in relation to the proposed structure plan.

Additionally, the local government may advertise a structure plan by notifying affected owners and occupiers and erecting signs on the land.

Should Council endorse the modified LSP for advertising, it will be advertised by:

- Sending letters to landowners and occupiers within and surrounding the precinct, including all properties in Ascot Waters and the Residential and Stables area.
- Sending letters to Government Agencies.
- Sending letters to those who previously lodged a submission.
- Placing a notice in the Perth Now Newspaper.
- Displaying a notice and information on the City's website and the Belmont Connect webpage.

It should be noted that the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)* stipulate that a local government cannot advertise modifications more than once without approval from the Western Australian Planning Commission (WAPC). Therefore, this will be the final opportunity to advertise the LSP without the need to seek WAPC approval.

## **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.

### **Key Performance Area: Performance**

**Outcome:** 11. A happy, well informed and engaged community.

## **Policy implications**

There are no policy implications associated with this report.

## **Statutory environment**

### **Strategic Planning Framework**

Perth and Peel @ 3.5 Million

The State's 'Perth and Peel @ 3.5 Million' impacts upon the statutory direction for the City.

The Perth and Peel region will need to accommodate significant population growth by 2050 with an additional 1.5 million people requiring approximately 800,000 new homes. The 'Perth and Peel @ 3.5 million' strategic planning framework requires 47% of this growth to be delivered through infill developments. It identifies that the City of Belmont population will increase from 37,360 to 60,260 people by 2050 and to accommodate that increase an additional 10,410 dwellings will be required.

Perth and Peel @ 3.5 Million promotes the concept of 'urban corridors' as a way of achieving integrated land use and transport outcomes. Great Eastern Highway is identified as an 'urban corridor' and abuts the Golden Gateway LSP area. The framework suggests that land around urban corridors is appropriate for increased residential densities and mixed land uses.

#### **City of Belmont Local Planning Strategy**

The City of Belmont Local Planning Strategy (2011) is the strategic planning document that broadly sets out the long-term planning direction for the City. The Strategy also informed the preparation of Local Planning Scheme No. 15 (LPS 15). The key objectives of the Local Planning Strategy and its supporting sub-strategies as relevant to the Golden Gateway precinct are as follows:

- Enhance the north-west entrance to the City.
- Encourage landmark development.
- Produce a Structure Plan and Implementation Plan for the locality.
- Utilise the development process to rationalise and improve traffic access to commercial properties along Great Eastern Highway.
- Provide more pedestrian crossing points along Great Eastern Highway.
- Provide for higher density residential development along Great Eastern Highway, in addition to mixed use, landmark buildings that create an entry statement and a high standard of urban amenity.
- Acknowledge that Ascot Racecourse and the Swan River are 'strategic tourism sites' of State significance to benefit future tourism development.

- Recognise the importance of the river for transport, commerce, tourism and leisure as well as its conservation values.

#### Draft Great Eastern Highway Urban Corridor Strategy

The Strategy establishes a 'vision' for the Great Eastern Highway corridor and proposes a series of implementation strategies to deliver this. It identifies four precincts along Great Eastern Highway and provides guidance on their development. Precinct 2 includes the section of Great Eastern Highway between Belmont Avenue and Hardey Road, of which the northern side of the highway falls within the Golden Gateway precinct.

The Strategy identifies this area as an 'activity node', which is envisioned to be developed as a creative hub comprising a mixture of commercial uses, civic spaces, offices, professional and technical service uses. Cafes and restaurants are also envisaged to emerge as the local workforce grows and will also be supported by higher density residential development.

Council endorsed modifications to and re-advertising of the draft Great Eastern Highway Urban Corridor Strategy at the 26 September 2023 OCM. The document was advertised from 27 June 2024 until 26 July 2024.

The draft Golden Gateway LSP and the draft Great Eastern Highway Urban Corridor Strategy will be coordinated to ensure both documents present a consistent direction for future development.

#### City of Belmont Activity Centre Planning Strategy

The Activity Centre Planning Strategy (ACPS) has been prepared to guide the future planning and coordination of activity centres within the City of Belmont. The ACPS identifies a future local centre within the Golden Gateway precinct, which includes a portion of Perth Racing's land.

### **Statutory Planning Framework**

#### Metropolitan Region Scheme

Under the Metropolitan Region Scheme (MRS), the area is primarily zoned 'Urban', with a portion of land abutting the Swan River reserved for 'Parks and Recreation' and located within the Swan River Development Control Area. Great Eastern Highway, which abuts the precinct, is reserved as a 'Primary Regional Road' under the MRS and is controlled by Main Roads Western Australia (MRWA).



*Planning and Development Act 2005 (WA)*

Part 10, Division 3, Section 153 of the *Planning and Development Act 2005 (WA)* provides for the Commission to impose conditions as part of a subdivision approval for four lots or more which requires:

- A portion of land to be set aside for parks, recreation grounds or open space.
- A landowner to make a payment to the local government in lieu of providing public open space.

Section 154 of the Act requires money received by a local government to be paid into a separate reserve account established and maintained under the *Local Government Act 1995 (WA)*. The Act requires this money to be applied:

- For the purchase of land for parks, recreation grounds or open spaces by the local government in the vicinity of which it was received.
- In repaying any loans raised by the local government for the purchase of such land.
- With the approval of the Minister for the improvement or development as parks, recreation grounds or open spaces vested in or administered by the local government for those purposes.

*Planning and Development (Local Planning Schemes) Regulations 2015 (WA)*

Part 4, Schedule 2 – Deemed Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)* (the Regulations) outlines the procedure for the preparation, advertising and consideration of a structure plan. The key requirements under Part 4 of the Regulations are as follows:

- The local government must advertise a structure plan for at least 42 days unless otherwise approved by the WAPC.
- Within 60 days from the last day for making submissions, the local government must consider all submissions made on the proposed structure plan and prepare a report for the WAPC which includes the following:
  - A list of the submissions considered by the local government;
  - Any comments by the local government in respect of those submissions;
  - A schedule of any proposed modifications to address issues raised in the submissions;

- The local government’s assessment of the proposal based on appropriate planning principles; and
  - A recommendation by the local government on whether the proposed structure plan should be approved by the WAPC.
- If the WAPC is not given a report on a proposed structure plan they may make a decision on the proposed structure plan in the absence of a report. In making a decision, the WAPC may request technical advice or further information from the local government and if the local government fails to provide this, the WAPC may obtain the information themselves. If the WAPC incur any costs during this process, they may seek to recover these from the local government.
- The local government may advertise any modifications proposed to the structure plan to address issues raised by submissions; however it cannot advertise modifications on more than one occasion without approval from the WAPC.
- On receipt of a report on a proposed structure plan from the local government, the WAPC must within 120 days, consider the plan and determine whether to approve the structure plan, require the structure plan to be modified or refuse the structure plan.
- The WAPC may direct the local government to readvertise the structure plan where it considers that major modifications have been made; however, it cannot direct the local government to readvertise the structure plan on more than one occasion.

#### Local Planning Scheme No. 15

Private landholdings within the precinct are predominantly zoned ‘Mixed Use’ under LPS 15, with parcels of Perth Racing land zoned ‘Place of Public Assembly’. In addition, the open drain abutting Resolution Drive is reserved as ‘Parks and Recreation’ and various parcels of Crown land and road reserves are reserved as ‘Local Roads’ under LPS 15. Figure 2 illustrates the existing zoning of the precinct.

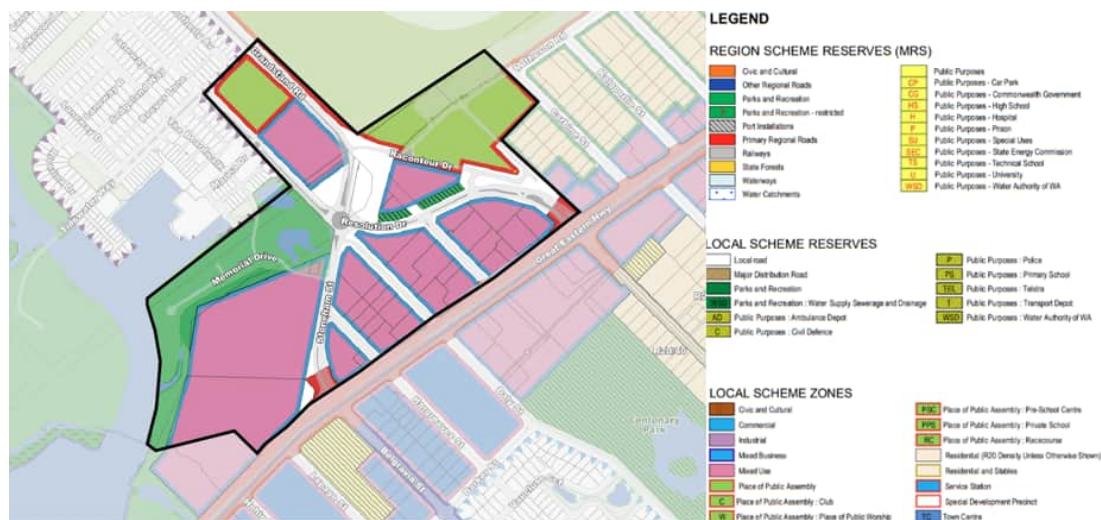


Figure 2: Extract of Scheme map

### 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.

### Liveable Neighbourhoods

Liveable Neighbourhoods is an operational policy that guides planning in greenfield and large urban infill areas. It provides guidance on the design of movement networks, activity centres, subdivision design and public open space provision.

Liveable Neighbourhoods typically requires a minimum contribution of 10% of the gross subdivisible area to be given up free of cost for public open space. However, in the case of mixed-use development, there is no minimum requirement for the provision of public open space. Instead, Liveable Neighbourhoods outlines that public open space contribution is to be determined by the WAPC on a case-by-case basis having regard to:

- The amount of mixed uses proposed and the potential number of residents;
- The amount of public open space available in 300m of the mixed-use area;

- The proportion of the mixed-use area likely to be used for non-residential purposes; and
- The level of innovation and quality of the resultant urban form in neighbourhood and town centres.

## **Background**

### **Golden Gateway Precinct**

In 2008, the Golden Gateway precinct was identified as a key strategic area due to its prominent position on Great Eastern Highway and at the north-western 'gateway' of the City of Belmont. It was recognised that there was significant potential for high quality mixed commercial and residential development in the location, however existing site access constraints and land fragmentation made it apparent that coordinated planning was required in the form of a structure plan.

### **Draft Golden Gateway Local Structure Plan**

The draft Golden Gateway LSP was prepared to address the following:

- The proposed zoning, reservation and density coding of land within the precinct, and prescribes the suitability of certain land uses.
- Built form controls including plot ratio, minimum and maximum building height, setbacks and car parking requirements.
- The provision of public open space and public realm improvements.
- The identification of a road hierarchy and movement network for vehicles, pedestrians and cyclists, as well as the consideration of street design and traffic management.
- Strategies for the management and treatment of stormwater runoff within the precinct.
- The identification of infrastructure and servicing requirements for the redevelopment of the precinct.
- Requirements to facilitate implementation of the draft LSP.

Council resolved to advertise the draft structure plan at the 26 February 2019 OCM.

At the 23 June 2020 OCM, Council resolved to investigate various matters and undertake a number of modifications prior to readvertising. Council's resolution is contained as Attachment 12.2.8. A table of Council's requested

investigations/modifications to the draft Structure Plan and the corresponding officer comment is contained as Attachment 12.2.9.

The following attachments are associated with this report:

- A copy of the updated LSP is included as Attachment 12.2.1.
- Attachment 12.2.2 through 12.2.6 include the technical appendices.
- Attachment 12.2.7 contains a copy of the 23 June 2020 OCM minutes.

## **Report**

The revised draft LSP contains the following key modifications:

- The designation of Perth Racing landholdings as subject to a separate planning process;
- The road network;
- Built form controls that consider current and future development feasibility; and
- The Central Belmont Main Drain and public open space.

These matters are discussed in further detail below.

### **Area to which the Structure Plan Applies**

The 'core' of the Golden Gateway precinct contains land parcels of fragmented ownership. The remainder of the precinct encompasses the Ascot Kilns site and Belmont Trust Land, as well as several land parcels owned by Perth Racing. These areas will be further discussed below.

#### **Perth Racing Landholdings**

Perth Racing are seeking to progress a planning framework for their landholdings to guide future development. This includes several of their lots located within the Golden Gateway precinct, as outlined in Figure 3.



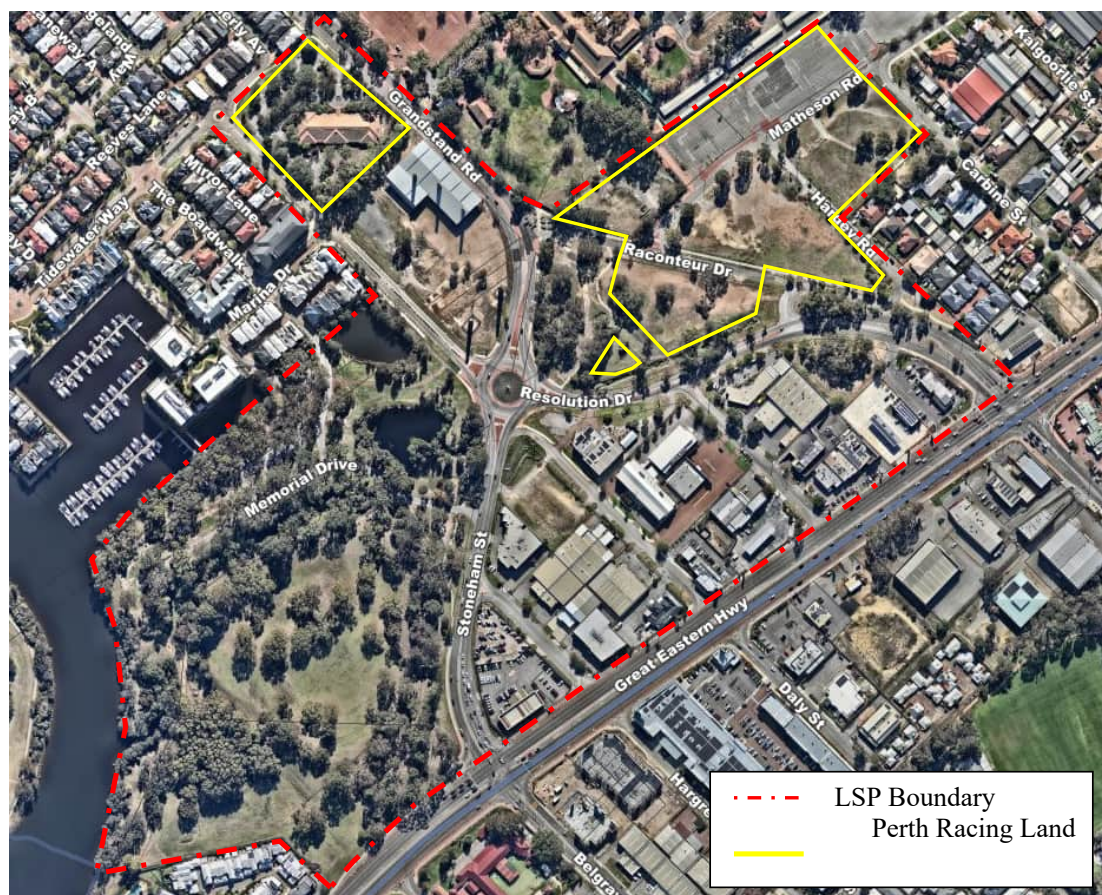


Figure 3: Perth Racing land subject to separate planning process

Following discussions with Perth Racing and the Department of Planning Lands and Heritage (DPLH), it is deemed appropriate to designate Perth Racing's land within the Golden Gateway precinct for further detailed planning. This approach allows Perth Racing to conduct their own planning while enabling the LSP to progress. Retaining Perth Racing's land within the broader LSP boundary ensures that future planning for both areas is coordinated holistically. Various modifications have been made to the document, including updates to Plan 2 – Precinct Plan, the Building Height Plan, the Precinct Development Table, and textual revisions throughout to account for this.

#### Belmont Trust Land

The Belmont Trust Land is subject to a Declaration of Trust which requires the land to be provided for public enjoyment and recreation.



In the June 2020 report to Council, officers noted the following regarding the Belmont Trust Land:

- The future use/development of the land for public enjoyment and recreation would have implications for the wider Golden Gateway precinct, such as public open space, access and traffic. It would be appropriate to consider these matters holistically rather than in isolation, which could be achieved by way of a later amendment to the LSP.
- The land provides a connection between the Swan River, the Golden Gateway precinct and the wider area.

To provide further clarification regarding the Belmont Trust Land, Council resolved to:

- (a) Replace references to the Belmont Trust Land with Belmont Charitable Trust Land.
- (b) Include text within the draft Local Structure Plan that explains that the Belmont Trust Land is for public recreation and enjoyment, and further planning work needs to be undertaken at a later date to ensure adequate access to the site, and an appropriate interface with the surrounding properties.

These modifications have been incorporated into the document.

The relationship between the Belmont Trust Land and public open space within the Golden Gateway precinct will be further detailed in the Public Open Space and Central Belmont Main Drain heading of the report.

#### Ascot Kilns

At the 23 June 2020 OCM, Council resolved to amend all plans within the draft LSP to identify the Kilns site as being owned by the State Government. Council also resolved to stipulate that the Ascot Kilns site requires a Local Development Plan and a minimum 10% public open space area. These modifications have been made to the document.

#### **Road Network**

The draft LSP originally proposed the following changes to the road network:

- Realigning Resolution Drive.
- Converting the existing roundabout at Stoneham Street, Grandstand Road and Resolution Drive to traffic signals.

- Proposing a new roundabout at the connection of Resolution Drive, Grandstand Road and Stoneham Street.
- Realigning Grandstand Road through private property to connect to Daly Street.

A comparison of the existing road network against the original proposal is shown in Figure 4 below.

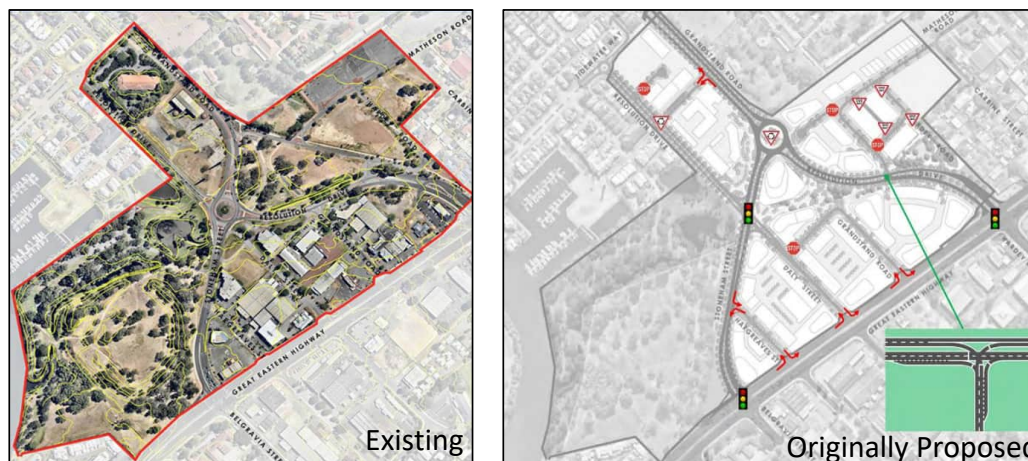


Figure 4: Existing and originally proposed road network

Following public advertising of the draft LSP, Council resolved at the 23 June 2020 OCM to require the following:

- Explore an alternative route for Grandstand Road to avoid traversing through private property.
- Investigate an alternative treatment for the intersection of Resolution Drive, Grandstand Road and Stoneham Street. This was due to MRWA not supporting the traffic signals.
- Reflect Matheson Road as being subject to further planning and investigation at a later date.
- Request Perth Racing keep the gate providing access between Raconteur Drive and Matheson Road shut into the future.

Various alternative road network options have been explored to address the above matters. This has resulted in the following:

- Grandstand Road is no longer proposed to run through private property and will instead remain in its existing location.

- Traffic lights are no longer proposed at the intersection of Resolution Drive, Grandstand Road and Stoneham Street. This results in the previously proposed roundabout at the intersection being removed.
- Access to Perth Racing's land, including Matheson Road, will be further investigated by Perth Racing as part of planning for their landholdings. In the meantime, gates providing access between Raconteur Drive and Matheson Road will remain shut.
- Resolution Drive will be retained in its current alignment to ensure appropriate permeability through the precinct.
- Daly Street will be closed and configured into a cul-de-sac (refer to Figure 5) to address the hazardous intersection of Daly Street and Stoneham Street, which is close to the roundabout. This change aligns with the MRWA vehicle access strategy for this section of Great Eastern Highway.



Figure 5: Amended/proposed road network

An amended Movement and Access Strategy evaluates the performance of current and proposed movement networks during weekday peak hours under various land use scenarios. In summary, by 2041, the draft structure plan predicts a minor decrease in road network performance at the intersections of Great Eastern Highway and Resolution Drive/Stoneham Street. However, modelling shows that these intersections will exceed capacity regardless of the Golden Gateway development. Thus, the reduced performance is not solely due to the precinct's redevelopment but is also significantly attributed to regional growth.

Ultimately, the responsibility for monitoring traffic flows and associated queuing for Great Eastern Highway and undertaking improvements to address issues to improve performance rests with MRWA.

### Development Feasibility

The draft LSP originally proposed a maximum building height of 15 storeys along Great Eastern Highway and 10 storeys for all other land bound by Resolution Drive, Stoneham Street, and Great Eastern Highway as reflected in Figure 6 below.



Figure 6: Original building heights

At the 23 June 2020 OCM, Council resolved to reduce building heights to nine storeys along Great Eastern Highway and six storeys for all other land bound by Resolution Drive, Stoneham Street, and Great Eastern Highway.

At the September 2023 OCM, Council reviewed the draft Great Eastern Highway Corridor Strategy and directed officers to investigate building scales to ensure these align with current market conditions and future trends. These investigations were undertaken, and the key findings are as follows:

- Feasibility is currently severely impacted by inflated construction costs and builder capacity constraints.
- As a result, the viability of apartment projects depends heavily on an increase in property values.



- Although construction costs continue to rise, market values are not increasing at the same rate.
- Sites with higher density and building height provisions are likely to be feasible sooner.
- In the absence of viable development controls, there is a risk that proposals will be submitted without a residential component, or developers will pursue land uses that do not align with the objectives of the precinct. Examples of this include 'Service Station', 'Warehouse (self-storage facilities)' and 'Fast Food/Takeaway Outlet'.
- Considering these factors, heights of 10 and 15 storeys and plot ratios of 3:1 and 5:1 respectively are recommended. These controls were supported by input from a property and economic consultant engaged by the City. A copy of the consultant's report is contained as a confidential attachment (Attachment 12.2.10) as it contains commercially sensitive information.

These controls are more likely to facilitate desirable land uses that incorporate a residential component.

The above heights are proposed by the draft LSP are shown in Figure 7.



Figure 7: Updated Building Height Plan

To enhance the delivery of a high-amenity and sustainable precinct, building heights can be increased from 10 to 15 storeys and from 15 to 20 storeys respectively if the following criteria are met:

- An area of publicly accessible private open space;
- All windows double glazed;
- Provision of an additional tree on-site above what is required by State Planning Policy 7.3 Volume 2 – Apartment Design Code. The tree must be a native species with a pot size of between 100L – 200L;
- Provision of conduits and capacity within the electrical distribution system and metering or future provision of electric car charging for each unit within the development;
- Provision of a minimum of two electric vehicle charging bays within the development
- Provision for shared sustainable transport measures for the development that may include the electric bikes, scooters and vehicle/s;
- Achieving a Nationwide House Energy Rating Scheme (NatHERS) star rating of a minimum of one star above the current energy efficiency requirements of the Building Codes of Australia for the relevant class of building. The energy efficiency rating for the dwelling shall be certified by a suitably qualified and accredited energy assessor using accredited software and shall be provided at the development application stage; and
- Installation of a photovoltaic solar panel system that can provide the equivalent of at least 1Kw energy per dwelling.

Similar measures are used by other local governments and are contained within strategic planning documents.

Currently, there are no specified building height limits under LPS 15 for the Mixed Use zone, which makes up the dominant portion of land within the precinct. Introducing the proposed heights through the LSP provides the community and developers with further certainty regarding future development within the precinct. The proposed building heights balance development feasibility with appropriate built form outcomes.

### **Public Open Space and Central Belmont Main Drain**

Public open space within the precinct was originally proposed to be achieved through the piping of the Central Belmont Main Drain and Resolution Drive realignment. A portion of public open space was also proposed on Perth



Racing's land adjacent to Hardey Road. This is shown in Figure 8 and provided 6,974m<sup>2</sup> of public open space within the precinct.



Figure 8: Original public open space layout

In regard to public open space and the Central Belmont Main Drain, the following is relevant:

- The piping of the Central Belmont Main Drain was premised on a Water Corporation report from 2009 that proposed the drain be piped to improve safety.
- More recently, the Department of Biodiversity, Conservation and Attractions and Water Corporation both have concerns with the piping as they consider this would not maintain or improve ecological values of the drain.
- There is currently not enough land on either side of the drain to convert it into a living stream, meaning that the drain must remain in its existing configuration.
- Resolution Drive is required to remain in its existing configuration eliminating the opportunity for public open space.
- The area adjacent to Hardey Road is owned by Perth Racing and is not designated by the draft LSP as public open space. Given this, Perth

Racing may designate this land as public open space as part of the planning for their landholdings.

Considering the above points, alternative public open space opportunities have been explored for the precinct. This has led to the identification of the redundant Daly Street road reserve, providing 525m<sup>2</sup> of public open space (see Figure 9). This area of public open space provides a connection to the Belmont Trust Land and adjacent Swan River foreshore.



Figure 9: Revised public open space layout

Additional open space opportunities also exist within the precinct including the Belmont Trust Land, Ascot Kilns Site, and on private development sites as follows:

- The Belmont Trust land offers significant opportunities for public open space and a connection to the Swan River for future residents. Use of cash collected in lieu of public open space for the upgrading of the Belmont Trust Land requires approval from the Minister for Planning. The public open space section of the LSP has been updated to reflect this.
- The future redevelopment of the Ascot Kilns site presents an opportunity for public open space. Therefore, consistent with Council's 2020 resolution, the updated LSP requires the preparation of a Local Development Plan for the Ascot Kilns site, designating 10% of the area as public open space. It is noted that the draft Ascot Kilns Local

Development Plan concept proposed areas of public open space and communal private open space as reflected in Figure 10 below.

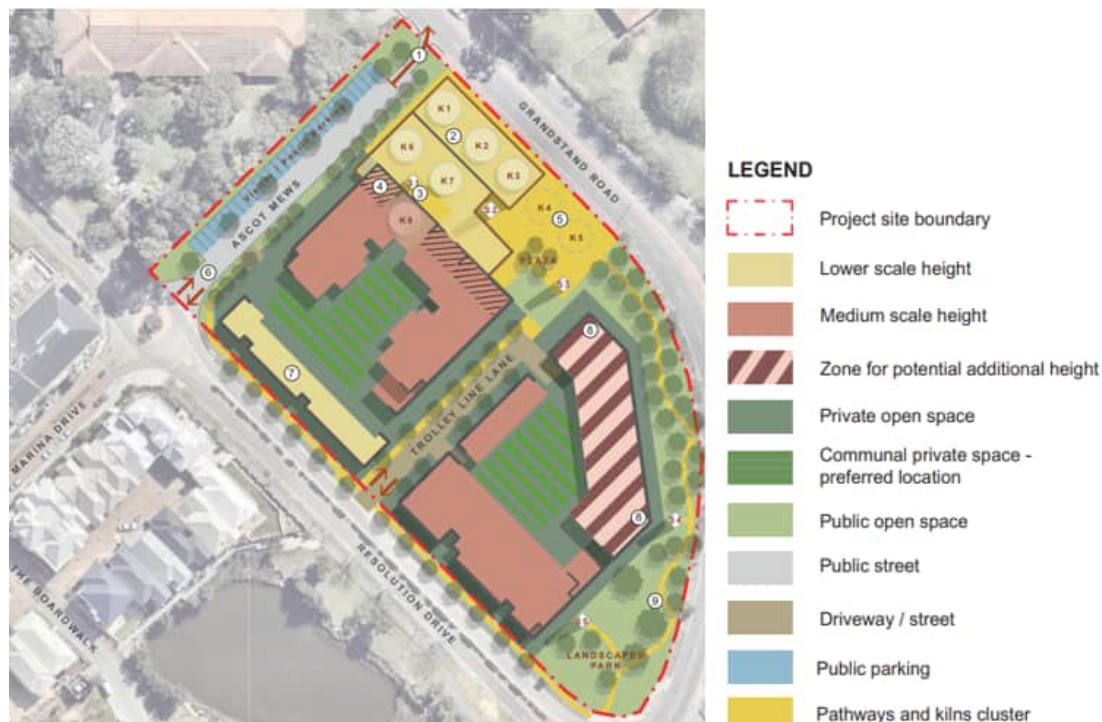


Figure 10: Draft Ascot Kilns Local Development Plan Concept

- Private development sites may present an opportunity for the establishment of additional open space areas. Therefore, as detailed in previous sections of this report, the LSP has been updated to include criteria that may encourage developers to provide publicly accessible private open space. These spaces have been successfully implemented in various areas including in West Perth, Melbourne and London as reflected in the images below.



*Figure 11: Publicly accessible private open space at 1204 Hay Street, West Perth*



*Figure 12: Publicly accessible private open space at Melbourne Quarter (699 Collins Street, Docklands)*





*Figure 13: Publicly accessible private open space at Granary Square, Kings Cross, London*

Together, these initiatives are anticipated to increase the amount and quality of public open space within the precinct.

In light of this, the 525m<sup>2</sup> area of public open space designated by the LSP is considered acceptable.

### **Local Centre**

The draft LSP originally designated a Local Centre along Daly Street, designed in a main street format with approximately 1,200m<sup>2</sup> of retail floorspace.

The City's ACPS does not designate a specific site for a future local centre. Instead, the ACPS supports the development of a 1,200m<sup>2</sup> local centre within the broader Golden Gateway precinct with an anchor supermarket and complimentary shops and restaurants/cafes.

Considering the existing built form and land fragmentation along Daly Street, it is appropriate to provide opportunity for the development of a local centre within the broader area. Consequently, the LSP no longer identifies Daly Street as the Centre's location or designates it as a main street.

### **Procedural Considerations**

The draft LSP is to be progressed according to the Regulations, which requires the advertising, consideration and determination of structure plans. The Regulations also establish processing timeframes which can only be varied subject to WAPC approval.

The Regulations stipulate that a local government can readvertise a structure plan once, unless otherwise approved by the WAPC. Therefore, this will be the last time that the document can be advertised, unless the WAPC provides permission to advertise it again. There is a risk that the WAPC will not consent to further advertising.

At the close of the advertising period, officers will consider the submissions and provide a recommendation to Council. If no decision is made on how to progress the draft LSP following advertising, the WAPC may determine how the draft LSP is to be progressed and may do so without referring to or considering the City's assessment and recommendation. The City may be liable to the WAPC for the costs the WAPC incurs during this process.

### **Conclusion**

Following Council's 23 June 2020 resolution, investigations led to several changes to the draft LSP. These changes encompassed designating Perth Racing landholdings for detailed planning, adjusting the road network, revising public open space allocation, removing the specific location for the local centre, and updating built form and development controls. Updates were also made to the Movement and Access Strategy and Public Realm Strategy to align with the revised LSP.

It is recommended that Council adopt the modified LSP for the purpose of public advertising.

### **Financial implications**

All costs associated with the preparation and advertising of the draft LSP are met by the Planning Services' operational budget.

### **Environmental implications**

Environmental implications associated with the draft LSP are outlined in the Environmental Assessment Report (Attachment 12.2.3).

### **Social implications**

The draft LSP proposes a number of upgrades to the public realm which is intended to improve the overall amenity of the area.



### Attachment details

Attachment No and title	
1.	Golden Gateway Local Structure Plan [ <b>12.2.1</b> - 73 pages]
2.	Bushfire Management Plan [ <b>12.2.2</b> - 23 pages]
3.	Environmental Assessment Report [ <b>12.2.3</b> - 34 pages]
4.	Movement and Access Strategy [ <b>12.2.4</b> - 342 pages]
5.	Infrastructure Assessment Report [ <b>12.2.5</b> - 34 pages]
6.	Public Realm Strategy [ <b>12.2.6</b> - 26 pages]
7.	Extract of 23 June 2020 Ordinary Council Meeting Minutes [ <b>12.2.7</b> - 63 pages]
8.	Council's Resolution [ <b>12.2.8</b> - 4 pages]
9.	Table of Council's Resolution with Corresponding Officer's Comments [ <b>12.2.9</b> - 14 pages]
10.	CONFIDENTIAL - Consultant Report (Confidential matter in accordance with the <i>Local Government Act 1995 (WA)</i> section 5.23(e)) [ <b>12.2.10</b> - 151 pages]

**Schedule of Submissions**

1	Public Submitter	<p><b>Raises Concerns</b></p> <p>Considers that infrastructure, access and amenities are already stretched to the limit.</p>	<p>Refer to Infrastructure and Movement sections of the report.</p> <p>Regarding amenities, it is unclear what the submitter is referring to.</p>
2	Public Submitter	<p><b>Raises Concerns</b></p> <p>Considers that building heights will hinder views coming into the estate and look out of place with the rest of Ascot.</p>	<p>It is unclear how redevelopment in the precinct will obstruct views coming into the Ascot Waters estate.</p> <p>For further information regarding building height, refer to Building Height section of the report.</p>
3	Public Submitter	<p><b>Supports subject to Modifications and Raises Concerns</b></p> <p>Supports the plan overall, finding it well thought out.</p> <p>Suggests prioritising shared cars in high-rise developments over e-scooters or e-bikes, as it's easier for people to own and store bikes or scooters, while access to shared cars would be more beneficial.</p> <p>Supports cash in lieu for enhancing The Trust Land.</p> <p>Advocates for a pedestrian and bike underpass between Resolution Drive and Stoneham Street to improve safety when crossing Great Eastern Highway, and agrees that improvements to crossing Stoneham Street, as mentioned, are necessary.</p> <p>Additionally, raises concerns about the roundabout at Waterway Crescent and Grandstand Road, noting it is dangerous and causes delays during peak hours. Urges the Council to address this issue, especially with the potential for increased traffic in the growing Gateway area.</p>	<p>Noted</p> <p>It is important to retain flexibility in transportation options. E-scooters, e-bikes, and shared cars each serve different needs and preferences, and all offer benefits for residents. Some may prefer or rely on the convenience of shared e-scooters or e-bikes, while others may benefit more from access to shared cars. As such, maintaining a balance of options will ensure a more adaptable and inclusive approach that can cater to a variety of lifestyle choices and transportation needs.</p> <p>Noted.</p> <p>Refer to Movement section of the Report.</p> <p>This section of Grandstand Road is outside the scope of this Structure Plan and the Movement and Access Strategy. Refer to Movement section of the report.</p>
4	Public Submitter	<p><b>Raises Concerns</b></p> <p>Raises concern with the proposed development heights and states that impacts such as congestion, traffic, security and parking issues from an increase in people has not been explained. States that the surveys seem to have been conducted back in 2022 on smaller numbers.</p> <p>Questions if Council is satisfied that none of the land is owned or has related parties of councillors.</p>	<p>For comments relating to congestion, traffic and parking, refer to Movement section of the Report. Regarding traffic counts, the Movement and Access Strategy uses the most recent available data. In terms of security, development in line with the draft Structure Plan is expected to enhance safety in the area. Currently, several land uses within the precinct are largely inactive, and the absence of residents limits ongoing activity, reducing opportunities for passive surveillance.</p> <p>It is noted that the City owns 18 Resolution Drive, Ascot, which is subject to the Draft LSP. Please note that there is nothing unusual or not permitted under planning legislation for a local government to prepare a structure plan that includes City owned land. Furthermore, this does not</p>

		Questions why the use of Belmont Trust land has not been resolved and what is proposed to meet the trust declaration requirements. Notes that this land has sat vacant for many years and should be put to use for the public open space it was designed for.	constitute a personal interest for individual elected members and does not require a declaration under the Local Government Act 1995.  The Belmont Trust Land is governed by a declaration of trust, which requires its use for public enjoyment and recreation. The future use and development of this land will be determined by the trustees having regard to the declaration of trust.
5	Public Submitter	<p><b>Raises Concerns</b></p> <p>States that the primary concern is traffic management in the area, highlighting previous correspondence with the City about traffic volumes and speeds in the Ascot Residential and Stables area. Notes that along Carbine Street, there are 15 children under the age of 11 who frequently play along the street.</p> <p>Mentions that drivers use Carbine Street as a shortcut to avoid queues on Great Eastern Highway, cutting through Matheson Road. Expresses worry that it's only a matter of time before a child or horse is seriously injured.</p> <p>Mentions that the City conducted traffic counts but believes they were timed before Christmas and New Year's to produce data not reflective of typical traffic loads.</p> <p>States that additional development will increase traffic and speeding in the area. Points out that there is often dead wildlife along Matheson Road, likely due to speeding vehicles.</p> <p>Additionally, expresses concern over building heights, stating that 15 storeys would bring more patrons, increase traffic, and create an eyesore out of place with surrounding buildings. Suggests that 9 or 10 storeys should be the maximum height and that the number of tall buildings should be limited. Believes there are other areas along Great Eastern Highway that could be developed with less impact on the surrounding area.</p>	<p>Noted. Refer to below comments and Movement section of the report.</p> <p>Access off Grandstand Road and Resolution Drive into the Residential and Stables area is currently controlled by Perth Racing with gates. Perth Racing's landholdings are subject to the Ascot Racecourse Precinct Structure Plan which further considers vehicle access and movements within this area. It is not anticipated that future development within the Golden Gateway precinct will result in 'rat running' through the Residential and Stables zone, due to proximity to Great Eastern Highway.</p> <p>Traffic counts along Carbine Street were conducted over a three-day period from 29 December 2020. The counts did not show any abnormal patterns, and it is unlikely that conducting them at a different time would have revealed significant differences.</p> <p>It is also unclear how development under the draft Golden Gateway Local Structure Plan will impact traffic volumes and safety in the residential and stables area.</p> <p>Refer to Movement and Building height sections of the Report.</p>
6	Public Submitter	<p><b>Raises Concerns</b></p> <p>Opposes the plan and states that the documentation contains inconsistencies.</p> <p>Expects all interested parties who have a perceived or actual conflict to declare them.</p> <p>Considers that infrastructure has not been designed to handle increased densities and this may lead to outages.</p>	<p>It is unclear what inconsistencies are being referred to.</p> <p>It is unclear what conflicts are being referred to. It is noted that the City owns 18 Resolution Drive, Ascot, which is subject to the Draft LSP. Please note that there is nothing unusual or not permitted under planning legislation for a local government to prepare a structure plan that includes City owned land. Furthermore, this does not constitute a personal interest for individual elected members and does not require a declaration under the Local Government Act 1995.</p> <p>Refer to Infrastructure section of the Report</p>

	<p>Raises concern about the Resolution Drive roundabout stating that it is difficult to exit the estate without risking a collision.</p> <p>Questions whether the Emergency Management Plan adequately address a catastrophic event such as a Swan River storm surge. States the Emergency Management Plan needs to address the risks posed by high EV ownership within a water locked estate.</p> <p>Concerned that recharging lithium devices within the precinct will impact the petrol station fuel supplies along Great Eastern Highway.</p> <p>Considers that this is not simply about opposing development. States that there is more to lose and little to gain. In relation to this, raises the following issues:</p> <ul style="list-style-type: none"> <li>• increased Council and water rates</li> <li>• decreased amenity</li> <li>• issues with noise</li> <li>• traffic</li> <li>• Parking while there is little to gain.</li> </ul> <p>Considers that the plan does not address issues worsened since COVID, such as:</p> <ul style="list-style-type: none"> <li>• labour and construction supply shortages</li> <li>• Poor-quality builds due to cheap materials</li> <li>• Affordable housing for Australians</li> <li>• Efficient transit routes and emergency services access</li> </ul>	<p>Refer to Movement Section of the Report.</p> <p>The Structure Plan includes measures to protect infrastructure and assets from flooding and inundation.</p> <p>The charging of lithium devices within future developments is not anticipated to pose a risk to fuel stations along Great Eastern Highway.</p> <p>It is unclear why Council and water rates would increase as a result of development within the precinct. Future development would increase the City's rate base.</p> <p>Refer to Amenity section of the report.</p> <p>Refer to Amenity section of the report.</p> <p>Refer to Movement section of the Report.</p> <p>Refer to Movement section of the Report.</p> <p>There are currently labour and construction supply shortages across Australia. High construction costs and builder shortages are affecting feasibility. As detailed in the building height section of the report, the height controls proposed by the Structure Plan are designed to facilitate feasible development over the life of the structure plan. There would be no planning purpose in preparing a plan which cannot reasonably facilitate development in accordance with its provisions.</p> <p>The quality of builds is not relevant to this Structure Planning process, and sits under separate Building Code of Australia and the Building Act requirements.</p> <p>The current housing/affordability crisis is largely a result of the limited availability of housing. The draft Golden Gateway Local Structure Plan is a strategic planning project that aims to facilitate the delivery of a diverse range of dwellings that cater to both the existing and future population.</p> <p>As detailed in the Movement section of the report, the road network is considered adequate to support future development in accordance with the draft Structure Plan. In terms of emergency services access, it is not</p>
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		<ul style="list-style-type: none"> <li>Reliable supply of utilities.</li> </ul> <p>Wishes to retain the amenity that existed in 2001.</p>	<p>considered that future development in accordance with the draft Structure Plan would impact emergency services access to the precinct or surrounding areas.</p> <p>Refer to Infrastructure section of the Report.</p> <p>Refer to Amenity section of the Report.</p>
7	Public Submitter	<p><b>Raises Concerns</b></p> <p>States that the area along Great Eastern Highway is becoming more populated but facilities have not kept up. Uses shopping as an example and states that there is no supermarket for residents in the Rivervale and Ascot area with the nearest being in Victoria Park and Belmont. Requests that Council prioritises development proposals that include supermarkets within the Golden Gateway precinct as this will improve the liveability of the area.</p> <p>States that a library and leisure centre with a swimming pool and sauna facility close to high density areas will make such areas more desirable.</p> <p>Considers that the plan should include a rail line or light rail to cater for increasing apartments and residents without increasing traffic. Suggests more transit orientated development.</p>	<p>The draft Local Structure Plan addresses this by providing for the development of a local centre within the precinct. This aligns with the City's Activity Centre Planning Strategy, which supports a 1,200m<sup>2</sup> local centre with an anchor supermarket, complementary shops, and cafés/restaurants. These services will meet the day-to-day needs of both current and future residents of the area.</p> <p>The Faulkner Civic Precinct already provides major community facilities including a leisure centre and library in a central location. Private developers may choose to provide such facilities within the Golden Gateway precinct as part of future development proposals.</p> <p>Section 3.4.3 of the Structure Plan states that the City will lobby Main Roads WA, Public Transport Authority and Department of Transport for enhanced bus services and explore options like a superbuss or trackless tram.</p>
8	Public Submitter	<p><b>Raises Concerns</b></p> <p>Considers that the proposed development poses a significant threat to the local environment, particularly the Swan River and surrounding green spaces. States that increased construction and urbanisation could lead to pollution and habitat destruction, adversely affecting local wildlife and the natural beauty of the area.</p> <p>Considers that the current infrastructure, especially wastewater management, is insufficient to support the proposed increase in residential and commercial activity. States that this could lead to overburdened systems, resulting in frequent outages and reduced quality of life for existing residents.</p> <p>Considers that the development will likely exacerbate traffic congestion on Great Eastern Highway and surrounding roads leading to longer commute times, higher</p>	<p>An Environmental Impact Assessment Report has been prepared in support of the Structure Plan. It concludes that as a result of existing uses, the subject land supports limited or no remnant vegetation with a lack of intact understorey vegetation. The subject land therefore provides little to no, fauna habitat of significant value to native fauna. Regarding pollution, the Structure Plan advocates for the use and promotion of Water Sensitive Urban Design techniques wherever possible. As the urban area will not produce a nutrient load, the focus will be on slowing runoff and reducing hydrocarbons. Rain gardens and nutrient sinks can be implemented within the precinct to promote passive irrigation of street tree vegetation and controlling hydrocarbon runoff. The Structure Plan has also been referred to the Department of Biodiversity Conservation and Attractions and the Department of Water and Environmental Regulation. No concerns were raised by these departments.</p> <p>Refer to Infrastructure section of the Report.</p> <p>Refer to Movement section of the report.</p>

		<p>accident rates, and increased air pollution, negatively impacting the health and well-being of the community.</p> <p>Considers that development may lead to the displacement of long-standing residents and businesses, disrupting the social fabric of the community.</p> <p>States that the character and heritage of Ascot could be lost in favour of high-density, commercialised spaces that do not reflect the area's unique identity.</p>	<p>It is unclear why or how residents would be displaced as a result of development within the precinct. While businesses may choose to relocate, landowners will still have the option to develop, just as they can under the current 'Mixed Use' zoning.</p> <p>Refer to Building Height and Amenity sections of the Report.</p>
9	Public Submitter	<p><b>Supports subject to Modifications</b></p> <p>States that the commitment to housing in this excellent location is commendable from the City, and should help in easing the housing crisis while providing affordable places to live in Belmont.</p> <p>Raises concern over the lack of pedestrian access to the adjacent Belmont Trust land and asks if an overpass over Stoneham Street could be funded by future development.</p> <p>States that the Public Transport Authority should be encouraged to provide bus stops and Main Roads should be encouraged to improve at-grade crossings on Resolution Drive and Great Eastern Highway.</p> <p>States that Mixed use development in the triangle could make for a good neighbourhood if done well.</p> <p>Notes that housing is important, and the thousands of potential residents of this area are the beneficiaries of this plan. Hopes that Council considers their needs as well as the valid concerns of current nearby residents.</p>	<p>Noted</p> <p>Refer to Movement Section of the Report.</p> <p>Following approval of the Structure Plan, the City will liaise with Main Roads Western Australia about improvements to pedestrian crossing points along Great Eastern Highway. The Structure Plan also advocates for improved bus services within the precinct and the exploration of other transit options, such as a superbus or trackless tram.</p> <p>Noted</p> <p>Noted.</p>
10	Public Submitter	<p><b>Raises Concerns</b></p> <p>States that the Golden Gateway Local Structure Plan has many good features but raises concerns with the proposed building heights. Considers that heights should revert back to the previous plan of 6 and 9 storeys.</p> <p>Considers that the additional 5 storey height requirement doesn't make sense because all structures should be built with excellent design and sustainability features.</p> <p>States that Belmont doesn't have to carry the ball for the whole region to fulfill its infill targets and nor should the City be concerned with developer profits more than the desires and requirements of its residences.</p> <p>Considers that there are current traffic, pedestrian and safety issues that should be addressed before adding high rise and the associated increase in people, cars, traffic etc.</p>	<p>Refer to Building Height section of the report.</p> <p>Refer to Sustainability section of the report.</p> <p>Refer to Infill targets and Building height sections of the report.</p> <p>Refer to Movement section of the Report.</p>
11	Public Submitter	<p><b>Raises Concerns</b></p> <p>Is aware of the need for more housing stock, and considers that Council has good intentions to provide a 'golden' gateway area that Belmont can be proud of.</p>	<p>Noted</p>



	<p>Supportive of high-quality sustainable development of the area but is concerned with several aspects of the plan.</p> <p>Opposed to the additional 5 storey height allowance and states that this will allow all buildings to be 15 storeys which undermines the intention of the maximum heights in the first place.</p> <p>Considers that some of the additional height criteria is inappropriate or should be included as minimum standards for all development. States the following concerns:</p> <ul style="list-style-type: none"> <li>Planting an extra tree or providing electric scooters is trivial.</li> <li>An 'area of public open space' is vague and could result in tiny spaces.</li> <li>Any building on Great Eastern Highway should be provided within double glazing in the first place. Considers that Australia is behind the rest of the world on this.</li> <li>The provision of two electric vehicle charging bays for up to 20 storeys is insufficient. Considers that this would be better if all cars could charge slowly, than two bays with a fast charger. States that the DPLH position paper supports this and says that all assigned bays should support Level 1 Trickle Charging. States that this should be a minimum requirement for buildings as opposed to a developer incentive.</li> <li>Considers that the 1kW solar per dwelling is the only requirement that may pose a challenge. Calculates that 1kW of solar panel is roughly \$1,000.00 and 4 square metres of collecting area, so 100 dwellings would need 400 square metres and cost approximately \$100,000.00.</li> <li>Suggests solar batteries be considered as an additional requirement.</li> </ul> <p>Recommends reconsidering tree species with preference for drought resistant Australian native species that can handle acidic soils. Considers this would be an easy win to connect the built surrounds to the land of the Noongar Whadjuk people and would be attractive to ecologically aware community focussed families, and would communicate a forward thinking vision to potential developers. Raises the following concerns with tree species:</p> <ul style="list-style-type: none"> <li>Plane tree is a well known allergen that causes health issues.</li> </ul>	<p>Noted</p> <p>If developers take advantage of the additional height criteria, buildings could be 20 storeys along Great Eastern Highway and 15 storeys elsewhere. Each development may or may not wish to take up the additional five storeys which is considered a commensurate trade off for the additional requirements that need to be met. These measures will further enhance the delivery of a high amenity and sustainable precinct.</p> <p>While this requirement may seem trivial of itself and when looked at in isolation, it is just one requirement among others that would all need to be met in order for the additional height to be considered.</p> <p>The City has chosen not to provide guidance on the design and size of these spaces to provide developers with a level of flexibility. The appropriateness of each space will be considered on a case-by-case basis against the intent of the bonus criteria.</p> <p>The requirement for double glazing is above and beyond what would typically be required. The bonus criteria seeks to achieve improved sustainability outcomes.</p> <p>Refer to Sustainability section of the report.</p> <p>Refer to Sustainability section of the report.</p> <p>Refer to Sustainability section of the report.</p> <p>It is considered that the species list strikes an appropriate balance between native and non-native species.</p> <p>Plane Tree is included on the City's tree species list and is therefore considered appropriate for the precinct.</p>
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12	Public Submitter	<p><b>Raises Concerns</b></p> <p>Concerned that heights could reach 15 to 20 storeys. Acknowledges the need for infill and responsible development but states that the proposed heights are ill-suited to the unique character and charm of the community. States that 6 to 9 storeys, which were already beyond the scale of what many residents found reasonable, have been exceeded and this is a serious threat to the very essence of what makes this area special.</p> <p>States that Ascot, particularly the area surrounding Resolution Drive, Stoneham Street, and the Great Eastern Highway, is a place where community and tranquillity intersect. The low-density housing, ample greenery, and the open space along the Ascot Kilns precinct create an environment that fosters connection among residents and allows the natural beauty of the area to shine.</p>	<p>Refer to Building Height section of the report.</p> <p>Development bound by Resolution Drive, Stoneham Street and Great Eastern Highway currently contains warehouses, offices, fast food/takeaway outlets, a motor vehicle wash and a service station. It is considered that future development in accordance with the Structure Plan will enhance the amenity of the area and may provide opportunities for increased open space (10% open space on the Ascot Kilns site and open space resulting from the closure of Daly Street), and the upgrading of open space on the Belmont Trust land.</p>

	<p>Pushing the development to heights of 20 storeys would irrevocably change the landscape, casting long shadows both literally and figuratively over the local community.</p> <p>Considers adding an estimated 4,082 new residents will strain limited infrastructure and services, especially when the plan only allows for one parking bay per apartment. States that this is not sufficient, particularly when modern families often have more than one car and visitors are also part of everyday life.</p> <p>Considers the additional vehicles will spill onto surrounding streets, further congesting an area already struggling with traffic issues, particularly around Great Eastern Highway and the adjacent roads. Mentions that the Movement and Access Strategy proposed in the plan does not adequately address these concerns, as it overlooks the realities of accommodating this vast increase in both population and vehicles.</p> <p>Considers the increased building heights will disrupt the aesthetic and visual appeal of the neighbourhood. Instead of preserving Ascot's low-rise, suburban feel, the towering structures would dominate the skyline, reducing the area's character to one of faceless high-rises. These taller buildings would dwarf the existing homes and create an uncomfortable, imposing environment for long-term residents who value their peace and privacy. Questions if this is truly the direction we want to take – sacrificing the serene and residential quality of life for the sake of developer profits.</p> <p>Raises concern about sustainability and open space and requests Council enforce the inclusion of at least 10% public open space, as the Ascot Kilns and Parry Field Action Group has rightly suggested. Considers this is the bare minimum required to maintain any semblance of the natural beauty the area is known for.</p> <p>States sustainable design features must not be an afterthought and should be at the forefront of any large-scale development. Also states that tall buildings consume significant energy and resources, and without stringent requirements for sustainability, we risk further environmental degradation in a time when responsible urban planning is more important than ever.</p> <p>Raises the following questions:</p> <ul style="list-style-type: none"> <li>• The promise of new cafes and shops might sound appealing, but are they worth the trade-off? Is a coffee shop on the ground floor of a towering building worth the sacrifice of Ascot's unique character, its liveability, and the peace that residents currently enjoy?</li> <li>• Is the priority here truly the well-being of the community or the financial gain of developers?</li> <li>• The acknowledgement at the September Ordinary Council Meeting that these heights increases were proposed to "track rising construction costs" is a red flag – are we allowing our town planning to be driven by financial pressure rather than thoughtful consideration of what is best for our neighbourhood?</li> </ul> <p>Urges Council to reconsider the proposed building heights. Is not opposed to progress but states progress must respect the history, character, and sustainability of the Ascot community. Considers that limiting development to 6 storeys along Resolution Drive and Stoneham Street, and 9 storeys on Great Eastern Highway, as set out in the original draft, is a far more balanced approach that allows for growth while preserving</p>	<p>Refer to Amenity section of the report.</p> <p>Refer to Infrastructure and Movement sections of the report.</p> <p>Refer to Movement section of the report.</p> <p>Refer to Amenity section of the report.</p> <p>Refer to the Public Open and Sustainability sections of the report.</p> <p>Refer to Sustainability section of the Report.</p> <p>Refer to Amenity section of the Report</p> <p>Refer to Building Height section of the Report.</p> <p>Refer to Building Height section of the Report.</p> <p>Refer to Building Height and Amenity sections of the Report.</p> <p>Regarding Heritage, the draft Structure Plan will have no impact on existing heritage.</p>
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		what makes Ascot so special. Suggests not rushing to concrete over heritage and sense of place for short-term gains and instead working together to ensure that development is in harmony with community values and the environment.	
13	Public Submitter	<p><b>Raises Concerns</b></p> <p>Expresses concern regarding the draft development.</p> <p>States that the City of Belmont is a remarkable part of the City of Perth and to change the precinct with high rise buildings will only increase the volume of undesirables to the area. Concerned that crime will increase in the area.</p> <p>States that Ascot Waters is a location that requires protection because of its uniqueness.</p> <p>States that services in Ascot Waters need to be updated and modernised and that the plan needs to be specific with the uniqueness of the area.</p> <p>Requests to not change the outlook to every other area and to think outside the square and be the City of Belmont all are wanting.</p>	<p>At this stage no development is proposed. The Structure Plan provides a framework against which future development proposals will be assessed.</p> <p>There is no evidence to suggest that anti-social behaviour would increase as a result of the draft Structure Plan.</p> <p>Refer to Amenity section of the Report.</p> <p>The draft Structure Plan doesn't relate to land within Ascot Waters. The precinct subject to development controls under the structure plan is a separate area with a different character.</p> <p>It is unclear what the submitter is referring to. Future development within the precinct is expected to enhance the area's amenity, creating a high quality urban environment for living, working and recreation.</p>
14	Public Submitter	<p><b>Supports subject to Modifications</b></p> <p>Commends Council for taking a progressive step toward building a sustainable future for the residents of Ascot. States that this is long overdue, especially considering that Council with suburbs along the foreshore from Fremantle to Applecross and neighboring Burswood have been implementing similar measures for over a decade.</p> <p>Welcomes the prospect of development which will significantly enhance Ascot's appeal. Considers that Ascot should always be the Jewel in the Belmont Council crown, and in turn, the City of Belmont should be the flagship for the eastern corridor of Perth.</p> <p>To ensure the development creates a true community, the following measures are suggested:</p> <ol style="list-style-type: none"> <li>1. Sustainable Hub: Implement best practices to establish Ascot as a leader in sustainability. This includes using the latest technology, such as solar panels for street lighting, artificial plants and trees made of recycled material with integrated cameras for safety of its citizens, park benches made from recycled plastics, and designated charging stations for electric vehicles (EVs). I also believe it would be beneficial to have EV stations within Ascot Waters.</li> <li>2. Parry Field Integration: Remove the fencing around Parry Field, plant mature trees, and clean up the land to make it usable and integrated with the Golden Gateway development. This could include better walkways and cycling paths, BBQ facilities, and gazebos.</li> <li>3. Community Amenities : Provide a small IGA grocery shop and a local bar but with a restriction of no more than 80 patrons to ensure it remains a small community pub rather than an entertainment venue that might attract undesirable elements.</li> </ol>	<p>Noted</p> <p>Noted</p> <p>Infrastructure within public spaces will be subject to further detailed planning at a later stage. Further information regarding sustainability is included in the Sustainability section of the Council Report.</p> <p>The Belmont Trust Land is governed by a declaration of trust, which requires its use for public enjoyment and recreation. The future use and development of this land will be determined by the trustees having regard to the declaration of trust.</p> <p>The Structure Plan provides for the development of a 1,200m<sup>2</sup> local centre within the Golden Gateway precinct and aims to facilitate active land uses and businesses on the ground floor of developments. Regarding a small</p>

		<p>4. High-Quality Apartments: Ensure the highest build quality for the apartments (while meeting state requirements for affordable housing) that is aimed at high-end units with a 5-star energy rating, like those in South Perth.</p> <p>5. Community Infrastructure : Construct a flyover or footbridge to assist the high proportion of seniors in Ascot with crossing Stoneham Street and Great Eastern Highway.</p> <p>To effectively integrate Ascot with its surroundings, the Kilns should be a central feature, as it is currently underutilised despite significant investment in its restoration. Additionally, suggests that the Kilns could be transformed into a valuable community asset, and the open space may be considered for future residential opportunities.</p> <p>Suggests that the Council implement necessary changes to the existing road infrastructure, as retaining the current roundabout is an inadequate compromise. Suggests relocating the roundabout to Grandstand Road with three outlets—allowing left turns at Resolution, straight-through access to Grandstand, and a right exit into the Golden Gateway development—which would facilitate direct access to Great Eastern Highway. This would enable Stoneham Street to become a local-only road, creating a more pedestrian-friendly environment.</p>	<p>bar, the choice to do so will be at the discretion of developers and will be assessed by the City of Belmont.</p> <p>Proponents will need to have regard to sustainability provisions in the R-Codes and Local Planning Policy 7.0. The structure plan builds on these requirements by requiring a higher standard of development for developers seeking an additional 5 storeys. Additionally, proposals will be reviewed by the City’s Design Review Panel to ensure high-quality design.</p> <p>Refer to Movement section of the Report.</p> <p>Future development of the Ascot Kilns site will be subject to a separate planning process led by the Department of Planning Lands and Heritage. The draft LSP proposes the preparation of a Local Development Plan for the site, which includes a 10% public open space requirement.</p> <p>Main Roads Western Australia did not support the originally proposed traffic lights for this location. As a result, the most practical option is to retain the roundabout in its current configuration, with Stoneham Street maintaining its existing function. However, as outlined in the Movement section of the Council Report, the Structure Plan has been updated to address pedestrian crossing points on Stoneham Street.</p>
15	Public Submitter	<p><b>Supports subject to Modifications</b></p> <p>Expresses support for the Golden Gateway Local Structure Plan subject to a number of modifications.</p> <p>Notes that the Daly Street Precinct is proposed to have a maximum podium height of 3 storeys and tower 10 storeys. Questions the commercial viability of two bonus height requirements as follows:</p> <ul style="list-style-type: none"> <li>• <u>100% of windows containing double glazing:</u> There needs to be some flexibility provided in this requirement given not every apartment will require double glazing for noise attenuation. One side of the building may be exposed to high traffic volumes while the other side of the building is located adjacent local streets. Given the cost involved for such a requirement to be provided for a 15-storey building, some degree of flexibility is warranted to allow for a site-specific planning assessment to be undertaken. Should such a built form requirement be governed by the National Construction Code (NCC).</li> <li>• <u>Install a photovoltaic solar panel system that can provide the equivalent of at least 1Kw energy per dwelling.</u> Generating 1Kw energy per dwelling may require 3-4 panels per apartment. This requirement may not be physically possible to comply with given limited roof space and need to accommodate both solar panels and plant and the complexity of fixing vertical panels to walls. Some flexibility is required to accommodate the different built forms and emerging technology in terms of solar collection and energy generation.</li> </ul>	<p>Noted.</p> <p>Refer to Sustainability section of report.</p> <p>Refer to previous comment.</p>

16	Public Submitter	<p><b>Supports</b></p> <p>States that the new look proposed by the Structure will be amazing and that those who oppose the plan forget that their property was once dirt.</p> <p>Encourages the City to progress the plan as it will add massive value to the area.</p> <p>Commends the City and reaffirms support.</p>	Noted
17	Public Submitter	<p><b>Raises Concerns</b></p> <p>Considers Great Eastern Highway looks like a concrete jungle and notes more is proposed. States the more interesting building styles and designs are required.</p> <p>Requests building heights to remain with what already exists and that no more than 10 storeys is appropriate.</p> <p>Notes that traffic congestion getting across Great Eastern Highway near Belmont Primary School is already difficult and can take many light changes to get through. Requests clarification on what is being done to manage this.</p> <p>Notes traffic in peak hours on Garrat Road is a bottle neck and questions what is being done to manage this with increased traffic</p> <p>Questions what is being considered to manage existing public transport along Great Eastern Highway with increased passenger numbers.</p> <p>Questions what is being done to bring more public transport along Grandstand Road direct to the City of Belmont for local City workers.</p> <p>States that the City should retain some parkland in the precinct or create new playground areas for kids.</p> <p>Raises concern about 1 car bay per apartment and questions if this is adequate.</p> <p>Requests no more service stations in the area because there are too many. States that they are looking forward to new and interesting commercial opportunities for the community. States dining options and family friendly brewery would be good.</p>	<p>Development within the precinct is anticipated to enhance the local amenity. Major proposals will be reviewed by the City's Design Review Panel to ensure high-quality building design.</p> <p>Refer to Building Height section of Report.</p> <p>Refer to Movement Section of Report.</p> <p>Garratt Road is outside the scope of this Structure Plan and the Movement and Access Strategy. As made clear by the Movement and Access Strategy, increased vehicle movements is most attributed to regional growth not development within the Golden Gateway precinct.</p> <p>As mentioned in the Movement section of the Report, the Structure Plan states that PTA will be advocated to provide improved bus services and exploration of other transit options such as a superbuss or trackless tram.</p> <p>Provision of public transport to the Civic Centre is outside the scope of this structure plan.</p> <p>Public Open Space will be provided in the precinct with future development of these spaces being guided by the City's Public Realm Strategy. Please refer to the Public Open Space section of the Report for further detail.</p> <p>Refer to Movement section of Report.</p> <p>As detailed in the Council Report, the Structure Plan proposes feasible development controls to facilitate high quality developments. Without appropriate development controls, developers will be more likely to submit proposals that exclude residential components or pursue land uses misaligned with the precinct's objectives, such as 'Service Station', 'Warehouse' or 'Fast Food/Takeaway Outlet'. The Structure Plan also identifies the opportunity for a local centre to establish within the precinct and encourages active land uses at ground level.</p>
18	Public Submitter	<p><b>Raises Concerns</b></p> <p>States building heights set out in the original draft Golden Gateway Structure Plan should remain unchanged. Considers that 10-20 storey buildings are unnecessary and will be an ugly visual blight to all residents of Ascot, Ascot Waters and Belmont.</p>	Refer to Building Height and Amenity section of the Report.



		<p>States all new developments should incorporate sustainability design features regardless of building height.</p> <p>Requests the City to consider mandating mixed use developments for all planned residential developments to bring amenities closer to residents and to make efficient use of land and reduce dependency on private vehicles.</p> <p>Requests no added lanes for Resolution Drive (west) leading into Ascot Waters. States traffic calming measures should be added to this stretch of roads to reduce the speed of vehicles entering from Stoneham Street and Resolution Drive east.</p>	<p>Refer to Sustainability section of the report.</p> <p>The Structure Plan includes statements of intent which seek to encourage active commercial uses at ground level for Precincts 1, 2 and 4. It is envisaged that the 'Mixed Use' zone will accommodate residential development in the form of multiple dwellings with supporting non-residential development on ground level.</p> <p>Resolution Drive (west) will continue to be a local distributor road with no added lanes. Development within the Golden Gateway precinct is not anticipated to generate a need for traffic calming measures leading into Ascot Waters.</p>
19	Public Submitter	<p><b>Raises Concerns</b></p> <p>Does not support the current draft of the Golden Gateway Local Structure Plan.</p> <p>States there are numerous issues with the plan, including but not limited to:</p> <ul style="list-style-type: none"> <li>• Increase in building heights from 6 and 9 storeys to 20 storeys.</li> <li>• Lack of public open space to accommodate new residents.</li> <li>• Increased traffic congestion.</li> <li>• Availability of public services such as schools.</li> <li>• Street lighting.</li> <li>• Street parking to accommodate new residents.</li> <li>• Lack of focus on environment and sustainability factors for the new buildings and surrounds.</li> </ul>	<p>Noted.</p> <p>Refer to Building Height section of report.</p> <p>Refer to Public Open space section of report.</p> <p>Refer to Movement section of report.</p> <p>The Structure Plan was referred to the Department of Education. The Department has advised that they will continue to monitor student enrolment and ensure that residential growth corresponds with the provision of public schools in the locality.</p> <p>There are existing street lights within the precinct. The adequacy of these and needs for improvements will be further investigated following consideration of the Structure Plan.</p> <p>Refer to Movement section of report.</p> <p>Refer to Sustainability section of the Council Report.</p>
20	Public Submitter	<p><b>Raises Concerns</b></p> <p>Considers that the draft structure plan appears to focus on profit for developers by encouraging developers to build higher structures in return for more green space and adherence to green principles.</p> <p>Questions whether the City's own planning guides stipulates a minimum 10% green space for all developments.</p> <p>Considers all structures regardless of their height should provide the highest green building principles particularly given the City of Belmont has the least tree canopy in the Perth metropolitan area.</p>	<p>Developer profits are not a planning consideration and were not considered when preparing the draft Structure Plan or modifications to the draft Structure Plan. Further detail is included in the Building Heights section of the report.</p> <p>Refer to Public Open Space section of report.</p> <p>Refer to Sustainability section of report.</p>

		<p>Questions how the City would encourage the use of public transportation.</p> <p>Questions how the City would facilitate ease of pedestrian access.</p> <p>Contends that the traffic study lacks clarity and is aged.</p> <p>Questions why the height of structures is proposed to be changed.</p> <p>Questions why profit for developers is the only driver.</p> <p>Questions what and where is the contemporary and current evidence that building costs have risen to such an extent that it has not kept pace with housing prices in the Perth metropolitan area.</p> <p>Requests amending the structure plan to align with the original draft document building heights (six and nine storeys in their respective places). Considers this would align better with other structures along this part of the Great Eastern Highway precinct.</p>	<p>Refer to Movement section of report.</p> <p>Refer to Movement section of report.</p> <p>Specific concerns relating to the clarity of the traffic study are not provided. Regarding age of the study, it has recently been updated to address modifications to the Structure Plan.</p> <p>Detailed reasons are included in the report presented at the 27 August 2024 Ordinary Council Meeting and further discussed in the Building Height section of the report.</p> <p>Developer profits are not a planning consideration and were not considered when preparing the draft Structure Plan or modifications to the draft Structure Plan. Further detail is included in the Building Heights section of the report.</p> <p>Refer to graph included in the Building Height section of the report.</p> <p>Refer to Building Height section of report.</p>
20	Public Submitter	<p><b>Supports subject to Modifications and Raises Concerns</b></p> <p>Supports the development of the Golden Gateway precinct if building heights are limited to 6 storeys along Resolution Drive and Stoneham Street and 9 storeys on Great Eastern Highway. Notes these are the heights specified in the original draft Golden Gateway Local Structure Plan. Urges the City of Belmont to rescind the current draft and limit building heights to no more than 6 storeys on Resolution Drive and Stoneham Street and 9 storeys on Great Eastern Highway.</p> <p>States new mixed use businesses will provide positive benefits to existing residents of Ascot and surrounding areas, and assist the City in addressing targets for urban infill and densification set by the State Government.</p> <p>Does not support the revised building heights or the additional height criteria that will provide for an additional five storeys if developers provide sustainable design features or public open space. States the reasons for this position are as follows:</p> <ul style="list-style-type: none"> <li>In 2024 during a global climate crisis, all developments in the City of Belmont should be required to incorporate sustainable design features, regardless of building height.</li> <li>All new developments should contain 10% public open space and a comprehensive strategy that will retain or enhance tree canopy.</li> </ul>	<p>Refer to Building Height section of report.</p> <p>Noted</p> <p>Refer to Sustainability section of report.</p> <p>Refer to Public Open Space. Regarding tree canopy, there are limited trees within the area due to most of it being built up. However, as part of future development, landscaping will be required. The structure plan includes a public realm strategy that includes recommended landscaping treatments.</p>

		<ul style="list-style-type: none"> <li>Residents have expressed on-going issues regarding traffic and congestion along Grandstand Road since prior to the time that Craig Care was proposed and subsequently built at 52 Grandstand Road. Despite this, nothing has been done to address this. It is increasingly difficult to leave the Ascot Waters estate during peak hours by car, or to cross Grandstand Road on foot to access the 999/998 bus route.</li> <li>Increasing height limits as proposed in the current draft of the GGLSP will only make this problem worse, with the addition of an estimated 4,082 new residents, which more than doubles the current population of Ascot.</li> <li>The Movement and Access Strategy specified in the GGLSP is insufficient and relies on residents of new buildings to take public transportation, carpool, or cycle. This might make sense in locations along the train line, such as near Redcliffe Station. In the Golden Gateway area, however, a movement plan that relies on public transportation and carpooling is naïve at best.</li> <li>While apartment parking allocation in the GGLSP conforms to the minimum State requirements, it is unreasonable to assume that residents will only have 1 car per apartment. This strongly suggests that residents will compete for parking bays intended for customers of mixed-use businesses, and in surrounding areas.</li> </ul> <p>States that at the 24 September Ordinary Council Meeting it was learnt that the principal driver behind the increase in building heights is that market property values have not tracked rising costs of construction. Considers the City of Belmont effectively told residents that developer profits are being prioritised over concerns of residents regarding congestion and traffic. Believes this is backwards. States that facilitating developer profits should not be a priority or a driving consideration when planning new developments and that the City should prioritise the needs of residents when planning new developments.</p>	<p>While the section of Grandstand Road referenced by the submitter lies outside the LSP area and is therefore beyond the scope of this project, modelling indicates that it will maintain adequate capacity in 2041.</p> <p>Refer to Movement section of report.</p> <p>Refer to Movement section of report.</p> <p>Refer to Movement section of report.</p> <p>Developer profits are not a planning consideration and were not considered when preparing the draft Structure Plan or modifications to the draft Structure Plan. Further detail is included in the Building Heights section of the report.</p>
21	Public Submitter	<p><b>Raises Concerns</b></p> <p>Concerned with current infrastructure/roads/parks if 15 to storeys is allowed within the precinct.</p> <p>States that the current high road noise will be further exacerbated with double the amount of people living in the area. States that the City did not allow a raised fence to protect privacy, reduce noise and reduce road dust and dirt that floods the back patio. Considers there should be a study for both noise and dust impacts on those houses.</p> <p>Has some support for the Ascot Kilns and Parry Field Action Group options, provided the City allows for noise and dust reduction for the 16 houses that back onto Grandstand Road opposite Ascot Racecourse.</p>	<p>While the submitter did not provide specific concerns, it should be noted that the Structure Plan and supporting reports include information on the adequacy of infrastructure, roads, and public open space. For further information, refer to Public Open Space, Movement and Infrastructure sections of the report.</p> <p>The submitter's property backs onto Grandstand Road, a Distributor Road, where some vehicle noise is expected. However, this noise is not solely attributed to future development within the Golden Gateway precinct. Furthermore, dust concerns are not relevant to this Structure Plan. Should the submitter wish to make changes to their property for dust and noise mitigation, they are welcome to provide details for the City's consideration.</p>
22	Public Submitter	<p><b>Raises Concerns</b></p>	

		<p>Considers that heights of 10 to 15 storeys is not appropriate and is out of step with all building heights in the area. Suggests reinstating the previous draft which called for apartments with ground floor commercial businesses of between 6 and 9 storeys.</p> <p>Notes their opinion that the City of Belmont has prioritised developer profits ahead of its current residents.</p> <p>Considers that because there are limited public transport opportunities, residents will be required to drive leading to increased congestion on Grandstand Road, Great Eastern Highway and adjacent roads.</p> <p>States that because the City has a low urban canopy percentage, it is time for the City to take a proactive approach to urban greening, instead of doing the bare minimum. Considers this development is an opportunity for the City to step up its urban biodiversity initiatives.</p> <p>States that at the very least, all development in the area should include at least 10% public open space and incorporate sustainable design features. Considers all tree plantings should be Australian Native trees that provide adequate shade.</p>	<p>Refer to Building Height section of the report.</p> <p>Developer profits are not a planning consideration and were not considered when preparing the draft Structure Plan or modifications to the draft Structure Plan. Further detail is included in the Building Heights section of the report.</p> <p>Refer to Movement section of the report.</p> <p>The structure plan includes a public realm strategy that includes recommended landscaping treatments. Additionally, any future residential development will be required to comply with the minimum tree planting requirements contained within the Residential Design Codes. Tree planting requirements for commercial proposals are being further investigated as part of the preparation of a new local planning scheme.</p> <p>Refer to Public Open Space, Landscaping and Sustainability section of the report.</p>
23	Public Submitter	<p><b>Raises Concerns</b></p> <p>Questions what parking survey samples were used when considering the proposal. Considers that each dwelling will require more than one car parking bay as demonstrated in the surrounding areas of Belmont and Ascot.</p> <p>Questions what improvements are being considered to cater for this uplift in vehicle usage in the area.</p> <p>Considers the traffic flow in the area is dangerous with narrow roads and high vehicle volumes and this is expected to get worse.</p> <p>Questions if there are any anticipated costings to rate payers to improve the existing road network to handle the anticipated increased population.</p> <p>Questions if environmental studies have been undertaken with a view to the future impact on the existing environment. Considers the proposed population increase will put pressure on the sensitive and fragile environment with increasing noise levels and disturbance of the wetland area.</p>	<p>There is no requirement for parking surveys to be undertaken as part of the draft Structure Plan. For further detail about parking, refer to the Movement section of the report.</p> <p>Details of the road network are contained within the Movement and Access Strategy. Further details are included in the Movement section of the report.</p> <p>Refer to Movement section of the report.</p> <p>Modelling has not identified a need for road network improvements. However, improvements to cyclist and pedestrian infrastructure as well as public open space will be further explored as part of the preparation of an appropriate funding strategy.</p> <p>An environmental study has been prepared in support of the Structure Plan. It demonstrates that there will no impact on the environment.</p>
24	Public Submitter	<p><b>Raises Concerns</b></p> <p>Is opposed to the proposed height increases above the original heights of 9 stories on Great Eastern Highway and 6 stories in the rest of the triangle. States the reasons for this are:</p>	

		<p>1. Considers that the pretext that additional height is required to make development profitable ignores the below examples. Considers these buildings would not have been constructed if they were not profitable:</p> <ul style="list-style-type: none"> <li>• the recent construction of the Aged Care 5 stories,</li> <li>• 150 East building 6 stories,</li> <li>• Marina apartments Ascot Waters 9 stories,</li> <li>• Cnr Belmont ave and GEH 9 stories,</li> <li>• Quest apartment 9 stories</li> <li>• Aloft Hotel 13 stories</li> </ul> <p>2. Is opposed to development increases when the Ascot Racecourse is proposing additional residential, aged care and commercial development in the area. Considers there isn't adequate infrastructure to handle the increased housing and commercial development and states traffic, parking, power, sewerage etc are all inadequate. States there is no suggested solutions to traffic volumes and the road system.</p> <p>3. Considers future households will not use public transport and will need two vehicles. States traffic and parking will spill into Ascot Waters.</p> <p>Considers Council is dealing with residents of Ascot Waters with contempt. States the area was intended to be an upmarket area, but now Council is disregarding this by crowding it out with skyscrapers and 11,000 people and thousands of cars.</p>	<p>Construction of each of the submitter's examples occurred prior to or during 2020. Refer to Building Height section of Council report for details on how the market has changed since that time.</p> <p>Refer to Infrastructure and Movement sections of the report.</p> <p>Refer to Movement section of the report.</p> <p>Refer to Amenity section of the report.</p>
25	Public Submitter	<p><b>Raises Concerns</b></p> <p>States that allowing 15 storey buildings along Great Eastern Highway will create a barrier that psychologically isolates those residents living on the southern side of Great Eastern Highway from the river and that traffic density is already a physical barrier.</p> <p>States that the southern side of Great Eastern Highway comprises lower socio-economic dwellings and fewer small retail shops. Considers this area is less attractive to buyers of real estate and that it would be beneficial to facilitate access to new retail outlets in the Golden Gateway precinct. Recommends installing an underpass or pedestrian bridge over Great Eastern Highway.</p> <p>Considers that private developers of multi-storey residential buildings tend to make streets very narrow and do not allocate enough parking for short term or visitor needs and uses East Perth, Rivervale and Victoria Park as examples. Recommends the City set aside land for public parking to service commercial/retail outlets.</p>	<p>The draft Structure Plan will not isolate or provide a barrier to residents on the south side of Great Eastern Highway from accessing the river. The precinct is proposed to be converted into a high quality, mixed use precinct with streetscape improvements, new areas of open space and landscaping that will make the area more amenable for pedestrians and cyclists.</p> <p>Refer to comments relating to pedestrian crossing points of Great Eastern Highway included in the Movement section of the Council report.</p> <p>The adequacy of parking for future developments will be further considered through the development application process.</p>
26	Public Submitter	<p><b>Raises Concerns</b></p>	

	<p>States that the draft plan supersedes the earlier plan because it did not include proper consultation with other landowner stakeholders and has been expanded to make it more attractive to developers. Surprised by these two aspects and states that the main concern is that the plan will result in overcrowding and overdeveloping a relatively small area along the busy corridor between Guildford Road and Great Eastern Highway, a route which already struggles with the amount of passing traffic.</p> <p>Considers the plan cannot be considered in isolation from the draft Ascot Racecourse Precinct Structure Plan.</p> <p>Notes the following:</p> <ul style="list-style-type: none"> <li>The draft Golden Gateway Local Structure Plan is estimated to cover some 4.2473ha, yield an additional 4,082 persons and 'at least 2,268' new dwellings, among which are high-rise buildings of 10-15 storeys. Within the plan, it is proposed to construct three 'landmark' buildings, each of which could be taken to as high as 20 storeys.</li> <li>Residential provision in the draft Ascot Racecourse Precinct Structure Plan will cover an area of 0.94ha and is estimated to yield an additional 920 people in 400 dwellings. There may be an additional 'vertical residential living village to accommodate retiring members of the horse racing industry' that will also serve as a 'landmark' in the locality. So, more people and another potential 20-storey building. Considers that retirees would not be eager to live in a high rise building that will be subject to periodical fire alarm testing and use of stairs in the case of an evacuation.</li> </ul> <p>Mentions that according to the 2021 census, the entire suburb of Ascot covers some 400ha with 3,095 residents and 1,421 dwellings. The combined additional population from the two structure plans would suggest at least a 162% increase in Ascot's population shoehorned into an area that is only some 3% of the size of the total suburb.</p> <p>States that buildings should be kept at levels that complement the local environment.</p> <p>Mentions that at considerable cost and care the Council has recently refurbished the Ascot Kilns chimneys and questions why anyone is considering overshadowing these historical destinations with the possible construction of two 20 storey buildings next door.</p>	<p>The previous version of the structure plan underwent extensive consultation in the same manner as the current version (same mail out). It should be noted that the City has undertaken more consultation on this project than required under the Planning and Development (Local Planning Schemes) Regulations 2015.</p> <p>Perth Racing are progressing a planning framework for their landholdings to guide future development. This includes several of their lots located within the Golden Gateway precinct. Following discussions with Perth Racing and the Department of Planning Lands and Heritage (DPLH), it is deemed appropriate to designate Perth Racing's land within the Golden Gateway precinct for further detailed planning. This approach allows Perth Racing to conduct their own planning while enabling the LSP to progress. Retaining Perth Racing's land within the broader LSP boundary ensures that future planning for both areas is coordinated holistically.</p> <p>The draft Golden Gateway Local Structure Plan considers possible development on Perth Racing's land. For example, the Movement and Access Strategy considers anticipated vehicle movements resulting from development and events at Ascot Racecourse.</p> <p>Noted.</p> <p>Noted. Comments related to housing choice in the Ascot Racecourse precinct are not relevant to this Structure Plan.</p> <p>The Structure Plan is looking to put additional controls in place to guide development. It should be noted that development can currently occur in the absence of these controls with no limitation on building height.</p> <p>Refer to Building Height section of the Council report.</p> <p>The Ascot Kilns site is owned by the Department of Planning Lands and Heritage. Restoration of the Kilns has been funded and coordinated by the State Government. The structure plan does not propose 20 storey buildings adjacent to the Kilns. Instead, the precinct is well separated from the Kilns. Regarding overshadowing, the Ascot Kilns site is located</p>
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		<p>Mentions that the draft Structure Plan proposes buildings of between 10-15 storeys three of which are landmark buildings and would attract the potential for an additional five storey bonus. Considers the use of the word 'bonus' is an overt reference to financial benefit being given precedence over social welfare. Asks that Council take more care not to overshadow the environmental integrity of the area.</p> <p>Feels compelled to observe that Belmont City or someone within it has a fixation about what has previously been labelled an 'iconic' building that will apparently herald a dramatic entry to Belmont. Notes that on page 5 of the draft Structure Plan it talks about the need for buildings at the intersection of Resolution Drive and Stoneham Street to leverage their location as the northern 'arrival' point to Golden Gateway and mentions that similar wording is used in the Ascot Racecourse Precinct Structure Plan when describing the retirement building. Astonished that it echoes language used when Council was involved in developing the site which is now Craig Care Ascot Waters. States that Council stated a desire for an iconic building that capitalises on its position at the northern gateway to the City of Belmont. Questions what the real benefit of that is going to be to Belmont.</p> <p>States that the City should be aware of the impact of increased traffic in the area. Mentions that Garratt Road is very busy and peak hour tailbacks are often a feature for traffic heading toward Guildford Road. States more people living along the Corridor is going to mean more vehicles.</p> <p>Mentions that two of the three landmark sites are proposed to be built on an already busy roundabout which will exacerbate the growing difficulty of road use.</p> <p>States Garratt Road Bridge is on the State Heritage List. Is sure that there is an expectation that traffic will ease once work on the Tonkin Highway is completed, but says nonetheless there will be much heavier traffic across those adjacent bridges than they were ever designed to handle.</p> <p>States that the Structure Plan should be realistic about people and their use of vehicles and notes that apartment blocks will apparently provide 0.75 of a parking bay for every 1 bedroom apartment and 1 parking bay for 2 bedroom apartments. Considers this means that one in every four 1 bedroom apartments will have a dedicated car parking space and only one person in any 2 bedroom apartment will be able to park a car.</p> <p>Appreciates that there is a desire to change behaviours and agrees that this is a positive approach, but does not think it will work because behavioural change will not</p>	<p>north of where development under the draft Structure Plan will occur. As a result, no overshadowing will occur.</p> <p>Refer to Building Height and Amenity sections of Council report.</p> <p>15 storeys is recommended for lots fronting Great Eastern Highway and 10 storeys for all other land bound by Great Eastern Highway, Stoneham Street and Resolution Drive. A five storey bonus applies to all sites if developers provide open space and sustainability initiatives. The appropriateness of the 5 storey height criteria is further discussed in the Sustainability section of the Council report.</p> <p>The landmark sites have been identified in response to key view lines and their visibility from outside the Golden Gateway precinct. Landmark sites will contribute to the local character and amenity of the area by incorporating architectural features with a point of difference. These proposals will also be evaluated by the City's Design Review Panel as part of future development applications.</p> <p>Garratt Road is outside the scope of this Structure Plan and the Movement and Access Strategy. As made clear by the Movement and Access Strategy, increased vehicle movements is most attributed to regional growth not development within the Golden Gateway precinct.</p> <p>The two landmark sites are proposed at the intersection of Resolution Drive and Great Eastern Highway and the intersection of Stoneham Street and Great Eastern Highway. No landmark sites are proposed at the roundabout.</p> <p>Garratt Road Bridge is the responsibility of Main Roads Western Australia who have not raised concerns with the City about the volume of traffic using the bridge.</p> <p>Refer to Movement section of the Council report.</p> <p>Refer to Movement section of the Council report.</p>
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		<p>occur before the Structure Plan comes to fruition. Mentions that in East Perth, residents in Adelaide Terrace shuffle their cars around available bays or park further away from their apartments at great inconvenience to residents of those other locations. Considers this is bound to occur in the vicinity of Golden Gateway if practical parking solutions are not made available for all residents of new apartments.</p> <p>Is aware that the City of Belmont's Sustainable Transport Plan is currently under review and that public consultation closed on 30 October 2024. Trusts that it includes research of behaviours in areas of existing high rise development.</p> <p>Invites Council members to take the short drive along Wicca Street between Wright Street and Sydenham Street. States that since the completion of a 4 storey apartment development (65 Wicca Street), cars now park on both sides of the street, making it chaotic to navigate.</p> <p>Considers the availability of high frequency public transport is hyped as a key attraction to encourage car-less residents. Believes the actual corridor between Great Eastern Highway and Guildford is served by one bus every 15 minutes in each direction with the capacity for 82 passengers (110 if the bus is articulated). States that according to the Public Transport Authority website, three bus routes go along Great Eastern Highway too. Questions if that is likely to be sufficient.</p> <p>States public transport has to be able to take people where they want to go and considers this is not easy to achieve in Perth. States changing behaviour around personal car use is not going to happen unless viable alternatives or incentives (such as free public transport) are offered.</p> <p>Finds the advice in the draft Structure Plan about specific requirements to be applied around parking for mixed use and multiple dwelling development very confusing. Considers that making residential parking bays available for general public access at certain times is not practical and that in Eastern Perth shared use was not positive despite that area having greater public transport options.</p> <p>States the project could be a standout example of urban development if executed sympathetically and that there is no question that Perth needs more accommodation for current and future population growth. Requests the plan be reconsidered because it concentrates so many people and such high buildings into one relatively small area. Finds it hard to believe there are no other sites within the council area where similar developments can be undertaken to provide sufficient distance between people and buildings that are more thoughtful for the environment.</p> <p>States Perth is currently considered one of the world's most desirable cities in which to live because of its environment, weather and healthy outdoors lifestyle. Considers that overcrowding a suburb that many tourists will pass on their way into the City is unlikely to see that reputation being maintained.</p>	<p>The Sustainable Transport Plan will investigate travel behaviours but with a primary purpose of finding opportunities to promote active transport and public transport use.</p> <p>Parking for this development was provided in accordance with the Residential Design Codes. Any safety concerns regarding the parking of vehicles can be provided in writing to the City's Rangers.</p> <p>The Great Eastern Highway corridor is serviced by routes 293 and 940 providing connections to Redcliffe Train Station, Perth Airport, Guildford, Midland, Victoria Park Transfer Station and Perth CBD. Routes 998 and 999 via Raconteur Drive/Grandstand Road provide connections to Bayswater Station, Morley Bus Station, Morely shopping Centre, Belmont Forum Shopping Centre, Oats Street Station and Curtin University.</p> <p>It is considered the existing bus network provides a suitable level of connectivity to surrounding areas. However, increased residents in the area may provide a catalyst for the City to advocate to the Public Transport Authority for improved service in the area. The City does not have the ability to offer free public transport. This would rest with the state government.</p> <p>A condition of development approval will require a Car Parking Strategy to ensure appropriate management and operation.</p> <p>The Golden Gateway precinct is a unique opportunity within the City of Belmont to create a northwest gateway to the City of Belmont. The precinct is separated from existing residential areas by roads and is serviced by high frequency transport routes that provides connections to surrounding areas.</p> <p>As previously stated, the draft Structure Plan is likely to result in a high amenity precinct that is attractive to both residents and visitors.</p>
27	Public Submitter	<b>Support Subject to Modifications and Raises Concerns</b>	

		<p>Believes in progress, states that owners within high rise in Ascot Waters will benefit from progressive building policies and does not oppose high rise developments.</p> <p>Believes the precedent has been set for 8 storeys within the area and that this should be the maximum allowed. Considers that building heights shouldn't be changed because construction companies would be more interested in the projects. States lifestyle balanced with progress is the most important item to be considered.</p> <p>States the impact on infrastructure, not only on water/sewerage etc, but traffic should be considered.</p>	<p>Noted.</p> <p>Refer to Building Height section of Council report.</p> <p>Refer to Infrastructure and Movement sections of Council report.</p>
28	Public Submitter	<p><b>Raises Concerns</b></p> <p>Asks why two structure plans have been prepared and considers that both areas need to be and should be addressed as a whole. Considers that by separating the two land areas there are now two inconsistent policies proposed.</p> <p>States that it appears the WATC has more control over their land usage than current landowners and residents and believes the decision not to realign Resolution Drive is evidence of this. Considers the explanations are vague and the area is a mess of multiple junctions and wasted land use. States the new plans still split the area into islands with poor connections and that the WATC structure plan appears to include commercial use adjacent to proposed residential use in the Golden Gateway Local Structure Plan.</p> <p>Believes it is a fallacy that apartment owners should be restricted to a single car bay or restricted access to on-site parking. Would like to see changes to planning policies. To encourage better land use, those downsizing and families, the experience and amenity of apartments should be as good as, if not better than typical landowners. States that one of the negatives of moving to an apartment is the lack of parking and states that people cannot be forced to use public transport. Considers that 2 bays minimum for every resident in a multi-unit dwelling should be standard. States this will avoid families with children or visitors having to park their cars on the street or in public car parks as happens now. Considers current policies make sense if the apartments are built within 500m of a train or bus interchange and are sized to suite first homeowners and couples. States Ascot does not meet this criteria. Concerned that the opportunity to avoid uncontrolled street and public open space parking by residents is being overlooked.</p>	<p>The draft Golden Gateway Local Structure Plan has not been prepared to guide future development of Perth Racing's landholdings. As the landowner, it is appropriate for Perth Racing to progress their future plan themselves. Both structure plans will be reviewed having regard for the other to ensure compatible development outcomes.</p> <p>Any development within the City of Belmont is guided by the relevant planning framework (local planning scheme, local planning policies, state planning policies and structure plans where relevant). Council decided not to realign Resolution Drive because the original alignment would have intersected private land, making its implementation uncertain.</p> <p>The two structure plans are considered to relate to one another. For example, the draft Golden Gateway Local Structure Plan proposes a local centre within the precinct. Perth Racing has expressed interest in establishing this centre on their land to serve the surrounding community and future residents of the Golden Gateway precinct. The mix of residential and commercial uses within the precinct is expected to complement the development of the centre. Officers and Council will further consider the nature of development on Perth Racing's land through the assessment of their structure plan.</p> <p>Refer to Movement section of Council report.</p>

		States that the needs of various groups (those downsizing and families) should be considered and that better land use within the metropolitan area should occur for the expected population growth.	The draft Structure Plan is considered to support development that caters to a diverse range of residents. It identifies a local centre as appropriate within the precinct and promotes mixed-use development, incorporating both commercial and residential uses. Future residential development will be assessed against Volume 2 of the R-Codes, including requirements for dwelling mix.
29	Public Submitter	<p><b>Raises Concerns</b></p> <p>States the Structure Plan has benefits and issues that will impact residents in proximity to the area bound by Great Eastern Highway, Resolution Drive and Stoneham Street.</p> <p>Notes the previous heights decided by Council and those proposed by this revision. States that at the September Ordinary Council Meeting, it was acknowledged that the height increase is due to market property values not tracking the rising construction costs and that labour costs and shortage of housing were also mentioned. Believes the City of Belmont is prioritising developer profits above concerns of residents such as traffic congestion and parking.</p> <p>Mentions the following results if the Structure Plan is implemented:</p> <ul style="list-style-type: none"> <li>• An estimated 4,082 additional residents would be added to Ascot's current population of only 3095 (Census 2021 data).</li> <li>• Apartments would be required to have only 1 parking bay following State guidelines, so families with additional cars could potentially use parking bays intended for customers of new commercial businesses and street parking</li> </ul> <p><u>Benefits of the Golden Gateway Local Structure Plan:</u> Lists the following benefits:</p> <ul style="list-style-type: none"> <li>• New cafes and shops will be near residential areas.</li> <li>• Assist the City in meeting State targets for urban infill and densification to address the housing shortage.</li> <li>• Trees will be planted along Resolution Drive and Stoneham Street.</li> </ul> <p><u>Issues with the Golden Gateway Local Structure Plan:</u></p> <ul style="list-style-type: none"> <li>• Considers that increased congestion on Grandstand Road, Great Eastern Highway, and adjacent roads, along with associated noise levels, will impact high-traffic areas.</li> <li>• Believes there will be additional parking issues as Golden Gateway residents may compete for commercial and street parking bays. States that while encouraging public transport, cycling, walking, or alternatives to cars is a positive idea, certain population groups may be unable to use these alternatives.</li> <li>• Considers that the Structure Plan's limited parking and promotion of alternative transport could restrict who can rent or own property in the area. For example, families with multiple young adults, each owning a car, may struggle to find</li> </ul>	<p>Noted</p> <p>Refer to Building Height section of the report.</p> <p>Developer profits are not a planning consideration and were not considered when preparing the draft Structure Plan or modifications to the draft Structure Plan.</p> <p>Noted</p> <p>Refer to Movement section of Council Report.</p> <p>Noted</p> <p>Refer to Movement section of Council report. Regarding noise, vehicle noise can be expected within the area. However, this noise is not solely attributed to future development within the Golden Gateway precinct.</p> <p>Refer to Movement section of Council report.</p> <p>The R-Codes include provisions on dwelling mix, and applications will be assessed against its minimum parking requirements. However, as with all</p>

		<p>parking bays, and senior or disabled residents may not be able to rely on public transport, cycling, or walking.</p> <ul style="list-style-type: none"> <li>• Believes that a shortage of parking will affect new commercial businesses in this development.</li> <li>• States that traffic lights on the highway turn yellow or red before reaching the opposite side, adding to the issue.</li> <li>• Considers that crossing Stoneham Street to access new commercial businesses could become more challenging, especially during peak times from 6:45 am to 9 am and from 3:30 pm to 5:30 pm.</li> <li>• States that the mixed-use building category in the plan permits a reduction in Public Open Space from 10% in residential areas to 3.47%. Notes that Liveable Neighbourhoods would require a total of 1.5186 hectares of open space, while the Structure Plan proposes only approximately 0.0525 hectares due to the closure of Daly Street. Considers this inadequate for a mixed-use precinct, as it impacts greenery and relaxation areas for residents and business customers.</li> <li>• States that under the Perth and Peel@3.5 million Planning Framework, 10,410 dwellings will be provided within the City of Belmont by 2050. Expresses concern about the City targeting an estimated 2,268 dwellings (21% of the 10,410 total) for this area when the target applies to the entire City of Belmont. Believes Ascot's contribution to the current 32% progress is due to Marina apartments built after 2011, the baseline year.</li> <li>• Considers that the City may have a vested interest in this development, as it owns lots 1 and 5 on Resolution Drive and may be taking steps to benefit itself and developers.</li> <li>• States that the high concentration of concrete buildings contributes to heat generation, with temperature increases reported annually in Perth. Refers to updates to the 2013 "Where Are All The Trees," Australia's benchmark report on urban green canopy cover, which tracks changes in greenery and identifies ways to mitigate future heatwaves, urban heat island effects, and extreme weather. Notes that the City is rated as "Most Vulnerable," despite increasing its canopy cover by 3.1%. Believes planting some trees along Resolution Drive and</li> </ul>	<p>developments, if a dwelling does not meet an individual's needs, it is expected that the person would not choose to purchase it.</p> <p>There is no evidence to suggest there will be a shortage of parking within this precinct. Parking will need to be provided in accordance with the R-Codes or the City's Local Planning Scheme. As part of development approvals, the City may request parking demand assessments where a variation to the parking requirements is sought, or a Car Parking Strategy to demonstrate appropriate management of unallocated communal bays.</p> <p>Phasing of traffic signals is the responsibility of MRWA.</p> <p>Improvements to pedestrian crossing points along Stoneham Street are addressed by the Structure Plan. Refer to Movement section of Council report for further detail.</p> <p>Refer to Public Open space section of Council report.</p> <p>Refer to Infill Targets section of Council report.</p> <p>The City of Belmont hasn't developed the planning framework with development aspirations for its landholding in mind. It is noted that the City owns 18 Resolution Drive, Ascot, which is subject to the Draft LSP. Please note that there is nothing unusual or not permitted under planning legislation for a local government to prepare a structure plan that includes City owned land. Furthermore, this does not constitute a personal interest for individual elected members and does not require a declaration under the Local Government Act 1995. It should be noted that the Structure Plan puts further development controls in place than what is currently applied through Local Planning Scheme No. 15.</p> <p>The precinct is not currently heavily vegetated and is mostly built up. The Structure Plan proposes improvements to landscaping, open space and the public realm to improve the urban environment and reduce the urban heat island effect.</p>
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		<p>Stoneham Street will not offset increased heat exposure from the high-density structures proposed.</p> <p><b>Areas most at risk from extreme heat</b></p> <p><b>TOP URBAN GREENING OPPORTUNITIES:</b></p> <ul style="list-style-type: none"><li>- City of Belmont (0.5)</li><li>- City of Kwinana (1)</li><li>- City of Cockburn, Town of Victoria Park (1.5)</li><li>- Town of Bassendean, City of Swan, City of Wanneroo (2)</li><li>- City of Armadale, City of Fremantle, City of Gosnells, City of Perth, City of Rockingham (2.5)</li><li>- City of Bayswater, Town of Cambridge, Town of East Fremantle, City of Melville, City of Stirling (3)</li></ul>	<p>A base height of 15 storeys is proposed along Great Eastern Highway consistent with the Great Eastern Highway Urban Corridor Strategy. The bonus of 5 storeys is also consistent with the Strategy which provides for additional building height subject to particular criteria being met.</p> <p>The figure of 1,890 people included in the Activity Centre Planning Strategy is a population forecast, not a target. This forecast, provided by Forecast ID, does not account for development within the Golden Gateway precinct, except for approximately 254 dwellings at 68 Daly Street. Therefore, the Structure Plan can propose population numbers in excess of these forecasts. It is anticipated that the forecasts will be updated should the Golden Gateway Local Structure Plan be approved.</p> <p>The City of Belmont hasn't developed the planning framework with development aspirations for its landholding in mind. It is noted that the City owns 18 Resolution Drive, Ascot, which is subject to the Draft LSP. Please note that there is nothing unusual or not permitted under planning legislation for a local government to prepare a structure plan that includes City owned land. Furthermore, this does not constitute a personal interest for individual elected members and does not require a declaration under the Local Government Act 1995. It should be noted that the Structure Plan puts further development controls in place than what is currently applied through Local Planning Scheme No. 15.</p> <p>Officers and Council are required to genuinely consider the community's feedback in preparing a recommendation to the WAPC.</p>
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		<p>Raises the below concluding points:</p> <ul style="list-style-type: none"> <li>• Considers that building heights should remain at six storeys along Resolution Drive and Stoneham Street and nine storeys on Great Eastern Highway, as set out in the original draft of the Golden Gateway Structure Plan. States that this would also provide certainty to developers, as the City has recently allowed the construction of Bell Air apartments at nine storeys.</li> <li>• States that the City's target under the Perth and Peel@3.5 million Planning Framework is 10,410 dwellings by 2050 and that 32% (3,331 dwellings) of this target has already been achieved.</li> <li>• Believes there is a significant concern about the City targeting an estimated 2,268 dwellings (21% of the 10,410 target) for this land area when the target is meant for the entire City of Belmont. Considers it important to note that Ascot contributed to the current 32% because the Marina apartments were built after 2011, the baseline year.</li> <li>• Believes the City may have a vested interest in this development, as it owns lots 1 and 5 on Resolution Drive and may be prioritising its own and developer interests.</li> </ul> <ul style="list-style-type: none"> <li>• Considers that all mixed-use development in the area should include 10% public open space and incorporate sustainable design features, regardless of building height. This is particularly important given that the City is ranked as "Most Vulnerable" in terms of heat risk due to limited greenery. States that, with extensive experience as a retired Occupational Hygienist in the mining industry, the health impact of extreme heat is understood and believes the City's focus on construction costs, developer certainty, and housing shortages overlooks the health impact of high concentrations of concrete buildings on generated heat.</li> <li>• Believes that traffic congestion and parking issues associated with an estimated 4,082 new residents would exacerbate ongoing concerns of current residents. Considers that simply monitoring or modelling parking use after the fact is unacceptable, as this approach is costly and often ineffective in addressing the problem.</li> <li>• Considers that traffic congestion will contribute to pollution levels (chemical and physical) that could impact the health of local residents in the proposed Structure Plan area.</li> </ul>	<p>Refer to Building Height section of Council report.</p> <p>Refer to Infill Targets section of Council report.</p> <p>Refer to Infill Targets section of Council report.</p> <p>The City of Belmont hasn't developed the planning framework with development aspirations for its landholding in mind. It is noted that the City owns 18 Resolution Drive, Ascot, which is subject to the Draft LSP. Please note that there is nothing unusual or not permitted under planning legislation for a local government to prepare a structure plan that includes City owned land. Furthermore, this does not constitute a personal interest for individual elected members and does not require a declaration under the Local Government Act 1995. It should be noted that the Structure Plan puts further development controls in place than what is currently applied through Local Planning Scheme No. 15.</p> <p>Refer to Public Open Space section of Council report.</p> <p>The precinct is not currently heavily vegetated and is mostly built up. The Structure Plan proposes improvements to landscaping, open space and the public realm to improve the urban environment and reduce the urban heat island effect.</p> <p>Refer to Movement section of Council report.</p> <p>Increasing densities along major transport corridors is consistent with contemporary planning practices advocated for by Perth and Peel @ 3.5 Million which seeks to locate people in close proximity to services and</p>
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		<ul style="list-style-type: none"> <li>States some residents may not be able to rely on public transport, cycling, or walking due to age, disability, physical impairments, weather conditions (e.g., heat, rain), or lack of nearby public transport stops. Considers that limiting parking to one bay per dwelling could disadvantage certain population groups.</li> <li>Suggests that the City or State Government could encourage alternative transport use by providing incentives, such as partially funded electric bikes or scooters or Council rate discounts for those who demonstrate public transport usage.</li> </ul>	<p>public transport opportunities. This aims to promote the use of alternative modes of transport such as public transport, walking and cycling.</p> <p>Refer to Movement section of Council report.</p> <p>Increased residents in the area may provide a catalyst for the City to advocate to the Public Transport Authority for improved service in the area. Other strategies to promote alternative modes of transport will be further investigated through the review of the City's Sustainable Transport Plan.</p>
30	Public Submitter	<p><b>Raises Concerns</b></p> <p><u>State Government Planning Changes</u></p> <p>States it is not apparent that the City has taken into account the impact of the latest raft of changes by the State Government to Planning laws and regulations when preparing the latest Local Structure Plan.</p> <p>Given much of the proposed development area has been designated for high rise developments, states that it is almost certain developers will bypass the City when putting forward their development plans. Considers this will result in Council having little to no impact on any final decisions. Believes recent decisions made the by the State Government do not place a strong emphasis on the preferences of Council's and their residents.</p> <p>On the basis of the above, encourages stricter controls be imposed. Considers the draft Structure Plan would be welcomed by developers for all the wrong reasons.</p> <p><u>Density</u></p> <p>States the City has applied the highest density code to the majority of the area and that little to no explanation has been provided as to why this is necessary or why a mix of density codes has not been applied.</p> <p>Considers that to state that buildings will be 9-15 storeys with the possibility of an extra 5 if certain concessions are made is very misleading. States that developers will ask for the highest number of storeys and this will inevitably mean 20 storeys close to Great Eastern Highway and 15 storeys elsewhere and that developers may seek approval for even greater heights.</p>	<p>While officers are aware of recent planning reforms, it is unclear what the submitter is specifically referring to.</p> <p>Development proposals may be referred to the Development Assessment Panel, based on their estimated cost. In these cases, City of Belmont planners will assess the proposal against the structure plan and provide a responsible authority report to the Panel, which includes two of the City's Councillors. Decision-makers will be required to consider the structure plan in their deliberations.</p> <p>An unreasonable planning framework will carry little weight with the DAP, while well-founded and reasonable controls are likely to carry more weight. Given that the draft controls are soundly justified, they are less likely to be varied, offering both the Council and the community greater certainty regarding the precinct's future development.</p> <p>The proposed R-ACO density code is not the highest code that can be applied but provides for precinct specific planning requirements.</p> <p>15 storeys is recommended for lots fronting Great Eastern Highway and 10 storeys for all other land bound by Great Eastern Highway, Stoneham Street and Resolution Drive. A five storey bonus applies to all sites if developers provide open space and sustainability initiatives. The appropriateness of the 5 storey height criteria is further discussed in the</p>

		<p>Believes that if the Structure Plan is approved, similar heights will occur in areas marked 'subject to separate planning process'. Concerned this may be a deliberate ploy and that no consideration has been given to the possibility in the Plan and how this might impact the overall area.</p> <p><u>Application of Concessions</u> Concerned that the City is prepared to approve up to an additional 5 storeys on the basis of vague assurances. Fails to see how the City can clarify these concessions as worthy of extra consideration and considers these should be incorporated into the basic design requirements of all new buildings.</p> <p>States that there have been recent decisions by external approval boards whereby the so call 'concessions' have been minimised or even removed. Believes the City has a unique opportunity to ensure new buildings will last well into the future and be leading examples of what can be achieved through high quality Planning principles. Concerned that without stricter controls it is inevitable that developers will not take the initiative and the City and users will be the poorer for it.</p> <p><u>Social Issues</u> States the City has not considered the impact of the overall development on residents, visitors and the City overall and that nowhere else in the City are there height or density provisions similar to what is being proposed in the Golden Gateway precinct. Questions whether the City has a broader plan or if the City is maximising income and revenue for the various players or if it is a case of laziness just to get something approved to meet a target deadline.</p> <p>Believes the proposed densities lend themselves to many social issues and problems in the future and that the plan does nothing to mitigate these issues. Considers this shows the looseness of the Plan provisions and that residents are being left with only vague assurances that developers will be encouraged to provide innovative designs. States history shows this is very rarely met by developers unless they are required to do so.</p> <p><u>Public Open Space</u> Considers that the Belmont Trust Land cannot be relied on for Public Open Space because there has been no decision about what is going to happen with this land and that this should be acknowledged in the plan. Believes it is highly likely that when a decision is made, it will include a trade off that some of this land is developed in order to include some other concessions for the remaining land. States assurances of this will not happen because Council is not the deciding body on these matters.</p> <p><u>Road/Traffic</u> States that the report from Flyt bases its projections on data from 2021 and that no explanation has been provided for using old data. Believes there is also no real</p>	<p>Sustainability section of the Council report. Additional commentary relating to the developer profits is included in the Building Height section.</p> <p>Building heights over Perth Racing's land is shown in the draft Ascot Racecourse Precinct Structure Plan as 6, 3 and 2 storeys respectively. Council will consider building heights when this Structure Plan is presented to Council. Building Heights for the Ascot Kilns land will be considered by Council when a Local Development Plan is received.</p> <p>Refer to Sustainability section of Council report.</p> <p>The Structure Plan aims to facilitate high-quality development. Applications will be assessed against the R-Codes, including landscaping and sustainability requirements. Proposals will also undergo review by the City's Design Review Panel to ensure alignment with the ten design principles of State Planning Policy 7.0 – Design of the Built Environment. To exceed these standard requirements, incentives, such as additional height, must be provided.</p> <p>The Golden Gateway precinct's unique location, adjacent to Great Eastern Highway and separated from residential areas, makes it well-suited for the proposed density and height. The Perth and Peel planning framework supports higher-density development along key corridors like Great Eastern Highway to promote urban consolidation.</p> <p>All development applications will be reviewed by the Design Review Panel (DRP) to ensure high-quality, innovative designs.</p> <p>There is no evidence to suggest the proposed densities will result in social issues. Further information regarding building height and amenity is provided in the relevant sections of the Council report.</p> <p>The Belmont Trust Land is subject to a declaration of trust which requires this land to be used for public enjoyment and recreation. Further details relating to this land are included within the Council Report.</p> <p>A revised Movement and Access Strategy has been prepared in support of the Structure Plan which uses the latest available data sets.</p>
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	<p>acknowledgement of the difficulty in negotiating the area around the racecourse when there is a major event and that the report does not account for increases in traffic associated with Perth Racing's development aspirations.</p> <p>Finds it hard to believe that it will take up until 2041 for traffic congestion problems to be noticeable.</p> <p>Considers the reliance on people using public transport and bicycles to fix traffic problems is naïve and without merit. States no mention was made regarding increasing problems with e-scooters and e-bicycles and that some Council's are actually removing them from use as a result. Believes these modes of transport and car share and trackless trams is not the solution.</p> <p>Believes stating there is a plan to reduce car dependence is nothing more than reducing parking requirements for developers. States recent history has shown this results in increased congestion and illegal and nuisance parking and that this results in reduced liveability and increased costs for managing future problems.</p> <p>States the reference to "investigate alternative road alignment" has the potential to have a significant impact on the Structure Plan and that without any idea of what it will look like, everyone is going in blind and placing their faith in the City and Main Roads that everything will be alright. States this is unacceptable.</p> <p><u>Water Availability.</u> States the plan says there is limited or no availability of quality water from the aquifer for irrigation. Questions how assurances regarding maximising public open space can be believed, whether provided by the City or developers.</p> <p><u>Contaminated Sites</u> States no mention has been made of contaminated sites and that it is important these are identified because they will have a major impact on what is proposed. Believes it will not be the developer who pays but the City and its ratepayers.</p> <p><u>Summary</u> States it is possible to achieve housing targets while maintaining a healthy balance for the Structure Plan Area that preserves the amenity of the surrounding area in keeping</p>	<p>The Movement and Access Strategy includes data about the future and current road network performance (further details included in the Movement section of the Council report). It also includes assessment of the road network factoring in Perth Racing's development and traffic on event days.</p> <p>The results of the traffic assessment are detailed in the Movement and Access Strategy. The findings indicate that there will be a level of congestion in the area prior to 2041 however this will occur regardless of development within the Golden Gateway precinct.</p> <p>As outlined in the structure plan and the Movement section of the Council report, future development could act as a catalyst for enhancing alternative transport options in the area, including improved public transport services. While concerns about e-scooters and e-bicycles are acknowledged, these modes, when properly managed, can significantly reduce car dependency and help alleviate traffic congestion.</p> <p>Parking requirements are consistent with Volume 2 of the R-Codes. Further commentary is included in the Movement section of the Council report.</p> <p>This phrase is included in Part 2 of the Structure Plan and describes opportunities identified in the early stages of preparing the Structure Plan. Council considered a previous version of the Structure Plan at the 23 June 2020 Ordinary Council Meeting. A result of Council's decision is that the road network is now proposed to remain in its existing configuration apart from Daly Street which will be converted into a cul-de-sac.</p> <p>Due to the limitation of groundwater for irrigation purposes, the future irrigation of vegetation within the public open space and public realm areas will need to be supplied by other sources. This may include scheme water, stormwater, irrigation (by agreement) from the Western Australian Turf Club's artesian groundwater licence, a new irrigation lake or other irrigation strategies will need to be investigated in the future. The City may encourage developers to consider the irrigation of abutting verge vegetation and street trees to ensure the high quality natural amenity of the public realm is maintained. Alternatively, non irrigated (dry) landscape may need to be considered for the public realm areas.</p> <p>There are no contaminated sites within the precinct. Lot 5 Resolution Drive (160 Stoneham Street) is listed as "possibly contaminated, Investigation Required." The implementation strategy identifies it is the responsibility of developers to complete preliminary site investigation for contamination in accordance with the Contaminated Sites Act 2003 should areas of known contamination be disturbed.</p> <p>Noted.</p>
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		<p>with the character of the area and providing a benefit to the community. Considers there is opportunity that with a clear vision and an innovative approach, the City can achieve a unique community focussed community that is liveable and sustainable.</p> <p>States that in order to do so in the current environment where the State Government has severely impacted the ability of Councils to achieve what the community needs and/or wants, it is essential that the Plan imposes strict, high level conditions on developers. Council, through this Plan, cannot leave the door open for developers to put forward plans that are totally out of step not only for the residents but the overall Perth community.</p>	<p>Future development proposals will be assessed in accordance with the Structure Plan, Local Planning Scheme and the Residential Design Codes. Additionally proposals will be reviewed by the City's Design Review Panel.</p>
31	Public Submitter	<p><b>Supports Subject to Modifications</b></p> <p>Mentions that the client's land comprises the Ascot Racecourse complex, administration buildings, and other associated buildings surrounding the racecourse. On behalf of Perth Racing, it is mentioned that the draft Ascot Racecourse Precinct Structure Plan ('Draft PSP') was recently submitted to the City for assessment. States that the Draft PSP is currently undergoing public consultation, which is expected to conclude on 6 December 2024, ahead of the Council's consideration of and recommendation to the DPLH on the Draft PSP in early 2025.</p> <p><b>Duplication</b></p> <p>Given the recent submission of the Draft PSP, requests that Perth Racing's land be excluded from the GGLSP entirely and that the 'Structure Plan Boundary' depicted on Plan 1 – Structure Plan Map be modified to remove Perth Racing's landholdings. This amendment is requested to ensure that there is no duplication of planning framework or deferral to other documents and/or frameworks, and to apply subdivision and development standards solely to the land in which the Structure Plan relates.</p> <p><b>Provisions</b></p> <p>Mentions that, should the City consider the need for 'common provisions' to apply to both the Golden Gateway and Precinct E of the Draft PSP, both Structure Plans should replicate the same provisions, rather than duplicating provisions for the one landholding.</p> <p><u>Parking</u></p> <p>States that the proposed Parking provisions in the Draft GGLSP (Clause 4.2.2.1) defer to LPS 15 standards or a parking strategy, whereas the Draft PSP provides parking standards that are consistent with the Department of Planning, Lands and Heritage ('DPLH') draft Interim Guidance Document on car parking requirements for non-residential land uses in Perth and Peel (Draft Interim Guidance Document) and reflects the most recent direction on parking provided by the State Government. Requests that, should 'common provisions' be included within both documents, consistency with the Draft Interim Guidance Document be maintained.</p> <p><u>Infrastructure Funding</u></p> <p>Mentions that Clause 5.2 of the Draft GGLSP allows for the City to establish an appropriate funding strategy through the introduction of a Development Contribution</p>	<p>Noted</p> <p>The decision to retain Perth Racing's land within the precinct was done in consultation with officers at the Department of Planning Lands and Heritage. This approach allows Perth Racing to conduct their own planning while enabling the LSP to progress. Retaining Perth Racing's land within the broader LSP boundary ensures that future planning for both areas is coordinated holistically.</p> <p>It should be noted that the draft Structure Plan designates Perth Racing landholding as subject to a separate planning process. Accordingly, no development provisions (such as parking) applied through the structure plan will be applicable to land owned by Perth Racing.</p> <p>Officers consider it appropriate to apply parking requirements in line with the existing statutory planning framework. The City will review parking requirements through the preparation of a new local planning scheme</p> <p>Given Perth Racing's land is designated as being subject to a separate planning process, infrastructure funding arrangements applied through the Golden Gateway Local Structure Plan will not apply to Perth Racing's land.</p>



		<p>Area and a Development Contribution Plan ('DCP'). States that Part Two of the Draft GGLSP outlines that funding may include:</p> <ul style="list-style-type: none"> <li>• Great Eastern Highway pedestrian crossing</li> <li>• Land for Public open space and community facilities</li> <li>• Landscape treatment for all public realm areas, including local roads</li> </ul> <p>Given that the Draft PSP does not extend towards Great Eastern Highway, does not include land required for public open space, and proposes improvements to the public realm, it is requested that these provisions not be duplicated as a 'common provision' between both Structure Plans.</p>	
32	Department of Education	<p>The proposed Structure Plan area falls within the student enrolment intake area of Belmont Primary School. Whilst the subject primary school is currently operating within the 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 school in the long term.</p> <p>It is worth noting that every new residential development or intensification of residential density create demand for, or on, public schools, with this demand potentially extending beyond the boundaries of a structure plan. Whilst the Department acknowledges the planning merits of infill development, it is critical to balance the residential growth and resultant student population with public school provision in the locality. If there are insufficient provisions of public schools, this will result in significantly overcrowded school sites, insufficient parking for drop-offs and pick-ups, traffic management issues for the local community, and compromised education outcomes for students.</p> <p>With reference to Part 2, section 3.6 'Education Facilities' of the draft Golden Gateway Local Structure Plan Report, the Department does not support the commentary in that the future development within the Structure Plan would have 'limited additional demand for education facilities'. It should be highlighted that the public school demand is dependent on, amongst other things, gentrification of the locality, size and capacity of the local public school site/s, future or potential urban growth areas and compliance with the prescribed ratio of 1 public primary school site for every 1500 dwellings as per the Western Australian Planning Commission's Operational Policy 2.4 – Planning for School Sites.</p> <p>Preliminary analysis at this stage indicates that Belmont Primary School would be under student enrolment pressure in the long term. With the school site being restricted in size (1.46 hectares in lieu of a standard 4 ha standalone primary school site), future expansion or augmentation of the school (e.g. off site early childhood facility) may be required in the future to ensure its capability of catering for the long-term student demand in the Ascot-Belmont area.</p> <p>Notwithstanding this, the Department has no in-principle objections to the Structure Plan subject to the above matters being addressed. The Department will continue to monitor the student enrolment demand as development progresses within the Structure Plan and ensure that the residential growth corresponds accordingly with the provision of public schools in the locality. It is essential that the Department and the City of Belmont collaborate on future school planning within the municipality to adequately provide for the educational needs of the Town in the future.</p>	<p>Noted</p> <p>Noted</p> <p>Refer to Administrative Modifications section of Council Report and Schedule of Modifications</p> <p>Noted</p> <p>Noted</p>



33	Water Corporation Locked Mail Bag 2, Osborne Park WA 6916	Major water and wastewater infrastructure upgrades are required for this area to service the extent of the structure plan proposal. The upgrades have been captured in the Servicing Report produced by Cardno. Key pieces of the network upgrade will be conducted by Water Corporation as part of the Capital Investment 5 year Program. Other upgrades will be completed as required once development applications for larger buildings go through the planning process.	Noted
34	Main Roads Western Australia PO Box 6202, East Perth WA 6892	<p><b>Vehicle Access Strategy</b> Current "Vehicle Access Strategy" for Great Eastern Highway abutting the proposed Local Structure Plan (LSP) site is to be maintained as per the Plan no. 16339-13.</p> <p><b>Bus Priority Lane</b> It is recommended to investigate the feasibility for continuous east-bound bus priority lane along the Great Eastern Highway between Stoneham Street and Resolution Drive as part of the mitigation measures to reduce impacts on bus queue jump lane and existing intersections performance due to proposed LSP.</p> <p><b>Movement and Access Strategy - Further Information Required</b> 'Movement and Access Strategy' report prepared by Flyt (revision 3, dated 2 August 2024) is recommended to be revised addressing the followings:</p> <p><u>Pedestrian Connectivity</u> Section 4.3 updates required:</p> <ul style="list-style-type: none"> <li>Assess and determine necessary upgrades to pedestrian facilities at the intersections of Great Eastern Highway with Resolution Drive/Hardey Road and Stoneham Street/Belgravia Street.</li> <li>Consider the increased pedestrian demand due to the 2,268 dwellings within the walking catchment, especially towards Belmont Primary School, therefore the report should be amended.</li> </ul> <p><u>Alternative Pedestrian Treatments:</u></p> <ul style="list-style-type: none"> <li>Model the above treatments within SIDRA to evaluate their viability.</li> <li>Assess geometric requirements, land boundaries, and potential signal modifications.</li> <li>Detail mechanisms for future delivery this information would be required to inform costings for a development contribution plan.</li> </ul> <p><u>Local Roads Connectivity</u> Performance Assessment:</p> <ul style="list-style-type: none"> <li>Evaluate the performance of local road intersections with Great Eastern Highway, Stoneham Street, and Resolution Drive.</li> <li>Determine necessary upgrades such as turn pockets, staged-turning facilities, and civil modifications to enforce left-in/left-out movements etc.</li> </ul> <p>Speed Zone Assessment:</p> <ul style="list-style-type: none"> <li>Main Roads are responsible for speed zones. The proposed 30km/hr speed zone in section 4.3 requires a further assessment and approval from Main Roads Traffic Management Services.</li> </ul>	<p>The Structure Plan proposes vehicle access consistent with the Vehicle Access Strategy.</p> <p>Given Great Eastern Highway is under the care and control of Main Roads Western Australia, it is appropriate for them to undertake these investigations.</p> <p>The Movement and Access Strategy already recommends the City investigate protected crossings. As Main Roads Western Australia is responsible for pedestrian crossings on Great Eastern Highway, the City of Belmont will need to liaise with them.</p> <p>The Movement and Access Strategy considers the increase in pedestrian numbers and includes recommended improvements to pedestrian infrastructure.</p> <p>As the exact nature and timing of potential pedestrian upgrades is uncertain, the need for modelling will be reassessed when specifics are known.</p> <p>These aspects will be further considered at a later stage when the City develops a funding strategy for the structure plan.</p> <p>No changes are proposed to the local road intersections with Great Eastern Highway, Stoneham Street or Resolution Drive (with the exception of the closure of the Daly Street connection to Stoneham Street). The existing intersection configurations were found to operate with acceptable levels of service for the 2031 and 2041 forecast scenarios, therefore there is no need to undertake further analysis.</p> <p>Noted. This will occur at a later stage.</p>

		<p><u>SIDRA Assessment</u></p> <p>Network Model Coordination:</p> <ul style="list-style-type: none"><li>• SIDRA network model is required to be co-ordinated for the existing two signalised intersections to observe any changes due to any proposed scenarios.</li></ul> <p>Bus Lane Vehicle Distribution:</p> <ul style="list-style-type: none"><li>• Modify vehicle distribution along the bus lane to reflect SCATS volume, which indicating a lower proportion of vehicles using the bus lane compared to regular through lanes.</li></ul> <p><b>Noise</b></p> <ul style="list-style-type: none"><li>• Noise sensitive land uses located adjacent to the Primary Regional Road reservation are required to implement acoustic attenuation measures in accordance with WAPC State Planning Policy 5.4 – Road and Rail Noise. A noise report complying with State Planning Policy 5.4 is to be prepared for any future proposals for noise sensitive development within the SPP 5.4 trigger distance of Great Eastern Highway.</li></ul>	<p>Due to the size of each network model, with 20 sites, co-ordination between the two signalised intersections makes the models unstable. The network models represent a worst case, with the phase times identical to the base year models.</p> <p>The bus lane usage has been reviewed and updated, with particular emphasis on the two signalised intersections along Great Eastern Highway.</p> <p>Noted. This will be addressed through the development application process.</p>
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**Schedule of Modifications**

<b>Document</b>	<b>Modification No.</b>	<b>Section/Page</b>	<b>Change</b>
Structure Plan Report	1	6 Additional Information - Page 10  1.1 Introduction and Purpose – Page 15  1.2.3 Legal Description and Ownership – Page 19  3.3 Land Use – Page 47  3.3.7 Public Open Space – Page 51	Update Table Numbers and references in text.
Structure Plan Report	2	4.2.2.2 Building Height – Page 7  3.3.4 Building Height – Page 48	Insert “alternative measures can be considered at the discretion of the decision maker provided they have an equal or greater sustainability outcome.”
Structure Plan Report	3	3.3.8 Public Realm Provision – Road and Street Treatments – Page 53	Correctly label the cross section images (currently the label of “Resolution Drive” is over the Stoneham Street cross section and vice versa).
Structure Plan Report	4	3.4.3 Pedestrian and Cycling Network – Page 58  3.9.2 Infrastructure Funding Strategy – Page 61	Reference the investigation of a pedestrian overpass or underpass across Stoneham Street through the preparation of an Infrastructure Funding Strategy.
Structure Plan Report	5	3.6 Education Facilities – Page 59	Delete <i>“given the nature of the development and anticipated demographic it is anticipated that there will be limited additional demand for education facilities generated in the precinct.”</i>  After <i>“The Golden Gateway Precinct is well located within an existing urban context allowing future residents to take advantage of existing education facilities”</i> insert <i>“The Department of Education has indicated that Belmont Primary School is expected to face enrolment pressure in the long term. They will continue to monitor enrolment demand as development progresses within the Structure Plan and ensure residential growth aligns with the availability of public schools in the area.”</i>
Public Realm Strategy	6	Golden Gateway Tree Species – Page 21&22	Delete Pheonix canariensis: Canary Palm 15m+ from the planting list.

## 12.2 Final Adoption - Amendment No. 22 to Local Planning Scheme No. 15 - Amendments to the Land Use Permissibility of Warehouse in the Mixed- Use Zone

Voting Requirement	: Simple Majority
Subject Index	: LPS15/022
Location/Property Index	: Various
Application Index	: N/A
Disclosure of any Interest	: Nil
Previous Items	: 27 February 2024
Applicant	: N/A
Owner	: Various
Responsible Division	: Development and Communities

### Council role

<b>Legislative</b>	Includes adopting local laws, local planning schemes and policies.
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### Purpose of report

For Council to consider final adoption of Scheme Amendment No. 22 to the City of Belmont Local Planning Scheme No. 15 (LPS15) following public advertising.

### Summary and key issues

- The 'Warehouse' use is currently designated as a 'D' ('Discretionary') use in the 'Mixed Use' zone under LPS15.
- The 'Warehouse' land use has inherent use and built form characteristics that present challenges for the 'Mixed Use' zone. It generally requires large floor spaces, has minimal on-site activity primarily because of storage function with a small number of employees, and very few customers visiting the site, and offers minimally activated street facades.
- There have been recent examples of the 'Warehouse' land use seeking to establish in prominent locations along key arterial routes, such as Great Eastern Highway (GEH).

- It is considered that the use does not align with the intent of the 'Mixed Use' zone under LPS15, the City's GEH Corridor Strategy, or Perth and Peel @ 3.5 Million.
- At the 27 February 2024 Ordinary Council Meeting (OCM) (Item 12.3), Council endorsed public advertising of Amendment No. 22 to LPS15, which proposes to:
  - Prohibit the 'Warehouse' land use in the 'Mixed Use' zone.
  - Update the current land use definition to 'Warehouse/Storage', to align with the Model Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* (Regulations)(WA).
  - Update to the 'Mixed Use' zone objective.
- The Amendment was categorised as 'Complex' and advertised from 5 September 2024 to 5 November 2024. During this period three submissions were received, with one raising objections.
- The submissions have been reviewed and it is considered that the matters raised do not warrant any changes to the Amendment.
- It is recommended that Council support Amendment No. 22 to LPS15 without modification.

### Officer Recommendation

That Council:

1. Pursuant to Regulation 41(2) of the *Planning and Development (Local Planning Schemes) Regulations 2015* (WA), consider the submissions received in respect of Amendment No. 22 to Local Planning Scheme No. 15 and endorse the Officer Response to those submissions in Attachment 12.2.1 (Schedule of Submissions).
2. Pursuant to Regulation 41(3) of the *Planning and Development (Local Planning Schemes) Regulations 2015* (WA), support Amendment No. 22 to Local Planning Scheme No. 15 with a recommendation that the Amendment be approved by the Minister for Planning without modification.
3. Advise those who made a submission of the Council's decision.



## Location

Amendment No. 22 applies to the following areas:

- In relation to land use permissibility and zone objective, land zoned as 'Mixed Use' (shown in Figures 1 to 4) under LPS15. This zoning is generally located within a 400m margin along GEH, except for one lot in Cloverdale (275 Belmont Avenue, at the corner of Fulham Street); and
- The land use definition applies across the whole scheme area.



Figure 1: Mixed Use Zone – Rivervale

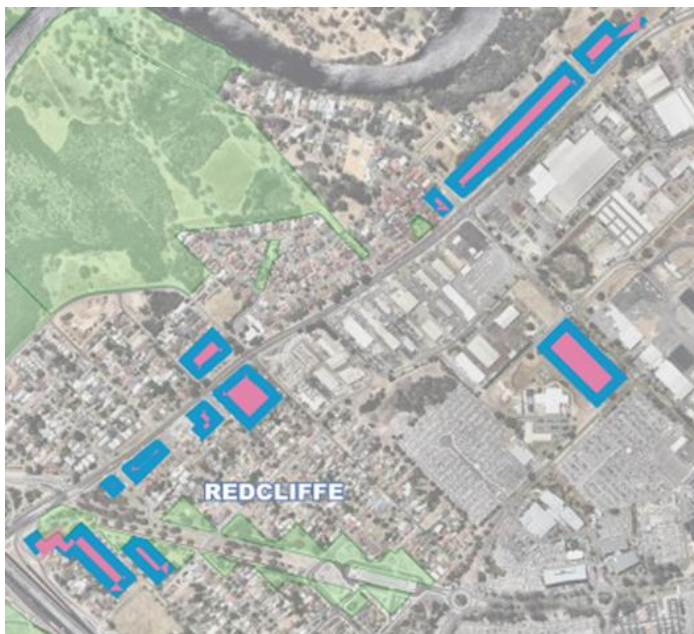


Figure 2: Mixed Use Zone – Redcliffe and Ascot



Figure 3: Mixed Use Zone – Cloverdale





Figure 4: Mixed Use Zone – Ascot and Belmont

## Consultation

In accordance with the *Planning and Development Act 2005 (WA)*, Amendment No. 22 was referred to the Environmental Protection Authority (EPA) to determine whether environmental assessment was required prior to advertising. The EPA advised that an assessment was not required, and public advertising may proceed.

The Regulations require a 'complex' amendment to be submitted to the Western Australian Planning Commission (WAPC) to obtain consent for public advertising. In granting its consent to advertise the Amendment, the WAPC requested all references in the Scheme Text relating to 'Warehouse' be replaced with 'Warehouse/Storage' to be consistent with the Regulations.

Following the WAPC granting consent to advertise, the Regulations requires a 'complex' amendment to be advertised for 60 days. Amendment No. 22 was advertised for 61 days from 5 September 2024 to 5 November 2024, as follows:

- Letters advising of the proposed amendment were sent to landowners and occupiers of 'Mixed Use' zoned land and relevant State Government agencies.

- The Amendment and public notice were displayed on the City's website and at the City's Civic Centre.
- A notice was published in the 5 September 2024 edition of the PerthNow newspaper.
- A public notice was displayed at the Civic Centre for the duration of advertising.

Three submissions were received during the advertising period. Of these submissions, two expressed no objection for the proposed Amendment. One submission raised concerns that the proposed Amendment would adversely affect the ongoing operation of their warehousing business and will impact their investments in Belmont. This will be further discussed in the 'Report' section.

A summary of the submissions received during the advertising period are detailed in the Schedule of Submissions comprised in Attachment 12.2.1.

## 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.

**Outcome:** 7. Attractive and welcoming places.

## Policy implications

### Perth and Peel @ 3.5 million

The State strategic framework documented under the WAPC 'Perth and Peel @ 3.5 million' informs the statutory direction of the City. The Perth and Peel region will need to accommodate significant population growth by 2050 with an additional 1.5 million people requiring approximately 800,000 new homes.

The 'Perth and Peel @ 3.5 million' strategic planning framework requires that a substantial amount of this growth (i.e. 47%) be delivered through infill developments. It identifies that the City of Belmont population will increase from 37,360 to 60,260 people by 2050 and to accommodate that increase an additional 10,410 dwellings will be required.

Perth and Peel @ 3.5 Million promotes the concept of 'Urban Corridors' as a way of achieving integrated land use and transport outcomes. Great Eastern Highway is identified as an urban corridor within the document. The framework suggests that focus should be given to investigating increased residential densities and mixed land uses along urban corridors.

## **Local Planning Strategy**

The City's existing Local Planning Strategy (2011) notes the following land uses as being appropriate in the 'Mixed Use' zone:

- Residential
- Hotel
- Motel
- Office
- Showroom
- Warehouse
- Fast Food/Takeaway
- Light Industry (where appropriate)

Despite the 2011 Strategy designating 'Warehouse' as a fitting land use in the 'Mixed Use' zone, it is considered outdated and incongruent with the strategic direction outlined in Perth and Peel @ 3.5 Million and the City's Corridor Strategy. Additional discussion on this matter is available in the 'Report' section.

The strategic direction set by Perth and Peel @ 3.5 Million and the Corridor Strategy will play a pivotal role in shaping a new local planning strategy and scheme. To ensure timely addressing of concerns outlined in the 'Background' section of this report, it is imperative to advance the proposed Amendment before preparing these new documents.

## **Great Eastern Highway Urban Corridor Strategy**

The Great Eastern Highway Urban Corridor Strategy (Corridor Strategy), endorsed by Council on 22 October 2024, outlines the transformation of the GEH corridor into an urban boulevard with varied land uses. The Corridor Strategy will be implemented through either Scheme provisions, structure planning or a local planning policy.

In accordance with Clause 67(2b) of the Regulations, due regard must be given to the Corridor Strategy when assessing development proposals on land within the corridor area.

## **Statutory environment**

### **Local Planning Scheme No. 15**

In accordance with Table 1 of LPS 15, 'Warehouse' is classified as a 'D' (Discretionary) land use within the 'Mixed Use' zone, meaning that the use is not permitted unless the local government has exercised its discretion by granting development approval.

## ***Planning and Development (Local Planning Schemes) Regulations 2015 (WA)***

### **Model Provisions**

The Regulations and associated Local Planning Scheme template assist local government planners and industry practitioners in the preparation, review or amendment of their local planning schemes to align with the Model Provisions (Schedule 1 of the Regulations).

The Model Provisions, along with any essential local variations approved by the Minister, should be gradually integrated into Local Planning Schemes through the scheme amendment process whenever an opportunity arises.

Table 1 displays the existing definitions in LPS15 for the 'Warehouse/Storage' land use and the 'Mixed Use' zone objective, in comparison to the Model Provisions. The relevant amendments to the Scheme in alignment with the Model Provisions will be discussed in the 'Background' section.

	<b>Existing in LPS 15</b>	<b>Model Provisions (LPS Regulations)</b>
'Warehouse / storage' land use definition	<p>Warehouse: means premises used to store or display goods and includes premises on the same land used for:</p> <ul style="list-style-type: none"> <li>a) The work of administration or accounting;</li> <li>b) The selling of goods by wholesale; or</li> <li>c) The provision of amenities for employees, incidental to any of those warehouse operations.</li> </ul>	<p>Warehouse/storage: means premises including indoor or outdoor facilities used for:</p> <ul style="list-style-type: none"> <li>a) The storage of goods, equipment, plant or materials; or</li> <li>b) The display or the sale by wholesale of goods.</li> </ul>
'Mixed Use' Zone objective	<p>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,</p>	<p>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. 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</p>

	Existing in LPS 15	Model Provisions (LPS Regulations)
	<p>welfare and safety of its residents.</p> <p>Buildings should be of a high standard of architectural design set in pleasant garden surrounds with limited vehicular access from properties to primary roads.</p>	<p>generate nuisances detrimental to the amenity of the district or to the health, welfare and safety of its residents.</p>

Table 1: Existing LPS 15 definitions and model provisions

## Amendment Types and Consultation Requirements

Section 75 of the *Planning and Development Act 2005 (WA)* (PD Act) provides for an amendment to be made to a local planning scheme. The procedures for amending a local planning scheme are set out within Part 5 of the Regulations.

The Regulations specify three different types of Scheme amendments, being 'basic', 'standard' and 'complex'. The main differences between the amendment classifications are the differing advertising requirements. Clause 35(2) of the Regulations requires a resolution of the local government specifying the type of amendment and the reasons for the classification.

Irrespective of the classification of the amendment, where a responsible authority (being the local government) has resolved to amend a Scheme, it shall be forwarded to the EPA as per Section 81 of the PD Act to determine whether the amendment requires an environmental assessment.

The process to initiate and advertise a complex scheme amendment, under Clause 37 and 38, is as follows:

1. Submission of Proposed Complex Amendment to the Commission:
  - The local government must submit two copies of the proposed complex amendment to a local planning scheme to the Commission.
  - Submission must occur within 21 days of the local government resolution, or a longer period if allowed by the Commission.
2. Commission Examination and Advice:
  - Within 60 days of receiving the documents, or a longer period as permitted by the Minister or an authorised person, the Commission must examine the documents.
  - The Commission advises the local government of any required modifications before advertising the amendment.
3. Advertisement of Complex Amendment:



- Upon Commission's satisfaction with the suitability of the complex amendment:
  - The local government must prepare a notice approved by the Commission, including details of the purpose of the amendment, availability to the public, submission process, and submission period.
- Advertising involves:
  - Publishing the notice and the amendment on the City of Belmont's website;
  - Publishing the notice in the local newspaper;
  - Displaying the notice on public notice boards; and
  - Providing copies to relevant public authorities that are considered to be affected by the amendment.
- Submissions can be made during a 60-day period after the first publication, or a longer period approved by the Commission.

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.

## **Background**

Council initiated Amendment No 22 to LPS15 as a 'complex' amendment for the purposes of advertising at the 27 February 2024 OCM. The intent of the Amendment is to prohibit the 'Warehouse/Storage' land use in the Mixed Use zone, update the Mixed Use zone objective, replace the existing 'Warehouse' references with 'Warehouse/Storage' and update this definition to be consistent with the Regulations. Further justification for the Amendment is detailed below.

## **Warehouse Trends**

The City of Belmont has large areas of commercial and industrial zones where there are a significant number of warehouses.

A trend has been identified involving warehouses targeting prominent locations on key arterial routes, such as GEH to capitalise on the significant passing traffic. Specifically, there has been a noticeable increase in the number of 'Warehouse' (Self Storage) facilities seeking to establish in these locations.



Upon examination, it is observed that warehouses tend to be characterised by limited street activation, present an undesirable built form as viewed from the public realm, and lack compatibility with the greater 'Mixed Use' zone.

Considering the above factors and the objectives of the 'Mixed Use' zone, it is appropriate to make 'Warehouse/Storage' an 'X' (not permitted) use within the 'Mixed Use' zone.

## **Examples**

In 2022, a 'Warehouse' development (Self Storage Facility) was approved at 197 – 201 GEH in the 'Mixed Business' zone. Noting the land use's minimal parking and access requirements, it became evident that the choice of location on GEH was motivated by advertising prominence rather than operational necessity.

While this may be considered acceptable in the 'Mixed Business' zone due to the limited number of properties fronting GEH, there is a concern over this use beginning to extend into the 'Mixed Use' zone.

In 2023 an application was lodged for a significant 'Warehouse' (Self Storage Facility) within the 'Mixed Use' zone at 97 – 107 GEH, Rivervale. The proposal included a large building spanning the entire frontage of a street block, featuring extensive elevations with limited openings. In December 2023 this proposal was refused by the Metro Inner South Joint Development Assessment Panel. The reasons for refusal align with the rationale for this Amendment.

It is noted that this application was ultimately approved by the Development Assessment Panel (DAP) on reconsideration. However, this highlights that unless 'Warehouse/Storage' is designated as an 'X' (not permitted) use, applicants may only be required to meet the minimum standards to secure approval from a built form perspective. In many cases, additional windows are incorporated to create the appearance of an activated frontage, but these openings are often not associated with habitable internal spaces. This underscores how the 'Warehouse/Storage' use is fundamentally misaligned with the intent of the corridor.

These examples demonstrate the largely inherent built form outcomes of the use, and highlight the necessity of the proposed Amendment, to ensure future developments along GEH align with the strategic vision for the corridor.

## **Current Context of 'Mixed Use' Zone**

When considering the appropriateness of this use it is necessary to do so in the context of the development which has occurred in the 'Mixed Use' zone as described below.

## Western End

The western end of the 'Mixed Use' zone along GEH in Rivervale is opposite the high-density 'Springs' development. Key features include the Eastgate Shopping Centre with shops, food outlets, and gyms. Further east along GEH there are multiple hotels, office spaces, and higher-density residential apartments such as on Tanunda Drive. It is located near the Swan River which adds to the area's appeal, with a mix of amenities for residents and visitors.

## Mid-section East of Belgravia

The mid-section Mixed Use zone of GEH, east of Belgravia has several hotels, serviced apartments, and the Ascot Precinct serving as a commercial centre. It also has numerous food outlets, showrooms, and is near the Ascot Racecourse.

## East of Tonkin Highway

The Mixed Use zone East of Tonkin Highway presents a mix of uses, including hotels, restaurants, small-scale commercial centres, service stations, and historic light industry uses. With close proximity to Perth Airport and the new Redcliffe train station, this area is convenient and well-connected for residents and visitors.

Given the above context, the 'Mixed Use' zone is evidently evolving towards its intended objective of a mix of commercial, residential, and tourist accommodation land uses that align with the strategic goals of the zone. It is apparent that the 'Warehouse/Storage' land use is increasingly incompatible and undesirable within this context. It also is important to recognise that the City of Belmont contains significant areas where 'Warehouse' land use is generally more suitable, particularly within the 'Mixed Business' and 'Industrial' zones.

## **'Mixed Use' Zone Objective**

The proposed Amendment seeks to incorporate the following sentence at the end of the existing objective (drawn from the Model Provisions):

"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."

This addition underscores a commitment to fostering a blend of active and compatible land uses and promoting a vibrant streetscape with diverse activities that is consistent with Perth and Peel @ 3.5 Million and the Corridor Strategy.

This vision stands in contrast to the nature of 'Warehouse' (Self Storage) land uses, which lack active street level engagement. Therefore, it is considered appropriate to amend the existing objective to align with the Model Provisions.

## Changes to Land Use Definition

The existing 'Warehouse' definition in LPS15 is proposed to be updated to align with the 'Warehouse/Storage' definition in the Regulations. The key change involves removing the explicit reference to activities such as administration, accounting, and employee amenities. These activities are considered incidental to warehouse operations and do not require explicit inclusion in the definition.

## Report

Three submissions were received during the advertising period. Two submissions raised no objection to the proposed Amendment. One submission raised concerns that the proposed Amendment would adversely affect the ongoing operation of their warehousing business and will impact their investments in Belmont.

Provided an existing 'Warehouse' within the 'Mixed Use' has a valid development approval in place, it can continue to operate as a non-conforming land use. However, should the use cease to operate or changes to another land use, that right is extinguished.

The strategic justification for the amendment is as follows:

- 'Warehouse/Storage' land uses do not align with the strategic intent for the 'Mixed Use' section of GEH as set out by Perth and Peel @ 3.5 Million and the Corridor Strategy.
- Perth and Peel @ 3.5 Million promotes the concept of 'Urban Corridors' as a way of achieving integrated land use and transport outcomes.
- The Corridor Strategy aims to guide the renewal of Great Eastern Highway into a high-quality, amenity-rich, multi-use urban boulevard with improved transport options, housing, and job growth.
- Warehouse/Storage uses are considered incongruent with this intent and incompatible with suitable urban corridor land uses.
- While 'Warehouse/Storage' uses may not cause adverse noise or amenity impacts, they present an undesirable built form and reduce opportunities for active land uses, detracting from the streetscape.
- Sites with high visibility along major transport corridors should prioritise active land uses to enhance street activation. The Amendment seeks to enable ground-floor street activation and encourage attractive built forms for future developments.
- The Amendment seeks to activate 'Mixed Use' sites so to promote compatible land uses and better utilise the proximity of these sites to the Swan River, high frequency transport, and the provision of services.

- The objective for the 'Mixed Use' zone is proposed to be amended to align with the Model Provisions. This specifically mentions a requirement for uses to be active at street level. 'Warehouse/Storage' land uses are inherently inactive and therefore inconsistent with the proposed 'Mixed Use' zone objective.
- It is noted that the City of Belmont contains significant areas where 'Warehouse/Storage' land uses are generally more suitable, particularly within the 'Mixed Business' and 'Industrial' zones.
- The Amendment does not propose to change the permissibility of 'Warehouse/Storage' in the 'Mixed Business' and 'Industrial' zones, and proponents can continue to operate or establish 'Warehouse/Storage' land uses in these zones, subject to approval.

It is recommended that the Amendment be progressed without modification.

## **Conclusion**

It is recommended that Council support Amendment No. 22 to LPS15 without modification, with a recommendation that the Amendment be approved by the Minister for Planning.

## **Financial implications**

The costs associated with the preparation and advertising of Amendment No. 22 are accommodated within the Planning Department's operational 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.	Schedule of Submissions [ <b>12.2.1</b> - 1 page]
2.	CONFIDENTIAL REDACTED - Schedule of Submissions LPS15 AMD 22 (Confidential matter in accordance with Local Government Act 1995 (WA) Section 5.23(2)(b)) [ <b>12.2.2</b> - 1 page]

## Schedule of Submissions

No.	Submitter	Summary of Submission	Officer Comment
1	Public Submitter	<p>Notes they have chosen to conduct their business from Belmont due to the proximity to the airport and a number of their customers.</p> <p>States that Amendment 22 proposes to disallow warehouses under the Local Planning Scheme, which would adversely affect the ongoing operation of their business and impact their investments in Belmont.</p>	<p>Noted.</p> <p>The Amendment does not propose to change the permissibility of 'Warehouse/Storage' in the 'Mixed Business' and 'Industrial' zones, and proponents can continue to operate or establish 'Warehouse/Storage' land uses in these zones.</p> <p>For further information regarding the suitability of 'Warehouse/Storage' land uses in the Mixed Use Zone, please refer to the 'Report' heading in the report.</p>
		States that Great Eastern Highway offers high visibility for their warehousing business.	<p>It is considered that sites with high visibility to major transport corridors should be characterised by active land uses. The Amendment seeks to enable street activation at the ground floor and encourage future developments to adopt an attractive built form.</p> <p>For further information regarding the suitability of 'Warehouse/Storage' land uses in the City of Belmont, please refer to the 'Report' heading in the report.</p>
		States that their warehousing business is operated so not to be obnoxious or disruptive and is neat and clean.	For further information regarding the suitability of 'Warehouse/Storage' land uses in the City of Belmont, please refer to the 'Report' heading in the report.
		Notes strongly objecting to the Amendment. Suggests that the City should be mindful of the variety of businesses in the Mixed Use zone.	<p>Properties zoned 'Mixed Use' within the City of Belmont comprise a variety of businesses which support the economy of the surrounding area and greater metropolitan area.</p> <p>Whilst the Amendment proposes to change the permissibility of 'Warehouse/Storage' within the 'Mixed Use' zone, other permissible land uses within the zone will remain unchanged. The Amendment is not considered to adversely impact the variety of businesses in the City of Belmont.</p>
2	Main Roads Western Australia PO Box 6202	Notes having no objection to the proposed Scheme Amendment.	Noted.
3	Water Corporation 629 Newcastle Street Leederville WA 6007	Notes the proposed changes are relatively minor in nature and therefore these are unlikely to impact on the Water Corporation's planning or servicing.	Noted.



## 12.3 Development Application for 'Warehouse', 'Industry General' and 'Office' - Lot 1 (6) Ferguson Street, Kewdale

Voting Requirement	: Simple Majority
Subject Index	: 115/001
Location/Property Index	: Lot 1 (6) Ferguson Street, Kewdale
Application Index	: 439/2024
Disclosure of any Interest	: Nil
Previous Items	: N/A
Applicant	: INDEV WA Pty Ltd
Owner	: Lioness (WA) Pty Ltd and Erysipelas Pty Ltd
Responsible Division	: Development and Communities

### Council role

<b>Quasi-Judicial</b>	When Council determines an application/matter that directly affects a person's right and interests. The judicial character arises from the obligation to abide by the principles of natural justice. Examples of quasi-judicial authority include local planning applications, building licences, applications for other permits/licences (eg under Health Act, Dog Act or Local Laws) and other decisions that may be appealable to the State Administrative Tribunal.
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### Purpose of report

For Council to determine an application for a proposed Industry (General), Warehouse and Office development at Lot 1 (6) Ferguson Street, Kewdale.

### Summary and key issues

- The City has received an application for a 'Warehouse', 'Industry – General' and 'Office' development which includes:
  - Demolition of existing structures on the southern portion of the development site.
  - Construction of an Industrial/Warehouse building (2940m<sup>2</sup>) and Office (494m<sup>2</sup>), and outdoor storage.
  - Widening of two existing crossovers (truck access/egress) to Ferguson Street.
  - Bicycle parking, end of trip facilities, 70 car parking spaces, and staff amenities.

- Landscaping within the Ferguson Street setback area.
- The subject site is zoned 'Industrial' under Local Planning Scheme No. 15 (LPS 15). 'Warehouse', 'Industry – General' and 'Office' are designated as 'D' uses in the 'Industrial' zone. This means the uses are not permitted unless the local government has exercised its discretion by granting planning approval.
- The estimated cost of works is \$7.5 million, which exceeds the \$5 million officer delegation threshold. Accordingly, the proposal requires determination by Council.
- The application includes a variation to LPS 15 car parking requirements. There are 70 car bays proposed in lieu of 88, resulting in a shortfall of 18 bays.
- It is considered that the parking variation can be supported on the basis that:
  - The 70 parking bays can adequately accommodate the proposed uses on the site and meet the needs of the future tenant.
  - There is adequate space to provide an additional 18 bays on site in the future if required. These additional bays, and the ability to require them to be constructed if required, can be secured via a condition.
- It is considered that the proposal is consistent with the objectives of LPS 15, and it is recommended that Council approve the application, subject to conditions.

### Officer Recommendation

That Council approve planning application 439/2024 as detailed in plans dated 24 October 2024 and 18 December 2024 submitted by INDEV WA Pty Ltd on behalf of the owner Lioness (WA) Pty Ltd and Erysipelas Pty Ltd for 'Warehouse', 'General Industry' and 'Office' at Lot 1 (No 6 Ferguson Street, Kewdale) subject to the following conditions:

1. Development/land use shall be in accordance with the attached approved plan(s) dated 24 October 2024 and 18 December 2024 and subject to any modifications required as a consequence of any condition(s) of this approval. The endorsed plans shall not be modified or altered without the prior written approval of the City.
2. Prior to the commencement of any site works, all existing buildings and structures on the development site, including soakwells, leach drains, septic tanks, underground storage tanks, stormwater drainage systems and waste water disposal systems, shall be removed and the land levelled to the satisfaction of the City.

3. Prior to lodging an application for a Building Permit, the owner/applicant shall seek approval from the City of Belmont for an artist to provide public art on the development site to a minimum value of \$75,000 (exclusive GST) to the satisfaction of the City of Belmont.
4. Where public art will be provided on the development site, the approved concept/strategy shall be thereafter implemented and the artwork constructed and maintained for the life of the development to the satisfaction of the City.
5. Prior to occupation or use of the development, vehicle parking, manoeuvring and circulation areas shall be designed, constructed, sealed, drained, line marked and kerbed in accordance with:
  - a. The approved plan;
  - b. Australian Standard AS/NZS 2890 and AS/NZS 1428;
  - c. Schedule 7 of City of Belmont Local Planning Scheme No. 15; and
  - d. The City's engineering requirements and design guidelines.

The areas must be sealed in bitumen or concrete in accordance with the City's specifications and thereafter maintained for the life of the development, to the satisfaction of the City.
6. Prior to the occupation or use of the development, the applicant shall seal and drain the portion of land highlighted in red on the approved plans with either bitumen or concrete, to the satisfaction of the City. This area shall thereafter be maintained for the life of the development.
7. Prior to occupation of the development, a minimum of 7 bicycle bays, 7 ventilated equipment lockers, and 1 male and 1 female showers (or 2 unisex showers) are to be installed and thereafter maintained for the course of the development, to the specifications outlined within Austroads Guide AP-R527-16 - Bicycle Parking Facilities Guidelines for Design and Installation and AS2890.3:2015 to the satisfaction of the City.
8. All access ways, parking areas and hard stand areas shall be maintained in accordance with the City's engineering requirements and design guidelines to the satisfaction of the City.
9. Prior to occupation or use of the development, the owner/applicant shall, after having obtained written approval from the City (Infrastructure Services Clearance), construct the vehicle crossovers in accordance with the approved plans and the City's engineering specifications, to the satisfaction of the City.
10. All stormwater runoff from roofed and paved areas shall be collected and disposed of with a combination of on-site and off-site disposal system via

an approved oil and silt separator device in accordance with the City's engineering requirements and design guidelines.

11. Prior to lodging an application for a building permit, stormwater disposal plans, details and calculations prepared in accordance with the City's engineering requirements and design guidelines shall be submitted for approval and thereafter implemented, constructed, and maintained to the satisfaction of the City.
12. All new and existing stormwater drains, drainage pits and soakwells shall be maintained in a clean and clear condition free of obstruction.
13. Prior to lodging an application for a building permit, a detailed landscaping plan for the subject site and/or the road verge(s) shall be submitted for approval and implemented to the satisfaction of the City. The plan must include the landscaping of:
  - a. All areas of the property visible from the street;
  - b. The street verge in compliance with the Consolidated Local Law 2020.
14. Prior to occupation or use of the development, landscaping, plants, verge treatment and/or irrigation are to be installed and thereafter maintained in accordance with the approved landscaping and irrigation plan to the satisfaction of the City. Any species which fail to establish within the first two planting seasons following implementation must be replaced in consultation with, and to the satisfaction of the City.
15. Existing turf, irrigation, verge treatment or street trees located within the verge are City of Belmont assets and as such must not be damaged, removed or interfered with during the course of the development.
16. Existing street trees must be retained and protected in accordance with AS 4970-2009 to the satisfaction of the City.
17. Prior to occupation or use of the development the applicant shall provide a suitably sized area for effluent disposal that is protected from vehicular traffic by bollards and not paved or covered with a surface treatment, to the satisfaction of the City.
18. Prior to occupation or use of the development, the applicant shall provide a wastewater apparatus in accordance with the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974*, the apparatus shall thereafter be maintained to the satisfaction of the City.
19. The loading and/or unloading of vehicles is to occur on-site and in a manner that does not interfere with the parking of vehicles in the car park. All car parking bays in the car park are to be always made available for the parking of vehicles by visitors and employees.

20. All commercial vehicles and trucks shall ingress and egress the site in forward gear. No reversing of vehicles and trucks to or from the site via a public road is permitted.
21. A minimum of 70 car parking bays are to be provided and maintained to the satisfaction of the City.
22. The landowner shall reserve space for a further 18 car parking spaces to be provided on-site to cater for potential future car parking demand.

In the event the City determines that the demand for car parking on the land requires some or all of the further spaces to be used, the City may after first consulting with the landowner give a written notice to the landowner setting out the number and location of additional bays required, following which the landowner must:

  - a. Within 90 days seal, drain, and line mark the additional bays required, to the City's satisfaction; and
  - b. Thereafter maintain the additional bays.

## **Location**

The subject site is located within the Kewdale Industrial Estate and has street frontage to Ferguson Street and Kewdale Road. The property has a total area of 2.79 ha and contains existing buildings that are used for 'Warehouse', 'Office', 'Showroom', 'Light Industry' and 'Motor Vehicle Repair' land uses. These existing structures are situated in the north-western portion of the site.

The large open area is unsealed with degraded bitumen and gravel. There are existing shed structures in the southern portion of the site. The site is accessed via three separate crossovers along Ferguson Street. Figure 1 shows an aerial image with the site outlined in red.



Figure 1: Aerial of the subject site outlined in red

## Consultation

The subject site fronts Ferguson Street with a secondary street frontage to Kewdale Road. Kewdale Road is a Category 2 Other Regional Road under the control of the Department of Planning, Lands and Heritage (DPLH).

Given this, the application was referred to the DPLH for comment. The DPLH had no objection to the application given that all vehicular access to the site is from Ferguson Street.

A copy of the DPLH referral response dated 23 December 2024 can be found at Attachment 12.3.1.

## Strategic Community Plan implications

In accordance with the 2024–2034 Strategic Community Plan:

### **Key Performance Area: Place**

**Outcome:** 7. Attractive and welcoming places.

### **Key Performance Area: Prosperity**

**Outcome:** 9. A progressive, vibrant and thriving economy with active participation in long-life learning.



## **Policy implications**

### **City of Belmont Delegation Register 2024-25**

Clause 9.2.1 of the City of Belmont Delegation Register 2024-25 relates to officer's ability to exercise power under delegated authority for determining development applications. A condition prevents officers from exercising delegated authority where the estimated cost of development exceeds \$5 million.

As the estimated cost of the proposed development is \$7.5 million, City Officers do not have delegated authority to determine the application. Therefore, the application requires determination by Council.

### **State Planning Policy 5.1 - Land Use Planning in the Vicinity of Perth Airport**

The objectives of this document are to:

- Protect Perth Airport from unreasonable encroachment by incompatible (noise-sensitive) development, to provide for its ongoing development and operation.
- Minimise the impact of airport operations on existing and future communities with reference to aircraft noise.

The proposed 'General Industry', 'Warehouse' and 'Office' are identified as 'acceptable' land uses under State Planning Policy 5.1. Therefore, noise insulation is not required.

### **State Planning Policy 5.4 - Road and Rail Noise**

The site is located within the 'Secondary Noise' buffer from Kewdale Road. As the use of the land is not classified as a noise-sensitive land use, the application is exempt from State Planning Policy 5.4 (Section 4.1).

### **Local Planning Policy No. 11 - Public Art Contribution**

Local Planning Policy No. 11 (LPP 11) requires a public art contribution of 1% for developments in identified precincts that have a construction cost in excess of \$4.5 million.

The subject site falls within Precinct 9 - Kewdale Industrial Precinct of LPP 11 and the development has an estimated construction cost of \$7.5 million. The application will therefore be subject to a requirement to provide public art on the site.

## Statutory environment

### Local Planning Scheme No. 15

The subject site is zoned 'Industrial' under LPS 15 as shown in Figure 2 below.

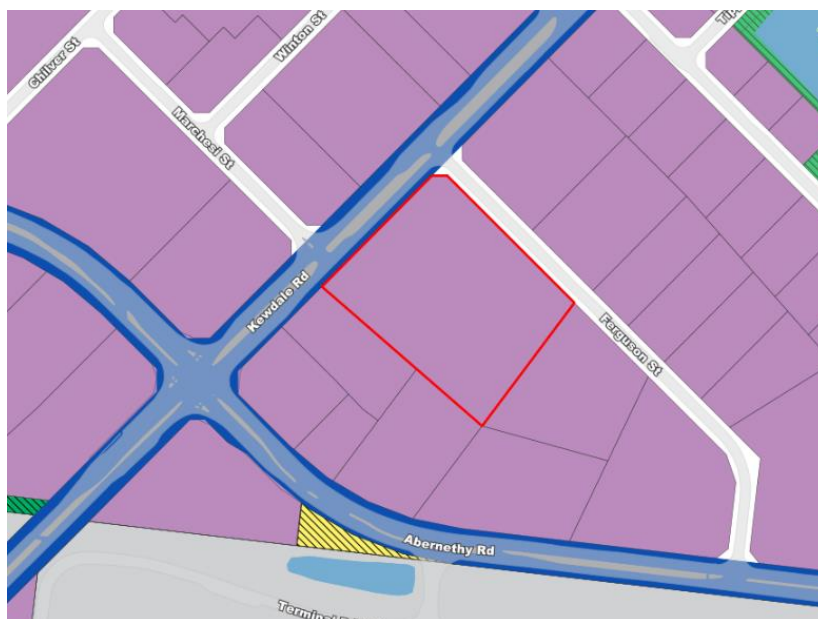


Figure 2: LPS 15 (Industrial) – subject site bordered red

The land uses relevant to this application are 'Industry-general', 'Warehouse' and 'Office'. The definitions of each land use under LPS 15 are as follows:

**"Industry-general** means an industry other than an extractive, hazardous, light, noxious, rural or service industry."

**"Warehouse** means premises used to store or display goods and includes premises on the same land used for:

- a) The work of administration or accounting;
- b) The selling of goods by wholesale; or
- c) The provision of amenities for employees, incidental to any of those warehouse operations."

**"Office** means premises used for administration, clerical, technical, professional or other like business activities."

The 'Industry-general', 'Warehouse' and 'Office' land uses are 'D' (Discretionary) uses within the Industrial Zone. Therefore, the uses are not permitted unless the local government has exercised its discretion by granting approval.

Under LPS 15, the objective of the Industrial zone is as follows:

"The Industrial Zone is intended to provide for the industrial development of the Kewdale Industrial Estate and the Redcliffe Industrial Estate. The significance of the Kewdale Industrial Estate as a transport and logistics hub as part of the Kewdale-Hazelmere Integrated Masterplan is

acknowledged. The local government may approve a wide range of industrial activities within this zone subject to conditions designed to achieve a high standard of industrial environment."

Clause 4.13 of LPS 15 sets out the development standards, which apply to development within the Industrial Zone. These provisions relate to design and built form requirements, such as building setbacks, site coverage, pedestrian and landscape areas. Clauses 4.13.2 (1) and 4.16 set out the car parking requirements for developments.

Clause 4.5.1 of LPS 15 states that the local government may, despite any non-compliance with development standards, approve an application subject to such conditions.

Clause 4.5.3 states that the power of Clause 4.5.1 may only be exercised where:

- a) approval of the proposed development would be appropriate having regard to the criteria set out in Clause 67 of the Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 2; and
- b) the non-compliance will not have an adverse effect upon the occupiers or users of the development, the inhabitants of the locality or the likely future development of the locality.

### ***Planning and Development (Local Planning Schemes) Regulations 2015 (WA)***

Clause 67 of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA) Schedule 2* Deemed Provisions outlines the matters to be considered by the local government in determining an application for development approval. The following provisions are relevant to this application:

- (a) the aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area;
- (b) the requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the Planning and Development (Local Planning Schemes) Regulations 2015 or any other proposed planning instrument that the local government is seriously considering adopting or approving;
- (c) any approved State planning policy;
- (g) any local planning policy for the Scheme area;
- (m) the compatibility of the development with its setting including –
  - (i) the compatibility of the development with the desired future character of its setting; and

- (ii) the relationship of the development to development on adjoining land or on other land in the locality, including but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;
- (n) the amenity of the locality including the following:
  - (i) environmental impacts of the development;
  - (ii) the character of the locality; and
  - (iii) social impacts of the development.
- (p) whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;
- (s) the adequacy of:
  - (i) the proposed means of access and egress from the site; and
  - (ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles.
- (t) the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety; and
- (za) the comments or submissions received from any authority consulted under Clause 66.

## **Deemed Refusal**

Under Clause 75 of the deemed provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)*, an application is 'deemed to be refused' if it is not determined within a 90-day period.

The only exception is where there is a written agreement for a further time between the applicant and the City of Belmont. In this case, there is no written agreement for the statutory time period to be extended.

The application was lodged on 20 November 2024, with the first request to the applicant for additional information made on 6 December 2024. The applicant provided the requested information on the 18 December 2024. The deemed refusal date for this application is 18 February 2025.

The applicant was informed prior to the request for information that the application required determination by the Council. Given the Council recess period in January, the applicant noted that the proposal would be determined at the Ordinary Council Meeting (OCM) in February 2025.

## Right of Review

Is there a right of review? ☒ Yes ☐ No

The applicant/owner may make application for review of a planning approval/planning refusal to the State Administrative Tribunal (SAT) subject to Part 14 of the *Planning and Development Act 2005 (WA)*. Applications for review must be lodged with SAT within 28 days. Further information can be obtained from the SAT website – [www.sat.justice.wa.gov.au](http://www.sat.justice.wa.gov.au).

## Background

<b>Lodgement Date:</b>	20/11/2024	<b>Use Class:</b>	'D' Land Uses Industry-general, Warehouse, Office
<b>Lot Area:</b>	2.79ha	<b>TPS Zoning:</b>	Industrial
<b>Estimated Cost of Development:</b>	\$7.5 million	<b>MRS:</b>	Industrial

## 2023 Development Approval

At the OCM on 26 September 2023 (Item 12.3), development approval was granted for a 'Warehouse' and 'Office' development at the subject site. That proposal included a 19-bay car parking shortfall, which was approved on the condition that an area be reserved for future car parking if required. However, this approval was not acted upon, and the development did not proceed.

## Proposal

The applicant seeks approval for a 'Industry-General', 'Warehouse' and 'Office' building. The application proposes the following:

- Retention of existing 'Warehouse', 'Office', 'Showroom', 'Light Industry' and 'Motor Vehicle Repair' buildings in the north-western portion of the site, and one crossover.
- Demolition of existing structures across the southern portion of the development site.
- Construction of an Industrial/Warehouse building (2940m<sup>2</sup>) and ancillary 2-storey office (494m<sup>2</sup>), and outdoor storage.

- Widening of two existing crossovers (truck access/egress) to Ferguson Street.
- Car and bicycle parking, end of trip facilities and staff amenities.
- Landscaping within the Ferguson Street setback area.

A copy of the development plans can be found at Attachment 12.3.2.

## **Report**

The key planning considerations relating to the application are discussed below.

## **Land Use**

In accordance with Table 1 of LPS 15, 'Industry-General', 'Warehouse' and 'Office' are designated as a 'D' land use which means that they are not permitted unless the local government has exercised its discretion by granting approval.

Under LPS 15, the objective of the Industrial zone is to:

"provide for the industrial development of the Kewdale Industrial Estate and the Redcliffe Industrial Estate. The significance of the Kewdale Industrial Estate as a transport and logistics hub as part of the Kewdale-Hazelmere Integrated Masterplan is acknowledged.

The local government may approve a wide range of industrial activities within this zone subject to conditions designed to achieve a high standard of industrial environment."

The proposed development supports the objectives of the Industrial zone by providing an industry-general (workshop), warehouse and office tenancy to allow for industrial-based businesses to operate within the Kewdale Industrial Estate.

The applicant has advised that Aggreko is the future tenant of the site, which operates a generator supply and maintenance business. The development site provides warehouse storage for parts, and workshop space for maintenance. The outdoor storage area to the rear of the site is for temporary storage of containerised generators awaiting maintenance in the workshop or for distribution to customers.



## Context and Character

The subject site is located within the Kewdale Industrial Estate. The immediate locality is characterised by a mix of industrial warehouses, offices, and showroom buildings.

Developments along Ferguson Street mostly provide single-storey office buildings in front of larger warehouse/industrial buildings. The majority of the industrial buildings are constructed in precast concrete walls and steel with limited articulation. Within the front setback area, the developments provide car parking and landscaping along the front boundaries that ranges between 1.5m and 6m in width.

Figures 4 and 5 below show images of existing properties along Ferguson Street. Figure 6 shows an image of the existing development onsite to be retained. Additional context and site photos are provided under Attachment 12.3.3.



Figure 4: Adjoining development at 10 Ferguson Street



Figure 5: Development at 9 Ferguson Street



Figure 6: Image showing existing development on the subject site

The proposal includes a 2-storey office component setback 22.6m from the front boundary. The office is attached to the warehouse building behind, with a 30m setback from the front boundary. A 3m wide landscaped area is proposed along the front boundary which includes planting of tree, groundcovers and the

retention of a large mature tree. Figure 7 shows an extract of the Concept Landscape Plan (Attachment 12.3.4).

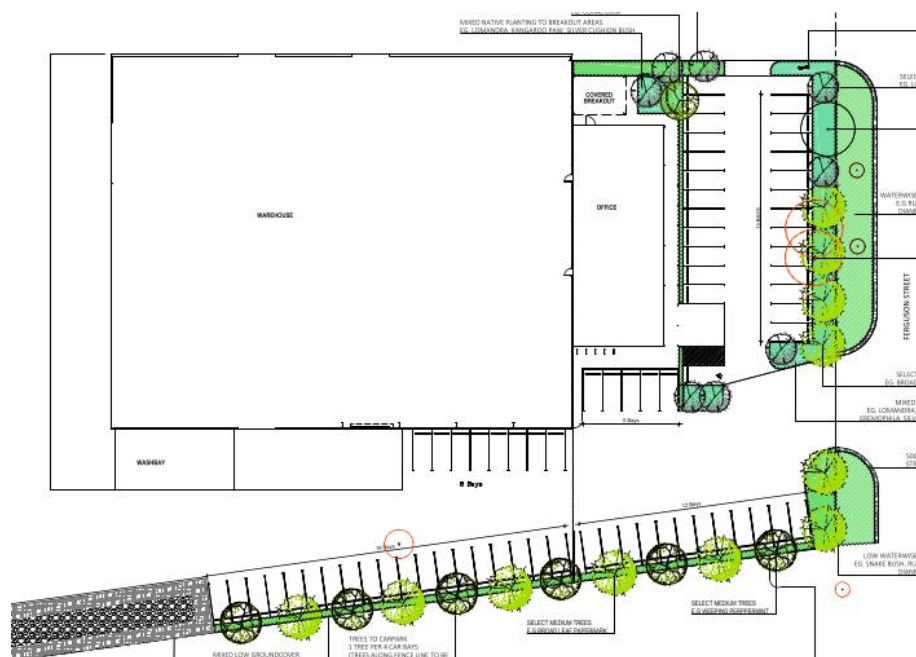


Figure 7: Image showing existing development on the subject site

The proposed developments street setbacks, height and landscape areas are consistent with existing developments along Ferguson Street, and compliant with the requirements of LPS 15.

## Car Parking

The LPS 15 specifies that car parking requirements for the 'Industry-General', 'Warehouse' and 'Office' land uses, and are to be calculated as follows:

LAND USE	REQUIREMENT
<b>INDUSTRY/WORKSHOP/FACTORY</b> 1 space for every 50m <sup>2</sup> of open space used for industrial purposes, plus 1 space for every 50m <sup>2</sup> of GFA; or 1 space for each employee, whichever is greater. – 1500m <sup>2</sup> of Workshop proposed.	<u>Required</u> Industry: 30 bays Warehouse: 41.86 (42) bays Office: 15.35 (16) bays <b>Total: 88 bays</b>
<b>WAREHOUSE</b> 1 space for every 100m <sup>2</sup> of GFA plus 1 space for every 100m <sup>2</sup> of open space used for warehousing purpose. - 1440m <sup>2</sup> (Indoor warehouse) - 2746m <sup>2</sup> (Outdoor Storage): - <i>Total 4186m<sup>2</sup>.</i>	<u>Provided</u> <b>Total: 70 bays (18 bay shortfall)</b>

LAND USE	REQUIREMENT
<b>OFFICE</b>  1 space for every 30m <sup>2</sup> of NLA or 1 space for each employee, whichever is greater.  – 460m <sup>2</sup> of net lettable area.	

Table 1: Car Parking Requirements

As depicted in Table 1 above, the development proposes 70 parking bays in lieu of the 88 bays requirement. This results in a parking shortfall of 18 bays.

In considering the appropriateness of this variation the following points are relevant:

- There is scope to consider a variation to the parking requirements under Clause 4.13.2 of LPS 15. The Clause states:  

"... In those cases where the local government is satisfied that a number of spaces less than those stipulated in Table 2 is appropriate, it may grant approval, subject to the number of spaces required being not less than 50%... and then only on the condition that adequate space is reserved to meet the full parking requirement should it be needed at any time in the future."
- In accordance with the above provision, the shortfall is less than 50%, and there is sufficient space to accommodate 18 additional bays on the site if required in the future. This can be achieved in various locations in the rear portion of the site or adjacent to the warehouse, as highlighted in Figure 8 below.

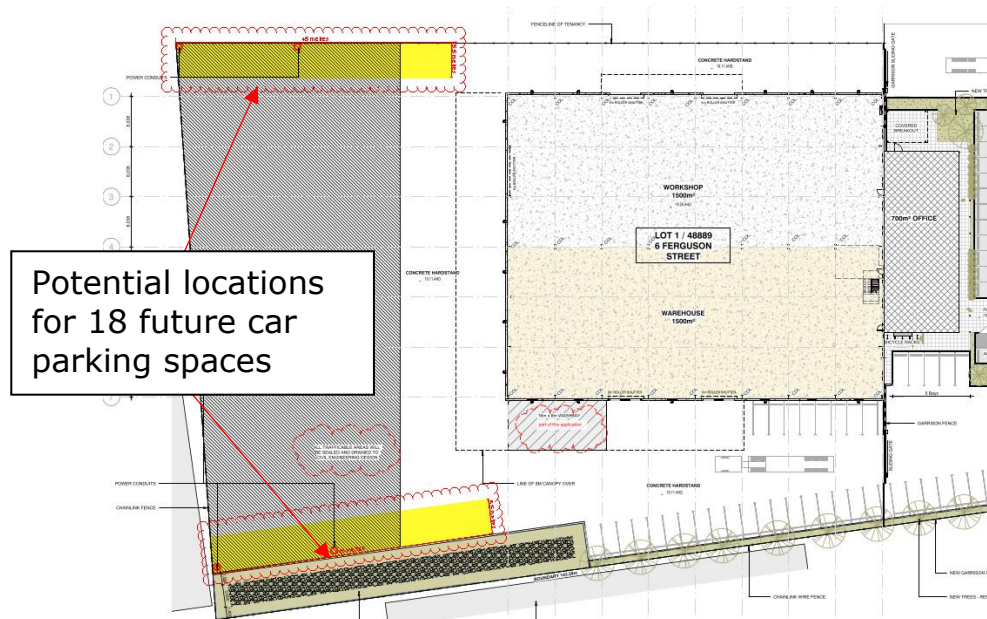


Figure 8: Potential locations for additional carparking



Should Council approve the application, a condition is proposed for the space for 18 car parking bays to be reserved, and the ability to require them to be constructed if required in the future.

- At the OCM on 26 September 2023 approval was granted for a 'Warehouse' and 'Office' development at the subject site. That proposal included a 19 car parking bay shortfall, which was approved subject to a condition for area be reserved for future car parking to be provided if required.
- The applicant has confirmed that the future operator Aggreko will employ 65 staff, being 35 technicians within the warehouse/workshop, and 30 professionals within the office. They expect a maximum of five visitors on site at any one time. The proposed 70 car parking bays would be sufficient to accommodate the expected staff and visitors onsite.
- The development provides seven secure bicycle parking bays, end of trip facilities and is located 150m from bus stops on Kewdale Road. These facilities may encourage staff to use alternative travel options, instead of traveling by car.

Based on the above, it is considered that the car parking arrangements for the proposed use are acceptable. In addition, the proposal includes bicycle parking and end of trip facilities compliant with the requirements of LPS 15. It is recommended that a condition be included to require these bicycle bays, lockers and end of trip facilities be provided.

## **Traffic**

The applicant has provided a Transport Impact Statement (TIS) prepared by Transcore (Attachment 12.3.5). The following points are considered to be of particular relevance:

- The proposed development is estimated to generate a total of 195 vehicular trips per weekday, with 30 trips during weekday AM peak hour and 26 trips during the weekday PM peak hour. These totals include both inbound and outbound vehicle movements.

The estimated traffic generation by the proposed development is not significant and as such would not have a significant impact on the surrounding road network.

- The largest heavy vehicle that is expected to use the subject site is a 27.5m B-double. The turn path analysis in the TIS demonstrates that B-double swept paths can enter, exit, and circulate within the subject site.

The TIS and development plans were referred to DPLH, who have no objection to the proposal.

Based on the above and the analysis provided within the TIA, it is considered that the proposed development can be accommodated within the existing road network.

### Remaining portion of site

It is acknowledged that the proposal includes a portion of land situated between the existing development and the area subject to this application, as shown in Figure 9 below.

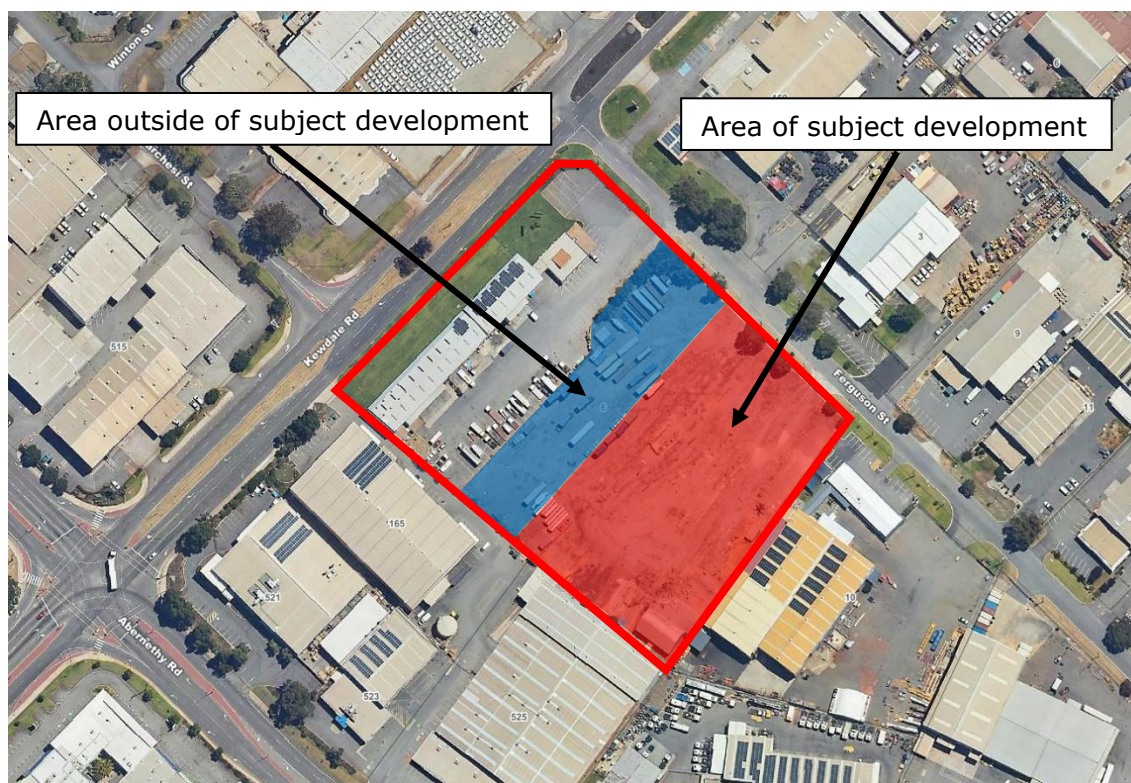


Figure 9: Aerial of the subject site outlined in red

This area of the site ultimately forms part of the property and requires consideration. The plans indicate that it will remain unsealed, and the applicant has subsequently advised that they intend to pursue its sealing and drainage through a future development application.

However, this approach is not considered acceptable for the following reasons:

- Seeking to defer it to a separate process does not exclude it from assessment at this time, nor does it justify leaving it unsealed.
- The area is directly accessible from the crossover to the development, and given the lack of proposed restrictions on access or details on its use, an unsealed surface would remain in use in the interim.
- It is inconsistent with the site's previously approved use as a transport depot, which was subject to a condition requiring the land to be sealed.

- Council has consistently maintained this position for such developments within the Industrial zone, and permitting an unsealed surface would undermine previous approvals and create inconsistencies.

Given the above, it is therefore appropriate to impose a condition requiring the sealing and drainage of this section prior to the occupancy of the development.

### **Public Art Contribution**

Local Planning Policy No. 11 requires public art to be provided as part of the development. The cost for the public art shall be at least 1% of the cost of the proposed development and in this case, at least \$75,000.

The applicant has nominated two possible locations adjacent to the Ferguson Street frontage for sculptures. The applicant has begun to identify possible artists to further progress the concept for the site.

The proposed public art concept will be forwarded to the Public Art Advisory Panel who will make a recommendation to the City regarding the suitability of the proposed art.

It is recommended that a condition be included to provide public art to a minimum value of \$75,000.

### **Conclusion**

The proposed 'Industry-General', 'Warehouse' and 'Office' development is consistent with the objectives of the 'Industrial' zone. The minor LPS 15 variation to car parking is considered acceptable. On this basis, it is recommended that Council approve the application subject to conditions.

### **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.	DPLH Referral Response [ <b>12.3.1</b> - 2 pages]
2.	Development Plans [ <b>12.3.2</b> - 12 pages]
3.	Site Photos [ <b>12.3.3</b> - 3 pages]
4.	Landscape Concept Plan [ <b>12.3.4</b> - 2 pages]
5.	Transport Impact Statement [ <b>12.3.5</b> - 35 pages]



Department of **Planning,  
Lands and Heritage**

OFFICIAL

City of Belmont  
Locked Bag 379  
CLOVERDALE WA 6985

Your ref: 439/2024  
Our ref: DP/10/00702  
Enquiries: Simon Luscombe (6551 9307)

23 December 2024

Attention: Nicholas Reddy

Dear Nicholas,

**Re: Lot 1 (6 - 8) Ferguson Street, Kewdale**

Further to your correspondence dated 23 December 2024, in accordance with the Western Australian Planning Commission (WAPC) Instrument of Delegation dated 18 January 2022, the following comments are provided. This proposal seeks approval for a warehouse, workshop and incidental office (total of 3,700m<sup>2</sup> proposed floor area).

**Land Requirements**

The site abuts Kewdale Road, which is reserved as an Other Regional Road (ORR) in the Metropolitan Region Scheme (MRS), also reserved as Category 2 per WAPC Plan Number SP 694/6. The site is not affected by the ORR reservation.

**Transport Impact Statement**

The above supporting report by Transcore (October 2024), states that the development will generate 195 trips per regular weekday and 30 AM and 26 PM peak hour trips. All access to the site is shown from Ferguson Street, a local road with no access to Kewdale Road. This is in accordance with the Commission's Regional Roads (Vehicular Access) Policy D.C. 5.1, which seeks to minimise the number of new access points onto regional roads.

**Recommendation**

The Department of Planning, Lands and Heritage has no objection to the proposal on ORR planning grounds.

Thank you for your correspondence. Should you have any queries regarding this matter, please contact me on 6551 9307 or via email ([simon.luscombe@dplh.wa.gov.au](mailto:simon.luscombe@dplh.wa.gov.au)).

Yours sincerely

A handwritten signature in blue ink, appearing to read "S Luscombe".

Simon Luscombe  
Principal Planning Officer  
Strategy and Engagement

OFFICIAL




MRS Map



SHEET LIST - 6 FERGUSON STREET			
Sheet Number	Sheet Name	Current Revision	Current Revision Date
DA-01	Cover Sheet	A	21/10/24
DA-02	Site Location	A	21/10/24
DA-03	Existing Conditions & Demo	A	21/10/24
DA-04	Site Plan	A	21/10/24
DA-05	Plan - Ground Floor	A	21/10/24
DA-06	Plan - Office Floor Plan	A	21/10/24
DA-07	Roof Plan	A	21/10/24
DA-08	Elevations	A	21/10/24
DA-09	Elevations	A	21/10/24
DA-10	Sections	A	21/10/24
DA-11	Sections	A	21/10/24



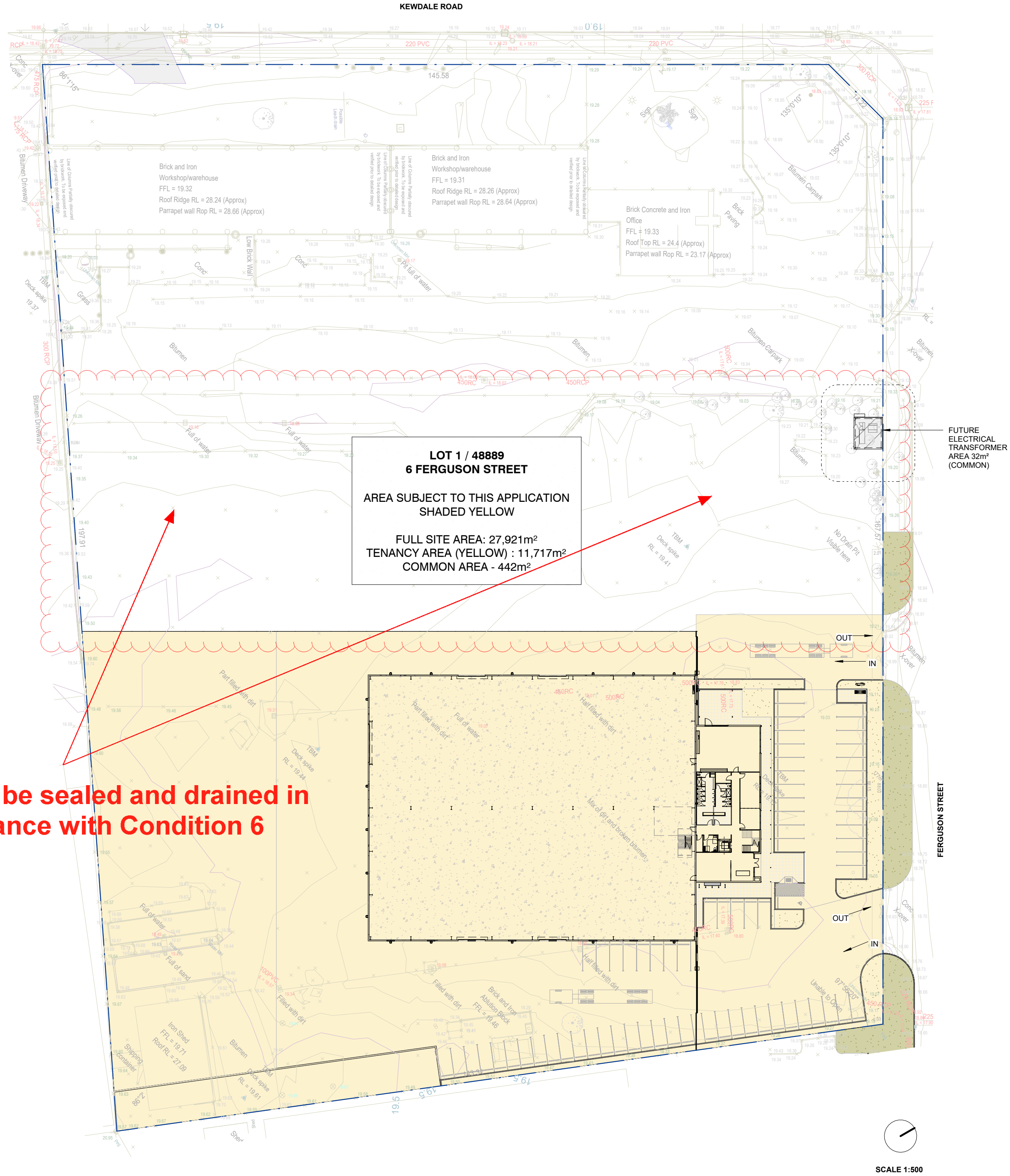
 <b>INDEV WA PTY LTD</b>	Address: Suite 3, Kewdale Central 137 Kewdale Road Kewdale WA 6105 (08) 6314 0077 admin@indev.au BC104426 3569 www.indev.au	© Copyright Indev WA Pty Ltd. All material contained in these documents is subject to copyright and is the property of Indev WA Pty Ltd in accordance with the Copyright Act 1969. This material must not be retained, reproduced or used without written authority from Indev WA Pty Ltd. All rights are reserved.	Project Name: <b>6 Ferguson St - Workshop &amp; Office</b>		Job: <b>23502P</b>	Drawn by: <b>PM</b>	Drawing: <b>DA-01</b>	Drawing Title: <b>Cover Sheet</b>		Sheet: <b>A1</b>	<div>CITY OF BELMONT RECEIVED 24/10/2024 Application No: 439/2024</div>
			Address: <b>6 Ferguson Street, Kewdale.</b>		Project Status: <b>DEVELOPMENT APPLICATION</b>	Checked by: <b>DH</b>	Rev# <b>A</b>	Revision Description <b>DA</b>	Date <b>21/10/24</b>	Scale <b>1 : 500</b>	

Document Set ID: 5912184  
Version: 5, Version Date: 19/12/2024





Site Location - 2/6 Ferguson Street



SCALE 1:500



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Project Name:  
**6 Ferguson St - Workshop & Office**

Address:  
**6 Ferguson Street, Kewdale.**

Job:  
**23502P**

Project Status:  
**DEVELOPMENT APPLICATION**

Drawn by:  
**PM**

Checked by:  
**DH**

Drawing:  
**DA-02**

Rev#  
**A**

Drawing Title:  
**Site Location**

Revision Description  
**DA**

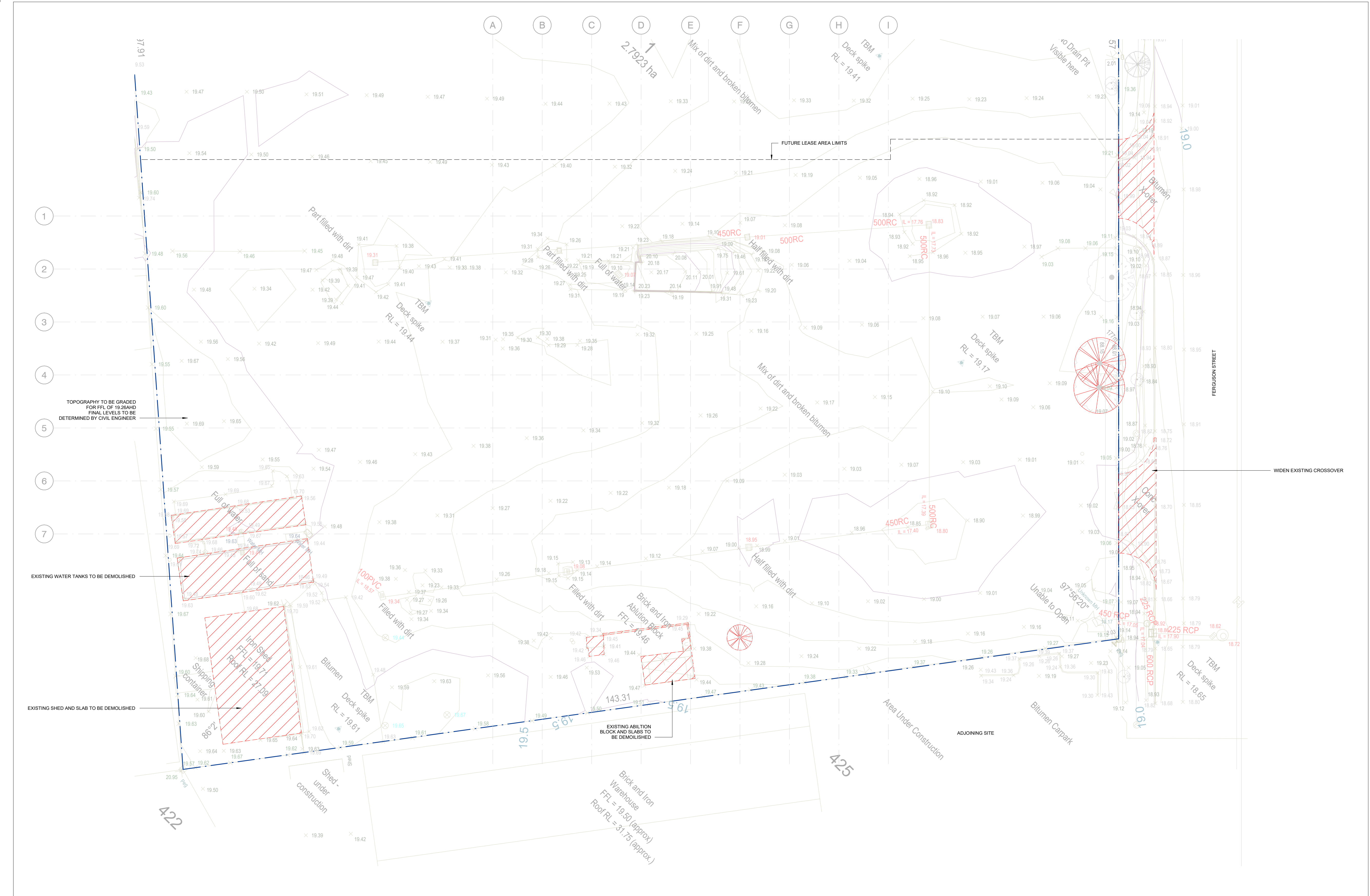
Date  
**21/10/24**


Sheet:  
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Application No: 439/2024

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**1 : 500**

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Version: 5, Version Date: 19/12/2024

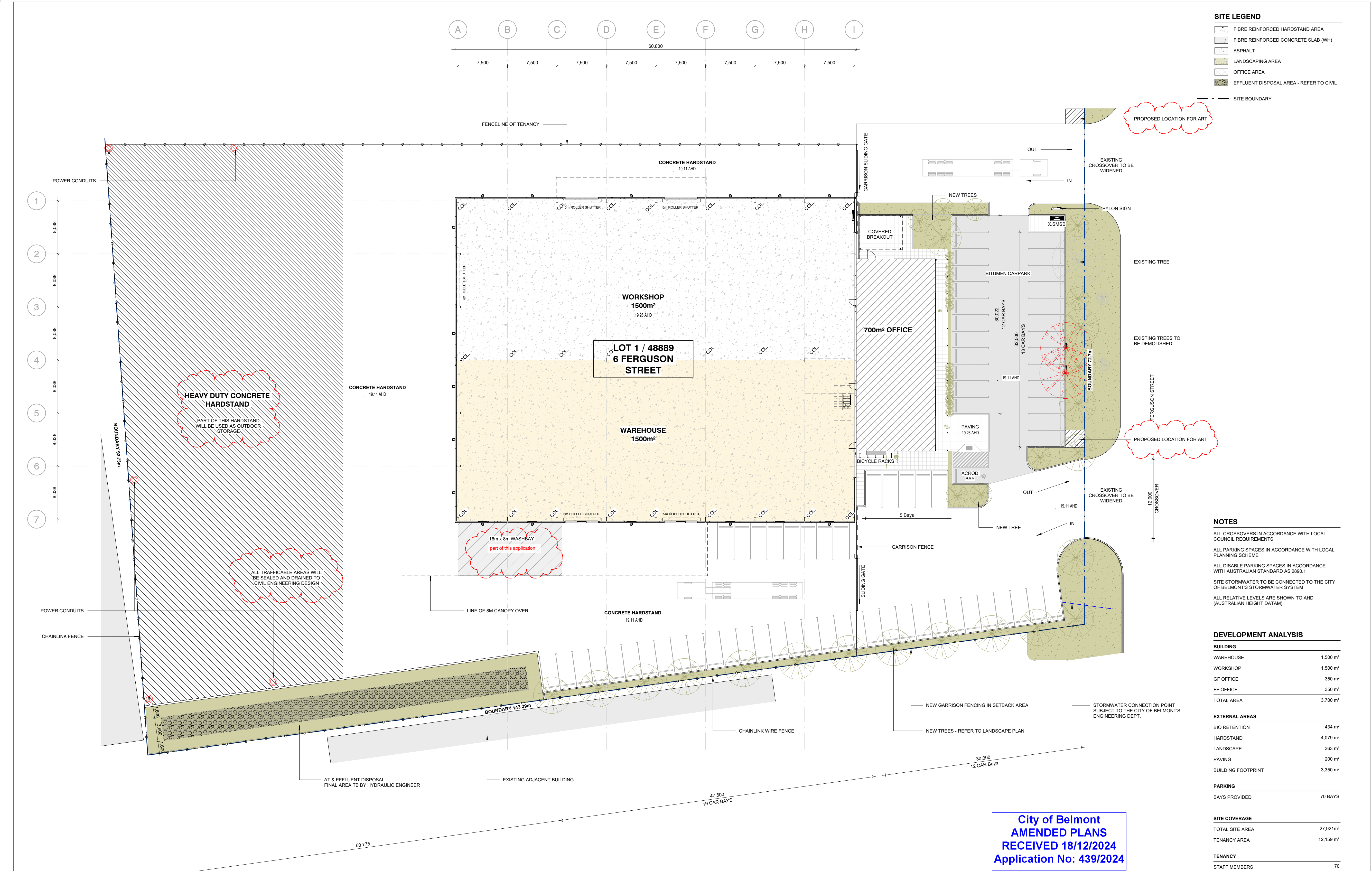





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			Address: <b>6 Ferguson Street, Kewdale.</b>		Project Status: <b>DEVELOPMENT APPLICATION</b>	Checked by: <b>DH</b>	Rev# <b>A</b>	Revision Description <b>DA</b>	Date <b>21/10/24</b>	Scale <b>1 : 250</b>	

Document Set ID: 5912184  
Version: 5, Version Date: 19/12/2024

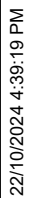




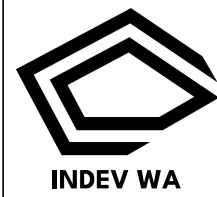
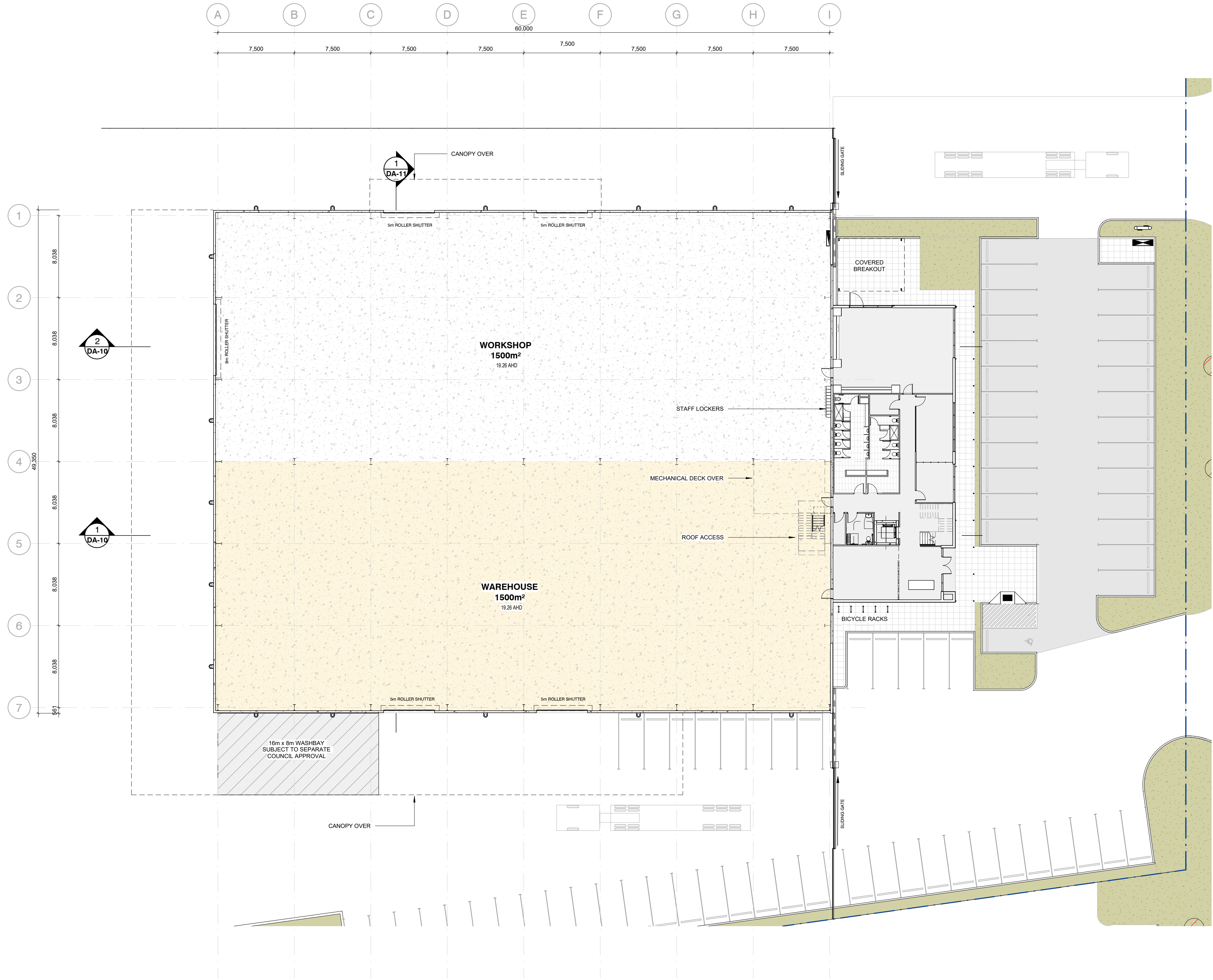
 <div><b>INDEV WA PTY LTD</b> INDEV WA</div>	Address: Suite 3, Kewdale Central 137 Kewdale Road Kewdale WA 6105 (08) 6314 0077 admin@indev.au BC104426 3569 www.indev.au	© Copyright Indev WA Pty Ltd. All material contained in these documents is subject to copyright and is the property of Indev WA Pty Ltd in accordance with the Copyright Act 1969. This material must not be retained, reproduced or used without written authority from Indev WA Pty Ltd. All rights are reserved.	Project Name: <b>6 Ferguson St - Workshop &amp; Office</b>		Job: <b>23502P</b>	Drawn by: <b>PM</b>	Drawing: <b>DA-04</b>	Drawing Title: <b>Site Plan</b>		Sheet: <b>A1</b>
			Address: <b>6 Ferguson Street, Kewdale.</b>		Project Status: <b>DEVELOPMENT APPLICATION</b>	Checked by: <b>DH</b>	Rev# <b>C</b>	Revision Description <b>Rev 2</b>	Date <b>16/12/24</b>	Scale: <b>1 : 250</b>

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Job:  
**23502P**  
Project Status:  
**DEVELOPMENT APPLICATION**

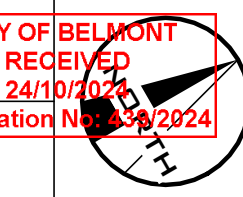
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Drawing:  
**DA-05**  
Rev#  
**A**

Drawing Title:  
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Revision Description  
**DA**

Date  
**21/10/24**

Sheet:  
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Scale:  
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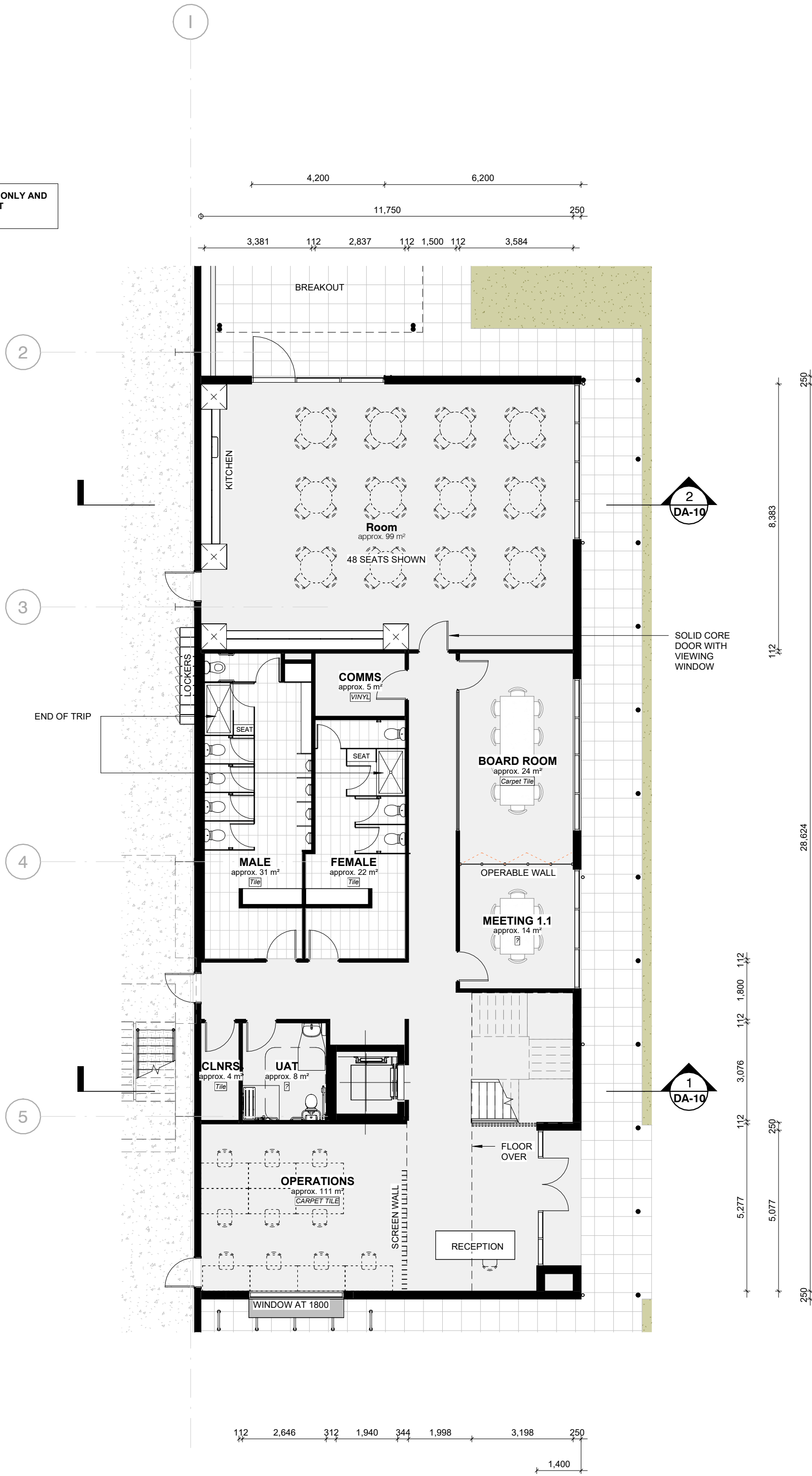


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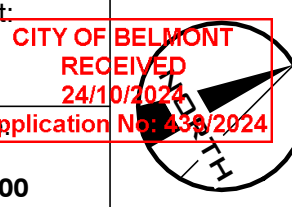
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**DA-06**  
Rev#  
**A**

Drawing Title:  
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Revision Description  
**DA**

Date  
**21/10/24**

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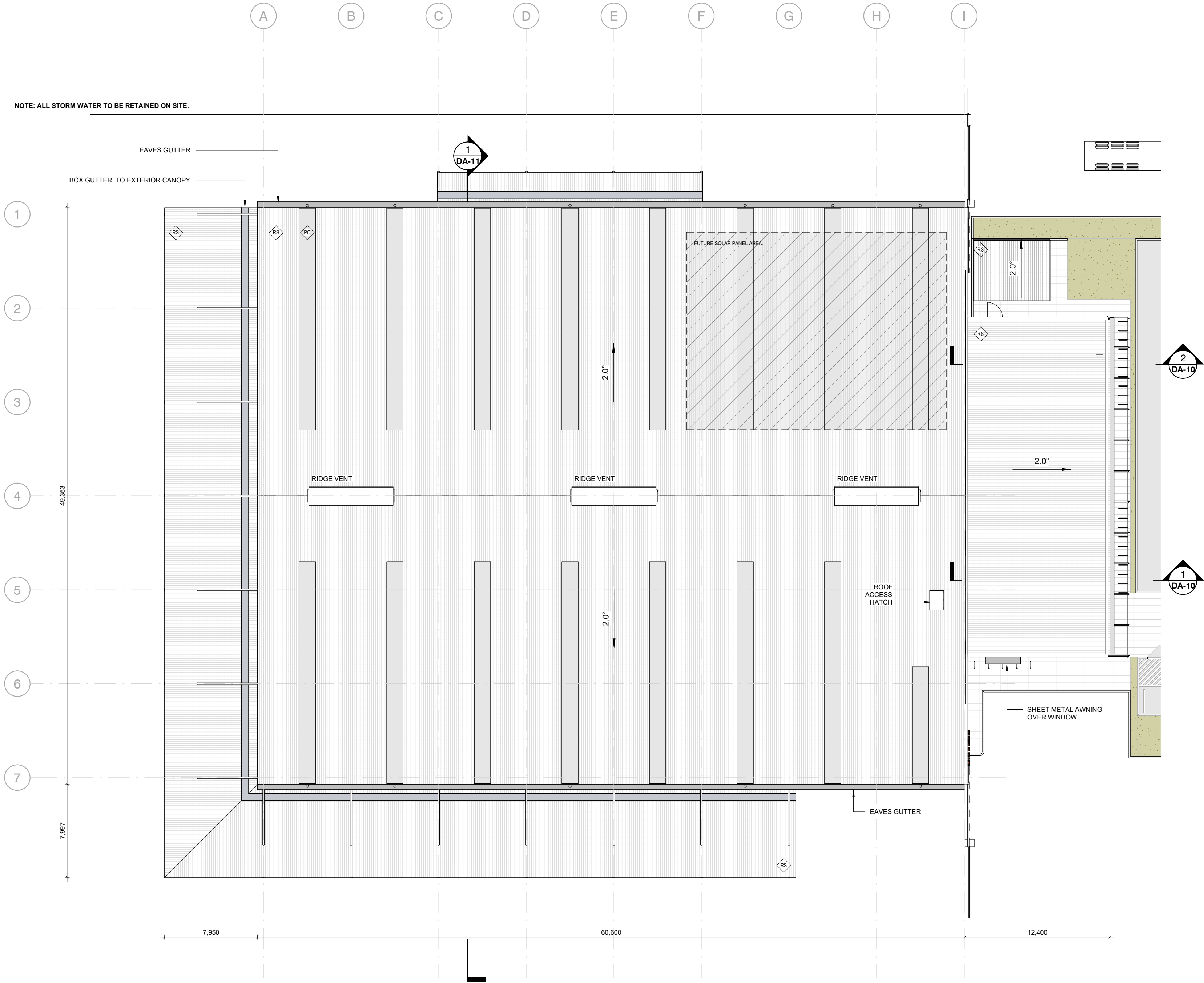
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MATERIALS LEGEND

- SML SHEET METAL CLADDING - ZINCALUM OR COLORBOND 'DOVER WHITE'
- RS METAL ROOF SHEETING - COLOURBOND 'SOUTHERLY'
- PC TRANSLUCENT SHEETING
- CO CONCRETE - PAINT FINISH 'WHITE'
- GL GLAZING
- ST STRUCTURAL STEEL - GALVANISED



**Roof Plan**  
SCALE 1 : 200 @ A1



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Address:  
**6 Ferguson Street, Kewdale.**

Job:  
**23502P**

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Checked by:

**DH**

Drawing:

**DA-07**

Rev#

**A**

Drawing Title:

**Roof Plan**

Revision Description

**DA**

Date  
**21/10/24**

Sheet:

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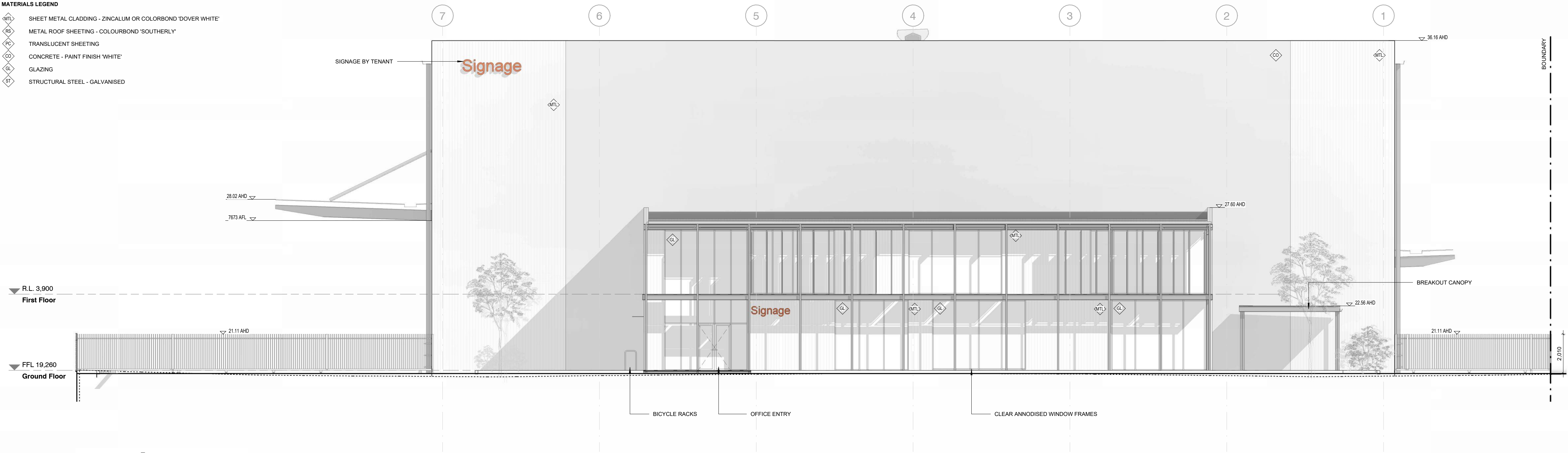
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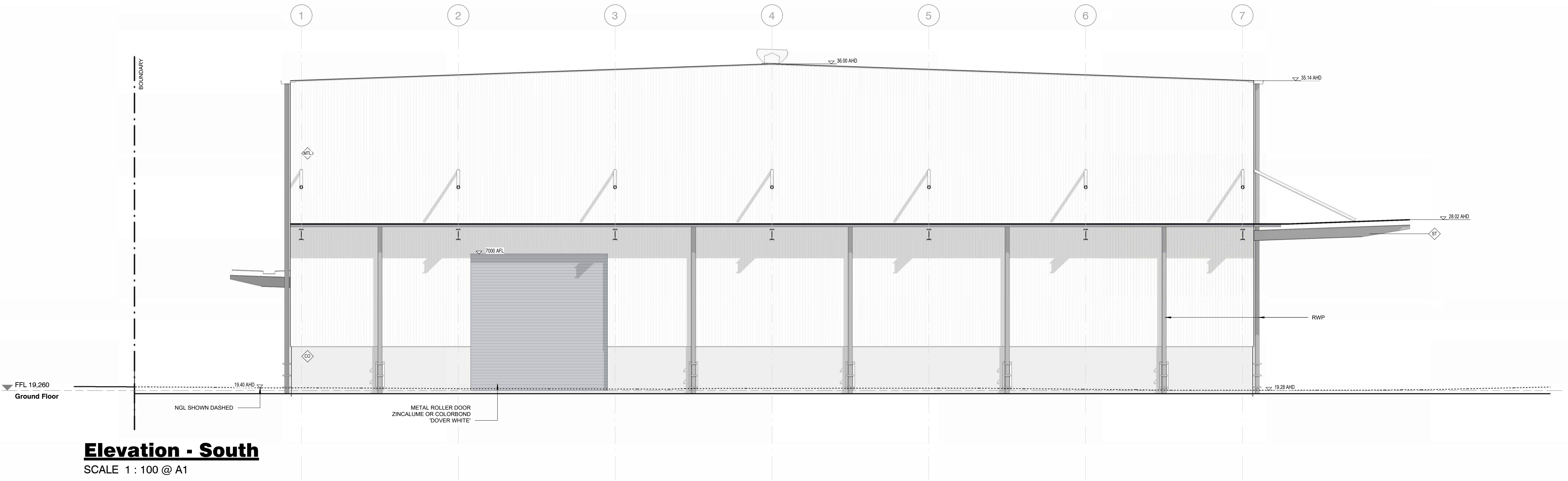
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- METAL ROOF SHEETING - COLOURBOND 'SOUTHERLY'
- TRANSLUCENT SHEETING
- CONCRETE - PAINT FINISH 'WHITE'
- GLAZING
- STRUCTURAL STEEL - GALVANISED



**Elevation - North**  
SCALE 1 : 100 @ A1



**Elevation - South**  
SCALE 1 : 100 @ A1

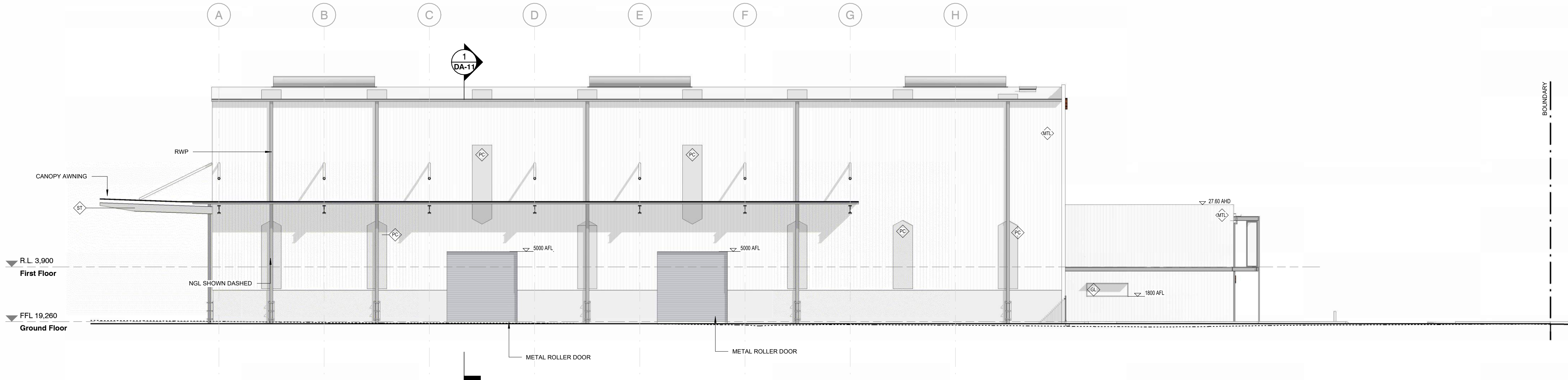
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			Address: <b>6 Ferguson Street, Kewdale.</b>		Project Status: <b>DEVELOPMENT APPLICATION</b>	Checked by: <b>DH</b>	Rev# <b>A</b>	Revision Description <b>DA</b>		Date <b>21/10/24</b>	

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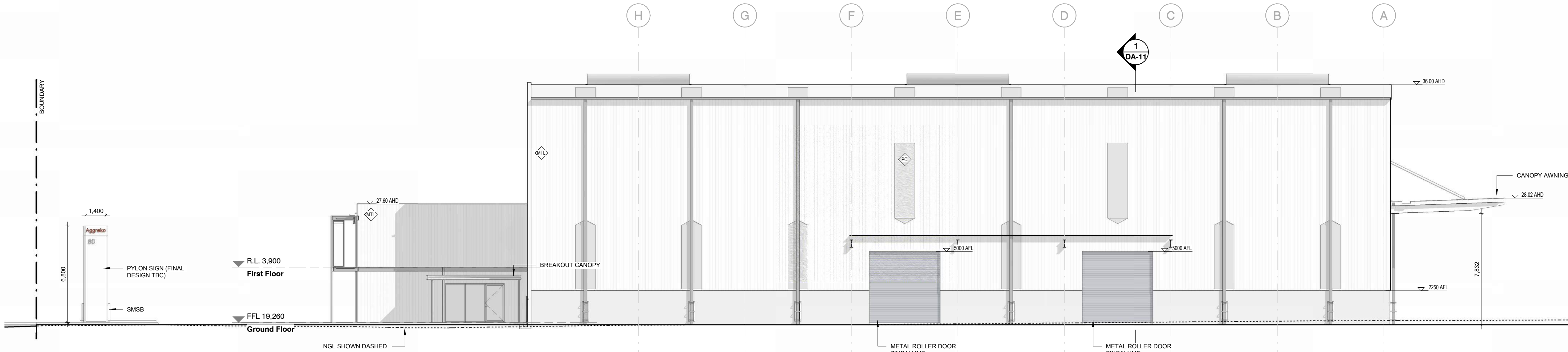


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- RS METAL ROOF SHEETING - COLOURBOND 'SOUTHERLY'
- PC TRANSLUCENT SHEETING
- CD CONCRETE - PAINT FINISH 'WHITE'
- GL GLAZING
- ST STRUCTURAL STEEL - GALVANISED



Elevation - East  
SCALE 1 : 150 @ A1



Elevation - West  
SCALE 1 : 150 @ A1



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Drawing:  
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Rev#  
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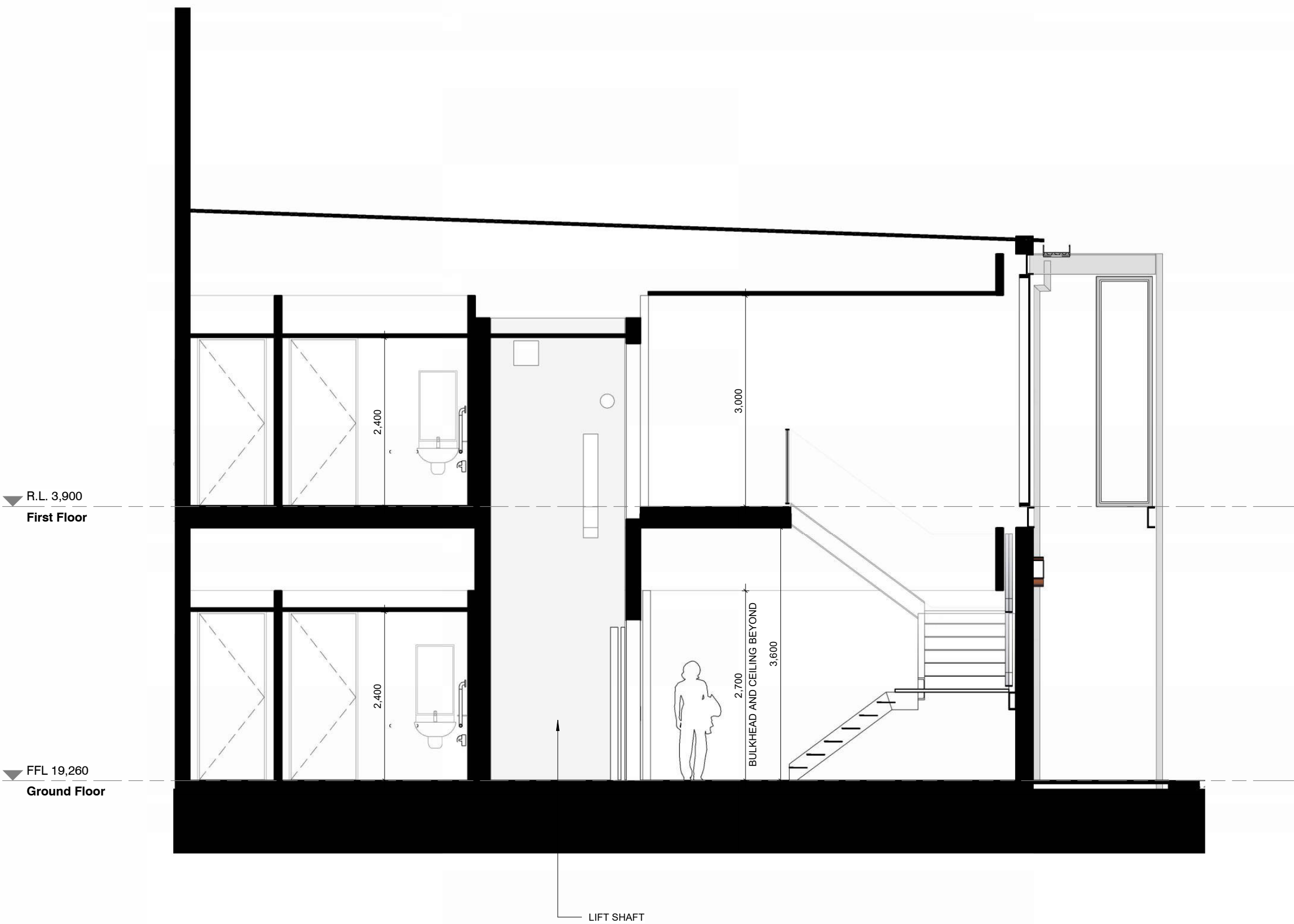
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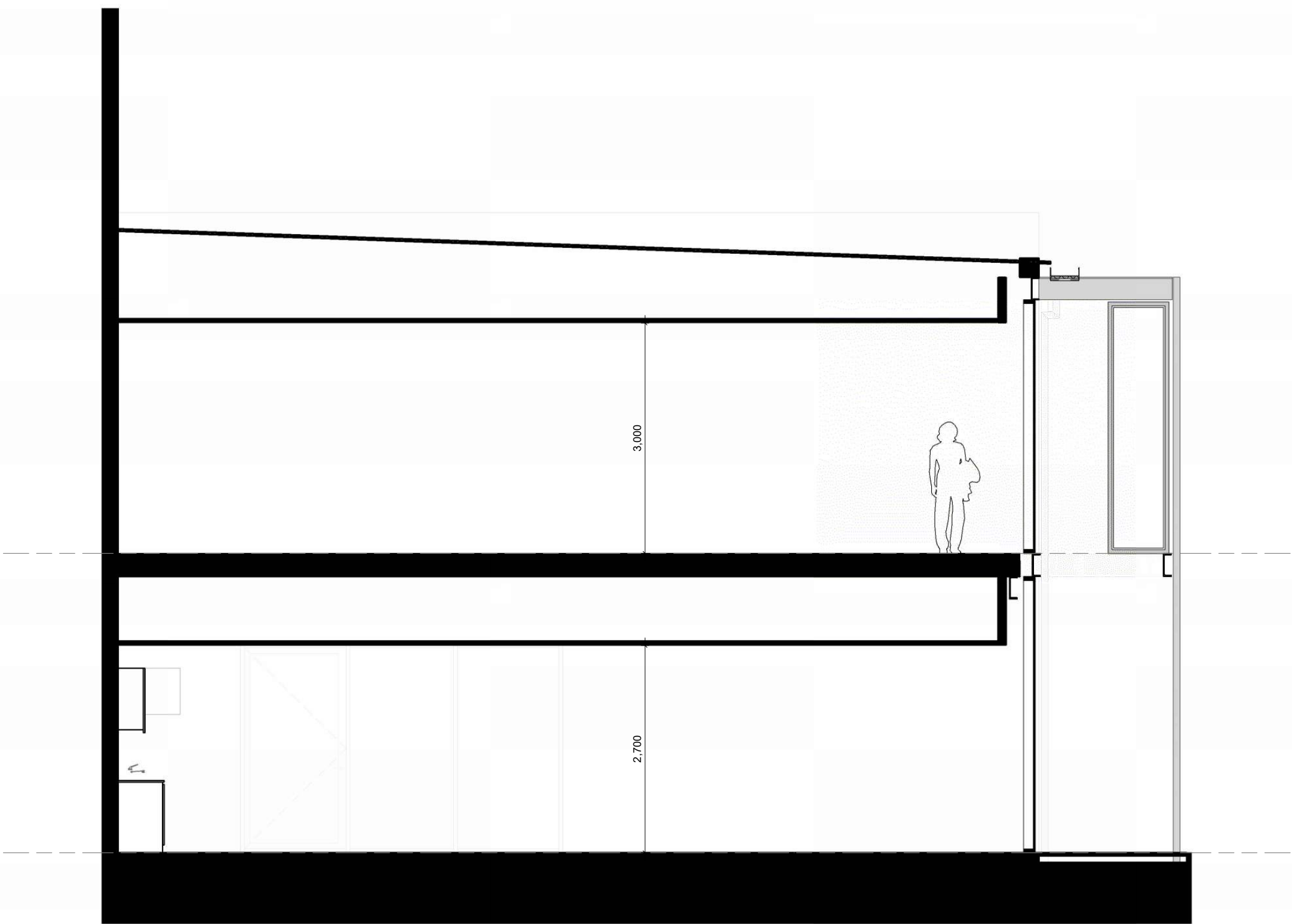
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**Section 1**  
SCALE 1 : 50 @ A1



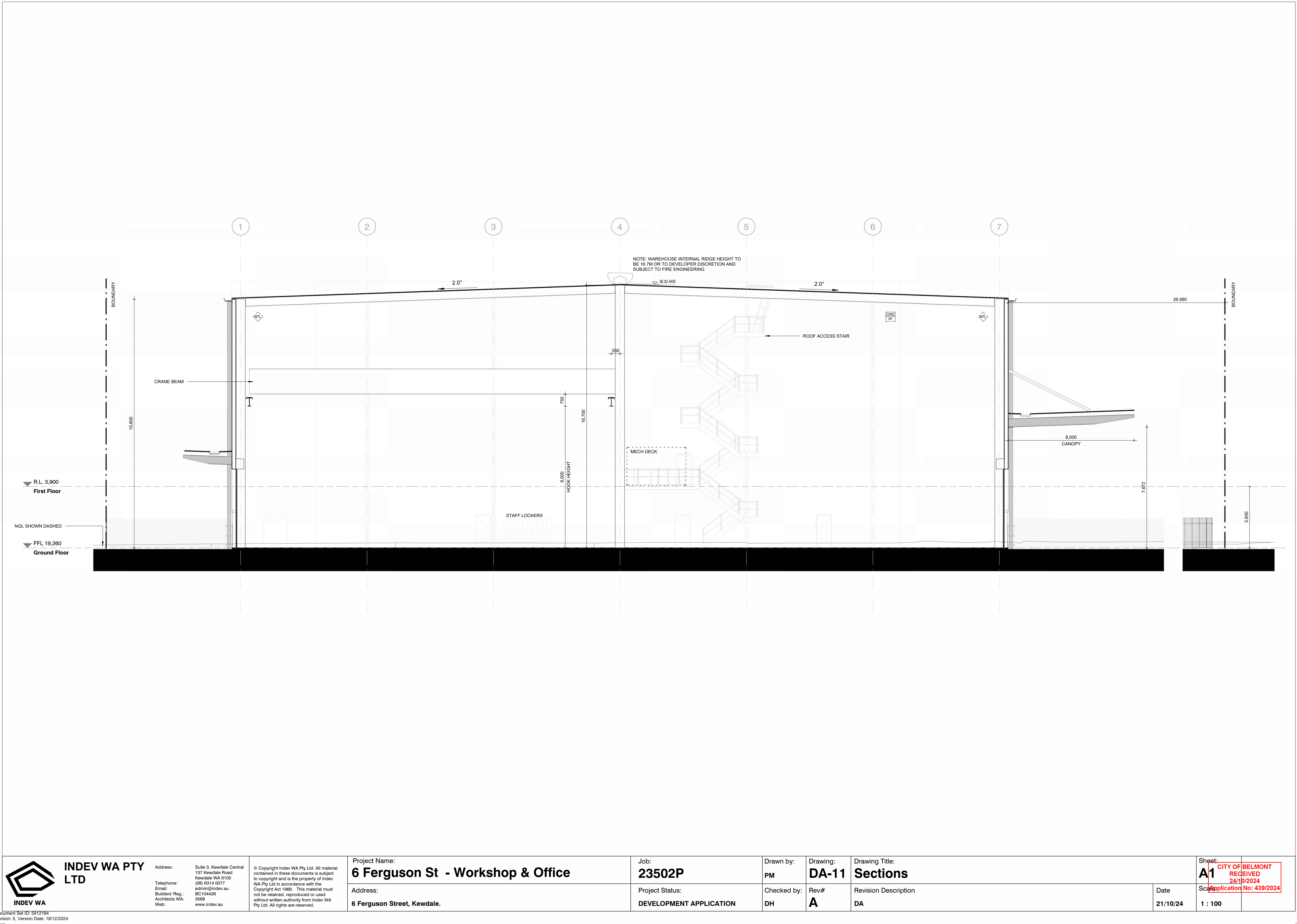
**Section 2**  
SCALE 1 : 50 @ A1


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			Address: <b>6 Ferguson Street, Kewdale.</b>	Project Status: <b>DEVELOPMENT APPLICATION</b>	Checked by: <b>DH</b>	Rev# <b>A</b>	Revision Description <b>DA</b>	Date <b>21/10/24</b>	<b>1 : 50</b>		

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*Photo 1 - Image showing existing development on the subject site.*



*Photo 2 - Image showing subjects sites Ferguson Street frontage, and location of the proposed development .*





*Photo 3 - Image showing 3 Ferguson Street, opposite the subject site.*



*Photo 4 - Image showing 9 Ferguson Street east of the subject site.*



*Photo 5 - Image showing 10 Ferguson Street adjoin the subject site to the south-east.*

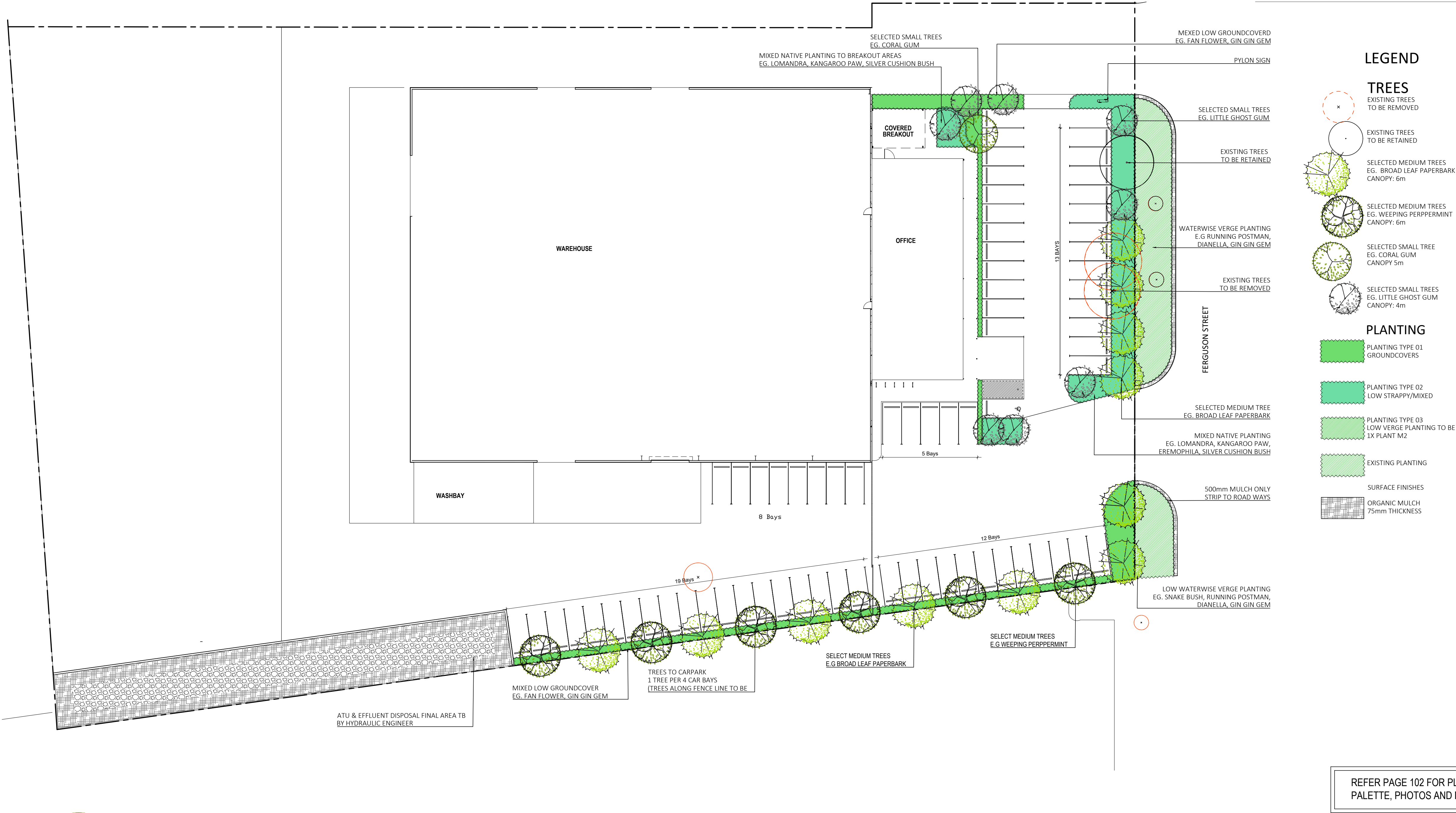


*Photo 6 - Image showing 11 Ferguson Street, east of the subject site.*



GENERAL NOTES:  
1. THIS IS A CONCEPT PLAN ONLY.  
2. ALL STRUCTURES SUBJECT TO ENGINEERING AND COUNCIL APPROVAL.  
3. ALL MEASUREMENTS TO BE CHECKED PRIOR TO CONSTRUCTION.

REV	DATE	DWN	APP	DESCRIPTION
A	14.10.24	ALC	KD	PLANTING PLAN



**kelsie davies**  
landscape architecture

Karrinyup WA 6018  
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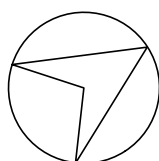
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DEVELOPMENT APPROVAL

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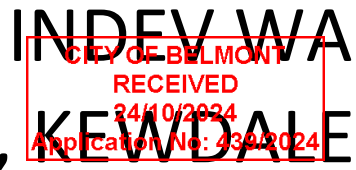
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1:250



# AGGREKO WORKSHOP & OFFICE LANDSCAPE CONCEPT PLAN

INDEX WA  
6 FERGUSON STREET, KEWDALE





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PLANTING IMAGES - TREES



MELqui



EUCtor



EUCvic



AGOfle

GROUND COVERS



KENpro



HEMSna



SCAhum



EREblu



GREGin



ADEcor

STRAPPY & SHRUBS



DIABla



WESgre



CONcan



LEUsil



ANIfle



LOMTan

REV	DATE	DWN	APP	DESCRIPTION
A	14.10.24	ALC	KD	PLANTING PLAN

PLANTING PALETTE

Symbol	Species	Common Name	Quantities	Size
<b>Trees:</b>				
AGOfle	Agonis flexuosa	Weeping Peppermint		100L
EUCtor	Eucalyptus torquata	Coral Gum		100L
EUCvic	Eucalyptus victrix	Little Ghost Gum		
MELqui	Metaleuca quinquenervia	Broad Leaved Paperbark		100L
<b>Shrubs and Groundcovers:</b>				
ADEsun	Adenanthos cuneatus	Coral Carpet		140mm
ANIfle	Arrigozanthus flavidis	Kangaroo Paws		140mm
CORBlu	Correa 'Dusky Belles'	Dusky Belles		230mm
DAMlin	Dampiera linearis	Blue Moon		140mm
DIABla	Dianella tasmanica 'Emerald Arch'	Emerald Arch		140mm
DIABla	Dianella Revoluta	Blue Flax Lilly		140mm
EREblu	Eremophila 'Blue Horizon'	Blue Horizon		140mm
FICnod	Ficinia nodosa	Knobby Club Rush		140mm
GREGin	Grevillea 'Gin Gin Gem'	Gin Gin Gem		140mm
HIBaca	Hibbertia scandens	Snake Vine		140mm
HEMpur	Hemibara purgens	Snake Bush		140mm
KENpro	Kennedia prostrata	Running Postman		140mm
LEUsil	Leucophyta Silver Nugget	Silver Cushion Bush		140mm
LOMTan	Lomandra 'Tanika'	Tanika		200mm
LOMnya	Lomandra 'Nyalla'	Nyalla		200mm
OLEaxi	Olearia axillaris	Coastal Daisy		200mm
MYOpar	Myoporum parvifolium 'Yareena'	Yareena		140mm
SCAhum	Scaevola humilis 'Purple Fusion'	Pan Flower		140mm
TRJjas	Trachelospermum jasminoides	Star Jasmine		140mm
WESgre	Westringia 'Grey Box'	Compact Coastal Rosemary		200mm

NOTES

- GENERAL
  - 1.1 ALL SCALES ARE AS NOTED AND TO SUIT A1 PAPER SIZE.
  - 1.2 THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS REVISED '0' ISSUED FOR CONSTRUCTION AND SIGNED AND APPROVED BY PROJECT MANAGER/SUPERINTENDENT.
  - 1.3 PLANTING SETOUT SHOULD BE CHECKED BY SUPERINTENDENT BEFORE INSTALLATION BEGINS.
- SOIL PREPARATION
  - 2.1 ALL AREAS ARE TO BE FINE GRADED EVENLY TO CONFORM TO KERB LEVELS AND SURROUNDING FINISHES.
  - 2.2 SURFACES SHALL BE FREE FROM DEPRESSIONS, IRREGULARITIES AND NOTICEABLE CHANGES IN GRADE. GENERALLY, GRADES SHALL DEVIATE IN LEVEL NO GREATER THAN 20mm IN ONE LINEAR METRE.
  - 2.3 PLANTED AREAS SHALL BE SPREAD WITH MIN. 50mm OF APPROVED STANDARD SOIL CONDITIONER THAT SHALL BE RIPPED INTO EXISTING SOIL TO A MIN. DEPTH OF 200mm.
  - 2.4 FILL SOIL TO RAISED PLANTER AREAS AND POTS TO BE APPROVED LIGHTWEIGHT LANDSCAPE MIX.
  - 2.5 ALL SITE AND IMPORTED SOILS, POTTING MIX, SOIL CONDITIONERS AND MULCHES TO BE IN ACCORDANCE TO RELEVANT AUSTRALIAN STANDARDS.
- PLANTING
  - 3.1 PLANTED AREAS SHALL BE MULCHED WITH AN ORGANIC (WOODCHIP) MULCH UNLESS OTHERWISE STATED TO A MINIMUM DEPTH OF 75mm.
  - 3.2 ADVANCED TREES SHALL BE STAKED W/ 50x50mm DIA HARDWOOD POSTS. POSTS SHALL BE PAINTED BLACK AND INSTALLED TO A MIN DEPTH OF 500mm. TREES SHALL BE SECURED TO POLES W/ RUBBER TIES IN FIGURE 8.
  - 3.3 TREES PLANTED WITH IN 1000mm OF BOUNDARY WALLS AND/OR PARKING AREAS SHALL BE INSTALLED WITHIN 600mm DEPTH IN/EX ROOT BARRIER MEMBRANE. MEMBRANE SHALL BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
  - 3.4 FINAL PLANTING SHALL BE SELECTED FROM PLANTING PALETTE SCHEDULE.
  - 3.5 PLANTS TO BE SET OUT IN EVEN SPACING TO FILL THE DESIGNATED AREAS.
  - 3.6 IN AREAS OF MIXED PLANTING, SPECIES TO BE SPREAD OUT AT RANDOM, IN GROUPINGS OF 2 OR 3.
  - 3.7 PLANTS SHALL BE SUPPLIED FROM AN INDUSTRY ACCREDITED WHOLESALE NURSERY. PLANTS SHALL BE IN APPROPRIATE SIZE FOR THE LISTED POT SIZE AND IN GOOD HEALTH.
- IRRIGATION
  - 4.1 PLANTING TO GROUND LEVEL TO BE IRRIGATED VIA A FULLY AUTOMATIC SYSTEM FROM MAINS.
  - 4.2 WATER PRESSURE TO HAVE A MINIMUM FLOW RATE OF 30L/pm AT 300KPA FROM THE WATER CONNECTION POINT (OR AS STIPULATED).
  - 4.3 CONTROLLER TO BE LOCATED IN SERVICE ROOM (OR AS SHOWN ON IRRIGATION DETAILS).
  - 4.4 SLEEVES BENEATH PAVED SURFACES AND TO RAISED PLANTING AREAS TO BE PROVIDED BY OTHERS.
  - 4.5 IRRIGATION TO GARDEN BEDS TO BE NETAFIM TECHLINE, SUB SURFACE IRRIGATION. INSTALLED TO MANUFACTURERS SPECIFICATION. IRRIGATION TO TURF TO BE POP UP SPRINKLERS; MP ROTATORS OR SIMILAR. IRRIGATION TO TREES TO BE BUBBLERS; TORO FLOOD BUBBLERS OR SIMILAR.
  - 4.6 ASCON DRAWINGS, MANUALS AND 12 MONTH WARRANTY SHALL BE SUPPLIED BY THE IRRIGATION CONTRACTOR TO THE CLIENT UPON PRACTICAL COMPLETION.
  - 4.7 PLEASE REFER TO IRRIGATION DRAWING SET FOR FINAL LAYOUT AND SCHEDULE (TO FUTURE DETAIL).



DEVELOPMENT APPROVAL

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email: kelsie@kdla.com.au

JOB No. 0492

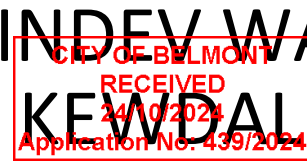
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REV A



FERGUSON STREET  
LANDSCAPE CONCEPT PLAN

INDEX WA  
6 FERGUSON STREET, KEWDALE



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# Proposed Industrial Development

## 6 Ferguson Street, Kewdale

### Transport Impact Statement

PREPARED FOR:  
INDEV WA Pty Ltd

October 2024

CITY OF BELMONT  
RECEIVED  
24/10/2024  
Application No: 439/2024

Document Set ID: 5912184  
Version: 5, Version Date: 18/12/2024

## Document history and status

Author	Revision	Approved by	Date Approved	Revision type
Kunyou Dai	r01	R White	29/06/2023	Draft
Kunyou Dai	r01a	R White	29/06/2023	Final
Roger Bajwa	r01b	B Bordbar	20/12/2023	Revised Final
Roger Bajwa	r02	B Bordbar	23/10/2024	2 <sup>nd</sup> Revised Final

**File name:** t23.046c.rb.r02

**Author:** Roger Bajwa

**Project manager:** Behnam Bordbar

**Client:** INDEV WA Pty Ltd

**Project:** 6 Ferguson Street, Kewdale

**Document revision:** r02

**Project number:** t23.046c

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APPENDIX A: PROPOSED DEVELOPMENT PLAN

APPENDIX B: TURN PATH ANALYSIS

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# 1 Introduction

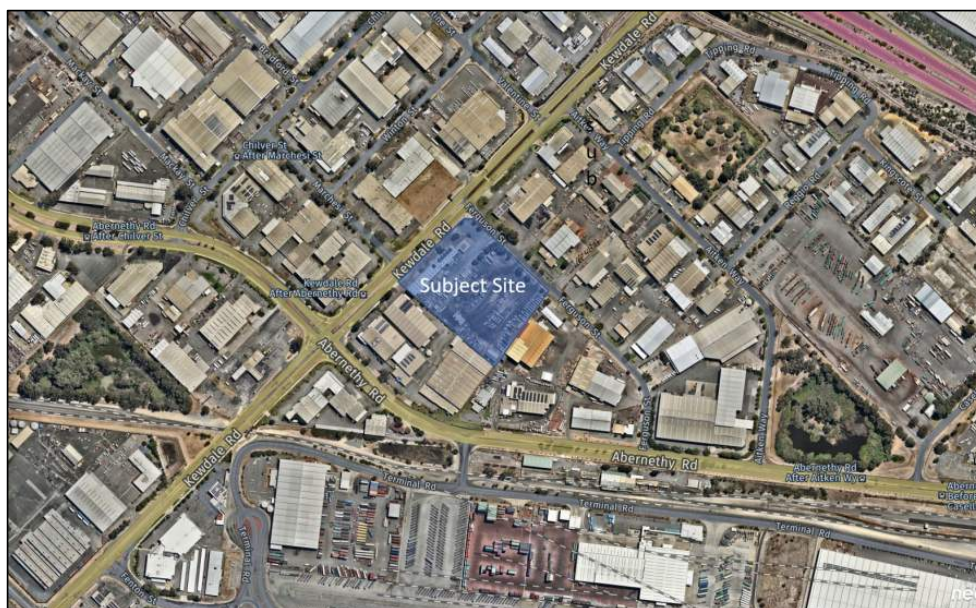
This Transport Impact Statement (TIS) has been prepared by Transcore on behalf of INDEV WA Pty Ltd with regard to a proposed industrial development to be located within the eastern portion of 6 Ferguson Street, Kewdale, in the City of Belmont.

The subject site is located south of the Kewdale Road / Ferguson Street intersection and is currently occupied by an existing industrial development in the western portion and the eastern portion is currently used to park trailers/ equipment.

A development application that proposed demolishing the existing building and redeveloping the entire subject site was approved in September 2023.

As part of this revised development application, the existing industrial development in the western portion of the subject site is proposed to be retained and another industrial development is proposed on the eastern portion of the subject site which is currently vacant land used for trailer/ equipment parking.

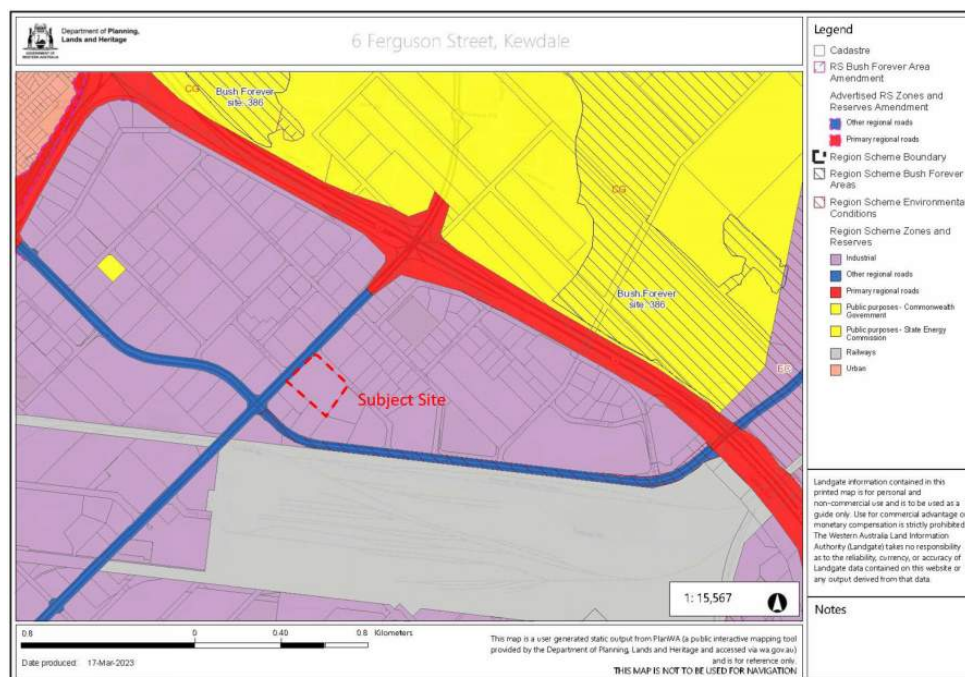
The subject site is bound by Kewdale Road to the northwest, Ferguson Street to the northeast, and industrial buildings to the southwest and southeast, as shown in **Figure 1**.



**Figure 1: Location of the subject site**

The location of the subject site within the Metropolitan Region Scheme (MRS) context is illustrated in **Figure 2**. The subject site is zoned as “Industrial” in the MRS. The MRS map identifies Kewdale Road as an Other Regional Road (Blue Road).

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**Figure 2. Location of the subject site in MRS**

The Transport Impact Assessment Guidelines (WAPC, Vol 4 – Individual Developments, August 2016) states: “A *Transport Impact Statement* is required for those developments that would be likely to generate moderate volumes of traffic<sup>1</sup> and therefore would have a moderate overall impact on the surrounding land uses and transport networks”.

**Section 5** of Transcore’s report provides details of the estimated trip generation for the proposed development. Accordingly, as the total peak hour vehicular trips are estimated to be less than 100 trips, a Transport Impact Statement is deemed appropriate for this development.

Key issues that will be addressed in this report include the traffic generation and distribution of the traffic associated with the proposed development, access and egress movement patterns and parking supply.

<sup>1</sup> Between 10 and 100 vehicular trips per hour

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## 2 Proposed Development

The Development Application (DA) proposes to build an industrial development with an incidental office and associated carpark. The breakdown of floor space for each component of the development is detailed in **Table 1**.

**Table 1: Proposed Development Floor Area**

Area Type	GFA (m <sup>2</sup> )
Workshop	1,500
Warehouse	1,500
Office	700
<b>Total</b>	<b>3,700</b>

As part of the development proposal, vehicular access to the subject site will be facilitated through two existing crossovers on Ferguson Street as detailed in **Section 3.1**. Moreover, a total of 70 on-site parking bays, including one ACROD bay, are proposed to address the parking demand of the proposed development **Section 3.2**.

Refer to **Appendix A** for proposed development plans.

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## 3 Vehicle Access and Parking

### 3.1 Access

Currently, three full-movement crossovers on Ferguson Street serve the subject site. As part of the proposed development, the existing crossovers will be retained, and Crossover 1 and Crossover 2 will serve the proposed development. The existing widths of Crossover 1 and Crossover 2 are approximately 10.5m and 11.5m. These will be widened to 12.0m to accommodate the proposed heavy vehicle movements.

Crossover 3 will continue to serve the existing industrial development with no proposed amendments. It should be noted that Crossover 2 will be a shared crossover and it will provide access to the proposed development as well as the existing hardstand area. The proposed access/egress arrangements are shown in **Figure 3**.



**Figure 3: Proposed access/egress arrangement**

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### 3.2 Parking Supply and Demand

As per the *City of Belmont Local Planning Scheme No. 15* the following parking provision applies to the proposed development:

- Workshop: 1 bay per 50m<sup>2</sup>;
- Warehouse: 1 bay per 100m<sup>2</sup>; and,
- Office: 1 bay per 30m<sup>2</sup>.

The NLA of the workshop and warehouse portion is 1,500 m<sup>2</sup> each and the NLA for the office portion is 384 m<sup>2</sup>. Thus, as per the City's parking provision, the proposed development requires a parking of 58 bays.

As part of the development proposal, a total of 70 parking bays, including one ACROD bay, are proposed to serve the proposed development which complies with and exceeds City parking requirements.

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## 4 Provision for Service Vehicles

The largest heavy vehicle that is expected to use the subject site is a 27.5m B-double. The heavy vehicle will enter the proposed development via the easternmost crossover (Crossover 1) and exit via the westernmost crossover (Crossover 2) and heavy vehicle circulation within the site will be limited to clockwise only.

However, to future-proof the site, additional turn paths are undertaken to assess the entry from Crossover 2 and exit from Crossover 1.

As demonstrated in **Appendix B**, the turn paths confirm satisfactory access, internal circulation and egress for the proposed development.

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## 5 Hours of Operation

The proposed industrial development will operate 24 x 7.

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## 6 Daily Traffic Volumes and Vehicle Types

### 6.1 Existing Development Trip Generation

The area of the site that is subject to development is currently used for trailers and equipment parking. In order to undertake a conservative analysis, the existing trip generation is not discounted from the proposed development trip generation.

### 6.2 Proposed Development Trip Generation

The traffic volumes likely to be generated by the proposed development were estimated in accordance with the *ITE Trip Generation Manual (11<sup>th</sup> Edition)*.

Based on this, the trip rates that were used to estimate the proposed development traffic generation are as follows:

General Light Industrial (110) – 1000 Sq. Ft. GFA

- Weekday daily:  $4.87\text{vpd per } 1000 \text{ sqft GFA} / 0.929 = 5.24\text{vpd} / 100\text{m}^2 \text{ GFA}$ ;
- Weekday AM peak hour:  $0.74 \text{ vph per } 1000\text{sqft GFA} / 0.929 = 0.80\text{vph} / 100\text{m}^2 \text{ GFA}$ ; and,
- Weekday PM peak hour:  $0.65 \text{ vph per } 1000\text{sqft GFA} / 0.929 = 0.70\text{vph} / 100\text{m}^2 \text{ GFA}$ .

Accordingly, it is estimated that the traffic generations for the proposed development with an overall GFA of  $3,700\text{m}^2$  (including incidental office) are:

- Weekday daily:  $[5.24 \times 3,700/100 \text{ (GFA)}] = 195\text{vpd}$ ; and,
- Weekday AM peak hour:  $[0.80 \times 3,700/100 \text{ (GFA)}] = 30\text{vph}$ ; and,
- Weekday PM peak hour:  $[0.70 \times 3,700/100 \text{ (GFA)}] = 26\text{vph}$ .

Accordingly, it is estimated that the proposed development would generate a total of approximately **195** vehicular trips per regular weekday with about **30** trips during the typical weekday AM peak hour and **26** trips during the typical weekday PM peak hour. These totals include both inbound and outbound vehicle movements.

The traffic generation and peak hour split are detailed in **Table 2** based on the directional split assumptions for peak hour periods referenced from the ITE Trip Generation Manual:

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**Table 2. Estimated peak hour trips for the proposed development**

Land Uses	Direction	Weekday Daily Traffic		Weekday AM Peak Hour Traffic		Weekday PM Peak Hour Traffic	
General Light Industrial	Inbound	50%	98	88%	26	14%	3
	Outbound	50%	97	12%	4	86%	23
<b>Overall</b>			<b>195</b>		<b>30</b>		<b>26</b>

## 6.3 Traffic Flow

With respect to the location of the development, permeability and layout of the surrounding road network and the proposed crossovers, the assumed distribution for light vehicle traffic arriving/departing at the site is assumed as follows:

- 70% of trips to/from the northwest along Ferguson Street; and,
- 30% of trips to/from the southeast along Ferguson Street.

**Figure 4** illustrates trip generation and traffic distribution over the local road network for the proposed industrial development.



**Figure 4: Estimated total daily traffic movements for the proposed development**

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## 6.4 Impact on Surrounding Roads

The WAPC Transport Impact Assessment Guidelines (2016) provide guidance on the assessment of traffic impacts:

*“As a general guide, an increase in traffic of less than 10 per cent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 per cent may. All sections of road with an increase greater than 10 per cent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 per cent of capacity. Therefore, any section of road where development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis.”*

As detailed in **Section 6.1**, the proposed development will not increase traffic flows on any roads adjacent to the site by the quoted WAPC threshold of +100vph to warrant further analysis. Therefore, the impact of development traffic on the surrounding road network will not be significant.

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## 7 Traffic Management on the Frontage Streets

**Figure 5** illustrates the road hierarchy of the surrounding roads based on the Main Roads WA Road Information Mapping System. Kewdale Road is classified as a Distributor A and operates under a speed limit regime of 70 km/h, as shown in **Figure 6**.



**Figure 5. Main Roads WA Road Information Mapping System Road Hierarchy**

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Figure 6. Main Roads WA Road Information Mapping System Speed Data

The existing traffic counts sourced from Main Roads WA *Trafficmap* on the surrounding roads in the vicinity are shown in **Figure 7**.

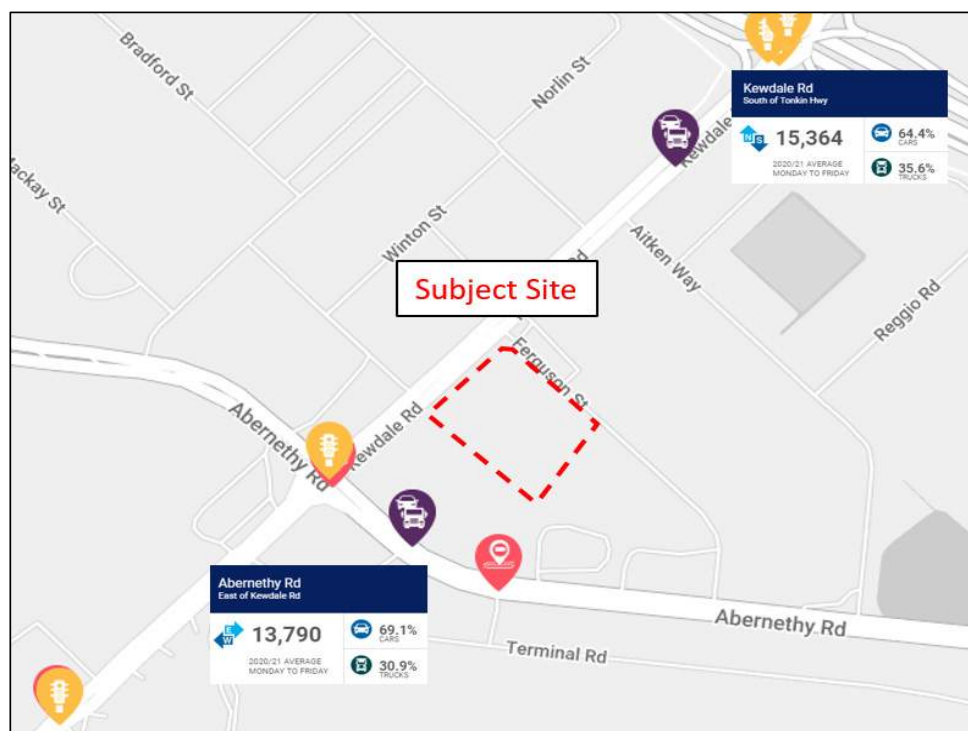


Figure 7. Existing traffic counts on surrounding roads

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**Kewdale Road**, adjacent to the subject site, is constructed as a dual-divided carriageway road with two lanes in each direction, as shown in **Figure 8**. Kewdale Road forms a priority-controlled T-intersection with Ferguson Street.



**Figure 8. Southwest-bound view along Kewdale Road**

**Ferguson Street**, east of the subject site, is constructed as a single-carriageway, two-way, undivided road with approximately 9.1 m wide trafficable pavement, as shown in **Figure 9**. Ferguson Street forms a priority-controlled T-intersection with Kewdale Road to the northwest, and a priority-controlled T-intersection with Abernethy Road to the north.



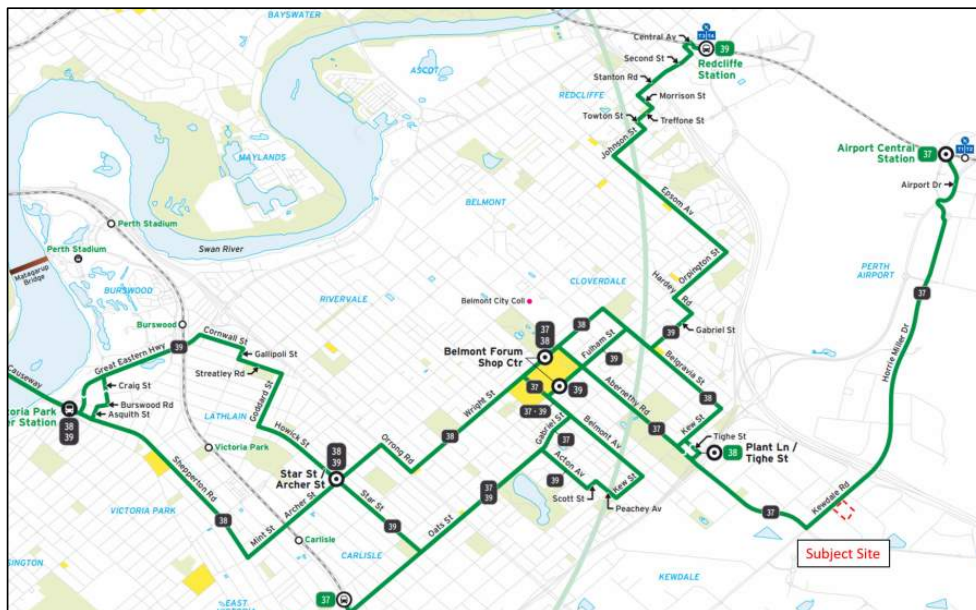
**Figure 9. Northwest-bound view along Ferguson Street**

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## 8 Public Transport Access

As detailed in **Figure 10**, the subject site has good access to the existing bus services that operate in the vicinity of the site.

The closest available bus services are route 37, which operates along Kewdale Road with the nearest bus stop located approximately 120m walking distance from the site. This bus route provides a direct link to Airport Central Station, Oats Street Station, and Belmont Forum Shopping Centre.



**Figure 10. Public transport services (Transperth Maps)**

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## 9 Pedestrian and Cycle Access

There is an existing 2.5m shared path on the northwest verge of Kewdale Road opposite the subject site and on the southeast verge immediately southwest of the subject site.

There are no pedestrian and cyclist facilities provided on Ferguson Street in the vicinity of the subject site at present, however, given the industrial nature of the subject site and surrounding attractions, pedestrian access to the subject site is not a major consideration.

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## 10 Site Specific Issues

No site-specific issues have been identified within the scope of this assessment for the proposed industrial development.

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## 11 Safety Issues

No particular safety issues have been identified within the scope of this assessment for the proposed development.

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## 12 Conclusions

This Transport Impact Statement (TIS) has been prepared by Transcore on behalf of INDEV WA Pty Ltd with regard to a proposed industrial development to be located within the eastern portion of 6 Ferguson Street, Kewdale, in the City of Belmont.

The subject site is located south of the Kewdale Road / Ferguson Street intersection and is currently occupied by an existing industrial development in the western portion and the eastern portion is currently used to park trailers/ equipment.

A development application that proposed demolishing the existing building and redeveloping the entire subject site was approved in September 2023.

As part of this revised development application, the existing industrial development in the western portion of the subject site is proposed to be retained and another industrial development is proposed on the eastern portion of the subject site which is currently vacant land used for trailer/ equipment parking.

As part of the development proposal, vehicular access to the subject site will be facilitated through two existing crossovers on Ferguson Street. Moreover, a total of 70 on-site parking bays, including one ACROD bay, are proposed to address the parking demand of the proposed development which complies with and exceeds the City of Belmont's parking requirements.

It is estimated that the proposed development would generate a total of approximately **195** vehicular trips per regular weekday with about **30** trips during the typical weekday AM peak hour and **26** trips during the typical weekday PM peak hour. These totals include both inbound and outbound vehicle movements. Thus, the estimated traffic generation by the proposed development is not significant and as such would not have a significant impact on the surrounding road network.

The largest heavy vehicle that is expected to use the subject site is a 27.5m B-double. Turn path analysis undertaken for a B-double shows satisfactory entry, egress, and circulation within the subject site.

No particular transport or safety issues have been identified for the proposed development.

Accordingly, it is concluded that the traffic-related issues should not form an impediment to the approval of the proposed industrial development.

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# Appendix A

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## PROPOSED DEVELOPMENT PLAN

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# Appendix B

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## TURN PATH ANALYSIS

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Austroads 2023: 27.5m B-double  
B-double Left-in/ Right-out

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LEGEND

Vehicle Body

Wheel Path

500mm Clearance

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6 Ferguson Street, Kewdale  
Austroads 2023: 27.5m B-double  
B-double Right-in/ Left-out

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Vehicle Body

Wheel Path

500mm Clearance

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6 Ferguson Street, Kewdale  
Austroads 2023: 27.5m B-double  
B-double - Wash Bay

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LEGEND

Vehicle Body

Wheel Path

500mm Clearance

t23.046c.sk12

14/10/2024

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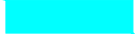



6 Ferguson Street, Kewdale  
Austroads 2023: 27.5m B-double  
B-double Left-in/ Right-out - Anticlockwise Circulation

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**LEGEND**

Vehicle Body 

Wheel Path 

500mm Clearance 

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Austroads 2023: 27.5m B-double  
B-double Right-in/ Left-out - Anticlockwise Circulation

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LEGEND

Vehicle Body

Wheel Path

500mm Clearance

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B-double Left-in/ Right-out

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LEGEND

Vehicle Body

Wheel Path

500mm Clearance

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B-double Right-in/ Left-out

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LEGEND

Vehicle Body

Wheel Path

500mm Clearance

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B-double - Wash Bay

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Austroads 2023: 27.5m B-double  
B-double Left-in/ Right-out - Anticlockwise Circulation

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**LEGEND**

Vehicle Body  
Wheel Path  
500mm Clearance

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B-double Right-in/ Left-out - Anticlockwise Circulation

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LEGEND

Vehicle Body

Wheel Path

500mm Clearance

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## 12.4 Policy Review: CP 11 Electoral Caretaker Period Policy

Voting Requirement	:	Absolute Majority
Subject Index	:	32/015
Location/Property Index	:	N/A
Application Index	:	N/A
Disclosure of any Interest	:	Nil
Previous Items	:	12/12/23 Item 12.8
Applicant	:	N/A
Owner	:	N/A
Responsible Division	:	Corporate and Governance

### Council role

**Executive** The substantial direction setting and oversight role of the Council e.g. adopting plans and reports, accepting tenders, directing operations, setting and amending budgets.

### Purpose of report

To seek Council endorsement of the reviewed Caretaker Policy following legislative amendments.

### Summary and key issues

In accordance with section 2.7(2)(b) of the *Local Government Act 1995 (WA)* (the Act), Council is to determine the local government's policies.

Amendments to the Act and *Local Government (Functions and General) Regulations 1996 (WA)* (the Regulations) restricts the types of decisions and activities that Council may undertake in the period from the close of nominations until the day after the election result is declared.

## Officer Recommendation

That Council endorses:

1. The amended CP11 Electoral Caretaker Period as per Attachment 12.4.2.
2. Any further minor administrative amendments/layout changes as required prior to publication on website.

**An absolute majority of Council is required**

## 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 City's website will be updated.

## Statutory environment

The *Local Government Act 1995 (WA)* section 1.4A states:

### Section 1.4A. Caretaker period

(1) In this Act — caretaker period, in relation to a local government, means a period that —

(a) begins at the close of nominations (as defined in section 4.49(a)) for a relevant election for the local government; and

(b) ends —

- (i) on the day after the day on which the returning officer declares the result of the relevant election under section 4.77; or
- (ii) if section 4.57(1) applies to the relevant election — on the day after the day on which the close of nominations falls; or
- (iii) if section 4.58(1) applies to the relevant election — on the day after the day on which the candidate dies.

(2) In subsection (1) —

**relevant election** means any of the following —

- (a) an ordinary election;
- (b) an inaugural election;
- (c) an election under section 4.11, 4.12, 4.13 or 4.14;
- (d) an election under section 4.15 after an election that is a relevant election under paragraph (a), (b) or (c) or this paragraph is declared invalid.

The restrictions on what local government may do during the caretaker period are contained in section 3.73 of the *Local Government Act 1995 (WA)* which states:

### **3.73. Restrictions on what local government may do during caretaker period**

(1) In this section —

**emergency means** —

- (a) the occurrence, or imminent occurrence, of an event, situation or condition that is a hazard under the definition of that term in the Emergency Management Act 2005 section 3; or
- (b) a public health emergency as defined in the Public Health Act 2016 section 4(1);

**land transaction** has the meaning given in section 3.59(1);

**major land transaction** has the meaning given in section 3.59(1);

**major trading undertaking** has the meaning given in section 3.59(1);

**significant act** means any of the following —

- (a) making a local law (including making a local law to amend or repeal a local law);

- (b) entering into, or renewing or terminating, the contract of employment of the CEO or of a senior employee;
  - (c) entering into a major land transaction;
  - (d) entering into a land transaction that is preparatory to entry into a major land transaction;
  - (e) commencing a major trading undertaking;
  - (f) entering into a contract, or other agreement or arrangement, in prescribed circumstances;
  - (g) inviting tenders in prescribed circumstances;
  - (h) deciding to do anything referred to in paragraphs (a) to (g);
  - (i) an act done under a written law or otherwise that is a prescribed act.
- (2) During a caretaker period, a local government must not do a significant act.
- (3) Subsections (4) to (6) apply despite subsection (2).
- (4) A local government may do a significant act during a caretaker period if —
- (a) the local government’s decision to do the significant act was made before the caretaker period; and
  - (b) any prescribed requirements are met.
- (5) A local government may do a significant act during a caretaker period if it is necessary for the local government to do the significant act during the caretaker period in order to comply with any of the following —
- (a) a written law;
  - (b) an order of a court or tribunal;
  - (c) a contractual obligation of the local government under a contract entered into by the local government before the caretaker period.
- (6) The Departmental CEO may authorise a local government to do a significant act during a caretaker period if the Departmental CEO is satisfied that it is necessary for the local government to do the significant act during the caretaker period —
- (a) because of an emergency; or
  - (b) to ensure the proper operation of the local government.



## Local Government (Functions and General) Regulations 1996 (WA)

### 3A. Significant acts

- (1) In this regulation, references to paragraphs are to paragraphs of the definition of **significant act** in section 3.73(1) of the Act (unless otherwise indicated).
- (2) For the purposes of paragraph (f), entering into a contract is a significant act if either or both of the following apply —
  - (a) under the contract, the local government is to, or is expected to, provide or receive consideration that is, or is expected to be —
    - (i) more than \$250 000 (in total); or
    - (ii) worth more than \$250 000 (in total);
  - (b) under the contract, the local government is to, or is expected to, acquire or dispose of property the market value of which is, or is expected to be, more than \$250 000 (in total).
- (3) If a local government intends to enter into 2 or more contracts in circumstances such that the desire to avoid the requirements of subregulation (2) is a significant reason for not dealing with the matter in a single contract, for the purposes of paragraph (f), entering into any of the contracts is a significant act.
- (4) In subregulations (2) and (3) —
  - acquire** includes lease or license from another person;
  - contract** means a contract or other agreement or arrangement;
  - dispose** includes lease or license to another person;
  - property** includes any interest, or any share of an interest, in any property.
- (5) For the purposes of paragraph (g), inviting a tender is a significant act if the tender —
  - (a) is required to be publicly invited under regulation 11(1) or 12(2); or
  - (b) would be required to be publicly invited under regulation 11(1) or 12(2) but for regulation 11(2).
- (6) For the purposes of paragraph (i), each of the following is a significant act —
  - (a) each of the following under Part 3 Division 4 of the Act —
    - (i) establishing a regional local government;

- (ii) amending the establishment agreement for a regional local government;
- (iii) winding up a regional local government, otherwise than at the direction of the Minister;
- (iv) withdrawing from a regional local government;
- (v) forming a regional subsidiary;
- (vi) amending the charter for a regional subsidiary;
- (vii) winding up, or withdrawing from, a regional subsidiary;
- (b) commencing the preparation of any of the following under the *Planning and Development (Local Planning Schemes) Regulations 2015* Part 3 —
  - (i) a local planning strategy;
  - (ii) an amendment to a local planning strategy;
  - (iii) a notice of revocation in respect of a local planning strategy;
- (c) passing a resolution of the kind referred to in the *Planning and Development (Local Planning Schemes) Regulations 2015* regulation 19(1);
- (d) passing a resolution of the kind referred to in the *Planning and Development (Local Planning Schemes) Regulations 2015* regulation 35(1) in relation to a complex amendment (as defined in regulation 34 of those regulations);
- (e) commencing a review of a local planning scheme under the *Planning and Development (Local Planning Schemes) Regulations 2015* regulation 65;
- (f) commencing the preparation of an instrument of repeal in respect of a local planning scheme under the *Planning and Development Act 2005* section 74(b);
- (g) doing either of the following under the *Planning and Development (Local Planning Schemes) Regulations 2015* Schedule 2 Part 2 Division 2 as that Division has effect as part of a local planning scheme of the local government —
  - (i) resolving to prepare or amend a local planning policy;
  - (ii) commencing the preparation of a notice of revocation in respect of a local planning policy;
- (h) publicly inviting persons to apply to join a panel of pre-qualified suppliers under Part 4 Division 3;

(i) deciding to do anything referred to in paragraphs (a) to (h) of this subregulation.

(7) Subregulation (6)(b) to (g) do not apply to anything done, and subregulation (6)(i) does not apply to a decision to do anything, for the purpose of complying with an order or notice given under the *Planning and Development Act 2005* section 76, 77A, 211 or 212.

[Regulation 3A inserted: SL 2023/102 r. 60.]

### **3B. Decisions taken before caretaker period**

For the purposes of section 3.73(4)(b) of the Act, the local government must do the following before doing the significant act —

- (a) give local public notice of the local government’s intention to do the significant act, including —
  - (i) details of the significant act and the date on which the local government intends to do the significant act; and
  - (ii) details of the decision to do the significant act referred to in section 3.73(4)(a) of the Act and the date on which the decision was made;
- (b) provide a copy of the notice given under paragraph (a) to the Departmental CEO.

## **Background**

Council adopted CP11 Electoral Caretaker Period at the December 2019 Ordinary Council Meeting (OCM) with minor reviews to the policy in 2022 and 2023. The introduction of s3.73 of the Act requires the policy to be amended.

The Act and the Regulations were amended in 2023 with s3.73 of the Act becoming operational on 1 July 2024 restricting what actions may be done by the local government during the caretaker period. Prior to this time, the local government through policy governed what matters could be actioned during the caretaker period.

The caretaker period is the period from the close of nominations to the day after the election result is declared and applies to ordinary local government elections. The period is roughly from early August to the Monday after the third Saturday in October in an ordinary local government election year.

## Report

With the introduction of s3.73 of the Act, several amendments to the policy are required as the new legislation now restricts what can be actioned during the caretaker period removing CEO discretion in a number of instances.

Under s3.73 (2) significant acts are not able to be undertaken during the Caretaker period. These include but are not limited to:

- CEO recruitment and termination
- Entering Contracts worth more than \$250,000 including acquiring or disposing of land
- Inviting tenders and applications to join pre-qualified supplier panels.
- Making a local law (including amending or repealing)
- Commencing a major trading undertaking
- Commencing, amending or revoking a local planning strategy
- Resolving to prepare, amend or revoke a local planning policy.

A local government may do a significant act if:

- the decision to proceed was made prior to the commencement of the caretaker period and local public notice is given or
- if it is required by law or court, or
- the local government is contractually obliged.

Amendments have also been made to the policy to clarify protocols to be followed:

- by candidates (including those elected members renominating)
- for City
  - events
  - publicity and promotional activities
- for website and social media content posted by the City.
- For discretionary community consultation.

A tracked change version of CP 11 is included at Attachment 12.4.1. A clean copy of the amended policy is included (refer Attachment 12.4.2).

## 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.	Electoral Caretaker Period Tracked Changes All Comments [ <b>12.4.1</b> - 9 pages]
2.	Electoral Caretaker Period Clean [ <b>12.4.2</b> - 8 pages]



## {item-title}

### Policy Objective

~~This Policy establishes protocols for the purpose of preventing actual and perceived advantage or disadvantage to a candidate in a local government election due to the use of public resources or from decisions made by the Council or administration on behalf of the City during the period immediately prior to an election.~~

This policy establishes protocols in the lead up to, and immediately after to the Election day ensuring that major decisions which would bind an incoming Council are avoided where possible, preventing the use of public resources in ways that may be seen as advantageous to or promoting candidates.

To ensure The policy ensures the City's activities, and those of Elected Members who are candidates in local government elections, are undertaken in a manner that supports a high standard of integrity during local government election periods.

### Policy Statement

To ensure the City's activities, and those of Elected Members who are candidates in local government elections, are undertaken in a manner that supports a high standard of integrity during local government election periods.

### Policy Detail

This policy applies to Elected Members, electoral candidates and employees of the City during a **Caretaker Period** and covers:

- Notices of Motions submitted by Elected Members; and De
- Decisions made by the Council;
- Promotional materials published by the City;
- Discretionary community consultation;
- Events and Functions held by the City;
- Use of the City's resources; and
- Access to information held by the City.

#### 1. Caretaker Period Protocols – Decision Making

##### 1.1 Notice of Caretaker Period and Policy requirements

The CEO will ensure that:

- a) Elected Members and employees are advised in writing of the impending **Caretaker Period** and Policy requirements at least 30 days prior to the close of nominations of the commencement of a **Caretaker Period**.

- b) Candidates are provided with a copy of this Policy at the time of their nomination for election, to ensure ~~their~~ awareness of the Policy requirements.

#### ~~1. Scheduling Major Policy Decisions~~Significant Acts

~~The CEO will use reasonable endeavours to ensure that during a Caretaker Period, unless Extraordinary Circumstances s.3.73(4) or s.3.73(5) apply:~~

- ~~a) Council or Committee agendas do not include any report or recommendation that if adopted would constitute a Major Policy Decision~~Significant Act.
- ~~b) Council forums, workshops or briefings, do not list for discussion any matter that relates to any Major Policy Decision~~Significant Act.

~~The CEO shall use reasonable endeavours to ensure that, unless Extraordinary Circumstances apply, Major Policy Decisions~~Significant Acts are either:

- ~~a) Considered by the Council prior to the Caretaker Period; or~~
- ~~b) Scheduled for determination by the incoming Council following the close of the eCaretaker pPeriod, the Election Day.~~

#### 1.2 Managing CEO Employment

~~Major Policy Decisions relating~~A Significant Act includes to the entering into, or renewing or terminating the contract of employment of the CEO ~~which recruitment or termination of the CEO and shall must~~ not be undertaken during a **Caretaker Period**.

Nonetheless, Council in satisfaction of its obligations as the CEO's employer during a Caretaker Period may consider and determine:

~~c) May consider and determine:~~

- a) appointment of an Acting CEO, where necessary;
- ~~b) suspension or termination of the current CEO, but only where appropriate in all the circumstances and in accordance with the terms of the CEO's contract;~~
- ~~e)b)~~ the CEO's leave applications; or
- ~~d)c)~~ any other incidental employment matter associated with the CEO including finalisation of the CEO Annual Performance Appraisal process.

~~The City may do a Significant Act during a caretaker period as set out in s3.73 of the Local Government Act 1995.~~

~~May not initiate a new CEO recruitment process.~~

#### 2. Caretaker Period Protocols – Candidates

## 2.1 Election process enquiries

All election process enquiries from candidates, including Elected Members who have nominated for re-election, will be directed to the Returning Officer, or where the matter is outside the responsibility of the Returning Officer, to the ~~CEO~~Director Corporate and Governance~~CEO~~.

## 2.2 Access to Information

Candidates, including Elected Members who have nominated for re-election, shall be provided with equitable access to the City's public information.

Elected Members nominating for re-election, may access information and assistance regarding the City's operations and Council matters during a **Caretaker Period**, but only to the extent necessary to perform their role as a Councillor and limited to matters currently relevant to the City.

Candidates, including Elected Members who have nominated for re-election, will **not** use or access City information, resources or employee resources and expertise for the purpose of gaining electoral advantage or disadvantage relevant to their own candidacy or any other person's candidacy.

All requests for information and advice from the City will be reviewed by the CEO. Where the subject of the information or advice is considered to relate to an election campaign matter, the CEO will have absolute discretion to determine if the information or advice is or is not provided. Where information is provided to one candidate, the CEO may determine if that information is also to be provided to all candidates, including candidates who are not current Elected Members.

## 2.3 Candidate Electoral Materials

~~CE~~Candidates, including Elected Members who have nominated for re-election, are prohibited from using the City's official crest, ~~or logo~~ or colours in any Electoral Materials, badge, nameplate, article of clothing or headwear.

## 2.4 Media and Publicity

All ~~elected~~ Elected member ~~Member~~ requests for media advice or assistance during a Caretaker Period, will be referred to the CEO for review.

The CEO will only authorise ~~elected~~ Elected member ~~Member~~ access to media advice or assistance where, in the CEO's opinion, the subject matter is relevant to the City's objectives or operations and is not related to an election campaign purpose or issue, ~~or to the elected member's candidacy or the candidacy of another person.~~

## 2.5 Elected ~~member~~ Member business cards and City printed materials

Elected Members must ensure that City business cards and printed materials are only used for purposes associated with their role of a Councillor, in accordance with ~~section s~~ 2.10 of the *Local Government Act 1995* (WA).

Elected Members are prohibited from using City business cards or City printed materials that are not available as a public document at any time, including times outside a **Caretaker Period**, for any election campaign purpose, either in support of their own candidacy or the candidacy of another person.

#### 2.6 Elected Member participation in Events and Functions

During a **Caretaker Period** Elected Members may continue to fulfil their role through attendance at Events and Functions hosted by external bodies.

#### 2.7 Elected member delegates to external organisations

At any time, including times outside of a **Caretaker Period**, Elected Members who are the Council's appointed delegate to an external organisation, must not use their attendance at an external organisation's meeting, event or function for any purpose associated with an election campaign purpose, including recruiting campaign assistance or promoting their own candidacy or the candidacy of another person.

#### 2.8 Elected ~~member~~ Member addresses/speeches

Excluding the Mayor and Deputy Mayor when fulfilling their functions prescribed in sections 2.8 or 2.9 of the *Local Government Act 1995 (WA)*, Elected Members who have nominated for re-election, are not permitted to make speeches or addresses during a **Caretaker Period** at events or functions organised or sponsored by the City, unless expressly authorised by the CEO.

In any case, the Mayor, Deputy Mayor and Elected Members shall not use any official speech or address at any function or event during a **Caretaker Period** to promote an election campaign purpose.

#### 2.9 Elected member misuse of local government resources

Use of City resources by an ~~elected~~ Elected ~~member~~ Member for the purpose of persuading electors to vote in a particular way is a "misuse of Local Government resources" and a breach of Regulation 17 of the *Code of Conduct for Council Members, Committee Members and Candidates. Local Government (Model Code of Conduct) Regulations 2021.*

This prohibition on misuse of local government resources for electoral purposes applies at all times and is not only applicable to a **Caretaker Period**.

For clarity, local government resources include, but are not limited to, employee time or expertise, equipment, stationery, hospitality, images, communications, services, reimbursements, vehicles and allowances provided by the City.

Note: Refer also to Policy 12—Governance Services to Elected Members—Local Government Election Year.

### **3. City Publicity ~~and~~, Promotional ~~and~~ Civic Activities**

Publicity campaigns and promotional activities during a **Caretaker Period** may be undertaken only for the purposes of:

- a) Promoting City services and activities, where such promotion does not relate to an electoral campaign matter and would otherwise be undertaken as part of normal operations; and
- b) Conducting the election and promoting elector participation in the election.

All other publicity and promotional activities of City initiatives will be, where reasonably practicable, avoided during the **Caretaker Period**, including the announcement of ~~Major Policy Decisions~~ **a Significant Act** made prior to the commencement of a **Caretaker Period** ~~or proposed to be made after a Caretaker Period~~.

~~The CEO may determine if Extraordinary Circumstances apply and if a Major Policy Decision announcement is necessary during a Caretaker Period.~~

### **4. Civic Events and Functions**

The City will avoid the scheduling of Civic Events and Functions during a Caretaker Period, ~~so as to~~ prevent any actual or perceived electoral advantage that may be provided to Elected Members who have nominated for re-election, ~~with the exception of the Annual Mayoral Dinner.~~

Civic Events and Functions organised by the City and held during the Caretaker Period will be reduced to only those essential to the operation of the City and should not in any way be associated with any issues considered topical and relevant to the election or be used as a forum for political canvassing.

### **5. City Website and Social Media Content**

**5.1** The City's website and social media shall comply with the requirements of this Policy.

Website and social media content regarding Elected Members will be limited to: elected member names, contact details, membership of committees and Council appointments as City delegates on external committees and organisations.

**5.2** New website or social media content which relates to Major Policy Decisions or election campaign issues will not be published during a Caretaker Period, ~~unless Extraordinary Circumstances apply.~~

**5.3** Content posted by the public, candidates or Elected Members on the City's social media channels, which is considered by the CEO to be candidate election campaign material or to promote any candidate, will be removed.



## **6. Discretionary Community Consultation**

Unless consultation is mandated under a written law or [Extraordinary Circumstances apply in accordance with s.3.73 of the Local Government Act 1995 \(WA\)](#) Act, Public Consultation relevant to [Major Policy](#) [a Significant Act](#) [s- Decisions](#) or potentially contentious election campaign issues will not be initiated in a manner that results in the consultation period being conducted immediately prior to, throughout or concluding during, a **Caretaker Period**.

## **Reference/Associated Documents**

[Local Government Act 1995 \(WA\)](#)

[Local Government \(Administration\) Regulations 1996 \(WA\)](#)

[Local Government \(Model Code of Conduct\) Regulations 2021 \(WA\)](#)

[Local Government \(Elections\) Regulation 1997 \(WA\)](#)

City of Belmont Code of Conduct for Council Members, Committee Members and Candidates

[Policy 12—Governance Services to Elected Members—Local Government Election Year](#)

## **Reference to Internal Procedure**

Work Instruction – Electoral Caretaker Period

## **Definitions**

**‘Caretaker Period’** ~~means the period of time prior to an Election Day, specifically being the period from the close of nominations (37 days prior to the Election Day in accordance with s refer to s1.4A .4.49(a) of the Local Government Act 1995 (WA).)~~ until 6.00pm on Election Day.

**‘CEO’** means the Chief Executive Officer of the City.

**‘City’** means the City of Belmont.

**‘Election Day’** means the day fixed under the [Local Government Act 1995 \(WA\)](#) for the holding of any poll needed for an election, including but not limited to an extraordinary election.

**‘Electoral Material’** means any [election-sign](#), advertisement, handbill, pamphlet, [written correspondence such as a](#) notice, letter, email, social media post, article or

other communication that is used for electioneering and/or intended or calculated to influence or affect an election result, but does not include:

1. an advertisement in a newspaper announcing the holding of a meeting (s.4.87 (3) of the *Local Government Act 1995 (WA)*); or
2. any materials exempted under Regulation 78 of the *Local Government (Elections) Regulations 1997 (WA)*; or
3. any materials produced by the City relating to the election process by way of information, education or publicity, or materials produced by or on behalf of the Returning Officer for the purposes of conducting an election.

**‘Events and Functions’** means gatherings for the purpose of discussion, review, acknowledgement, communication, consultation, celebration or promotion, of any matter relevant to the City or its stakeholders and may take the form of conferences, workshops, forums, launches, promotional activities, social occasions such as dinners and receptions, including gatherings coordinated or facilitated by the City or an external entity.

**‘Extraordinary Circumstances’** means a circumstance that requires the Council to make or announce a Major Policy Decision Significant Act during the Caretaker Period because, in the CEO’s opinion, delaying the decision or announcement to occur after the Caretaker Period has reasonable potential to:

1. incur adverse legal, financial or reputational consequences;
2. increase legal, financial or reputational risk; or
3. cause detriment to the strategic objectives of the City.

**‘Major Policy Decision’** means any decision:

Relating to the recruitment or termination of the CEO other than a decision to appoint an Acting CEO, or suspend the current CEO in accordance with the terms of any applicable contract of employment.

Relating to the City entering into a sponsorship arrangement with a total City contribution that would constitute Significant Expenditure, unless the expenditure is included in the current approved annual budget.

Relating to the City entering into a commercial enterprise as defined by section 3.59 of the *Local Government Act 1995*.

That would commit the City to Significant Expenditure or actions that, in the CEO’s opinion, are significant to the City’s operations, strategic objectives or will have significant impact on the community and funds have not been allocated in the annual budget.

To prepare a report, initiated by an Elected Member, candidate or member of the public that, in the CEO’s opinion, may be perceived as or is actually an election campaign issue.

Initiated through a notice of motion by an Elected Member, where the effect of that motion will change the status quo or, in the CEO’s opinion, may be relevant to the circumstances described in Clauses 1 to 5 above.

That would adopt a new policy, service or service level or significantly amends an existing policy, service or service level, unless the decision is necessary to comply with legislation or the requirements of a public authority.

~~That initiates or adopts a new local planning scheme, amendment to a local planning scheme or planning policy.~~

~~'**Significant Act**' refer to as defined under s.3.73 (1) of the Local Government Act 1995~~

~~but does NOT include any decision necessary in response to an emergency, declared by either the State or Federal Government or by the Mayor in accordance with s.6.8(1)(c) of the Local Government Act 1995.~~

**'Public Consultation'** means a process which involves an invitation to individuals, groups, organisations or the wider community to provide comment on a matter, proposed action or proposed policy, but does not include statutory consultation or submission periods prescribed in a written law.

**'Returning Officer'** means the returning officer appointed under ~~section s.~~4.20 of the Local Government Act 1995 (WA).

~~'**Significant Expenditure**' means expenditure that exceeds the tender threshold as prescribed in regulation 11(1) the Local Government (Functions and General) Regulations 1996.~~

This Policy is supported by:	
Policy No:	CP <del>(number will be added by Governance)</del> <u>11</u>
Strategic Community Plan:	<p><b>Goal 5: Responsible Belmont</b></p> <p><b>Strategy:</b> 5.6 Deliver effective, fair and transparent leadership and decision-making, reflective of community needs and aspirations</p> <p><b>Area: Performance: Desired Outcomes:</b> <u>10 Effective leadership, governance and financial management</u></p> <p><b>Objective:</b> <u>10.1 Deliver effective, fair and transparent leadership and governance</u></p>

Attachment 12.4.1 Electoral Caretaker Period Tracked Changes All Comments

Delegation Register:	(Insert No. & Title) or n/aN/A	
Service Area:	Executive Services	
Policy Owner:	Manager Governance, <del>Strategy and Risk</del> and <u>Legal</u>	
Policy Stakeholder:	<del>(Insert title of Officer(s))</del> <u>Chief Executive Officer</u>	
Amendment Status:		
Date of Amendment	Status of Amendment	Minute Item Reference
10/12/19	NEW	12.8
24/05/22	REVIEW - MINOR	12.7
<u>12/12/23</u>	<u>Review - None</u>	<u>-12.8</u>

## **{item-title}**

### **Policy Objective**

This policy establishes protocols in the lead up to, and immediately after the Election Day ensuring that major decisions which would bind an incoming Council are avoided where possible, preventing the use of public resources in ways that may be seen as advantageous to or promoting candidates.

The policy ensures the City's activities, and those of Elected Members who are candidates in local government elections, are undertaken in a manner that supports a high standard of integrity during local government election periods.

### **Policy Detail**

This policy applies to Elected Members, electoral candidates and employees of the City during a **Caretaker Period** and covers:

- Notices of Motion submitted by Elected Members;
- Decisions made by the Council;
- Promotional materials published by the City;
- Discretionary community consultation;
- Events and Functions held by the City;
- Use of the City's resources; and
- Access to information held by the City.

#### **1. Caretaker Period Protocols – Decision Making**

##### **1.1 Notice of Caretaker Period and Policy requirements**

The CEO will ensure that:

- a) Elected Members and employees are advised in writing of the impending **Caretaker Period** and Policy requirements at least 30 days prior to the close of nominations of the commencement of a **Caretaker Period**.
- b) Candidates are provided with a copy of this Policy at the time of their nomination for election, to ensure awareness of the Policy requirements.



## 1.2 Managing CEO Employment

A **Significant Act** includes the entering into, or renewing or terminating the contract of employment of the CEO which must not be undertaken during a **Caretaker Period**.

Nonetheless, Council in satisfaction of its obligations as the CEO's employer during a **Caretaker Period** may consider and determine:

- a) appointment of an Acting CEO, where necessary;
- b) the CEO's leave applications; or
- c) any other incidental employment matter associated with the CEO including finalisation of the CEO Annual Performance Appraisal process.

## 2. Caretaker Period Protocols – Candidates

### 2.1 Election process enquiries

All election process enquiries from candidates, including Elected Members who have nominated for re-election, will be directed to the Returning Officer, or where the matter is outside the responsibility of the Returning Officer, to the CEO.

### 2.2 Access to Information

Candidates, including Elected Members who have nominated for re-election, shall be provided with equitable access to the City's public information.

Elected Members nominating for re-election, may access information and assistance regarding the City's operations and Council matters during a **Caretaker Period**, but only to the extent necessary to perform their role as a Councillor and limited to matters currently relevant to the City.

Candidates, including Elected Members who have nominated for re-election, will **not** use or access City information, resources or employee resources and expertise for the purpose of gaining electoral advantage or disadvantage relevant to their own candidacy or any other person's candidacy.

All requests for information and advice from the City will be reviewed by the CEO. Where the subject of the information or advice is considered to relate to an election campaign matter, the CEO will have absolute discretion to determine if the information or advice is or is not provided. Where information is provided to one candidate, the

CEO may determine if that information is also to be provided to all candidates, including candidates who are not current Elected Members.

### 2.3 Candidate Electoral Materials

Candidates, including Elected Members who have nominated for re-election, are prohibited from using the City's official crest, logo or colours in any Electoral Materials, badge, nameplate, article of clothing or headwear.

### 2.4 Media and Publicity

All Elected Member requests for media advice or assistance during a Caretaker Period, will be referred to the CEO for review.

The CEO will only authorise Elected Member access to media advice or assistance where, in the CEO's opinion, the subject matter is relevant to the City's objectives or operations and is not related to an election campaign purpose or issue, or to the elected member's candidacy or the candidacy of another person.

### 2.5 Elected Member business cards and City printed materials

Elected Members must ensure that City business cards and printed materials are only used for purposes associated with their role of a Councillor, in accordance with s.2.10 of the *Local Government Act 1995 (WA)*.

Elected Members are prohibited from using City business cards or City printed materials that are not available as a public document at any time, including times outside a **Caretaker Period**, for any election campaign purpose, either in support of their own candidacy or the candidacy of another person.

### 2.6 Elected Member participation in Events and Functions

During a **Caretaker Period** Elected Members may continue to fulfil their role through attendance at Events and Functions hosted by external bodies.

### 2.7 Elected member delegates to external organisations

At any time, including times outside of a **Caretaker Period**, Elected Members who are the Council's appointed delegate to an external organisation, must not use their attendance at an external organisation's meeting, event or function for any purpose associated with an election campaign purpose, including recruiting campaign assistance or promoting their own candidacy or the candidacy of another person.

## 2.8 Elected Member addresses/speeches

Excluding the Mayor and Deputy Mayor when fulfilling their functions prescribed in sections 2.8 or 2.9 of the *Local Government Act 1995* (WA), Elected Members who have nominated for re-election, are not permitted to make speeches or addresses during a **Caretaker Period** at events or functions organised or sponsored by the City, unless expressly authorised by the CEO.

In any case, the Mayor, Deputy Mayor and Elected Members shall not use any official speech or address at any function or event during a **Caretaker Period** to promote an election campaign purpose.

## 2.9 Elected member misuse of local government resources

Use of City resources by an Elected Member for the purpose of persuading electors to vote in a particular way is a "misuse of Local Government resources" and a breach of Regulation 17 of the *Code of Conduct for Council Members, Committee Members and Candidates*.

This prohibition on misuse of local government resources for electoral purposes applies at all times and is not only applicable to a **Caretaker Period**.

For clarity, local government resources include, but are not limited to, employee time or expertise, equipment, stationery, hospitality, images, communications, services, reimbursements, vehicles and allowances provided by the City.

## 3. City Publicity and Promotional Activities

Publicity campaigns and promotional activities during a **Caretaker Period** may be undertaken only for the purposes of:

- a) Promoting City services and activities, where such promotion does not relate to an electoral campaign matter and would otherwise be undertaken as part of normal operations; and
- b) Conducting the election and promoting elector participation in the election.

All other publicity and promotional activities of City initiatives will be, where reasonably practicable, avoided during the **Caretaker Period**, including the announcement of a **Significant Act** made prior to the commencement of a **Caretaker Period**.

#### **4. Civic Events and Functions**

The City will avoid the scheduling of Civic Events and Functions during a Caretaker Period to prevent any actual or perceived electoral advantage that may be provided to Elected Members who have nominated for re-election.

Civic Events and Functions organised by the City and held during the Caretaker Period will be reduced to only those essential to the operation of the City and should not in any way be associated with any issues considered topical and relevant to the election or be used as a forum for political canvassing.

#### **5. City Website and Social Media Content**

5.1 The City's website and social media shall comply with the requirements of this Policy.

Website and social media content regarding Elected Members will be limited to: Elected Member names, contact details, membership of committees and Council appointments as City delegates on external committees and organisations.

5.2 New website or social media content which relates to a **Significant Act** or election campaign issues will not be published during a Caretaker Period.

5.3 Content posted by the public, candidates or Elected Members on the City's social media channels, which is considered by the CEO to be candidate election campaign material or to promote any candidate, will be removed.

#### **6. Discretionary Community Consultation**

Unless consultation is mandated under a written law or in accordance with s.3.73 of the *Local Government Act 1995 (WA)*, **Public Consultation** relevant to a **Significant Act** or potentially contentious election campaign issues will not be initiated in a manner that results in the consultation period being conducted immediately prior to, throughout or concluding during, a **Caretaker Period**.

## Reference/Associated Documents

*Local Government Act 1995 (WA)*

*Local Government (Administration) Regulations 1996 (WA)*

*Local Government (Model Code of Conduct) Regulations 2021 (WA)*

*Local Government (Elections) Regulation 1997 (WA)*

City of Belmont Code of Conduct for Council Members, Committee Members and Candidates

## Reference to Internal Procedure

Work Instruction – Electoral Caretaker Period

## Definitions

**Caretaker Period** refer to s1.4A of the *Local Government Act 1995 (WA)*.

**CEO** means the Chief Executive Officer of the City.

**City** means the City of Belmont.

**Election Day** means the day fixed under the *Local Government Act 1995 (WA)* for the holding of any poll needed for an election, including but not limited to an extraordinary election.

**Electoral Material** means any sign, advertisement, handbill, pamphlet, written correspondence such as a notice, letter, email, social media post, article or other communication that is used for electioneering and/or intended or calculated to influence or affect an election result, but does not include:

- i. an advertisement in a newspaper announcing the holding of a meeting (s.4.87 (3) of the *Local Government Act 1995 (WA)*); or
- ii. any materials exempted under Regulation 78 of the *Local Government (Elections) Regulations 1997 (WA)*; or
- iii. any materials produced by the City relating to the election process by way of information, education or publicity, or materials produced by or on behalf of the Returning Officer for the purposes of conducting an election.



**Events and Functions** means gatherings for the purpose of discussion, review, acknowledgement, communication, consultation, celebration or promotion, of any matter relevant to the City or its stakeholders and may take the form of conferences, workshops, forums, launches, promotional activities, social occasions such as dinners and receptions, including gatherings coordinated or facilitated by the City or an external entity.

**Significant Act** as defined under s.3.73 (1) of the *Local Government Act 1995* (WA).

**Public Consultation** means a process which involves an invitation to individuals, groups, organisations or the wider community to provide comment on a matter, proposed action or proposed policy, but does not include statutory consultation or submission periods prescribed in a written law.

**Returning Officer** means the returning officer appointed under s.4.20 of the *Local Government Act 1995* (WA).

This Policy is supported by:		
Policy No:	CP 11	
Strategic Community Plan:	Area: Performance: Desired Outcomes: 10 Effective leadership, governance and financial management Objective: 10.1 Deliver effective, fair and transparent leadership and governance	
Delegation Register:	N/A	
Service Area:	Executive Services	
Policy Owner:	Manager Governance and Legal	
Policy Stakeholder:	Chief Executive Officer	
Amendment Status:		
Date of Amendment	Status of Amendment	Minute Item Reference
10/12/19	New	12.8

24/05/22	Review - minor	12.7
12/12/23	Review - none	12.8

## 12.5 Accounts for Payment December 2024

Voting Requirement	: Simple Majority
Subject Index	: 54/007 - Creditors Payment Authorisations
Location/Property Index	: N/A
Application Index	: N/A
Disclosure of any Interest	: N/A
Previous Items	: N/A
Applicant	: N/A
Owner	: N/A
Responsible Division	: Corporate and Governance

### Council role

**Executive** The substantial direction setting and oversight role of the Council e.g. adopting plans and reports, accepting tenders, directing operations, setting and amending budgets.

### Purpose of report

To present to Council the list of expenditure paid for the period 16 November 2024 to 31 December 2024 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)*.

Due to timelines associated with the agenda preparation process for the earlier December meeting of Council, payments for the period 1 November 2024 to 15 November 2024 only were presented to the December meeting of Council. Payments made for the period 16 November to 31 December 2024 are presented here.

#### Officer Recommendation

That the Authorised Payment Listing for 16 November to 31 December 2024 as provided under Attachment 12.5.1 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:

- (a) the payee's name;
- (b) the amount of the payment;
- (c) the date of the payment; and
- (d) 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	\$
<b>Municipal Fund EFTs</b>	EF093434 - EF094227	8,822,718.69
<b>Municipal Fund Payroll</b>	November 2024 December 2024	3,360,552.57
<b>Trust Fund EFT</b>	EF093882	30,083.25
<b>Total Payments 16 November to 31 December 2024</b>		12,213,354.51

A copy of the Authorised Payment Listing is included as Attachment 12.5.1.



## 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.	December 2024 Payments [ <b>12.5.1</b> - 12 pages]

# Attachment 12.5.1 December 2024 Payments

					
City of Belmont					
Accounts for Payment - December 2024					
Compiled : 23/12/24 15:31					
Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
<b>Contractors</b>					
EF093790	06/12/24	00346	Action Couriers	67.42	Courier Service
EF093791	06/12/24	00390	Landgate	1,326.86	Title Searches - GRV's Metro & FESA
EF093792	06/12/24	00608	Programmed Skilled Workforce Ltd	1,144.48	Labour/Personnel Hire
EF093793	06/12/24	00726	T - Quip	400.41	Plant Parts & Repairs
EF093795	06/12/24	00855	Pacific Biologics Pty Ltd	12,888.70	Pest Control
EF093797	06/12/24	00988	Reece Australia Pty Ltd	1,849.53	Plumbing Maintenance/Supplies
EF093798	06/12/24	01122	Department of Biodiversity, Conservation and Attractions	2,200.00	Environmental Expenses - 2024-25 Reel It In Project
EF093804	06/12/24	01507	The Pressure King	5,575.35	Graffiti Removal - Various Location
EF093806	06/12/24	01712	Donegan Enterprises Pty Ltd	440.00	Various Parks Repairs and Maintenance
EF093807	06/12/24	01713	M P Rogers and Associates	3,460.37	Professional Fees - Bilya Kard Boodja
EF093808	06/12/24	02086	Pro AV Solutions (WA)	1,125.30	Electrical Contractor - Civic Centre
EF093810	06/12/24	02216	Western Australia Police	72.00	Volunteer National Police Check
EF093813	06/12/24	02741	Spare Parts Puppet Theatre Inc	330.00	Music/Entertainment Expenses - Puppet Playtime
EF093815	06/12/24	03197	West Coast Turf	11,825.00	Turf Maintenance - COB
EF093816	06/12/24	03419	Gott Health	5,610.00	Community Exercise Classes
EF093822	06/12/24	03854	Invision Investigations & Consulting	25,541.00	Risk Management Consultants - Employee Relations Investigations
EF093823	06/12/24	03881	Caricature Wizard - Henry Lam	750.00	Music/Entertainment Expenses
EF093826	06/12/24	04931	Aska Illustration	735.00	Library -Entertainment Expense - Rola Judging
EF093829	06/12/24	05127	Champion Music	605.00	Music/Entertainment Expenses - Pinnacle Acoustic
EF093830	06/12/24	05283	IRP Pty Ltd	18,219.96	Labour/Personnel Hire
EF093831	06/12/24	05328	Flipsease Pty Ltd	1,331.00	Music/Entertainment Expenses - Christmas Concert
EF093832	06/12/24	05758	Branch Arboriculture	1,400.00	Gardening Contractor - QTRA Assessments
EF093833	06/12/24	05809	Specialized Cleaning Group t/as Clean Sweep	46,775.08	Belmont Carparks - Sweeping Services
EF093834	06/12/24	05819	Ritz Drycleaners	494.75	Cleaning Services
EF093837	06/12/24	06094	Boyan Electrical Services	406.34	Electrical Contractor
EF093838	06/12/24	06130	Amalgam Recruitment	2,035.61	Labour/Personnel Hire
EF093839	06/12/24	06138	Cake Twist by Kim	435.00	Catering/Catering Supplies
EF093840	06/12/24	06203	Ngala Boodja Aboriginal Land Care	21,431.72	Maintenance of Natural Areas COB
EF093841	06/12/24	06269	Hidrive Group Pty Ltd	98.55	Plant Parts & Repairs
EF093842	06/12/24	06304	Prestige Property Maintenance	5,211.25	Gardening Maintenance
EF093844	06/12/24	06341	Australian Entomological Supplies Pty Ltd	69.75	Pest Control
EF093845	06/12/24	06384	Hire Society	578.16	Plant/Equipment Hire
EF093847	06/12/24	06528	Diplomatik Pty Ltd	1,957.52	Professional Fees - Recruitment Services
EF093848	06/12/24	06608	Robert Walters Pty Ltd	1,696.20	Labour/Personnel Hire
EF093850	06/12/24	06691	Wood Recruitment Pty Ltd	1,865.00	Labour/Personnel Hire
EF093852	06/12/24	06726	PJA Holdings (Australia) Pty Ltd	4,400.00	Audit Fee - Fisher & Fulham St
EF093853	06/12/24	06751	HFM Asset Management	1,584.00	Building Maintenance - Licence Fee
EF093854	06/12/24	06754	Doon Raj P/L - T/as Belmont (WA) Carpet Court	4,270.00	Building Maintenance - COB
EF093855	06/12/24	06761	Artistic Disorder	375.00	Library -Entertainment Expense - Workshop
EF093856	06/12/24	06773	Evolve Talent	3,338.26	Labour/Personnel Hire
EF093857	06/12/24	06847	Trayd Australia Pty Ltd	6,028.77	Building Maintenance - COB
EF093858	06/12/24	06875	Jimbu4J	379.50	Catering/Catering Supplies
EF093861	06/12/24	06928	Integrity Staffing	5,537.87	Labour/Personnel Hire
EF093862	06/12/24	06934	Positively Green Pty Ltd	7,813.66	BSRC Bowling Green Maintenance
EF093863	06/12/24	06959	Elite Compliance Pty Ltd	19,030.00	Professional Fees - Pool Barrier Inspections
EF093438	22/11/24	00230	Jackson McDonald	21,071.60	Legal Expenses
EF093440	22/11/24	00346	Action Couriers	47.62	Courier Service
EF093442	22/11/24	00394	Child & Adolescent Health Service - Dept of Health WA	721.86	Immunisation Expenses - October 2024
EF093443	22/11/24	00412	Dowsing Group Pty Ltd	2,970.00	Concrete Contractor - Profiling and Concrete Various Locations
EF093445	22/11/24	00608	Programmed Skilled Workforce Ltd	5,738.52	Labour/Personnel Hire
EF093446	22/11/24	00613	Qualcon Laboratories Pty Ltd	1,694.00	Core Analysis and Asphalt Testing
EF093447	22/11/24	01002	RAC Businesswise Vehicle Breakdowns	4.15	Plant Parts & Repairs
EF093448	22/11/24	01122	Department of Biodiversity, Conservation and Attractions	11,000.00	Refund - Co-Funding Contribution
EF093449	22/11/24	01180	Aptella Pty Ltd	1,177.00	Subscription
EF093453	22/11/24	01476	Hays Specialist Recruitment	6,786.07	Labour/Personnel Hire
EF093454	22/11/24	01507	The Pressure King	6,751.80	Graffiti Removal - Various Location
EF093456	22/11/24	01831	Mow Master Turf Equipment	280.00	Plant Parts & Repairs
EF093458	22/11/24	02161	Supercrane Service Parts & Training Pty Ltd	504.90	Plant Parts & Repairs
EF093459	22/11/24	02216	Western Australia Police	18.00	National Police Check - Sept 2024
EF093460	22/11/24	02298	Pelican Linemarking	880.00	Line Marking
EF093461	22/11/24	02303	Ultimo Catering and Events	838.60	Catering/Catering Supplies
EF093462	22/11/24	02411	Allsports Linemarking	71.50	Line Marking
EF093463	22/11/24	02844	Chandler Macleod Group Ltd	3,686.62	Labour/Personnel Hire
EF093465	22/11/24	02958	Yoshino Sushi	64.68	Catering/Catering Supplies
EF093468	22/11/24	03504	Classic Tree Services	19,708.61	Tree Pruning Within CoB
EF093469	22/11/24	03543	Labyrinth Constructions	2,508.00	Building Construction - Property Maintenance
EF093471	22/11/24	03599	Donald Cant Watts Corke (WA) Pty Ltd	11,806.66	The Esplanade - Superintendency Services
EF093472	22/11/24	03824	Konica Minolta	6,108.99	Photocopy Expenses
EF093473	22/11/24	03941	Metro Bee Services	330.00	Bee Removal

# Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF093474	22/11/24	04106	Effects Picture Framing	75.00	Photography/Framing Expenses
EF093475	22/11/24	04120	Randstad Pty Ltd	10,790.64	Labour/Personnel Hire
EF093476	22/11/24	04146	JB Hi -Fi Group Commercial Account, Osborne Park	259.38	Electrical Goods
EF093477	22/11/24	04161	Play Check	12,100.00	Playground Annual Audit
EF093479	22/11/24	04482	Allan Davies & Trevor Chudleigh Architects	4,373.60	Professional Fees - Elizabeth St Wet Area Reconfiguration
EF093482	22/11/24	04794	Stiles Electrical Services Pty Ltd	163,903.25	Electrical Contractor - Lighting Tower Middleton Park
EF093483	22/11/24	04889	Reading Entertainment Australia Pty Ltd	1,940.00	Plant/Equipment Hire - Movie Screening
EF093484	22/11/24	05127	Champion Music	3,883.00	Music/Entertainment Expenses - Mayoral Dinner
EF093485	22/11/24	05190	Mark Foote	151.25	Building Maintenance - Hub
EF093486	22/11/24	05283	IRP Pty Ltd	8,102.83	Labour/Personnel Hire
EF093490	22/11/24	05579	Mark C Evans - Mark Photography	677.00	Library -Entertainment Expense - Rola Judge
EF093491	22/11/24	05599	Trofi's - Fi's Mascot, Cleaning & Repair Services	960.00	Cleaning Services
EF093492	22/11/24	05623	Tree Planting and Watering - Baroness Holdings	86,489.12	Street Tree Watering Services for CoB
EF093493	22/11/24	05642	Steve's Sand Sifting for Playground Services	5,401.03	Sand Sifting - Various Parks
EF093494	22/11/24	06094	Boyan Electrical Services	425.70	Electrical Contractor
EF093495	22/11/24	06104	Flick Anticimex Pty Ltd	2,570.83	Pest Control - COB
EF093497	22/11/24	06130	Amalgam Recruitment	2,035.61	Labour/Personnel Hire
EF093498	22/11/24	06148	Fothergill Enterprises Pty Ltd t/as Kubarz	945.00	Catering/Catering Supplies
EF093499	22/11/24	06160	SEEK Limited	2,133.12	Advertising
EF093500	22/11/24	06203	Ngala Boodja Aboriginal Land Care	10,723.88	Maintenance of Natural Areas COB
EF093501	22/11/24	06211	Urbii Consulting Pty Ltd	17,600.00	Professional Fees -Traffic Modelling Abernethy Road
EF093503	22/11/24	06362	Marjan Partitions Pty Ltd t/as M & M Interiors	176.00	Building Construction
EF093504	22/11/24	06377	Choiceone Pty Ltd	3,340.54	Labour/Personnel Hire
EF093505	22/11/24	06384	Hire Society	5,473.14	Plant/Equipment Hire - Civic Dinner
EF093509	22/11/24	06458	ES2 Pty Ltd	4,950.00	Computer Software Maintenance
EF093510	22/11/24	06473	Corporate Hands Pty Ltd	528.00	Community Exercise Classes
EF093513	22/11/24	06592	Grosvenor Engineering Group	1,519.00	Electrical Contractor - COB
EF093514	22/11/24	06623	Glen Flood Group Pty Ltd T/as GFG Consulting	4,931.85	FOGO Customer Service Officer
EF093515	22/11/24	06691	Wood Recruitment Pty Ltd	4,111.80	Labour/Personnel Hire
EF093517	22/11/24	06815	Deborah Anne Eldridge	1,500.00	Music/Entertainment Expenses - Citizenship Ceremony
EF093518	22/11/24	06875	Jimbu4J	3,550.50	Catering/Catering Supplies
EF093519	22/11/24	06908	Bina Butcher -Monsees	450.00	Library - Entertainment Expense - Workshop
EF093520	22/11/24	06919	DFC Group	4,983.00	Concrete Contractor
EF093521	22/11/24	06928	Integrity Staffing	4,731.41	Labour/Personnel Hire
EF093523	22/11/24	06944	Perth Garden Games	360.00	Library -Entertainment Expense - Kooyong Rd Locals
EF093524	22/11/24	06951	Janali & Co.	1,650.00	Community Exercise Classes
EF093540	28/11/24	00013	Air - Met Scientific Pty Ltd	1,603.91	Plant Parts & Repairs
EF093541	28/11/24	00027	ABB Australia Pty Limited	2,920.50	Reticulation Parts & Repairs
EF093543	28/11/24	00083	Ascot Veterinary Hospital	95.00	Pound Expenses
EF093545	28/11/24	00210	Littergrabber - Seaview Orthotics	1,118.00	Tools/Tool Repairs
EF093546	28/11/24	00221	John Hughes Group	48,294.53	Plant Purchase
EF093551	28/11/24	00295	Capital Recycling	27,268.12	Rubbish Removals
EF093552	28/11/24	00350	Veolia Environmental Services	699,838.88	Rubbish Removals
EF093554	28/11/24	00391	Chemistry Centre (WA) t/as ChemCentre	1,930.96	Professional Fees - Testing
EF093556	28/11/24	00412	Dowsing Group Pty Ltd	329,168.36	Concrete Contractor - Profiling and Concrete Various Locations
EF093559	28/11/24	00491	Fujifilm Business Innovation Australia	230.51	Photocopy Expenses
EF093560	28/11/24	00496	Garrards Pty Ltd	5,027.12	Pest Control
EF093561	28/11/24	00557	City Subaru	1,592.45	Plant Parts & Repairs
EF093562	28/11/24	00585	Hydroquip Pumps	561.00	Bore Drilling/ Maintenance
EF093563	28/11/24	00613	Qualcon Laboratories Pty Ltd	2,821.50	Core Analysis and Asphalt Testing
EF093566	28/11/24	00665	Kennards Hire Pty Ltd	352.00	Plant/Equipment Hire
EF093567	28/11/24	00668	IRS Pty Ltd - Industrial Rubber Supplies	66.47	Plant Parts & Repairs
EF093568	28/11/24	00683	Learning Horizons - Danube River Pty Ltd	1,100.00	Training
EF093570	28/11/24	00726	T - Quip	494.47	Plant Parts & Repairs
EF093571	28/11/24	00734	McIntosh and Son WA	915.81	Plant Parts & Repairs
EF093572	28/11/24	00784	Bucher Municipal	47,272.59	Plant Parts & Repairs
EF093573	28/11/24	00815	New Town Toyota	5,366.80	Plant Parts & Repairs
EF093574	28/11/24	00830	Canon Production Printing Australia Pty Ltd	430.57	Photocopy Expenses
EF093577	28/11/24	00917	Positive Auto Electrics	1,369.65	Plant Parts & Repairs
EF093578	28/11/24	00927	Professional Glass & Maintenance	1,659.00	Building Maintenance
EF093579	28/11/24	00931	Sonic HealthPlus Pty Ltd	1,019.70	Pre Employment Medicals
EF093581	28/11/24	00972	Repco Auto Parts	1,271.88	Plant Parts & Repairs
EF093582	28/11/24	00983	R M Surveys	5,027.00	Survey Expenses
EF093583	28/11/24	00988	Reece Australia Pty Ltd	2,582.30	Plumbing Maintenance/Supplies
EF093585	28/11/24	01074	Shred - X Pty Ltd	140.45	Rubbish Removals
EF093586	28/11/24	01082	Sparks Refrigeration and Airconditioning	580.80	Airconditioning/Refrigeration Maintenance
EF093588	28/11/24	01088	Sports Turf Technology Pty Ltd	1,771.00	Gardening Maintenance
EF093589	28/11/24	01090	St John Ambulance Australia Inc	3,040.10	First Aid Service - Events & Training
EF093590	28/11/24	01138	E & M J Rosher Pty Ltd	1,629.80	Plant Parts & Repairs
EF093591	28/11/24	01158	8M Media & Communications	414.70	Professional Fees - Marketing
EF093593	28/11/24	01186	ZircoDATA Pty Ltd	2,208.98	Records Storage
EF093594	28/11/24	01199	Toyota Material Handling Pty Ltd	666.60	Plant Parts & Repairs
EF093596	28/11/24	01233	Stihl Shop Redcliffe	1,221.10	Tools/Tool Repairs
EF093597	28/11/24	01237	Wren Oil	121.00	Rubbish Removals

# Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF093600	28/11/24	01243	WARP Pty Ltd	147,329.45	Traffic Control - Various Locations
EF093602	28/11/24	01255	Wattleup Tractors	1,165.80	Plant Parts & Repairs
EF093606	28/11/24	01317	WA Hino Sales & Service	1,070.85	Plant Parts & Repairs
EF093609	28/11/24	01411	Award Irrigation Pty Ltd - Award Contracting	1,650.00	Reticulation Installation
EF093612	28/11/24	01533	WC Convenience Management	5,462.61	Building Maintenance
EF093617	28/11/24	01712	Donegan Enterprises Pty Ltd	8,401.04	Various Parks Repairs and Maintenance
EF093618	28/11/24	01713	M P Rogers and Associates	2,080.76	Professional Fees - Garvey Park Foreshore
EF093619	28/11/24	01721	Fulton Hogan Industries	110,526.79	Road Building Contractor - Asphalt
EF093620	28/11/24	01731	Charter Plumbing and Gas	26,626.59	Plumbing Maintenance/Supplies
EF093621	28/11/24	01772	Data3 Limited	417,167.32	Computer Software Maintenance - Subscriptions
EF093624	28/11/24	01982	Northam Avon Descent Association Inc	5,500.00	Advertising - Avon Support
EF093625	28/11/24	02023	YMCA of Perth Youth and Community Services Inc	83,660.01	Youth Services Expenses - October 2024
EF093626	28/11/24	02050	Austraffic WA	4,299.90	Traffic Counts
EF093630	28/11/24	02207	Wilson Security	139,932.51	Security Services
EF093631	28/11/24	02210	Macri Partners	4,125.00	Audit Fee
EF093632	28/11/24	02298	Pelican Linemarking	1,705.00	Line Marking
EF093633	28/11/24	02303	Ultimo Catering and Events	27,251.60	Catering/Catering Supplies
EF093635	28/11/24	02387	Triton Electrical Contractors Pty Ltd	11,527.22	Electrical Contractor - COB
EF093636	28/11/24	02410	System Maintenance T/A Systems By Ballantyne	2,296.01	Plumbing Maintenance/Supplies
EF093637	28/11/24	02411	Allsports Linemarking	1,815.00	Line Marking
EF093638	28/11/24	02425	Prestige Alarms	2,550.90	Security Services
EF093640	28/11/24	02451	Carlisle Events Hire Pty Ltd	22,876.70	Plant/Equipment Hire - Kidz Fest
EF093642	28/11/24	02589	Zenien	18,557.20	Security Services
EF093643	28/11/24	02627	Dunbar Services WA Pty Ltd	5,868.50	Cleaning Services
EF093644	28/11/24	02672	Ruah Community Services	18,523.31	Provision of Preventive Domestic Violence Service - September 2024
EF093645	28/11/24	02711	CPG Research and Advisory Pty Ltd	1,558.33	Advisory Fees - November 2024
EF093647	28/11/24	02779	Natural Area Holdings Pty Ltd	3,137.20	Gardening Maintenance
EF093648	28/11/24	02837	GLG Greenlife Group	29,195.86	Verge Mowing - Various Parks
EF093650	28/11/24	02958	Yoshino Sushi	301.62	Catering/Catering Supplies
EF093651	28/11/24	03031	Retech Rubber	3,562.42	Plant Parts & Repairs - Park Softball
EF093654	28/11/24	03366	Daimler Trucks Perth	830.49	Plant Parts & Repairs
EF093655	28/11/24	03419	Gott Health	3,190.00	Community Exercise Classes
EF093657	28/11/24	03464	Bridgestone Australia Ltd	3,837.02	Plant Parts & Repairs
EF093658	28/11/24	03504	Classic Tree Services	26,062.66	Tree Pruning Within CoB
EF093659	28/11/24	03567	Gardner Autos Pty Ltd t/as Gardner Isuzu	2,634.00	Plant Parts & Repairs
EF093660	28/11/24	03599	Donald Cant Watts Corke (WA) Pty Ltd	11,038.50	The Esplanade & Wilson Park - Superintendency Services
EF093662	28/11/24	04002	Ray White Urban Springs	9,316.97	Professional Fees - Property Maintenance
EF093665	28/11/24	04137	Greive Panelbeaters	1,000.00	Plant Parts & Repairs
EF093667	28/11/24	04211	Triodia Scanning Services	726.00	Survey Expenses
EF093668	28/11/24	04320	ABM Landscaping	4,078.25	Bricks/Bricklaying - COB
EF093669	28/11/24	04391	Lifeskills Australia	627.00	Professional Fees - Analysis
EF093670	28/11/24	04467	Rent a Fence Pty Ltd	6,486.26	Fencing - Kidz Fest
EF093672	28/11/24	04496	Azure Painting Pty Ltd	9,075.00	Painting Contractor - CoB
EF093673	28/11/24	04565	Heritage Conservation Solutions - Dr Ian MacLeod	1,045.25	Clat Cart Cleaning
EF093674	28/11/24	04645	Instant Products Hire	873.00	Plant/Equipment Hire
EF093675	28/11/24	04693	Allwest Plant Hire Australia Pty Ltd	8,525.00	Plant/Equipment Hire - Oct24
EF093676	28/11/24	04713	Festoon Lighting Perth	3,676.85	Plant/Equipment Hire - Civic Dinner
EF093679	28/11/24	04779	One 20 Productions	4,689.30	Plant/Equipment Hire - Mayoral Dinner
EF093680	28/11/24	04870	Tree Care Machinery	169.95	Plant Parts & Repairs
EF093681	28/11/24	04917	Environmental Industries Pty Ltd	18,945.85	Landscape Maintenance - Ascot Waters
EF093682	28/11/24	04974	Turf Care WA Pty Ltd	56,087.65	Turf Maintenance - Various Parks
EF093683	28/11/24	04991	Two Feet & A Heartbeat	825.00	Library - Entertainment Expense - Heritage Walking Tour
EF093686	28/11/24	05083	Dent Dismissal	220.00	Plant Parts & Repairs
EF093689	28/11/24	05154	Tanks for Hire	693.00	Plant/Equipment Hire
EF093690	28/11/24	05240	Otiom Planning Group Pty Ltd	59,406.60	Professional Fees - Abernethy Sporting Precinct
EF093691	28/11/24	05252	AAAC Towing Pty Ltd	11,357.40	Towing Vehicles
EF093692	28/11/24	05283	IRP Pty Ltd	7,424.12	Labour/Personnel Hire
EF093693	28/11/24	05339	Elliotts Filtration Pty Ltd	6,669.85	Reticulation Parts & Repairs
EF093695	28/11/24	05427	Horizon West Landscape & Irrigation Pty Ltd	40,154.40	Gardening Maintenance - Various Locations
EF093696	28/11/24	05436	Pooltime Belmont	6,344.00	Building Maintenance - Pool Epsom Avenue
EF093698	28/11/24	05523	Go Doors Pty Ltd	1,529.97	Building Maintenance - Various Locations
EF093699	28/11/24	05558	BlueFit Pty Ltd	77,898.24	Oasis Management Subsidy - October 2024
EF093700	28/11/24	05568	Allstate Kerbing and Concrete	25,297.72	Kerbing and Concrete - COB
EF093701	28/11/24	05623	Tree Planting and Watering - Baroness Holdings	86,310.66	Street Tree Watering Services for CoB
EF093702	28/11/24	05642	Steve's Sand Sifting for Playground Services	4,310.49	Sand Sifting - Various Parks
EF093703	28/11/24	05692	Newground Water Services Pty Ltd	220.00	Reticulation Installation
EF093706	28/11/24	05771	AlSCO Pty Ltd	186.32	Cleaning Services
EF093707	28/11/24	05776	Level 5 Design Pty Ltd	600.00	Professional Fees - Planning
EF093708	28/11/24	05819	Ritz Drycleaners	144.10	Cleaning Services
EF093709	28/11/24	05840	Commercial Aquatics Australia Pty Ltd	19,354.50	Oasis Expenses - Monthly Maintenance
EF093711	28/11/24	05944	Delron Cleaning Pty Ltd - Ventia	96,515.45	Cleaning Services - Various Locations
EF093712	28/11/24	05945	Motorola Solutions Australia Pty Ltd	760.32	Two Way Radio Expenses - Kidz Fest
EF093714	28/11/24	05979	The Fire Truck Pizzeria - Mangia Italiano	2,775.00	Catering/Catering Supplies - Event
EF093716	28/11/24	06067	TK Elevator Australia Pty Ltd	1,037.65	Building Maintenance

# Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF093717	28/11/24	06094	Boyan Electrical Services	23,440.28	Electrical Contractor
EF093719	28/11/24	06130	Amalgam Recruitment	2,254.82	Labour/Personnel Hire
EF093721	28/11/24	06164	Brianology	90.00	Phone Accessories
EF093722	28/11/24	06203	Ngala Boodja Aboriginal Land Care	12,793.03	Maintenance of Natural Areas COB
EF093723	28/11/24	06212	Civil Sciences and Engineering	3,168.00	Professional Fees - Pavement Investigation
EF093725	28/11/24	06282	Dell Financial Services Pty Ltd	6,259.37	Plant/Equipment Hire - October 2024
EF093726	28/11/24	06293	Freo Fire Maintenance Services Pty Ltd	9,345.14	Fire Equipment/Service
EF093727	28/11/24	06304	Prestige Property Maintenance	4,734.56	Gardening Maintenance
EF093728	28/11/24	06312	BroadSpec Environmental	990.00	Building Maintenance
EF093730	28/11/24	06326	Total Tools Kewdale	1,041.00	Tools/Tool Repairs
EF093732	28/11/24	06339	Focus Consulting WA Pty Ltd	1,100.00	Electrical Contractor - Peet Park Sport Light
EF093733	28/11/24	06345	SoCo Studios - Travis Hayto Photography	5,527.50	Photography/Framing Expenses
EF093734	28/11/24	06371	RP Data Pty Ltd T/as CoreLogic Asia Pacific	7,516.87	Subscription - RP Data & Estimator
EF093735	28/11/24	06377	Choiceone Pty Ltd	11,619.47	Labour/Personnel Hire
EF093736	28/11/24	06389	Netstar Australia Pty Ltd	275.00	GPS Tracker Fee
EF093738	28/11/24	06446	Rhianna Abu Lashin	450.00	Music/Entertainment Expenses - Citizenship Ceremony
EF093739	28/11/24	06468	Perth Bouncy Castle Hire	537.90	Plant/Equipment Hire - Wiggles & Giggles
EF093740	28/11/24	06469	Element Advisory Pty Ltd	2,161.50	Consultancy - Bilya Kard Boodja
EF093741	28/11/24	06472	Overall Perth Gutter Cleaning	3,971.00	Cleaning Services - Various Location
EF093742	28/11/24	06528	Diplomatik Pty Ltd	949.97	Professional Fees - Recruitment Services
EF093743	28/11/24	06580	Omnicom Media Group	8,440.81	Advertising
EF093745	28/11/24	06591	Blue Tang (WA) T/A The Reef Unit Trust	6,600.00	Professional Fees - Faulkner Park Civic Centre
EF093746	28/11/24	06592	Grosvenor Engineering Group	7,092.80	Electrical Contractor - COB
EF093747	28/11/24	06602	Perth Symphony Orchestra	12,478.95	Christmas Concert
EF093748	28/11/24	06608	Robert Walters Pty Ltd	3,392.40	Labour/Personnel Hire
EF093749	28/11/24	06612	My Media Intelligence Pty Ltd	650.98	Professional Fees - Subscription
EF093754	28/11/24	06691	Wood Recruitment Pty Ltd	2,320.23	Labour/Personnel Hire
EF093756	28/11/24	06712	Ozpond Solutions	5,500.00	Gardening Maintenance
EF093758	28/11/24	06773	Evolve Talent	6,592.01	Labour/Personnel Hire
EF093759	28/11/24	06789	TC & Sons Enterprise T/A ME Fire Solutions	17,050.00	Fire Equipment/Service - Oasis Fire Services Upgrade
EF093760	28/11/24	06790	Site Architecture Studio Pty Ltd	1,485.00	Professional Fees - Hub Basement Carpark
EF093761	28/11/24	06798	Aspire Performance Training	15,565.00	Professional Fees - Recruitment Services
EF093763	28/11/24	06823	Maneki Neko Perth	2,400.00	Music/Entertainment Expenses - Cheers to Volunteers
EF093765	28/11/24	06847	Trayd Australia Pty Ltd	9,177.30	Building Maintenance - COB
EF093766	28/11/24	06857	Arion Service	3,127.30	Building Maintenance - Various Locations
EF093767	28/11/24	06866	Jetwave WA	605.55	Dealer Service
EF093768	28/11/24	06874	Bug Busters	2,414.50	Pest Control - COB
EF093769	28/11/24	06875	Jimbu4J	632.50	Catering/Catering Supplies
EF093770	28/11/24	06884	McLeods Lawyers	6,416.99	Legal Expenses
EF093771	28/11/24	06888	Veolia Water Operations Pty Ltd T/A Allpipe Technologies	77,403.92	Building Maintenance - COB
EF093772	28/11/24	06900	AMS Installation & Maintenance Solutions	11,549.91	Airconditioning/Refrigeration Maintenance - COB
EF093773	28/11/24	06910	Dream Courts Pty Ltd	420.00	Playground Inspections/Repairs - Asbestos Management
EF093774	28/11/24	06934	Positively Green Pty Ltd	792.00	BSRC - Bowling Green Maintenance
EF093775	28/11/24	06938	LGC Equipment Hire	11,876.43	Plant/Equipment Hire - Kidz Fest
EF093776	28/11/24	06960	Phase 3 Landscape Construction	358,166.63	Professional Fees - Faulkner Park Lakes Renewal
EF093777	28/11/24	06961	Roving Mad Entertainment	550.00	Library - Entertainment Expense - Museum Historia Zombies
EF093778	28/11/24	06966	Joey Ice -Cream Holdings	1,033.00	Catering/Catering Supplies
EF093884	13/12/24	00118	Australia Post	8,964.85	Postage
EF093888	13/12/24	00346	Action Couriers	121.14	Courier Service
EF093889	13/12/24	00350	Veolia Environmental Services	610.02	Rubbish Removals
EF093890	13/12/24	00501	Infor Global Solutions (ANZ) Pty Ltd	437.25	Computer Software Maintenance
EF093891	13/12/24	00608	Programmed Skilled Workforce Ltd	5,639.60	Labour/Personnel Hire
EF093894	13/12/24	00983	R M Surveys	7,557.00	Survey Expenses - Alexander Road
EF093895	13/12/24	00988	Reece Australia Pty Ltd	983.89	Plumbing Maintenance/Supplies
EF093901	13/12/24	01353	Aurion Corporation Pty Ltd	1,210.00	Computer Software Maintenance - Aurion Support
EF093902	13/12/24	01476	Hays Specialist Recruitment	11,576.03	Labour/Personnel Hire
EF093903	13/12/24	01499	Porter Consulting Engineers	8,470.00	Professional Fees - Design Abernethy & Gabriel Rd
EF093905	13/12/24	02359	Swan Towing Service Pty Ltd	198.00	Towing Vehicles
EF093906	13/12/24	02411	Allsports Linemarking	429.00	Line Marking
EF093909	13/12/24	03789	BPA Engineering	6,600.00	Professional Fees - Belmont Hub Driveway
EF093911	13/12/24	04146	JB Hi - Fi Group Commercial Account, Osborne Park	7,027.00	Electrical Goods
EF093913	13/12/24	04454	FM Contract Solutions Pty Ltd	892.62	Professional Fees - Auditing Aug 24
EF093915	13/12/24	04974	Turf Care WA Pty Ltd	102,281.62	Turf Maintenance - Various Parks
EF093916	13/12/24	05016	Cyclus Pty Ltd	2,208.45	Labour/Personnel Hire
EF093917	13/12/24	05074	Brook & Marsh Pty Ltd	880.00	Survey Expenses - Middleton Park
EF093919	13/12/24	05159	Nicole La Motte - Extreme Bounce Party Hire	305.00	Music/Entertainment Expenses - Little Creature Toddlers
EF093920	13/12/24	05336	West - Sure Group Pty Ltd	576.35	Cash Transit Service - Nov 24
EF093922	13/12/24	05493	Daphn	2,007.50	Computer Software Maintenance - Website Support
EF093923	13/12/24	05778	Stephen Carrick Architects Pty Ltd	3,187.50	Professional Fees - Design Review
EF093924	13/12/24	06160	SEEK Limited	2,578.40	Advertising
EF093925	13/12/24	06276	Efficient Site Services (WA)	24,706.00	Building Construction - COB
EF093926	13/12/24	06283	defiNET Pty Ltd	14,652.00	Computer Software Maintenance -GIS Consulting
EF093929	13/12/24	06468	Perth Bouncy Castle Hire	471.90	Plant/Equipment Hire - Little Creatures Toddlers
EF093930	13/12/24	06528	Diplomatik Pty Ltd	2,382.89	Professional Fees - Recruitment Services



## Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF093931	13/12/24	06587	Brayco Commercial	304.00	Office Furniture
EF093932	13/12/24	06592	Grosvenor Engineering Group	1,400.78	Electrical Contractor - COB
EF093933	13/12/24	06608	Robert Walters Pty Ltd	1,696.20	Labour/Personnel Hire
EF093934	13/12/24	06619	Baaz Security Services Pty Ltd	297.00	Security Services
EF093935	13/12/24	06691	Wood Recruitment Pty Ltd	2,349.60	Labour/Personnel Hire
EF093936	13/12/24	06773	Evolve Talent	3,422.78	Labour/Personnel Hire
EF093937	13/12/24	06790	Site Architecture Studio Pty Ltd	8,371.00	Professional Fees - Hub Carpark Canopy
EF093938	13/12/24	06796	Western Social Club Inc	950.00	Community Exercise Classes
EF093939	13/12/24	06815	Deborah Anne Eldridge	1,500.00	Music/Entertainment Expenses - Civic Dinner
EF093940	13/12/24	06847	Trayd Australia Pty Ltd	2,141.17	Building Maintenance - COB
EF093941	13/12/24	06875	Jimbu4J	4,147.00	Catering/Catering Supplies
EF093942	13/12/24	06889	PTG Consulting Pty Ltd	3,010.70	Belmont Sustainable Transport - Survey
EF093943	13/12/24	06936	Building Approvals WA Pty Ltd T/as WABCA Group	1,540.00	Professional Fees - Building Maintenance
EF093944	13/12/24	06972	Fionna Cosgrove	760.75	Library - Entertainment Expense - Rola Judge
EF093945	13/12/24	06973	Carla Brolly T/A Coldrolls	350.00	Catering/Catering Supplies
EF093946	13/12/24	06976	Go Gabz DJs	1,045.00	Music/Entertainment Expenses - End of Year Christmas Lunch
EF093948	13/12/24	06991	Loro Tre Catering - Anytime Catering	580.80	Catering/Catering Supplies
EF093966	19/12/24	00027	ABB Australia Pty Limited	5,151.30	Reticulation Parts & Repairs
EF093972	19/12/24	00187	Statewide Bearings	453.44	Plant Parts & Repairs
EF093973	19/12/24	00195	Bin Bath Australia Pty Ltd	2,123.16	Cleaning Services
EF093974	19/12/24	00221	John Hughes Group	660.50	Plant Parts & Repairs
EF093975	19/12/24	00230	Jackson McDonald	18,224.25	Legal Expenses
EF093978	19/12/24	00247	CAI Fences	4,279.00	Fencing
EF093979	19/12/24	00251	Catalyse Pty Ltd	33,609.84	Professional Fees - 2024 Scorecard
EF093983	19/12/24	00295	Capital Recycling	19,475.81	Rubbish Removals
EF093986	19/12/24	00358	Hoseco (WA) Pty Ltd	84.92	Plant Parts & Repairs
EF093987	19/12/24	00391	Chemistry Centre (WA) t/as ChemCentre	3,593.91	Professional Fees - Testing
EF093988	19/12/24	00394	Child & Adolescent Health Service - Dept of Health WA	721.86	Immunisation Expenses - Nov 24
EF093991	19/12/24	00412	Dowsing Group Pty Ltd	145,420.48	Concrete Contractor - Profiling and Concrete Various Locations
EF093992	19/12/24	00491	Fujifilm Business Innovation Australia	2,121.90	Photocopy Expenses
EF093993	19/12/24	00585	Hydroquip Pumps	30,129.00	Pump Maintenance - Various Parks
EF093996	19/12/24	00608	Programmed Skilled Workforce Ltd	5,639.58	Labour/Personnel Hire
EF093998	19/12/24	00665	Kennards Hire Pty Ltd	1,277.60	Plant/Equipment Hire
EF093999	19/12/24	00668	IRS Pty Ltd - Industrial Rubber Supplies	12.80	Plant Parts & Repairs
EF094000	19/12/24	00699	Marketforce Pty Ltd	19,725.68	Advertising & Printing
EF094001	19/12/24	00726	T - Quip	403.20	Plant Parts & Repairs
EF094002	19/12/24	00734	McIntosh and Son WA	2,764.96	Plant Parts & Repairs
EF094003	19/12/24	00784	Bucher Municipal	648.47	Plant Parts & Repairs
EF094005	19/12/24	00815	New Town Toyota	1,741.30	Plant Parts & Repairs
EF094006	19/12/24	00830	Canon Production Printing Australia Pty Ltd	445.66	Photocopy Expenses
EF094008	19/12/24	00917	Positive Auto Electrics	1,032.06	Plant Parts & Repairs
EF094009	19/12/24	00931	Sonic HealthPlus Pty Ltd	594.00	Pre Employment Medicals
EF094011	19/12/24	00972	Repco Auto Parts	292.33	Plant Parts & Repairs
EF094012	19/12/24	00988	Reece Australia Pty Ltd	4,931.91	Plumbing Maintenance/Supplies
EF094013	19/12/24	01002	RAC Businesswise Vehicle Breakdowns	108.00	Plant Parts & Repairs
EF094015	19/12/24	01058	Slater - Gartrell Sports	7,529.50	Flanged Ground Sockets
EF094016	19/12/24	01074	Shred - X Pty Ltd	114.62	Rubbish Removals
EF094019	19/12/24	01088	Sports Turf Technology Pty Ltd	2,057.00	Turf Maintenance - COB
EF094020	19/12/24	01090	St John Ambulance Australia Inc	1,792.05	First Aid Service
EF094022	19/12/24	01186	ZircoDATA Pty Ltd	2,226.41	Records Storage
EF094023	19/12/24	01188	Transcore Pty Ltd	8,800.00	Professional Fees - Redcliffe Traffic Modelling
EF094024	19/12/24	01201	Truckline	68.86	Plant Parts & Repairs
EF094026	19/12/24	01233	Stihl Shop Redcliffe	1,701.80	Tools/Tool Repairs
EF094029	19/12/24	01243	WARP Pty Ltd	133,086.39	Traffic Control - Various Locations
EF094030	19/12/24	01251	Wurth Australia Pty Ltd	148.05	Plant Parts & Repairs
EF094032	19/12/24	01255	Wattleup Tractors	11,753.96	Plant Parts & Repairs
EF094037	19/12/24	01289	Wayne's Windscreens Pty Ltd	295.00	Plant Parts & Repairs
EF094038	19/12/24	01358	Kevrek Australia Pty Ltd	440.00	Plant Parts & Repairs
EF094041	19/12/24	01507	The Pressure King	5,780.50	Graffiti Removal - Various Location
EF094042	19/12/24	01533	WC Convenience Management	5,462.61	Building Maintenance
EF094046	19/12/24	01712	Donegan Enterprises Pty Ltd	65,683.36	Various Parks Repairs and Maintenance
EF094047	19/12/24	01713	M P Rogers and Associates	4,998.32	Professional Fees - Bilya Kard Boodja
EF094048	19/12/24	01719	Jaycar Electronics Pty Ltd	384.45	Electrical Goods
EF094049	19/12/24	01721	Fulton Hogan Industries	200,280.24	Road Building Contractor - Asphalt
EF094051	19/12/24	01731	Charter Plumbing and Gas	8,109.35	Plumbing Maintenance/Supplies
EF094056	19/12/24	02216	Western Australia Police	72.00	Volunteer National Police Check
EF094057	19/12/24	02234	Blackwell and Associates Pty Ltd	1,015.00	Professional Fees - Planning
EF094059	19/12/24	02298	Pelican Linemarking	2,145.00	Line Marking
EF094060	19/12/24	02303	Ultimo Catering and Events	37,104.27	Catering/Catering Supplies
EF094062	19/12/24	02378	C R Kennedy & Co Pty Ltd	6,686.00	Subscription
EF094064	19/12/24	02387	Triton Electrical Contractors Pty Ltd	816.20	Electrical Contractor - COB
EF094065	19/12/24	02410	System Maintenance T/A Systems By Ballantyne	667.65	Plumbing Maintenance/Supplies
EF094066	19/12/24	02411	Allsports Linemarking	2,420.00	Line Marking
EF094067	19/12/24	02418	Programmed Property Services Pty Ltd	2,860.00	Gardening Maintenance

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Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF094068	19/12/24	02425	Prestige Alarms	20,991.30	Security Services
EF094070	19/12/24	02451	Carlisle Events Hire Pty Ltd	10,731.60	Plant/Equipment Hire - Kooyong Road Locals
EF094072	19/12/24	02589	Zenien	9,605.88	UPS Upgrade
EF094073	19/12/24	02672	Ruah Community Services	18,523.31	Labour/Personnel Hire
EF094074	19/12/24	02779	Natural Area Holdings Pty Ltd	11,669.68	Gardening Maintenance
EF094075	19/12/24	02837	GLG Greenlife Group	48,554.44	Verge Mowing - Various Parks
EF094078	19/12/24	02958	Yoshino Sushi	348.04	Catering/Catering Supplies
EF094080	19/12/24	03001	Roy Gripske & Sons - GA Power Equipment Spares	85.47	Plant Parts & Repairs
EF094081	19/12/24	03085	Edwina Forward Engraving	49.50	Engraving
EF094084	19/12/24	03197	West Coast Turf	17,761.80	Turf Maintenance - COB
EF094088	19/12/24	03464	Bridgestone Australia Ltd	3,434.01	Plant Parts & Repairs
EF094089	19/12/24	03498	Talis Consultants Pty Ltd	46,960.93	Professional Fees - Belvidere Street Revitalisation Design
EF094090	19/12/24	03504	Classic Tree Services	23,374.54	Tree Pruning Within CoB
EF094091	19/12/24	03567	Gardner Autos Pty Ltd t/as Gardner Isuzu	1,427.00	Plant Parts & Repairs
EF094093	19/12/24	03599	Donald Cant Watts Corke (WA) Pty Ltd	18,174.75	Professional Fees - Superintendency Services
EF094096	19/12/24	03683	Core Business Australia	11,385.00	Professional Fees - Building Asset Condition Report
EF094097	19/12/24	03707	Access Unlimited International Pty Ltd	694.16	Plant Parts & Repairs
EF094098	19/12/24	03824	Konica Minolta	3,348.20	Photocopy Expenses
EF094100	19/12/24	04026	HK Calibration Technologies Pty Ltd	341.00	Plant Parts & Repairs
EF094105	19/12/24	04109	Heroes Framing & Memorabilia	953.61	Photography/Framing Expenses
EF094106	19/12/24	04120	Randstad Pty Ltd	8,175.64	Labour/Personnel Hire
EF094107	19/12/24	04131	Total Green Recycling Pty Ltd	653.66	Rubbish Removals
EF094109	19/12/24	04211	Triodia Scanning Services	5,808.00	Survey Expenses - GPR Scanning
EF094110	19/12/24	04320	ABM Landscaping	2,426.60	Bricks/Bricklaying - COB
EF094111	19/12/24	04391	Lifeskills Australia	2,090.00	Professional Fees - Analysis
EF094113	19/12/24	04400	The Freedom Fairies	2,915.00	Music/Entertainment Expenses - Christmas Concert
EF094114	19/12/24	04467	Rent a Fence Pty Ltd	55.24	Fencing
EF094115	19/12/24	04482	Allan Davies & Trevor Chudleigh Architects	5,324.00	Professional Fees - Gerry Archer Sports Complex
EF094116	19/12/24	04496	Azure Painting Pty Ltd	2,035.00	Painting Contractor - Goodwood Pde Toilets
EF094117	19/12/24	04594	Website Weed and Pest W A Pty Ltd	21,214.56	Weed Control - COB
EF094118	19/12/24	04693	Allwest Plant Hire Australia Pty Ltd	8,250.00	Plant/Equipment Hire - November 2024
EF094121	19/12/24	04779	One 20 Productions	464.20	Plant/Equipment Hire
EF094122	19/12/24	04870	Tree Care Machinery	2,162.45	Plant Parts & Repairs
EF094123	19/12/24	04917	Environmental Industries Pty Ltd	18,945.85	Landscape Maintenance - Ascot Waters
EF094124	19/12/24	04958	Eco Bin (Aust) Pty Ltd	53.43	Rubbish Removals
EF094125	19/12/24	04974	Turf Care WA Pty Ltd	45,052.13	Turf Maintenance - Various Parks
EF094127	19/12/24	05090	Elan Energy Matrix Pty Ltd	762.41	Rubbish Removals
EF094128	19/12/24	05127	Champion Music	671.00	Music/Entertainment Expenses - Christmas Markets
EF094129	19/12/24	05154	Tanks for Hire	693.00	Plant/Equipment Hire
EF094130	19/12/24	05190	Mark Foote	1,760.23	Building Maintenance - Nursery shed
EF094131	19/12/24	05237	Crown Perth	13,601.00	Catering/Catering Supplies - End of Year Staff Lunch
EF094132	19/12/24	05252	AAAC Towing Pty Ltd	1,424.50	Towing Vehicles
EF094133	19/12/24	05283	IRP Pty Ltd	4,570.72	Labour/Personnel Hire
EF094134	19/12/24	05328	Fliptease Pty Ltd	1,331.00	Music/Entertainment Expenses - Christmas Concert
EF094135	19/12/24	05339	Elliotts Filtration Pty Ltd	2,050.40	Reticulation Parts & Repairs
EF094136	19/12/24	05382	McGees Property - Sullivan Commercial Pty Ltd	4,675.00	Valuation Expense - Garvey Park & Treffone St
EF094137	19/12/24	05427	Horizon West Landscape & Irrigation Pty Ltd	6,606.11	Gardening Maintenance - Various Locations
EF094140	19/12/24	05523	Go Doors Pty Ltd	14,682.78	Building Maintenance - Various Locations
EF094141	19/12/24	05568	Allstate Kerbing and Concrete	6,614.30	Kerbing and Concrete - COB
EF094142	19/12/24	05576	NPB Security Australia	1,488.27	Security Services - Kooyong Rd Locals
EF094143	19/12/24	05612	ASCON Survey and Drafting Pty Ltd	1,016.37	Survey Expenses - COB
EF094144	19/12/24	05623	Tree Planting and Watering - Baroness Holdings	162,152.28	Street Tree Watering Services for CoB
EF094145	19/12/24	05670	RID Australia	3,815.09	RID Order for Bassendean and Vic Park
EF094146	19/12/24	05771	AlSCO Pty Ltd	184.26	Cleaning Services
EF094147	19/12/24	05776	Level 5 Design Pty Ltd	420.00	Professional Fees - Belmont DRP
EF094148	19/12/24	05801	Integrated Fuel Services & Solutions	246.40	Plant Parts & Repairs
EF094149	19/12/24	05809	Specialized Cleaning Group t/as Clean Sweep	27,078.92	Belmont Carparks - Sweeping Services
EF094150	19/12/24	05819	Ritz Drycleaners	233.00	Cleaning Services
EF094152	19/12/24	05840	Commercial Aquatics Australia Pty Ltd	8,514.00	Oasis Expenses - Monthly Maintenance
EF094153	19/12/24	05944	Delron Cleaning Pty Ltd - Ventia	97,406.90	Cleaning Services - Various Locations
EF094155	19/12/24	05964	High Voltage Performers Boutique	4,834.50	Music/Entertainment Expenses - Christmas Concert
EF094158	19/12/24	06054	Paxon Business and Financial Services Pty Ltd	10,164.00	Audit Fee
EF094159	19/12/24	06067	TK Elevator Australia Pty Ltd	1,606.35	Building Maintenance
EF094160	19/12/24	06094	Boyan Electrical Services	34,778.41	Electrical Contractor
EF094161	19/12/24	06104	Flick Anticimex Pty Ltd	2,236.60	Pest Control - COB
EF094163	19/12/24	06116	Perth Harmony Chapter	400.00	Library - Entertainment Expense - Perth Harmony Chorus
EF094164	19/12/24	06130	Amalgam Recruitment	2,286.14	Labour/Personnel Hire
EF094165	19/12/24	06148	Fothergill Enterprises Pty Ltd t/as Kubarz	2,835.70	Catering/Catering Supplies - Kooyong Rd Locals
EF094166	19/12/24	06203	Ngala Boodja Aboriginal Land Care	10,599.01	Maintenance of Natural Areas COB
EF094167	19/12/24	06211	Urbii Consulting Pty Ltd	2,200.00	Professional Fees - Abernethy Road
EF094169	19/12/24	06293	Freo Fire Maintenance Services Pty Ltd	6,791.65	Fire Equipment/Service
EF094170	19/12/24	06303	Event Bike Rack Hire	700.00	Plant/Equipment Hire
EF094171	19/12/24	06304	Prestige Property Maintenance	17,706.26	Gardening Maintenance
EF094172	19/12/24	06345	SoCo Studios - Travis Hayto Photography	3,327.50	Photography/Framing Expenses

## Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF094173	19/12/24	06362	Marjan Partitions Pty Ltd t/as M & M Interiors	37,252.60	Building Construction - Renovation ILU
EF094174	19/12/24	06389	Netstar Australia Pty Ltd	192.50	GPS Tracker Fee
EF094177	19/12/24	06438	Marketlife Pty Ltd T/As Erin Madeley Consulting	4,053.00	Music/Entertainment Expenses - Christmas Carols
EF094179	19/12/24	06472	Overall Perth Gutter Cleaning	7,538.00	Cleaning Services - Various Location
EF094180	19/12/24	06485	Constructive Building Consultants	825.00	Professional Fees - Structural Certification
EF094181	19/12/24	06528	Diplomatik Pty Ltd	10,625.71	Professional Fees - Recruitment Services
EF094182	19/12/24	06554	Made To Be Messy	758.82	Community Art Classes
EF094183	19/12/24	06573	Orikan Australia Pty Ltd	33,990.00	Computer Software Maintenance - Pinforce & Sentinel Annual Hosting
EF094184	19/12/24	06580	Omnicom Media Group	8,448.56	Advertising
EF094186	19/12/24	06592	Grosvenor Engineering Group	19,587.34	Electrical Contractor - COB
EF094187	19/12/24	06608	Robert Walters Pty Ltd	3,427.74	Labour/Personnel Hire
EF094189	19/12/24	06623	Glen Flood Group Pty Ltd T/as GFG Consulting	3,132.94	FOGO Customer Service Officer
EF094190	19/12/24	06654	Billi Australia Pty Ltd	315.78	Office Equipment Maintenance
EF094191	19/12/24	06662	Tool Kit Depot	1,206.25	Tools/Tool Repairs
EF094195	19/12/24	06718	Empire Roofing Services	5,500.00	Building Maintenance - COB
EF094196	19/12/24	06754	Doon Raj P/L - T/as Belmont (WA) Carpet Court	2,285.00	Building Maintenance - COB
EF094197	19/12/24	06764	Built Environment Collective Pty Ltd	2,783.00	Oasis Expenses
EF094198	19/12/24	06773	Evolve Talent	6,422.99	Labour/Personnel Hire
EF094199	19/12/24	06795	AMPAC Debt Recovery( WA) Pty Ltd	2,022.38	Professional Fees - Debt Collection
EF094201	19/12/24	06833	First Choice Gates (WA)	675.00	Fencing
EF094203	19/12/24	06847	Trayd Australia Pty Ltd	2,711.50	Building Maintenance - COB
EF094204	19/12/24	06857	Arion Service	3,619.00	Building Maintenance - COB
EF094205	19/12/24	06861	Mode Design Corp	26,290.00	Professional Fees - Civic Centre Design Audit
EF094206	19/12/24	06874	Bug Busters	638.00	Pest Control
EF094207	19/12/24	06875	Jimbu4J	423.50	Catering/Catering Supplies
EF094208	19/12/24	06884	McLeods Lawyers	6,269.10	Legal Expenses
EF094209	19/12/24	06888	Veolia Water Operations Pty Ltd T/A Allpipe Technologies	89,855.92	Building Maintenance - COB
EF094210	19/12/24	06893	Sewer Equipment Company	36,569.50	Drainage Maintenance - HD Drain Camera
EF094211	19/12/24	06900	AMS Installation & Maintenance Solutions	6,752.01	Airconditioning/Refrigeration Maintenance - COB
EF094212	19/12/24	06910	Dream Courts Pty Ltd	7,474.50	Playground Inspections/Repairs - Peachey Park
EF094213	19/12/24	06928	Integrity Staffing	8,029.03	Labour/Personnel Hire
EF094214	19/12/24	06946	Geveko Markings	1,716.22	Line Marking
EF094215	19/12/24	06955	Perth International Cabaret Festival	13,750.00	Library - Entertainment Expense - After Dak 2025
EF094216	19/12/24	06959	Elite Compliance Pty Ltd	5,621.00	Professional Fees - Pool Barrier Inspection
EF094217	19/12/24	06962	Siragusa Family Trust TA Trinacria Consulting	18,759.40	Esplanade and Cracknell Park Jetty Inspection & Report
EF094219	19/12/24	06971	Piyawat Thai Massage Armadale	770.00	Library - Entertainment Expense - Kooyong Rd Locals
EF094221	19/12/24	06992	Malena Kitchen ( WA)	1,000.00	Catering/Catering Supplies - Food Safari
<b>Contractors Total</b>				<b>6,611,884.18</b>	
<b>Councillor Payments</b>					
EF093796	06/12/24	00919	Cr Janet Powell	3,148.17	Councillor Sitting Fee
EF093802	06/12/24	01369	Philip Marks	3,148.17	Councillor Sitting Fee
EF093809	06/12/24	02145	Robert Rossi	12,668.92	Councillor Sitting Fee
EF093824	06/12/24	03916	Bernard Ryan	3,148.17	Councillor Sitting Fee
EF093827	06/12/24	05084	Jenny Davis	3,148.17	Councillor Sitting Fee
EF093828	06/12/24	05085	George Sekulla	3,148.17	Councillor Sitting Fee
EF093835	06/12/24	05828	Deborah Sessions	5,171.40	Councillor Sitting Fee
EF093851	06/12/24	06704	Christopher John Kulczycki	3,148.17	Councillor Sitting Fee
EF093864	06/12/24	06968	Jarrod Harris	3,148.17	Councillor Sitting Fee
EF094151	19/12/24	05828	Deborah Sessions	724.17	Councillor Expenditure - Child Care Fee
<b>Councillor Payments Total</b>				<b>40,601.68</b>	
<b>Credit Card 2310</b>					
EF093534	27/11/24	03526	Local Government Management	1,550.00	Registration
EF093957	16/12/24	03526	Jazmine Flowers	75.00	Flowers
<b>Credit Card 2310 Total</b>				<b>8,724.21</b>	
<b>Credit Card 4739</b>					
EF093537	27/11/24	06409	Asic	20.00	Subscription
EF093960	16/12/24	06409	News Pty Ltd	28.00	Subscription
<b>Credit Card 4739 Total</b>				<b>299.60</b>	
<b>Credit Card 7563</b>					
EF093538	27/11/24	06834	City Club	1,192.00	Accommodation - NDEC
EF093961	16/12/24	06834	Business News	550.00	Registration
<b>Credit Card 7563 Total</b>				<b>1,984.04</b>	
<b>Credit Card 7996</b>					
EF093535	27/11/24	05121	Wilson Parking	27.00	Parking
EF093958	16/12/24	05121	CPP Convention Centre	25.24	Parking
<b>Credit Card 7996 Total</b>				<b>105.48</b>	
<b>Credit Card 8380</b>					
EF093536	27/11/24	06342	Campaign Monitor	1,680.80	Subscription
EF093959	16/12/24	06342	Nordpass	1,024.94	Subscription
<b>Credit Card 8380 Total</b>				<b>16,745.35</b>	
<b>Credit Card 8670</b>					
EF093539	27/11/24	06849	Institute of Public WO	446.60	Registration
EF093962	16/12/24	06849	Esplanade Hotel	115.00	Accommodation - IPWEA Conference

## Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
<b>Credit Card 8670 Total</b>				<b>4,018.88</b>	
<b>Fuels and Utilities</b>					
EF093800	06/12/24	01252	Water Corporation	16,095.79	Water, Annual & Excess
EF093801	06/12/24	01274	Synergy	55,765.97	Light, Power, Gas
EF093811	06/12/24	02471	Western Power	3,099.00	Light, Power, Gas
EF093818	06/12/24	03592	Steven Harling	117.14	Parking
EF093843	06/12/24	06322	Code Research Pty Ltd t/as PWD	396.00	Phone/Internet expenses
EF093436	22/11/24	00042	Alinta Energy	3,763.15	Light, Power, Gas
EF093450	22/11/24	01252	Water Corporation	1,337.23	Water, Annual & Excess
EF093470	22/11/24	03592	Steven Harling	117.17	Fuel, Oil, Additives
EF093508	22/11/24	06424	Telstra Limited	10,876.87	Phone/Internet expenses
EF093542	28/11/24	00042	Alinta Energy	45.65	Light, Power, Gas
EF093601	28/11/24	01252	Water Corporation	7,244.09	Water, Annual & Excess
EF093729	28/11/24	06322	Code Research Pty Ltd t/as PWD	275.00	Phone/Internet expenses
EF093737	28/11/24	06424	Telstra Limited	6,901.35	Phone/Internet expenses
EF093755	28/11/24	06707	Motorpass - 1617 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF093883	13/12/24	00042	Alinta Energy	6.85	Light, Power, Gas
EF093899	13/12/24	01252	Water Corporation	12,606.92	Water, Annual & Excess
EF093900	13/12/24	01274	Synergy	90,735.03	Light, Power, Gas
EF093907	13/12/24	02471	Western Power	1,320.00	Light, Power, Gas
EF093908	13/12/24	02631	Ampol - Caltex	16,568.00	Fuel, Oil, Additives
EF093927	13/12/24	06322	Code Research Pty Ltd t/as PWD	561.00	Phone/Internet expenses
EF093928	13/12/24	06424	Telstra Limited	3,942.37	Phone/Internet expenses
EF093967	19/12/24	00042	Alinta Energy	1,333.60	Light, Power, Gas
EF093980	19/12/24	00264	Castrol Australia Pty Ltd	673.08	Fuel, Oil, Additives
EF094031	19/12/24	01252	Water Corporation	11,130.17	Water, Annual & Excess
EF094036	19/12/24	01274	Synergy	12,126.56	Light, Power, Gas
EF094092	19/12/24	03592	Steven Harling	44.75	Parking
EF094176	19/12/24	06424	Telstra Limited	6,996.76	Phone/Internet expenses
EF094188	19/12/24	06614	Oracle Customer Management Solutions	6,454.25	Phone/Internet expenses
EF094194	19/12/24	06707	Motorpass - 1617 - WEX Card Fee	3.00	Fuel, Oil, Additives
<b>Fuels and Utilities Total</b>				<b>296,641.73</b>	
<b>Materials</b>					
EF093785	06/12/24	00009	Cafe Corporate	242.99	Groceries
EF093788	06/12/24	00203	BOC Gases Australia Ltd	20.68	Welding Equipment/Supplies
EF093789	06/12/24	00317	Coles Supermarkets Aust Pty Ltd	1,471.37	Groceries
EF093794	06/12/24	00778	Modern Teaching Aids Pty Ltd	29.65	Books/CDs/DVDs
EF093799	06/12/24	01173	Global Spill Control	1,385.21	Cleaning Products
EF093803	06/12/24	01474	Natsync Environmental	950.00	Gardening - Night walks Sept & Oct 2024
EF093805	06/12/24	01547	Big W	101.00	Craft/Display Materials
EF093812	06/12/24	02498	City of South Perth	147.00	Impound Cats & Dogs - August 24
EF093814	06/12/24	02912	Sanity Music Stores Pty Ltd	21.99	Books/CDs/DVDs
EF093819	06/12/24	03660	Safe T Card Australia Pty Ltd	65.80	Safety Clothing/Equipment
EF093825	06/12/24	04177	Artcom Fabrication	1,282.60	Stationery & Printing
EF093846	06/12/24	06385	Belmont Liquor Store (Cellarbrations at Belmont)	1,442.00	Beverages - Civic Dinner
EF093867	06/12/24	06983	KayC Poon	126.00	Uniforms
EF093439	22/11/24	00317	Coles Supermarkets Aust Pty Ltd	1,827.15	Groceries
EF093441	22/11/24	00380	Dawsons Garden World Pty Ltd	981.95	Gardening - Plants/Supplies
EF093452	22/11/24	01398	Winc Australia Pty Ltd	158.59	Stationery & Printing
EF093457	22/11/24	01983	Whistlers Products Pty Ltd	1,062.60	Groceries
EF093464	22/11/24	02912	Sanity Music Stores Pty Ltd	254.90	Books/CDs/DVDs
EF093478	22/11/24	04394	JB Hi-Fi Belmont Forum - Library purchases	3,931.58	Books/CDs/DVDs
EF093480	22/11/24	04537	Cameron Aitkenhead t/as Head Office Studio	10,670.00	Books/CDs/DVDs - Belmonster
EF093481	22/11/24	04763	Merchandising Libraries Pty Ltd	235.68	Books/CDs/DVDs
EF093488	22/11/24	05432	Bloomin Boxes	150.00	Flowers
EF093489	22/11/24	05497	Pressed Earth Juices Pty Ltd	79.00	Beverages
EF093502	22/11/24	06346	Southern Chronicles	440.00	Publications/Newspapers
EF093506	22/11/24	06385	Belmont Liquor Store (Cellarbrations at Belmont)	4,531.00	Beverages - Art Awards
EF093512	22/11/24	06589	OverDrive Australia Pty Ltd	76.56	Books/CDs/DVDs
EF093525	22/11/24	06969	ABCO Products	458.92	Cleaning Products
EF093547	28/11/24	00231	Bunnings Group Ltd	2,770.01	Hardware
EF093548	28/11/24	00233	Bunzl Limited	3,786.77	Cleaning Products
EF093549	28/11/24	00278	Chefmaster Australia	1,616.09	Cleaning Products
EF093550	28/11/24	00285	City of Armadale	959.61	Stationery & Printing
EF093555	28/11/24	00403	Boral Construction Materials Group Ltd	2,578.17	Road/Drainage Material
EF093557	28/11/24	00425	EBSCO Australia	5,926.80	Books/CDs/DVDs
EF093558	28/11/24	00475	Saferight Pty Ltd	4,246.00	Safety Clothing/Equipment
EF093564	28/11/24	00653	Humes - Holcim (Australia) Pty Ltd QLD	1,081.04	Concrete Products
EF093565	28/11/24	00664	Kmart Australia Limited	301.50	Stationery & Printing
EF093569	28/11/24	00697	Nutrien AG Solutions Ltd	940.50	Gardening - Plants/Supplies
EF093575	28/11/24	00832	Officeworks	159.94	Stationery & Printing
EF093576	28/11/24	00850	Pacific Safety Wear Malaga	43.89	Safety Clothing/Equipment
EF093580	28/11/24	00947	Diskbank Pty Ltd - SoundPack	342.26	Books/CDs/DVDs
EF093584	28/11/24	01040	Sheridans Badges & Engraving	1,067.00	Badges & Pendants

# Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF093587	28/11/24	01083	SERCUL South East Regional Centre for Urban Landcare	5,570.14	Gardening Maintenance
EF093592	28/11/24	01173	Global Spill Control	768.40	Cleaning Products
EF093595	28/11/24	01214	Visimax	1,056.02	Safety Clothing/Equipment
EF093598	28/11/24	01239	WA Limestone Co	693.00	Sand/Soil
EF093603	28/11/24	01265	Westbooks	539.30	Books/CDs/DVDs
EF093604	28/11/24	01266	Westcare Incorporated	246.62	Safety Clothing/Equipment
EF093607	28/11/24	01325	Poolegrave Signs and Engraving	522.50	Signs
EF093608	28/11/24	01398	Winc Australia Pty Ltd	1,877.50	Stationery & Printing
EF093611	28/11/24	01430	Raeco - CEI Pty Ltd	1,257.30	Stationery & Printing
EF093613	28/11/24	01568	Allstate Safety Products	421.30	Safety Clothing/Equipment
EF093614	28/11/24	01570	Blackwoods	3,750.91	Hardware
EF093622	28/11/24	01906	Frazzcon Enterprises	2,261.56	Street & Parking Sign Maintenance - October 2024
EF093623	28/11/24	01955	Image Extra - Starmix Holdings Pty Ltd	1,375.00	Building Material - Bollards
EF093627	28/11/24	02088	Lock Stock & Farrell Locksmith	1,336.20	Hardware
EF093628	28/11/24	02168	Ergolink	3,963.10	Office Furniture
EF093629	28/11/24	02201	Neverfail Springwater Limited	81.35	Beverages
EF093634	28/11/24	02320	Ambius Indoor Plants	1,239.34	Gardening - Plants/Supplies
EF093639	28/11/24	02431	ASB Branded Merchandise - ASB Marketing Pty Ltd	14,725.37	Promotional Items
EF093641	28/11/24	02498	City of South Perth	3,081.10	Impound Cats & Dogs - September 24
EF093649	28/11/24	02862	James Bennett Pty Ltd	2,267.81	Books/CDs/DVDs
EF093652	28/11/24	03117	Six Axis Nominees T/A OCP Sales	271.97	Safety Clothing/Equipment
EF093653	28/11/24	03144	COS Complete Office Supplies Pty Ltd	2,331.55	Stationery & Printing
EF093661	28/11/24	03856	SEM Distribution - newspaper delivery	67.84	Publications/Newspapers
EF093663	28/11/24	04053	Totally Workwear TWW	993.29	Safety Clothing/Equipment
EF093666	28/11/24	04145	T J Depiazzi and Sons	30,528.30	Gardening Maintenance
EF093671	28/11/24	04491	Woolworths Group - Functions/Catering only	117.27	Groceries
EF093677	28/11/24	04759	StrataGreen	456.75	Gardening - Plants/Supplies
EF093678	28/11/24	04763	Merchandising Libraries Pty Ltd	3,349.50	Books/CDs/DVDs
EF093684	28/11/24	05036	Smedia Pty Ltd	500.00	Books/CDs/DVDs
EF093685	28/11/24	05055	Statewide Cleaning Supplies	814.14	Cleaning Products
EF093688	28/11/24	05144	Tangibility Pty Ltd	2,365.00	Stationery & Printing
EF093694	28/11/24	05402	Heatley Sales Pty Ltd	664.75	Safety Clothing/Equipment
EF093697	28/11/24	05465	QBD Books	97.29	Books/CDs/DVDs
EF093704	28/11/24	05701	Bing Technologies Pty Ltd	7,234.78	Stationery & Printing - Mails
EF093710	28/11/24	05890	Living Turf	4,752.00	Gardening - Turf Maintenance
EF093713	28/11/24	05966	Light Application Pty Ltd	3,872.00	Lights & Light Fittings - Hub
EF093715	28/11/24	05992	Corsign WA	2,020.70	Parking Signs
EF093720	28/11/24	06157	Fix8 Systems	1,986.00	Craft/Display Materials
EF093744	28/11/24	06589	OverDrive Australia Pty Ltd	838.46	Books/CDs/DVDs
EF093753	28/11/24	06681	Prefet Pty Ltd T/A Minuteman Press Perth	7,285.19	Stationery & Printing - Various Events
EF093757	28/11/24	06768	SignBiz WA	181.50	Signs
EF093762	28/11/24	06800	The Aivish Family Trust T/as Fruit Break	2,561.40	Groceries
EF093764	28/11/24	06844	Print and Sign Co	6,009.63	Stationery & Printing
EF093885	13/12/24	00185	Benara Nurseries	606.98	Gardening - Plants/Supplies
EF093886	13/12/24	00203	BOC Gases Australia Ltd	142.38	Welding Equipment/Supplies
EF093887	13/12/24	00317	Coles Supermarkets Aust Pty Ltd	76.85	Groceries
EF093892	13/12/24	00664	Kmart Australia Limited	117.00	Stationery & Printing
EF093893	13/12/24	00832	Officeworks	164.50	Stationery & Printing
EF093896	13/12/24	01066	Snap Belmont - Belsnap Pty Ltd	379.50	Stationery & Printing
EF093910	13/12/24	03856	SEM Distribution - newspaper delivery	107.90	Publications/Newspapers
EF093912	13/12/24	04394	JB Hi-Fi Belmont Forum - Library purchases	79.00	Books/CDs/DVDs
EF093914	13/12/24	04537	Cameron Aitkenhead t/as Head Office Studio	10,670.00	Books/CDs/DVDs - Belmonster in Adachi
EF093921	13/12/24	05432	Bloomin Boxes	1,854.00	Flowers
EF093969	19/12/24	00132	Bolinda Publishing Pty Ltd	64.35	Books/CDs/DVDs
EF093971	19/12/24	00185	Benara Nurseries	5,702.40	Gardening - Plants/Supplies
EF093976	19/12/24	00231	Bunnings Group Ltd	1,873.41	Hardware
EF093977	19/12/24	00233	Bunzl Limited	9,572.98	Cleaning Products
EF093981	19/12/24	00278	Chefmaster Australia	4,185.37	Cleaning Products
EF093982	19/12/24	00285	City of Armadale	941.57	Stationery & Printing
EF093984	19/12/24	00311	Cloverdale Hardware and Western Supply	22.61	Hardware
EF093985	19/12/24	00317	Coles Supermarkets Aust Pty Ltd	1,657.10	Groceries
EF093989	19/12/24	00403	Boral Construction Materials Group Ltd	2,573.88	Road/Drainage Material
EF093990	19/12/24	00406	Domus Nursery	3,137.20	Gardening - Plants/Supplies
EF093997	19/12/24	00627	Jason Signmakers	122.85	Signs
EF094007	19/12/24	00850	Pacific Safety Wear Malaga	169.95	Safety Clothing/Equipment
EF094014	19/12/24	01040	Sheridans Badges & Engraving	891.34	Badges & Pendants
EF094017	19/12/24	01083	SERCUL South East Regional Centre for Urban Landcare	2,356.60	Gardening Maintenance
EF094018	19/12/24	01086	Archival Survival Pty Ltd	571.23	Stationery & Printing
EF094021	19/12/24	01093	SAI Global Limited	32.33	Publications/Newspapers
EF094025	19/12/24	01206	Access Icon Pty Ltd t/a Cascada	12,144.00	Concrete Products - COB
EF094027	19/12/24	01239	WA Limestone Co	1,402.17	Sand/Soil
EF094033	19/12/24	01261	Wesfarmers Kleenheat Gas Pty Ltd	166.43	Welding Equipment/Supplies
EF094034	19/12/24	01265	Westbooks	1,925.16	Books/CDs/DVDs
EF094039	19/12/24	01398	Winc Australia Pty Ltd	2,906.62	Stationery & Printing



## Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF094040	19/12/24	01426	Sprayline Spraying Equipment	114.40	Gardening - Plants/Supplies
EF094043	19/12/24	01570	Blackwoods	3,049.33	Hardware
EF094052	19/12/24	01983	Whistlers Products Pty Ltd	74.80	Groceries
EF094053	19/12/24	02088	Lock Stock & Farrell Locksmith	5,333.20	Hardware
EF094054	19/12/24	02168	Ergolink	592.00	Stationery & Printing
EF094061	19/12/24	02320	Ambius Indoor Plants	1,646.34	Gardening - Assorted Plants
EF094063	19/12/24	02382	Perth Timber Co Pty Ltd	7,326.00	Building Material - Bollards
EF094069	19/12/24	02431	ASB Branded Merchandise - ASB Marketing Pty Ltd	1,381.93	Promotional Items
EF094071	19/12/24	02498	City of South Perth	3,955.28	Books/CDs/DVDs
EF094076	19/12/24	02862	James Bennett Pty Ltd	1,911.34	Books/CDs/DVDs
EF094077	19/12/24	02946	Asphalt in a Bag	1,787.50	Road/Drainage Material - Asphalt
EF094082	19/12/24	03117	Six Axis Nominees T/A OCP Sales	5,933.73	Safety Clothing/Equipment - Rangers
EF094083	19/12/24	03144	COS Complete Office Supplies Pty Ltd	1,006.09	Stationery & Printing
EF094086	19/12/24	03430	Fire Rescue Safety Australia	2,699.62	Belmont SES - General Rescue Equipment
EF094094	19/12/24	03630	Direct Trades Supply Pty Ltd	757.80	Hardware
EF094095	19/12/24	03660	Safe T Card Australia Pty Ltd	61.60	Safety Clothing/Equipment
EF094099	19/12/24	03856	SEM Distribution - newspaper delivery	191.30	Publications/Newspapers
EF094102	19/12/24	04036	CleverPatch Pty Ltd	434.35	Craft/Display Materials
EF094103	19/12/24	04053	Totally Workwear TWW	922.22	Safety Clothing/Equipment
EF094112	19/12/24	04394	JB Hi-Fi Belmont Forum - Library purchases	1,018.88	Books/CDs/DVDs
EF094119	19/12/24	04759	StrataGreen	907.01	Gardening Maintenance
EF094120	19/12/24	04763	Merchandising Libraries Pty Ltd	1,057.10	Books/CDs/DVDs
EF094126	19/12/24	05055	Statewide Cleaning Supplies	913.00	Cleaning Products
EF094138	19/12/24	05432	Bloomin Boxes	150.00	Flowers
EF094139	19/12/24	05465	QBD Books	1,138.88	Books/CDs/DVDs
EF094156	19/12/24	05992	Corsign WA	4,187.70	Signs
EF094157	19/12/24	06005	MDM Entertainment Pty Ltd	89.48	Books/CDs/DVDs
EF094168	19/12/24	06234	Brandworx Australia	560.79	Uniforms
EF094175	19/12/24	06408	LOTE Libraries Direct Pty Ltd	3,693.64	Books/CDs/DVDs
EF094185	19/12/24	06589	OverDrive Australia Pty Ltd	850.77	Books/CDs/DVDs
EF094192	19/12/24	06681	Prefet Pty Ltd T/A Minuteman Press Perth	1,628.73	Stationery & Printing - Various Events
EF094193	19/12/24	06694	Grasstrees Australia (WA) Pty Ltd	1,305.00	Gardening - Plants/Supplies
EF094200	19/12/24	06800	The Aivish Family Trust T/as Fruit Break	2,437.40	Groceries
EF094202	19/12/24	06844	Print and Sign Co	2,733.50	Stationery & Printing
EF094218	19/12/24	06969	ABCO Products	196.68	Cleaning Products
<b>Materials Total</b>				<b>312,961.98</b>	
<b>Other</b>					
EF093787	06/12/24	00181	Belmont City College	40,000.00	Grants General - 2024 November Funding
EF093820	06/12/24	03760	Wilmot Loh	107.80	Meeting - Prof Tokyo University
EF093821	06/12/24	03773	Belmont Districts Football Club	101.00	Sign Repair
EF093836	06/12/24	05839	Gary Wotzko	29.04	Hardware
EF093849	06/12/24	06613	Host Tel	145.00	State Emergency Services Expense
EF093859	06/12/24	06879	STRUT Dance Incorporated	4,875.36	Community Contribution Fund - CCF Grant
EF093860	06/12/24	06880	Chorus Australia	4,468.20	Community Contribution Fund - CCF Grant
EF093865	06/12/24	06981	Jacob Rechner	300.00	Membership Fee
EF093866	06/12/24	06982	Tara Leanne Willey	39.05	Staff Reimbursement
EF093868	06/12/24	06984	Lani Mulder	64.65	Staff Reimbursement
EF093872	06/12/24	99998	Kyieshah Riley	450.00	Sports Donation
EF093873	06/12/24	99998	Daniel Soon	676.38	Crossover Subsidy
EF093874	06/12/24	99998	Clare Porter	247.00	Your Neighbour Grant
EF093875	06/12/24	99998	K & M Powdercoating	10.56	Application Fee Refund
EF093876	06/12/24	99998	Mitchell Dalton	657.85	Crossover Subsidy
EF093877	06/12/24	99998	S Peter	493.45	Rates Refund
EF093878	06/12/24	99998	Thomas Charles & Betty Florance	540.29	Pensioner Refund
EF093879	06/12/24	99998	Phillip Edwards Patchett	540.29	Pensioner Refund
EF093880	06/12/24	99998	Beng Choo Tan & Kim Hwa Lee	150.80	Pensioner Refund
EF093881	06/12/24	99998	Robert George Goodsell	925.19	Pensioner Refund
EF093434	19/11/24	01236	Department of Fire and Emergency Services	672,241.79	Emergency Services Levy October 2024
EF093437	22/11/24	00123	Australian Communications & Media Authority	753.00	Subscription
EF093444	22/11/24	00441	Records & Information Management Practitioners Alliance	1,815.00	Training
EF093451	22/11/24	01396	Volunteering WA	550.00	Membership Fee
EF093466	22/11/24	03071	Department of Transport - Vehicle Owner Searches	910.00	Vehicle Ownership Searches
EF093467	22/11/24	03478	Western Australian Cricket Association	328.00	Refund - Booking Cancellation
EF093522	22/11/24	06940	Aboriginal Family Legal Services	5,000.00	Community Contribution Fund
EF093529	22/11/24	99998	Harrison Karim	55.00	Rates Refund
EF093530	22/11/24	99998	Wanneroo Patios	47.00	Application Fee
EF093531	22/11/24	99998	Tamya Leigh Wilson	181.24	Rates Refund
EF093532	22/11/24	99998	Aaron Ho	370.62	Crossover Subsidy
EF093533	22/11/24	99998	M & M Property Consultants	455.16	Rates Refund
EF093544	28/11/24	00116	OneMusic - Australasian Performing Right Assoc	2,037.52	Subscription
EF093605	28/11/24	01270	Perth Racing - WA Turf Club	2,579.19	Reimbursement - Line Marking
EF093610	28/11/24	01425	Belmay Primary School	2,000.00	Donation - Support Chaplaincy
EF093616	28/11/24	01676	Cloverdale Primary School	2,000.00	Donation - Support Chaplaincy
EF093656	28/11/24	03453	Clare Bridges	1,779.36	Training

# Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF093664	28/11/24	04079	Belmont Men's Shed Inc	148.00	Library Maintenance
EF093687	28/11/24	05135	Umbrella Multicultural Community Care Inc	2,970.00	Community Contribution Fund
EF093718	28/11/24	06100	New Life City Church	4,999.50	Community Contribution Fund
EF093750	28/11/24	06613	Host Tel	145.00	State Emergency Services Expense
EF093751	28/11/24	06634	AELERT C/ - Department of Climate Change, Energy, The	250.00	Subscription
EF093779	28/11/24	99998	Cassidy Tran	731.97	Crossover Subsidy
EF093780	28/11/24	99998	Maria Femia Ryan	741.24	Crossover Subsidy
EF093781	28/11/24	99998	Lim Choon Wee	648.59	Crossover Subsidy
EF093782	28/11/24	99998	SHF Planning	452.00	Application Refund
EF093783	28/11/24	99998	Scott Aaron Biddle	63.23	Rates Refund
EF093947	13/12/24	06986	GrantGuru Pty Ltd ATF The Spencer Family Trust	3,143.80	Subscription
EF093949	13/12/24	99998	Elizabeth & Terrence Reynolds	189.51	Rates Refund
EF093950	13/12/24	99998	Teresa Keszi	64.00	Police Clearance - Refund
EF093951	13/12/24	99998	JA & TM McAullay	653.88	Rates Refund
EF093952	13/12/24	99998	Yongqiang Gao	999.49	Rates Refund
EF093953	13/12/24	99998	Harry Deluxe	48.50	Lets Celebrate Christmas - Staff Reimbursement
EF093954	13/12/24	99998	Andrea Hayes	65.00	Cleaning Products - Staff Reimbursement
EF093955	13/12/24	99998	Carly Strange	51.74	Rates Refund
EF093963	16/12/24	164865	Robert Rossi	200.00	Bond Payment/Refund
EF093964	16/12/24	167269	Matthew Russell	100.00	Bond Payment/Refund
EF093965	17/12/24	01236	Department of Fire and Emergency Services	511,615.15	Emergency Services Levy - November 2024
EF093970	19/12/24	00171	Belmont Forum Shopping Centre	250.00	Staff Recognition Program
EF094004	19/12/24	00795	LGISWA	500.00	Insurance Premiums
EF094035	19/12/24	01270	Perth Racing - WA Turf Club	2,579.19	Reimbursement - Line Marking
EF094055	19/12/24	02202	Australian Institute of Company Directors	10,245.00	Membership Fee 2024/2025
EF094079	19/12/24	02966	David Richards	69.25	Fuel, Oil, Additives
EF094087	19/12/24	03453	Clare Bridges	11,750.00	Staff Reimbursement - Employee Expense
EF094104	19/12/24	04079	Belmont Men's Shed Inc	14,146.00	Grants General - 2024/2025 Memorandum of Understanding
EF094225	19/12/24	99998	Australia Post Platinum Mastercard	2,900.00	Adachi - Sister City
EF094226	19/12/24	99998	Australia Post Platinum Mastercard	900.00	Adachi - Sister City
EF094227	19/12/24	99998	Coral Pilkington	250.00	Your Neighbour Grant
Other Total				1,319,794.83	
Property, Plant & Equipment					
EF093817	06/12/24	03424	The Chair Doctor WA Pty Ltd	541.00	Office Furniture
EF093496	22/11/24	06111	Esel Pty Ltd t/as MWave	660.50	Computer Hardware
EF093516	22/11/24	06758	Stylefurn	1,843.60	Office Furniture
EF093553	28/11/24	00377	Dell Australia Pty Ltd	5,332.80	Computer Hardware
EF093646	28/11/24	02747	Business Base - (was McLernons)	694.90	Office Furniture
EF093705	28/11/24	05740	Zenith Interiors Pty Ltd	1,622.50	Office Furniture
EF093724	28/11/24	06224	a_space Australia	55,000.00	Playground Renewal Design Fee
EF093731	28/11/24	06332	New Eagle International Pty Ltd T/A UMart	1,465.75	Computer Hardware
EF093752	28/11/24	06640	Arteil (WA) Pty Ltd	839.30	Office Furniture
EF094058	19/12/24	02254	PLE Computers	1,327.00	Computer Hardware
EF094085	19/12/24	03424	The Chair Doctor WA Pty Ltd	2,044.00	Office Furniture
EF094108	19/12/24	04132	Castledex Pty Ltd	1,650.00	Office Furniture
EF094154	19/12/24	05962	Active Discovery	98,945.00	Playground Renewal - Lions & Redgum Parks
EF094162	19/12/24	06111	Esel Pty Ltd t/as MWave	2,287.95	Computer Hardware
EF094178	19/12/24	06449	Civic Settlements	1,760.00	Land Purchase - Civic Settlement Fee
Property, Plant & Equipment Total				176,014.30	
Salaries/Wages					
EF093784	03/12/24	99971	SuperChoice	164,830.53	Superannuation Contribution
WG000512	05/12/24	COB	City of Belmont Payroll	812,432.18	Salaries/Wages
EF093869	06/12/24	99952	Child Support Agency	1,421.05	Salaries/Wages
EF093870	06/12/24	99954	City of Belmont Social Club	430.00	Salaries/Wages
EF093871	06/12/24	99962	LGRCEU - WA Shire Councils Union	132.00	Salaries/Wages
WG001112	10/12/24	COB	City of Belmont Payroll	2,159.37	Salaries/Wages
WG001212	12/12/24	COB	City of Belmont Payroll	164,123.57	Salaries/Wages
EF093435	20/11/24	99971	SuperChoice	167,077.67	Superannuation Contribution
WG002111	21/11/24	COB	City of Belmont Payroll	769,255.19	Salaries/Wages
EF093526	22/11/24	99952	Child Support Agency	1,435.36	Salaries/Wages
EF093527	22/11/24	99954	City of Belmont Social Club	430.00	Salaries/Wages
EF093528	22/11/24	99962	LGRCEU - WA Shire Councils Union	132.00	Salaries/Wages
WG002811	28/11/24	COB	City of Belmont Payroll	162,139.32	Salaries/Wages
EF093956	16/12/24	99971	SuperChoice	172,657.43	Superannuation Contribution
EF094222	19/12/24	99952	Child Support Agency	1,421.05	Salaries/Wages
EF094223	19/12/24	99954	City of Belmont Social Club	430.00	Salaries/Wages
EF094224	19/12/24	99962	LGRCEU - WA Shire Councils Union	132.00	Salaries/Wages
WG001812	19/12/24	COB	City of Belmont Payroll	772,881.60	Salaries/Wages
WG002012	20/12/24	COB	City of Belmont Payroll	167,032.25	Salaries/Wages
Salaries/Wages Total				3,360,552.57	
Training and Conferences					
EF093786	06/12/24	00108	Australian Institute of Building Surveyors	154.00	Training
EF093455	22/11/24	01683	Sally De La Cruz	338.90	Staff Reimbursement - Food Hampers
EF093487	22/11/24	05290	Town Team Movement Ltd	1,430.00	Conference Expenses

## Attachment 12.5.1 December 2024 Payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF093507	22/11/24	06394	Rapid Global Pty Ltd	11,000.00	Annual Licence - Rapid Incident Reporting
EF093511	22/11/24	06517	Clarity Communications	1,292.50	Media Communication Support
EF093599	28/11/24	01240	WA Local Government Association	484.00	Training
EF093615	28/11/24	01609	First 5 Minutes Pty Ltd	1,369.50	Training
EF093897	13/12/24	01197	Helloworld Travel Belmont WA	290.00	Conference Expenses - Flights
EF093898	13/12/24	01240	WA Local Government Association	495.00	Training
EF093904	13/12/24	01660	Local Government Planners Association	820.00	Training
EF093918	13/12/24	05097	Quantified Tree Risk Assessment Ltd	399.30	Training
EF093968	19/12/24	00110	Australian Institute of Management	1,421.00	Training
EF093994	19/12/24	00600	Institute of Public Works Engineering WA	1,650.00	Training
EF093995	19/12/24	00602	Local Government Professionals Australia WA	800.00	Conference Expenses
EF094010	19/12/24	00953	Planning Institute of Australia Limited	340.00	Training
EF094028	19/12/24	01240	WA Local Government Association	1,039.50	Training
EF094044	19/12/24	01605	ATM Australian Training Management	900.00	Training
EF094045	19/12/24	01609	First 5 Minutes Pty Ltd	626.73	Training
EF094050	19/12/24	01726	ATI - Mirage Pty Ltd	2,640.00	Training
EF094101	19/12/24	04031	Local Government NSW	2,772.00	Conference Expenses - Capability Framework
EF094220	19/12/24	06974	EB Training	2,680.00	Training
<b>Training and Conferences Total</b>				<b>32,942.43</b>	
<b>MUNI Total</b>				<b>12,183,271.26</b>	
<b>Trust Funds</b>					
EF093882	10/12/24	154102	Building and Energy - Building Services Levy	30,083.25	Building and Energy - Building Services Levy
<b>Trust Funds Total</b>				<b>30,083.25</b>	
<b>TRUST Total</b>				<b>30,083.25</b>	
<b>Grand Total</b>				<b>12,213,354.51</b>	
				12,213,354.51	
			Breakdown - Cheques :	0.00	
			EFT :	12,213,354.51	

## 12.6 Monthly Financial Report for December 2024

Voting Requirement	:	Simple Majority
Subject Index	:	32/009 Financial Operating Statements
Location/Property Index	:	N/A
Application Index	:	N/A
Disclosure of any Interest	:	N/A
Previous Items	:	N/A
Applicant	:	N/A
Owner	:	N/A
Responsible Division	:	Corporate and Governance

### Council role

**Executive** The substantial direction setting and oversight role of the Council e.g. adopting plans and reports, accepting tenders, directing operations, setting and amending budgets.

### Purpose of report

To provide Council with relevant monthly financial information for the 2024-25 financial year.

### Summary and key issues

The following report includes a concise list of material variances for the month ending 31 December 2024.

#### Officer Recommendation

That the Monthly Financial Reports as at 31 December 2024 as included in Attachment 12.6.1 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 2024-25 financial year.

## Report

At the June 2024 Ordinary Council Meeting, Council adopted the materiality threshold for the 2024-25 financial year as \$100,000. The below table provides a summary of significant variances based on this materiality threshold. The detailed financial activity report is included at Attachment 12.6.1.

Report Section	Budget YTD	Actual YTD	Report Comments
<b>Operating Activities</b>			
<b>Revenue from operating activities</b>			
<b>Fees and charges</b>			
Finance	81,750	208,517	Income relating to on charging of bank fee associated with large rates payment made by credit card.
City Facilities & Property	562,364	692,731	Income from hire of City facilities above budget.
Safer Communities	491,765	633,147	Building application and Health related license income higher than expected for period.
<b>Interest earnings</b>			
Finance	3,538,872	4,186,045	Higher than anticipated interest as a result of end of year underspends and subsequent higher end of year cash balances.

<b>Other revenue</b>			
City Facilities & Property	212,485	327,449	Income from utilities on charged to lessees above budget.
<b>Expenditure from operating activities</b>			
<b>Employee costs</b>			
Works	(903,740)	(1,095,294)	Some design costs to be reallocated to capital projects.
Parks, Leisure & Environment	(2,076,398)	(1,957,613)	Salaries are below budget due to vacancies which are currently being recruited by the City.
<b>Materials and contracts</b>			
Governance, Strategy & Risk	(461,358)	(165,411)	SCP review completed in FY24, budget to be amended at March review. Expenses relating to extraordinary election yet to be incurred from Electoral Commission.
Finance	(184,893)	(414,478)	Bank fee associated with large rates payment made by credit card. Fee amount has been on charged and paid.
Information Technology	(1,749,230)	(2,140,994)	Higher than expected Microsoft/VMware licensing costs, and earlier invoicing than prior years for other major software/cloud subscriptions.
Public Relations & Stakeholder Engagement	(477,547)	(350,785)	Delay in advertising and branding expenditure due to other project priorities.
Works	(3,805,595)	(3,929,486)	Various projects above budget by minor amounts.
Parks, Leisure & Environment	(4,506,959)	(2,861,034)	Decreased seasonal activities including watering (at start of season) and delays in receiving contractor invoices.

City Facilities & Property	(2,086,995)	(1,674,263)	Variances due to timing of invoices.
Planning Services	(252,972)	(138,573)	Expenses not yet incurred as budgeted for consultants on certain planning projects and legal matters.
Safer Communities	(1,390,584)	(1,215,692)	Realised savings due to more cost-effective CB radio System purchase. Various material and contract expenses in Community Safety and Building Control below budget by minor amounts.
Economic & Community Development	(1,367,753)	(918,482)	Expenses not yet incurred as budgeted including aged accommodation fees and maintenance, youth services program and other contracts.
Library, Culture & Place	(1,542,003)	(1,111,685)	Projects are in progress with some timing variances and delay in receiving invoices for completed works.
<b>Other expenditure</b>			
Economic & Community Development	(513,456)	(398,181)	Faulkner Park Retirement Village contributions not yet incurred.
<b>Investing Activities</b>			
<b>Inflows from investing activities</b>			
<b>Capital grants, subsidies and contributions</b>			
Works	1,088,933	756,980	2nd payment of 40% of MRRG grants yet to be claimed.
Parks, Leisure & Environment	318,013	87,931	Funding for Esplanade Foreshore Stabilisation from DBCA received in FY2023, budget to be reallocated to City Projects.

City Facilities & Property	167,041	287,702	Some works for Middleton Park completed ahead of schedule in order to align with grant requirements.
<b>Outflows from investing activities</b>			
<b>Payments for property, plant and equipment</b>			
Information Technology	(360,000)	(61,332)	Delay in network hardware refresh due to other high priority projects.
Design, Assets & Development	(504,175)	(304,505)	Vehicles awaiting delivery or not required, to be adjusted at March Review.
Safer Communities	(140,000)	Nil	Delays to the commencement of CCTV projects particularly delays to the Faulkner Park project and delays with equipment for the Belmont Oasis project.
<b>Payments for construction of infrastructure</b>			
Works	(3,199,640)	(2,109,477)	Major projects in progress, expenditure spread to be amended in March review.
City Projects	(3,709,439)	(1,061,132)	Esplanade foreshore and Ornamental Lakes works to commence later than originally scheduled in January 2025. Expenditure timings to be amended in March review.
Parks, Leisure & Environment	(2,601,853)	(630,160)	Variance reflects outstanding contractor invoices and delayed commencement of some projects compared to original schedule.

## 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 for December 2024 [ <b>12.6.1</b> - 12 pages]



**CITY OF BELMONT**  
**MONTHLY FINANCIAL REPORT**  
**For the period ended 31 December 2024**

***LOCAL GOVERNMENT ACT 1995***  
***LOCAL GOVERNMENT (FINANCIAL MANAGEMENT) REGULATIONS 1996***

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# Attachment 12.6.1 Monthly Financial Report for December 2024

## CITY OF BELMONT STATEMENT OF FINANCIAL ACTIVITY FOR THE PERIOD ENDED 31 DECEMBER 2024

	Supplementary Information	Amended Budget Estimates (a) \$	YTD Budget Estimates (b) \$	YTD Actual (c) \$	Variance* \$ (c) - (b)	Variance* % ((c) - (b))/(b)	Var.
<b>OPERATING ACTIVITIES</b>							
<b>Revenue from operating activities</b>							
Rates		59,869,936	59,565,956	59,481,698	(84,258)	(0.14%)	
Grants, subsidies and contributions		2,643,219	584,400	431,385	(153,015)	(26.18%)	▼
Fees and charges		10,451,111	8,729,051	9,211,764	482,713	5.53%	▲
Interest revenue		6,763,202	3,538,875	4,199,331	660,456	18.66%	▲
Other revenue		643,980	347,999	543,183	195,184	56.09%	▲
Profit on asset disposals		87,469	43,734	4,291	(39,443)	(90.19%)	
Fair value adjustments to financial assets at fair value through profit or loss		4,203	0	0	0	0.00%	
		<b>80,463,120</b>	<b>72,810,015</b>	<b>73,871,652</b>	<b>1,061,637</b>	<b>1.46%</b>	
<b>Expenditure from operating activities</b>							
Employee costs		(28,143,531)	(14,058,100)	(14,301,776)	(243,676)	(1.73%)	▼
Materials and contracts		(37,775,248)	(18,443,422)	(15,452,870)	2,990,552	16.21%	▲
Utility charges		(2,392,832)	(1,195,769)	(1,096,462)	99,307	8.30%	
Depreciation		(12,935,924)	(6,467,967)	(7,583,158)	(1,115,191)	(17.24%)	▼
Finance costs		(520,949)	(221,328)	(227,271)	(5,943)	(2.69%)	
Insurance		(938,950)	(938,211)	(835,197)	103,014	10.98%	▲
Other expenditure		(1,530,081)	(865,975)	(632,052)	233,923	27.01%	▲
Loss on asset disposals		0	0	(55,591)	(55,591)	0.00%	
		<b>(84,237,515)</b>	<b>(42,190,772)</b>	<b>(40,184,377)</b>	<b>2,006,395</b>	<b>4.76%</b>	
Non-cash amounts excluded from operating activities	Note 2(b)	12,819,160	6,424,233	8,487,596	2,063,363	32.12%	▲
<b>Amount attributable to operating activities</b>		<b>9,044,765</b>	<b>37,043,476</b>	<b>42,174,871</b>	<b>5,131,395</b>	<b>13.85%</b>	
<b>INVESTING ACTIVITIES</b>							
<b>Inflows from investing activities</b>							
Proceeds from capital grants, subsidies and contributions		4,343,198	1,598,987	1,362,696	(236,291)	(14.78%)	▼
Proceeds from disposal of assets		867,997	0	0	0	0.00%	
		<b>5,211,195</b>	<b>1,598,987</b>	<b>1,362,696</b>	<b>(236,291)</b>	<b>(14.78%)</b>	
<b>Outflows from investing activities</b>							
Payments for property, plant and equipment	3	(5,925,414)	(1,814,003)	(1,284,141)	529,862	29.21%	▲
Payments for construction of infrastructure	3	(21,554,982)	(8,282,370)	(3,647,474)	4,634,896	55.96%	▲
<b>Amount attributable to investing activities</b>		<b>(22,269,201)</b>	<b>(8,497,386)</b>	<b>(3,568,919)</b>	<b>4,928,467</b>	<b>58.00%</b>	
<b>FINANCING ACTIVITIES</b>							
<b>Inflows from financing activities</b>							
Transfer from reserves	2	18,446,042	0	0	0	0.00%	
		<b>18,446,042</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00%</b>	
<b>Outflows from financing activities</b>							
Repayment of borrowings		(641,885)	(311,971)	(311,971)	0	0.00%	
Payments for principal portion of lease liabilities		(105,427)	0	0	0	0.00%	
Transfer to reserves	2	(5,288,109)	0	0	0	0.00%	
		<b>(6,035,421)</b>	<b>(311,971)</b>	<b>(311,971)</b>	<b>0</b>	<b>0.00%</b>	
<b>Amount attributable to financing activities</b>		<b>12,410,621</b>	<b>(311,971)</b>	<b>(311,971)</b>	<b>0</b>	<b>0.00%</b>	
<b>MOVEMENT IN SURPLUS OR DEFICIT</b>							
Surplus or deficit at the start of the financial year		1,313,815	1,313,815	5,868,521	4,554,706	346.68%	▲
Amount attributable to operating activities		9,044,765	37,043,476	42,174,871	5,131,395	13.85%	▲
Amount attributable to investing activities		(22,269,201)	(8,497,386)	(3,568,919)	4,928,467	58.00%	▲
Amount attributable to financing activities		12,410,621	(311,971)	(311,971)	0	0.00%	
<b>Surplus or deficit after imposition of general rates</b>		<b>500,000</b>	<b>29,547,934</b>	<b>44,162,502</b>	<b>14,614,568</b>	<b>49.46%</b>	▲

### KEY INFORMATION

▲ ▼ Indicates a variance between Year to Date (YTD) Budget and YTD Actual data as per the adopted materiality threshold.

\* Refer to Note 3 for an explanation of the reasons for the variance.

This statement is to be read in conjunction with the accompanying Financial Statements and Notes.

**CITY OF BELMONT**  
**STATEMENT OF FINANCIAL POSITION**  
**FOR THE PERIOD ENDED 31 DECEMBER 2024**

	Supplementary Information	30 June 2024	31 December 2024
		\$	\$
<b>CURRENT ASSETS</b>			
Cash and cash equivalents	1	18,105,527	15,221,099
Trade and other receivables		24,999,921	33,156,896
Other financial assets		40,704,180	69,152,208
Inventories		262,339	255,201
Contract assets		37,717	0
Other assets		3,483,614	4,048,912
<b>TOTAL CURRENT ASSETS</b>		<b>87,593,298</b>	<b>121,834,316</b>
<b>NON-CURRENT ASSETS</b>			
Trade and other receivables		515,832	441,899
Other financial assets		21,135,546	21,135,546
Property, plant and equipment		341,517,776	340,079,103
Infrastructure		292,331,375	290,791,495
Right-of-use assets		158,975	158,975
Intangible assets		236,828	203,135
<b>TOTAL NON-CURRENT ASSETS</b>		<b>655,896,332</b>	<b>652,810,153</b>
<b>TOTAL ASSETS</b>		<b>743,489,630</b>	<b>774,644,469</b>
<b>CURRENT LIABILITIES</b>			
Trade and other payables		7,632,119	3,357,032
Other liabilities		1,833,787	2,874,947
Lease liabilities		105,428	105,428
Borrowings		641,884	329,913
Employee related provisions		4,987,945	4,638,678
<b>TOTAL CURRENT LIABILITIES</b>		<b>15,201,163</b>	<b>11,305,998</b>
<b>NON-CURRENT LIABILITIES</b>			
Other liabilities		151,558	151,558
Lease liabilities		57,042	57,042
Borrowings		10,976,367	10,976,367
Employee related provisions		541,262	541,263
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>11,726,229</b>	<b>11,726,230</b>
<b>TOTAL LIABILITIES</b>		<b>26,927,392</b>	<b>23,032,228</b>
<b>NET ASSETS</b>		<b>716,562,238</b>	<b>751,612,241</b>
<b>EQUITY</b>			
Retained surplus		195,472,409	230,522,412
Reserve accounts	2	69,265,334	69,265,334
Revaluation surplus		451,824,495	451,824,495
<b>TOTAL EQUITY</b>		<b>716,562,238</b>	<b>751,612,241</b>

This statement is to be read in conjunction with the accompanying notes.

NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY  
FOR THE PERIOD ENDED 31 DECEMBER 2024

1 BASIS OF PREPARATION AND SIGNIFICANT 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 where no inconsistencies exist.

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. Supporting 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.

**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.

**Judgements and estimates**

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.

The balances, transactions and disclosures impacted by accounting estimates are as follows:

- estimated fair value of certain financial assets
- impairment of financial assets
- estimation of fair values of land and buildings, infrastructure and investment property
- estimation uncertainties made in relation to lease accounting
- estimated useful life of intangible assets

**MATERIAL ACCOUNTING POLICES**

Significant accounting policies utilised in the preparation of these statements are as described within the 2023-24 Annual Budget. Please refer to the adopted budget document for details of these policies.

**PREPARATION TIMING AND REVIEW**

Date prepared: All known transactions up to 31 December 2024

**CITY OF BELMONT**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**FOR THE PERIOD ENDED 31 DECEMBER 2024**

**2 STATEMENT OF FINANCIAL ACTIVITY INFORMATION**

	Supplementary Information	Amended Budget Opening 30 June 2024	Last Year Closing 30 June 2024	Year to Date 31 December 2024
<b>(a) Net current assets used in the Statement of Financial Activity</b>				
<b>Current assets</b>		\$	\$	\$
Cash and cash equivalents	1	17,777,674	18,105,527	15,221,099
Trade and other receivables		23,613,744	24,999,921	33,156,896
Other financial assets		29,118,043	40,704,180	69,152,208
Inventories		276,212	262,339	255,201
Contract assets		0	37,717	0
Other assets		3,316,206	3,483,614	4,048,912
		74,101,879	87,593,298	121,834,316
<b>Less: current liabilities</b>				
Trade and other payables		(4,956,993)	(7,632,119)	(3,357,032)
Other liabilities		(2,082,606)	(1,833,787)	(2,874,947)
Lease liabilities		(39,341)	(105,428)	(105,428)
Borrowings		(666,573)	(641,884)	(329,913)
Employee related provisions		(4,273,584)	(4,987,945)	(4,638,678)
		(12,019,097)	(15,201,163)	(11,305,998)
<b>Net current assets</b>		<b>62,082,782</b>	<b>72,392,135</b>	<b>110,528,318</b>
<b>Less: Total adjustments to net current assets</b>	Note 2(c)	(55,628,292)	(66,523,614)	(66,365,816)
<b>Closing funding surplus / (deficit)</b>		<b>6,454,490</b>	<b>5,868,521</b>	<b>44,162,502</b>

**(b) Non-cash amounts excluded from operating activities**

The following non-cash revenue and expenditure has been excluded from operating activities within the Statement of Financial Activity in accordance with *Financial Management Regulation 32*.

	Amended Budget	YTD Budget (a)	YTD Actual (b)
<b>Non-cash amounts excluded from operating activities</b>	\$	\$	\$
<b>Adjustments to operating activities</b>			
Less: Profit on asset disposals	(87,469)	(43,734)	(4,291)
Less: Fair value adjustments to financial assets at fair value through profit and loss	(4,203)	0	0
Add: Loss on asset disposals	0	0	55,591
Add: Depreciation	12,935,924	6,467,967	7,583,158
Movement in current employee provisions associated with restricted cash	(25,092)	0	0
- Pensioner deferred rates	0	0	(73,933)
- Employee provisions	0	0	927,071
<b>Total non-cash amounts excluded from operating activities</b>	<b>12,819,160</b>	<b>6,424,233</b>	<b>8,487,596</b>

**(c) Current assets and liabilities excluded from budgeted deficiency**

The following current assets and liabilities have been excluded from the net current assets used in the Statement of Financial Activity in accordance with *Financial Management Regulation 32* to agree to the surplus/(deficit) after imposition of general rates.

	Amended Budget Opening 30 June 2024	Last Year Closing 30 June 2024	Year to Date 31 December 2024
<b>Adjustments to net current assets</b>			
Less: Reserve accounts	(61,067,348)	(69,265,334)	(69,265,334)
Add: Financial assets at amortised cost	0	20,927,619	20,927,619
- EMRC receivable	0	(20,927,619)	(20,927,619)
Add: Current liabilities not expected to be cleared at the end of the year:			
- Current portion of borrowings	666,573	641,884	329,913
- Current portion of lease liabilities	39,341	105,428	105,428
- Current portion of employee benefit provisions held in reserve	4,733,142	1,994,408	2,464,177
<b>Total adjustments to net current assets</b>	<b>(55,628,292)</b>	<b>(66,523,614)</b>	<b>(66,365,816)</b>

**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.



# Attachment 12.6.1 Monthly Financial Report for December 2024

## CITY OF BELMONT NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY FOR THE PERIOD ENDED 31 DECEMBER 2024

### 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 2024-25 year is \$100,000.

Description	Var. \$ \$	Var. % %	
<b>Revenue from operating activities</b>			
<b>Fees and charges</b>	482,713	5.53%	▲
Safer Communities - Building application and Health related licence income higher than expected for the period -(\$141,382)		Timing	
Finance - Income relating to oncharging of bank fee associated with large rates payment made by credit card -(\$126,767)		Timing	
City Facilities & Property - Various hire and lease revenue amounts above budget by amounts below variance threshold - (\$130,367)		Timing	
<b>Interest revenue</b>	660,456	18.66%	▲
Finance - Higher than anticipated interest as a result of end of year underspends and subsequent higher end of year cash balances -(\$647,173)		Timing	
<b>Other revenue</b>	195,184	56.09%	▲
City Facilities and Property - Various utility reimbursement amounts above budget by amounts below variance threshold-(\$114,964)		Timing	
<b>Expenditure from operating activities</b>			
<b>Employee costs</b>	(243,676)	(1.73%)	▼
Salaries are below budget due to vacancies currently being recruited by the City		Permanent	
Works - Some design costs to be reallocated to capital projects - \$191,554		Timing	
<b>Materials and contracts</b>	2,990,552	16.21%	▲
Information Technology - Higher than expected Microsoft/VMware licensing costs, and earlier invoicing than prior years for other major software/cloud subscriptions. - \$391,764		Timing	
Works - Various variance amounts above budget by amounts below variance threshold-(\$123,890)		Timing	
Park Leisure & Environment - Decreased seasonal activities including watering and maintenance of trees and delays in receiving contractor invoices -\$1,645,925		Timing	
City Facilities & Property - Various material and contracts expenses below budget by amounts below variance threshold -\$412,733		Timing	
Economic & Community Development - Expenses not yet incurred as budgeted including aged accommodation fees and maintenance, youth services program and other contracts - \$,449,270		Timing	
Library, Culture & Place - Projects are in progress with some timing variances and delay in receiving invoices for completed works. -\$430,318		Timing	
Governance, Strategy & Risk - SCP review undertaken in FY24. Expenses relating to extraordinary election yet to be incurred from electoral commission-\$295,947		Timing	
Finance - Bank fee associated with large rates payment made by credit card. Fee amount has been oncharged and paid - (\$229,585)		Timing	
Safer Communities - Realised savings due to more cost effective CB radio System purchase. Various material and contract expenses in Community Safety and Building		Timing	
Control below budget by amounts below variance threshold. - \$174,892		Timing	
PR& Stakeholder Engagement - Delay in advertising and branding expenditure due to other project priorities -\$126,762		Timing	
Planning Services - Expenses not yet incurred as budgeted for consultants on certain planning projects and legal matters-\$114,399		Timing	
<b>Other expenditure</b>	233,923	27.01%	▲
Economic & Community Development - Faulkner Park Retirement Village contributions not yet incurred. -\$115,275		Timing	
<b>Inflows from investing activities</b>			
<b>Proceeds from capital grants, subsidies and contributions</b>	(236,291)	(14.78%)	▼
Parks, Leisure & Environment - Funding for Esplanade Foreshore Stabilisation from DBCA received in FY2023 ,budget to be reallocated - (\$230,083)		Timing	
City Facilities & Property - Some works for Middleton Park completed ahead of schedule in order to align with grant requirements - \$120,661		Timing	
Works - 2nd payment of 40% of MRRG grants yet to be claimed. - (\$331,953)		Timing	
<b>Outflows from investing activities</b>			
<b>Payments for property, plant and equipment</b>	529,862	29.21%	▲
Information Technology - Delays in network hardware refresh due to other high priority projects -\$298,668		Timing	
Design, Asset & Development - Vehicles awaiting delivery or not required, to be adjusted at March Review.- \$199,670		Timing	
Safer Communities - Underspend in CCTV projects due to hardware supply delays - \$140,000		Timing	
<b>Payments for construction of infrastructure</b>	4,634,896	55.96%	▲
Works - Major projects in progress, expenditure spread to be amended in March review - \$1,090,163		Timing	
Parks, Leisure & Environment -Reflects current program which was delayed due to changes in project specification however all projects are on target for completion within this FY 2024-25 - \$1,971,693		Timing	
City Projects - Esplanade foreshore and Ornamental Lakes works to commence in January 2025. Budget to be amended in March review - \$2,648,308		Timing	

**CITY OF BELMONT**  
**SUPPLEMENTARY INFORMATION**

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## Attachment 12.6.1 Monthly Financial Report for December 2024

### CITY OF BELMONT SUPPLEMENTARY INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2024

#### 1 INVESTMENT PORTFOLIO

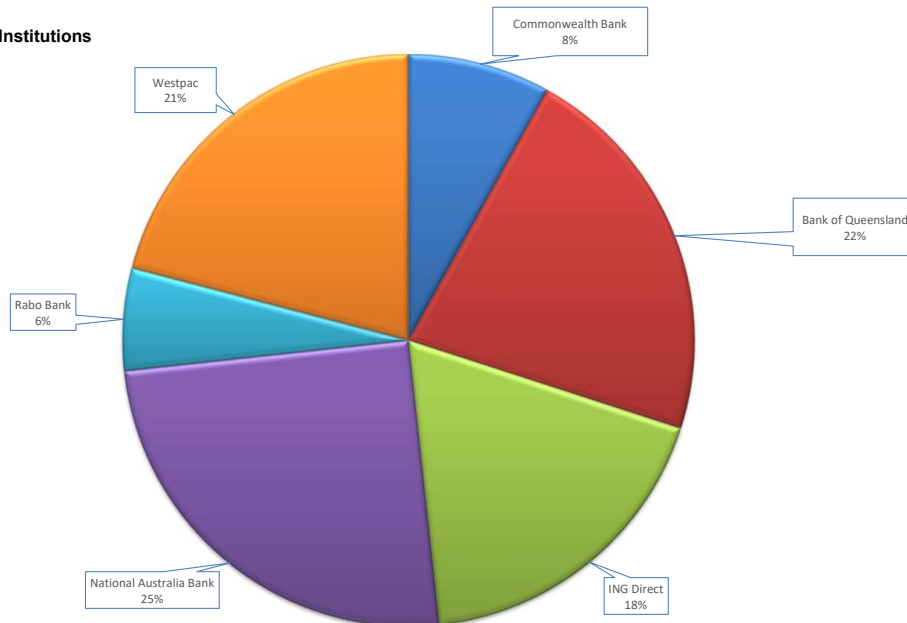
##### BY INVESTMENT HOLDINGS

	Municipal \$	Reserve \$	Trust-Reserve \$	Total \$	Total %
Municipal Account	667,571	-	-	667,571	0.67%
On-Call Account	7,420,582	-	-	7,420,582	7.40%
Term Deposits	28,000,000	64,204,831	(0)	92,204,831	91.94%
	36,088,153	64,204,831	(0)	100,292,985	100.00%

##### BY INSTITUTION

	Rating	Municipal \$	Reserve \$	Trust-Reserve \$	Total \$	Total %	Policy Max %
Commonwealth Bank	AA	8,088,153	-	-	8,088,153	8.06%	40%
Bank of Queensland	A	11,000,000	10,979,242	-	21,979,242	21.92%	30%
ING Direct	A	8,000,000	10,347,558	-	18,347,558	18.29%	30%
National Australia Bank	AA	7,000,000	18,091,709	-	25,091,709	25.02%	40%
Rabo Bank	A	-	5,795,230	-	5,795,230	5.78%	30%
Westpac	AA	2,000,000	18,991,093	-	20,991,093	20.93%	40%
		36,088,153	64,204,831	-	100,292,985	100.00%	

##### Investment Institutions



##### BY CREDIT RATINGS

Rating	Municipal \$	Reserve \$	Trust Reserve \$	Total \$	Total %	Policy Max %
AAA	-	-	-	-	0.00%	100%
AA	17,088,153	37,082,802	-	54,170,955	54.01%	100%
A	19,000,000	27,122,030	-	46,122,030	45.99%	80%
BBB / NR	-	-	-	-	0.00%	60%
	36,088,153	64,204,831	-	100,292,985	100.00%	

# Attachment 12.6.1 Monthly Financial Report for December 2024

## CITY OF BELMONT SUPPLEMENTARY INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2024

### 2 RESERVE ACCOUNTS

Reserve name	Budget Opening Balance	Budget Interest Earned	Budget Transfers In (+)	Budget Transfers Out (-)	Budget Closing Balance	Actual Opening Balance	Actual Interest Earned	Actual Transfers In (+)	Actual Transfers Out (-)	Actual YTD Closing Balance
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<b>Restricted by Council</b>										
Administration building Reserve	254,062	11,264	0	0	265,326	257,553	2,266	(2,266)	0	257,553
Aged Accommodation - Homewest Reserve	998,563	42,501	8,583	0	1,049,647	1,010,521	8,890	(8,890)	0	1,010,521
Aged Community Care Reserve	235,668	10,449	0	0	246,117	238,905	2,102	(2,102)	0	238,905
Aged persons housing Reserve	224,620	32,618	0	(257,238)	0	244,913	2,155	(2,155)	0	244,913
Aged Services Reserve	1,146,414	50,828	0	0	1,197,242	1,162,167	10,224	(10,224)	0	1,162,167
Ascot Waters Marina Maintenance & Restoration	1,091,037	48,399	0	(50,000)	1,089,436	1,106,061	9,731	(9,731)	0	1,106,061
Belmont District Band Reserve	50,559	2,242	0	0	52,801	51,256	451	(451)	0	51,256
Belmont Oasis Refurbishment Reserve	4,456,122	197,568	0	0	4,653,690	4,517,364	39,742	(39,742)	0	4,517,364
Belmont Trust Reserve	1,657,363	74,620	0	(216,324)	1,515,659	1,681,259	14,791	(14,791)	0	1,681,259
Building maintenance Reserve	4,657,748	233,538	0	(200,000)	4,691,286	4,739,102	41,693	(41,693)	0	4,739,102
Capital Projects Reserve	5,827,421	0	1,747,544	(2,703,590)	4,871,375	5,827,421	51,268	(51,268)	0	5,827,421
Car Parking Reserve	66,674	2,956	0	0	69,630	67,592	595	(595)	0	67,592
Carry Forward Projects Reserve	1,744,079	0	0	(1,647,757)	96,322	1,744,079	15,344	(15,344)	0	1,744,079
District valuation Reserve	23,651	1,049	95,000	0	119,700	23,680	208	(208)	0	23,680
Election expenses Reserve	2,030	6,412	75,000	0	83,442	8,497	75	(75)	0	8,497
Environment Reserve	884,673	69,281	0	0	953,954	927,841	8,163	(8,163)	0	927,841
Faulkner Park Retirement Village Buy Back Reserve	2,533,333	112,319	0	0	2,645,652	2,568,147	22,594	(22,594)	0	2,568,147
Faulkner Park Retirement Village Owners Maintenance Reserve	515,197	31,613	0	0	546,810	525,106	4,620	(4,620)	0	525,106
History Reserve	179,010	7,937	0	0	186,947	181,468	1,597	(1,597)	0	181,468
Information Technology Reserve	1,486,554	65,908	0	0	1,552,462	1,506,984	13,258	(13,258)	0	1,506,984
Land acquisition Reserve	10,904,340	467,902	0	0	11,372,242	11,039,182	97,119	(97,119)	0	11,039,182
Long Service Leave Reserve - Salaries	3,449,639	86,855	0	(153,273)	3,383,221	2,103,512	18,506	(18,506)	0	2,103,512
Long Service Leave Reserve - Wages	528,885	11,137	0	(5,753)	534,269	360,665	3,173	(3,173)	0	360,665
Miscellaneous Entitlements Reserve	779,710	35,942	0	0	815,652	791,398	6,962	(6,962)	0	791,398
Plant replacement Reserve	1,633,290	75,365	587,126	(1,008,951)	1,286,830	1,650,203	14,518	(14,518)	0	1,650,203
Property development Reserve	21,704,520	703,244	0	(10,564,852)	11,842,912	17,573,013	154,602	(154,602)	0	17,573,013
Public Art Reserve	411,617	18,870	0	(30,000)	400,487	417,466	3,673	(3,673)	0	417,466
Ruth Faulkner library Reserve	49,432	2,192	0	0	51,624	50,113	441	(441)	0	50,113
Streetscapes Reserve	529,620	23,481	0	(500,000)	53,101	536,898	4,723	(4,723)	0	536,898
Urban Forest Strategy Management Reserve	125,066	5,545	0	0	130,611	126,788	1,115	(1,115)	0	126,788
Waste Management Reserve	4,674,332	282,028	0	(1,108,304)	3,848,056	4,808,297	42,302	(42,302)	0	4,808,297
Workers Compensation/Insurance Reserve	1,400,052	60,793	0	0	1,460,845	1,417,883	12,474	(12,474)	0	1,417,883
	<b>74,225,281</b>	<b>2,774,856</b>	<b>2,513,253</b>	<b>(18,446,042)</b>	<b>61,067,348</b>	<b>69,265,334</b>	<b>609,375</b>	<b>(609,375)</b>	<b>0</b>	<b>69,265,334</b>

**CITY OF BELMONT**  
**SUPPLEMENTARY INFORMATION**  
**FOR THE PERIOD ENDED 31 DECEMBER 2024**

**INVESTING ACTIVITIES**

**3 CAPITAL ACQUISITIONS**

	Amended Budget	YTD Budget	YTD Actual	YTD Actual Variance
	\$	\$	\$	\$
<b>Capital acquisitions</b>				
Buildings - non-specialised	3,345,946	683,828	894,132	210,304
Furniture and equipment	1,123,801	601,000	84,542	(516,458)
Plant and equipment	1,405,667	504,175	305,467	(198,708)
Other property, plant and equipment	50,000	25,000	0	(25,000)
<b>Acquisition of property, plant and equipment</b>	<b>5,925,414</b>	<b>1,814,003</b>	<b>1,284,141</b>	<b>(529,862)</b>
Infrastructure - Roads	4,782,500	2,313,679	1,392,469	(921,210)
Infrastructure - Reserves Improvements	15,210,159	5,082,727	1,537,978	(3,544,749)
Infrastructure - Footpath Network	845,697	573,424	545,605	(27,819)
Infrastructure - Drainage Network	716,626	312,540	171,422	(141,118)
<b>Acquisition of infrastructure</b>	<b>21,554,982</b>	<b>8,282,370</b>	<b>3,647,474</b>	<b>(4,634,896)</b>
<b>Total capital acquisitions</b>	<b>27,480,396</b>	<b>10,096,373</b>	<b>4,931,615</b>	<b>(5,164,758)</b>
<b>Capital Acquisitions Funded By:</b>				
Capital grants and contributions	4,343,198	1,598,987	0	(1,598,987)
Reserve accounts				
Belmont Trust Reserve	216,324	0	0	0
Building maintenance Reserve	200,000	0	0	0
Capital Projects Reserve	2,703,590	0	0	0
Carry Forward Projects Reserve	1,647,757	0	0	0
Long Service Leave Reserve - Wages	5,753	0	0	0
Plant replacement Reserve	1,008,951	0	0	0
Property development Reserve	10,564,852	0	0	0
Public Art Reserve	30,000	0	0	0
Streetscapes Reserve	500,000			
Contribution - operations	17,501,530	8,497,386	4,931,615	(3,565,771)
<b>Capital funding total</b>	<b>39,589,952</b>	<b>10,096,373</b>	<b>4,931,615</b>	<b>(5,164,758)</b>

**MATERIAL ACCOUNTING POLICIES**

Each class of fixed assets within either plant and equipment or infrastructure, is carried at cost or fair value as indicated less, where applicable, any accumulated depreciation and impairment losses.

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 *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.

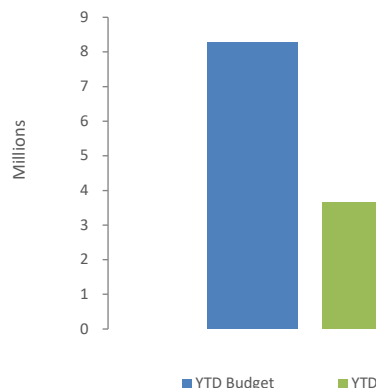
**Initial recognition and measurement for assets held at cost**

Plant and equipment including furniture and equipment is recognised at cost on acquisition in accordance with *Financial Management Regulation 17A*. Where acquired at no cost the asset is initially recognise at fair value. Assets held at cost are depreciated and assessed for impairment annually.

**Initial recognition and measurement between mandatory revaluation dates for assets held at fair value**

In relation to this initial measurement, cost is determined as the fair value of the assets given as consideration plus costs incidental to the acquisition. For assets acquired at zero cost or otherwise significantly less than fair value, cost is determined as fair value at the date of 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.

**Payments for Capital Acquisitions**



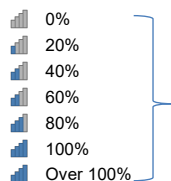


**CITY OF BELMONT**  
**SUPPLEMENTARY INFORMATION**  
**FOR THE PERIOD ENDED 31 DECEMBER 2024**

**INVESTING ACTIVITIES**

**3 CAPITAL ACQUISITIONS - DETAILED**

**Capital expenditure total**  
**Level of completion indicators**



Percentage Year to Date Actual to Annual Budget expenditure where the expenditure over budget highlighted in red.

*Level of completion indicator, please see table at the end of this note for further detail.*

	Account Description	Amended			Variance (Under)/Over
		Budget	YTD Budget	YTD Actual	
		\$	\$	\$	\$
City Projects		11,042,220	3,709,438	1,061,134	(2,648,304)
Parks and Environment		4,878,885	2,601,853	630,160	(1,971,693)
Buildings and facilities		2,635,000	585,000	740,816	155,816
Infrastructure Capital Works		6,344,823	3,199,643	2,109,496	(1,090,147)
Furniture and equipment		1,123,801	601,000	84,542	(516,458)
Plant and equipment		1,405,667	504,175	305,467	(198,708)
Other		50,000	25,000	0	(25,000)
		<b>27,480,396</b>	<b>11,226,109</b>	<b>4,931,615</b>	<b>(6,294,494)</b>

# Attachment 12.6.1 Monthly Financial Report for December 2024

## CITY OF BELMONT SUPPLEMENTARY INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2024

### 4 BUDGET AMENDMENTS

Amendments to original budget since budget adoption. Surplus/(Deficit)

Description	Council Resolution	Classification	Non Cash Adjustment \$	Increase in Available Cash \$	Decrease in Available Cash \$	Amended Budget Running Balance \$
<b>Budget adoption</b>						497,000
October Budget Review	October OCM #12.4	Opening surplus(deficit)	(4,990,527)			(4,493,527)
October Budget Review	October OCM #12.4	Operating revenue		367,633		(4,125,894)
October Budget Review	October OCM #12.4	Operating expenses			(154,263)	(4,280,157)
October Budget Review	October OCM #12.4	Capital revenue		972,549		(3,307,608)
October Budget Review	October OCM #12.4	Capital expenses			(7,400,921)	(10,708,529)
October Budget Review	October OCM #12.4	Non cash item	11,208,529			500,000
Tender 19-2024-Wilson Park Zone 2	December OCM #14.1	Capital expenses			(2,000,000)	(1,500,000)
Tender 19-2024-Wilson Park Zone 2	December OCM #14.1	Capital revenue		2,000,000		500,000
				<b>3,340,182</b>	<b>(9,555,184)</b>	<b>(6,215,002)</b>

## 12.7 Accounts for Payment January 2025

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

**Executive** The substantial direction setting and oversight role of the Council e.g. adopting plans and reports, accepting tenders, directing operations, setting and amending budgets.

### Purpose of report

To present to Council the list of expenditure paid for the period 1 January 2025 to 31 January 2025 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 January 2025 as provided under Attachment 12.7.1 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:

- (a) the payee's name;
- (b) the amount of the payment;
- (c) the date of the payment; and
- (d) 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	\$
<b>Municipal Fund Cheques</b>	788892	365.50
<b>Municipal Fund EFTs</b>	EF094228-EF094675	5,869,265.29
<b>Municipal Fund Payroll</b>	January 2025	2,234,561.68
<b>Trust Fund EFT</b>	EF094306-EF094307	53,216.58
<b>Total Payments for January 2025</b>		8,157,409.05

A copy of the Authorised Payment Listing is included as Attachment 12.7.1.

## 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. January 2025 payments [ <b>12.7.1</b> - 7 pages]

## Attachment 12.7.1 January 2025 payments

					
City of Belmont					
Accounts for Payment - January 2025					
Compiled : 04/02/25 13:40					
Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
<b>Contractors</b>					
EF094231	08/01/25	00350	Veolia Environmental Services	687,900.30	Rubbish Removals
EF094234	08/01/25	00699	Marketforce Pty Ltd	17,240.33	Advertising & Printing
EF094238	08/01/25	01188	Transcore Pty Ltd	7,700.00	Professional Fees - Redcliffe Traffic Modelling
EF094242	08/01/25	01721	Fulton Hogan Industries	82,190.53	Road Building Contractor - Asphalt
EF094243	08/01/25	01772	Data3 Limited	9,306.66	Computer Software Maintenance - Subscriptions
EF094244	08/01/25	02023	YMCA of Perth Youth and Community Services Inc	83,660.01	Youth Services Expenses - November 2024
EF094247	08/01/25	02207	Wilson Security	140,465.10	Security Services
EF094248	08/01/25	02298	Pelican Linemarking	550.00	Line Marking
EF094249	08/01/25	02303	Ultimo Catering and Events	3,234.60	Catering/Catering Supplies
EF094250	08/01/25	02411	Allsports Linemarking	605.00	Line Marking
EF094251	08/01/25	02711	CPG Research and Advisory Pty Ltd	1,558.33	Advisory Fees - December 2024
EF094252	08/01/25	02864	EnvisionWare Pty Ltd	880.00	Computer Software Maintenance
EF094258	08/01/25	04146	JB Hi-Fi Group Commercial Account, Osborne Park	15,970.00	Electrical Goods
EF094260	08/01/25	04594	Website Weed and Pest W A Pty Ltd	21,214.56	Weed Control - COB
EF094261	08/01/25	04889	Reading Entertainment Australia Pty Ltd	21,600.00	Plant/Equipment Hire - Belmont Blockbuster
EF094262	08/01/25	05016	Cyclus Pty Ltd	5,800.90	Labour/Personnel Hire
EF094265	08/01/25	05190	Mark Foote	2,135.63	Building Maintenance - COB
EF094266	08/01/25	05228	Office of the Auditor General	99,209.00	Audit Fee - June 2024
EF094267	08/01/25	05276	Rina Wong	1,103.99	Library - Entertainment Expense - Read Out Loud Awards MC
EF094269	08/01/25	05523	Go Doors Pty Ltd	471.13	Building Maintenance - Various Locations
EF094270	08/01/25	05558	BlueFit Pty Ltd	77,898.24	Oasis Management Subsidy - November 2024
EF094271	08/01/25	05572	Pack & Send Welshpool	523.00	Postage
EF094272	08/01/25	05576	NPB Security Australia	14,937.38	Security Services - Let's Celebrate Christmas
EF094274	08/01/25	05870	Work Health Professionals Pty Ltd	4,026.00	Medical Examinations
EF094275	08/01/25	06031	Williams Creative Company PL tas Proof The Band	2,172.50	Music/Entertainment Expenses - Civic Dinner
EF094276	08/01/25	06130	Amalgam Recruitment	2,035.61	Labour/Personnel Hire
EF094277	08/01/25	06203	Ngala Boodja Aboriginal Land Care	17,916.09	Maintenance of Natural Areas COB
EF094278	08/01/25	06334	Foodbank WA	4,999.50	Community Nutrition Classes
EF094279	08/01/25	06377	Choiceone Pty Ltd	27,061.01	Labour/Personnel Hire
EF094281	08/01/25	06528	Diplomatik Pty Ltd	8,845.64	Professional Fees - Recruitment Services
EF094282	08/01/25	06592	Grosvenor Engineering Group	2,629.17	Electrical Contractor - COB
EF094283	08/01/25	06623	Glen Flood Group Pty Ltd T/as GFG Consulting	2,991.45	FOGO Customer Service Officer
EF094286	08/01/25	06798	Aspire Performance Training	6,655.00	Professional Fees - Recruitment Services
EF094287	08/01/25	06875	Jimbu4J	928.30	Catering Supplies
EF094288	08/01/25	06884	McLeods Lawyers	177.21	Legal Expenses
EF094289	08/01/25	06898	CHG-MERIDIAN AUSTRALIA	19,491.53	Plant/Equipment Hire - Oasis
EF094290	08/01/25	06930	Matthew Lukin Biocich	476.30	Photography/Framing Expenses
EF094291	08/01/25	06960	Phase 3 Landscape Construction	70,780.83	Professional Fees - Faulkner Park Lakes Renewal
EF094292	08/01/25	06967	Howard & Sons Pyrotechnics (Displays)	12,064.00	Music/Entertainment Expenses - Fireworks Let's Celebrate Christmas
EF094308	17/01/25	00118	Australia Post	6,851.50	Postage
EF094312	17/01/25	00346	Action Couriers	35.90	Courier Service
EF094313	17/01/25	00350	Veolia Environmental Services	954.58	Rubbish Removals
EF094314	17/01/25	00390	Landgate	740.84	Title Searches - GRV's Metro & DFES
EF094315	17/01/25	00557	City Subaru	50,780.65	Plant Purchase
EF094316	17/01/25	00585	Hydroquip Pumps	7,378.80	Pump Maintenance - Various Parks
EF094317	17/01/25	00608	Programmed Skilled Workforce Ltd	5,263.12	Labour/Personnel Hire
EF094319	17/01/25	00815	New Town Toyota	1,897.30	Plant Parts & Repairs
EF094320	17/01/25	00988	Reece Australia Pty Ltd	1,416.09	Plumbing Maintenance/Supplies
EF094321	17/01/25	01002	RAC Businesswise Vehicle Breakdowns	108.00	Plant Parts & Repairs
EF094323	17/01/25	01188	Transcore Pty Ltd	16,500.00	Professional Fees - Tonkin Hwy Traffic Modelling
EF094327	17/01/25	01476	Hays Specialist Recruitment	8,755.26	Labour/Personnel Hire
EF094328	17/01/25	01507	The Pressure King	7,646.73	Graffiti Removal - Various Location
EF094329	17/01/25	01731	Charter Plumbing and Gas	290.57	Plumbing Maintenance/Supplies
EF094331	17/01/25	02172	Miss Maud	349.00	Catering - Women's Elders Group Christmas Lunch
EF094332	17/01/25	02290	Belmont Potters Group Inc	2,400.00	Library - Workshop
EF094336	17/01/25	03498	Talis Consultants Pty Ltd	56,938.75	Professional Fees - Belvidere Street Revitalisation Design
EF094337	17/01/25	03537	Mackay Urban Design	1,680.00	Professional Fees - Design Review
EF094339	17/01/25	03599	Donald Cant Watts Corke (WA) Pty Ltd	3,927.00	The Esplanade & Wilson Park - Superintendency Services
EF094340	17/01/25	03824	Konica Minolta	4,719.46	Photocopy Expenses
EF094341	17/01/25	03941	Metro Bee Services	495.00	Bee Removal
EF094342	17/01/25	04120	Randstad Pty Ltd	9,257.71	Labour/Personnel Hire
EF094343	17/01/25	04137	Greive Panelbeaters	1,000.00	Plant Parts & Repairs
EF094344	17/01/25	04391	Lifeskills Australia	209.00	Professional Fees - Analysis
EF094346	17/01/25	04400	The Freedom Fairies	1,732.50	Music/Entertainment Expenses - Christmas Concert
EF094347	17/01/25	04482	Allan Davies & Trevor Chudleigh Architects	5,053.40	Professional Fees - Elizabeth St Wet Area Reconfiguration
EF094349	17/01/25	04496	Azure Painting Pty Ltd	8,470.00	Painting Contractor - CoB
EF094350	17/01/25	04499	Zanzara - John Bonella	629.50	Pest Control
EF094351	17/01/25	04538	Sitech (WA) Pty Ltd	2,904.00	Plant Parts & Repairs
EF094352	17/01/25	04779	One 20 Productions	67,598.03	Plant/Equipment Hire - Miles Park Christmas Concert
EF094353	17/01/25	04974	Turf Care WA Pty Ltd	62,331.85	Turf Maintenance - Various Parks
EF094355	17/01/25	05016	Cyclus Pty Ltd	2,810.30	Labour/Personnel Hire
EF094356	17/01/25	05123	West Coast Bus Charters Pty Ltd	3,300.00	Plant/Equipment Hire - Christmas Bus Shuttle Service
EF094357	17/01/25	05154	Tanks for Hire	726.00	Plant/Equipment Hire
EF094359	17/01/25	05283	IRP Pty Ltd	17,692.02	Labour/Personnel Hire
EF094360	17/01/25	05427	Horizon West Landscape & Irrigation Pty Ltd	19,800.00	Gardening Maintenance - Various Locations
EF094362	17/01/25	05493	Daphn	5,874.00	Computer Software Maintenance - Website Support
EF094363	17/01/25	05567	Elmo Software Limited	311.04	Computer Software Maintenance
EF094364	17/01/25	05642	Steve's Sand Sifting for Playground Services	5,046.29	Sand Sifting - Various Parks
EF094365	17/01/25	05819	Ritz Drycleaners	511.35	Cleaning Services
EF094366	17/01/25	05945	Motorola Solutions Australia Pty Ltd	760.32	Two Way Radio Expenses
EF094368	17/01/25	06031	Williams Creative Company PL tas Proof The Band	1,650.00	Music/Entertainment Expenses - Let's Celebrate Belmont
EF094369	17/01/25	06130	Amalgam Recruitment	751.61	Labour/Personnel Hire
EF094370	17/01/25	06203	Ngala Boodja Aboriginal Land Care	3,509.00	Maintenance of Natural Areas COB
EF094372	17/01/25	06362	Marjan Partitions Pty Ltd t/as M & M Interiors	8,597.60	Building Construction - Renovation ILU & Parks
EF094373	17/01/25	06389	Netstar Australia Pty Ltd	82.50	GPS Tracker Fee

## Attachment 12.7.1 January 2025 payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF094375	17/01/25	06468	Perth Bouncy Castle Hire	5,736.50	Plant/Equipment Hire - Let's Celebrate Christmas
EF094376	17/01/25	06528	Diplomatik Pty Ltd	1,828.10	Professional Fees - Recruitment Services
EF094377	17/01/25	06591	Blue Tang (WA) T/A The Reef Unit Trust	3,300.00	Professional Fees - Faulkner Park Civic Centre
EF094378	17/01/25	06592	Grosvenor Engineering Group	264.00	Electrical Contractor - COB
EF094379	17/01/25	06608	Robert Walters Pty Ltd	6,643.45	Labour/Personnel Hire
EF094380	17/01/25	06691	Wood Recruitment Pty Ltd	1,483.19	Labour/Personnel Hire
EF094381	17/01/25	06751	HFM Asset Management	2,992.00	Building Maintenance - Licence Fee
EF094382	17/01/25	06753	Theme Group	511.50	Cleaning Services - Events
EF094383	17/01/25	06773	Evolve Talent	3,253.75	Labour/Personnel Hire
EF094384	17/01/25	06798	Aspire Performance Training	18,518.50	Professional Fees - Recruitment Services
EF094385	17/01/25	06862	Michael De Lange Tiling	2,013.00	Building Maintenance - Oasis
EF094386	17/01/25	06922	Crafting, Crazy-Kay Perry	230.00	Library-Entertainment Expense - Artist Shop
EF094387	17/01/25	06928	Integrity Staffing	1,164.92	Labour/Personnel Hire
EF094388	17/01/25	06959	Elite Compliance Pty Ltd	803.00	Professional Fees - Pool Barrier Inspection
EF094389	17/01/25	06960	Phase 3 Landscape Construction	326,612.95	Professional Fees - Faulkner Park Lakes Renewal
EF094390	17/01/25	06965	Daniel Argyle	330.00	Library-Entertainment Expense - Artist Talk
EF094391	17/01/25	06977	Intouch Kiosks T/A In Touch Screen	4,169.00	Touch Screen Kiosks for Museum
EF094418	23/01/25	00187	Statewide Bearings	266.66	Plant Parts & Repairs
EF094420	23/01/25	00221	John Hughes Group	1,270.63	Plant Parts & Repairs
EF094421	23/01/25	00230	Jackson McDonald	21,313.60	Legal Expenses
EF094424	23/01/25	00247	CAI Fences	1,936.00	Fencing
EF094426	23/01/25	00295	Capital Recycling	16,554.01	Rubbish Removals
EF094427	23/01/25	00373	Cutting Edges Pty Ltd	983.33	Plant Parts & Repairs
EF094428	23/01/25	00391	Chemistry Centre (WA) t/as ChemCentre	1,590.21	Professional Fees - Testing
EF094429	23/01/25	00394	Child & Adolescent Health Service - Dept of Health WA	721.86	Immunisation Expenses - December 2024
EF094431	23/01/25	00412	Dowsing Group Pty Ltd	68,009.33	Concrete Contractor - Profiling and Concrete Various Locations
EF094432	23/01/25	00557	City Subaru	509.95	Plant Parts & Repairs
EF094433	23/01/25	00585	Hydroquip Pumps	26,793.80	Pump Maintenance - Various Parks
EF094437	23/01/25	00665	Kennards Hire Pty Ltd	364.00	Plant/Equipment Hire
EF094438	23/01/25	00686	Listech Pty Ltd	1,188.00	Computer Software Maintenance Subscription
EF094439	23/01/25	00699	Marketforce Pty Ltd	1,212.20	Advertising & Printing
EF094440	23/01/25	00718	Major Motors Pty Ltd	2,148.90	Plant Parts & Repairs
EF094441	23/01/25	00726	T-Quip	744.38	Plant Parts & Repairs
EF094442	23/01/25	00738	Lloyd George Acoustics Pty Ltd	7,722.00	Professional Fees - Noise Management Plans
EF094444	23/01/25	00830	Canon Production Printing Australia Pty Ltd	628.32	Photocopy Expenses
EF094447	23/01/25	00855	Pacific Biologics Pty Ltd	7,326.00	Pest Control
EF094448	23/01/25	00859	Cannington Mazda (Prev Parkland Mazda)	1,548.90	Plant Parts & Repairs
EF094449	23/01/25	00917	Positive Auto Electronics	7,011.47	Plant Parts & Repairs
EF094451	23/01/25	00927	Professional Glass & Maintenance	840.00	Building Maintenance
EF094452	23/01/25	00931	Sonic HealthPlus Pty Ltd	1,108.80	Pre Employment Medicals
EF094453	23/01/25	00972	Repco Auto Parts	714.16	Plant Parts & Repairs
EF094454	23/01/25	00988	Reece Australia Pty Ltd	3,039.44	Plumbing Maintenance/Supplies
EF094455	23/01/25	01002	RAC Businesswise Vehicle Breakdowns	1,764.00	Plant Parts & Repairs
EF094457	23/01/25	01074	Shred-X Pty Ltd	187.25	Rubbish Removals
EF094459	23/01/25	01090	St John Ambulance Australia Inc	1,439.48	First Aid Service - Events & Training
EF094460	23/01/25	01112	Sunny Industrial Brushware	1,372.80	Plant Parts & Repairs
EF094461	23/01/25	01138	E & M J Rosher Pty Ltd	204.28	Plant Parts & Repairs
EF094462	23/01/25	01186	ZircoDATA Pty Ltd	1,767.26	Records Storage
EF094463	23/01/25	01201	Truckline	919.40	Plant Parts & Repairs
EF094465	23/01/25	01233	Stihl Shop Redcliffe	354.25	Tools/Tool Repairs
EF094466	23/01/25	01243	WARP Pty Ltd	126,484.86	Traffic Control - Various Locations
EF094469	23/01/25	01255	Wattleup Tractors	1,260.50	Plant Parts & Repairs
EF094473	23/01/25	01289	Wayne's Windscreens Pty Ltd	1,326.20	Plant Parts & Repairs
EF094474	23/01/25	01317	WA Hino Sales & Service	976.18	Plant Parts & Repairs
EF094475	23/01/25	01358	Kevrek Australia Pty Ltd	1,413.83	Plant Parts & Repairs
EF094478	23/01/25	01411	Award Irrigation Pty Ltd - Award Contracting	1,650.00	Reticulation Installation
EF094481	23/01/25	01507	The Pressure King	25,780.85	Graffiti Removal - Various Location
EF094482	23/01/25	01533	WC Convenience Management	5,462.61	Building Maintenance
EF094487	23/01/25	01712	Donegan Enterprises Pty Ltd	60,405.57	Various Parks Repairs and Maintenance
EF094488	23/01/25	01721	Fulton Hogan Industries	130,996.16	Road Building Contractor - Asphalt
EF094489	23/01/25	01731	Charter Plumbing and Gas	7,423.78	Plumbing Maintenance/Supplies
EF094490	23/01/25	01789	Allcom Communications	2,435.40	Two Way Radio Expenses
EF094491	23/01/25	01908	Urban Development Institute of Australia WA	828.00	Professional Fees - Registration Fee
EF094492	23/01/25	01976	Ecoscape Australia Pty Ltd	1,936.00	Professional Fees - Wilson Zone 2 Tendering
EF094493	23/01/25	02023	YMCA of Perth Youth & Community Services Inc	83,660.01	Youth Services Expenses - December 2024
EF094494	23/01/25	02059	Western Resource Recovery Pty Ltd	286.00	Rubbish Removals
EF094498	23/01/25	02207	Wilson Security	140,610.03	Security Services
EF094499	23/01/25	02234	Blackwell and Associates Pty Ltd	1,200.00	Professional Fees - Planning
EF094500	23/01/25	02298	Pelican Linemarking	2,310.00	Line Marking
EF094501	23/01/25	02359	Swan Towing Service Pty Ltd	500.50	Towing Vehicles
EF094502	23/01/25	02378	C R Kennedy & Co Pty Ltd	2,519.00	Subscription - Annual Maintenance Contract
EF094503	23/01/25	02387	Triton Electrical Contractors Pty Ltd	1,804.00	Electrical Contractor - COB
EF094504	23/01/25	02393	Zipform Pty Ltd	5,634.16	Postage - Rates Notices
EF094505	23/01/25	02410	System Maintenance T/A Systems By Ballantyne	6,555.65	Plumbing Maintenance/Supplies
EF094506	23/01/25	02411	Allsports Linemarking	605.00	Line Marking
EF094507	23/01/25	02425	Prestige Alarms	27,839.90	Security Services
EF094509	23/01/25	02451	Carlisle Events Hire Pty Ltd	13,901.80	Plant/Equipment Hire - Lets Celebrate Christmas
EF094512	23/01/25	02589	Zenien	13,486.61	Security Services
EF094513	23/01/25	02627	Dunbar Services WA Pty Ltd	431.20	Cleaning Services
EF094515	23/01/25	02640	Visual Inspirations Australia Pty Ltd	27,500.00	Plant/Equipment Hire - Christmas Decoration Civic Centre & Hub
EF094517	23/01/25	02672	Ruah Community Services	18,523.31	Provision of Preventive Domestic Violence Service - December 2024
EF094518	23/01/25	02779	Natural Area Holdings Pty Ltd	18,255.16	Gardening Maintenance
EF094519	23/01/25	02837	GLG Greenlife Group	24,600.72	Verge Mowing - Various Parks
EF094520	23/01/25	02849	Total Nissan and Kia - Total Autos (1990)	624.00	Plant Parts & Repairs
EF094524	23/01/25	02958	Yoshino Sushi	184.25	Catering/Catering Supplies
EF094525	23/01/25	03031	Retech Rubber	10,766.98	Plant Parts & Repairs- Harman Park Swings
EF094528	23/01/25	03197	West Coast Turf	15,999.50	Turf Maintenance - COB
EF094529	23/01/25	03366	Daimler Trucks Perth	3,364.20	Plant Parts & Repairs
EF094530	23/01/25	03419	Gott Health	2,090.00	Community Exercise Classes
EF094531	23/01/25	03464	Bridgestone Australia Ltd	3,965.30	Plant Parts & Repairs

# Attachment 12.7.1 January 2025 payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF094532	23/01/25	03504	Classic Tree Services	71,803.86	Tree Pruning Within CoB
EF094533	23/01/25	03543	Labyrinth Constructions	11,286.00	Building Construction - Property Maintenance
EF094534	23/01/25	03567	Gardner Autos Pty Ltd t/as Gardner Isuzu	772.10	Plant Parts & Repairs
EF094541	23/01/25	04106	Effects Picture Framing	335.00	Photography/Framing Expenses
EF094542	23/01/25	04120	Randstad Pty Ltd	4,057.77	Labour/Personnel Hire
EF094543	23/01/25	04146	JB Hi-Fi Group Commercial Account, Osborne Park	1,774.47	Electrical Goods
EF094544	23/01/25	04320	ABM Landscaping	5,846.50	Bricks/Bricklaying - COB
EF094546	23/01/25	04391	Lifeskills Australia	2,343.00	Professional Fees - Analysis
EF094548	23/01/25	04454	FM Contract Solutions Pty Ltd	1,785.24	Professional Fees - Auditing Nov & Dec 24
EF094549	23/01/25	04467	Rent a Fence Pty Ltd	53.46	Fencing
EF094550	23/01/25	04482	Allan Davies & Trevor Chudleigh Architects	973.50	Professional Fees - Gerry Archer Sports Complex
EF094552	23/01/25	04496	Azure Painting Pty Ltd	8,965.00	Painting Contractor - CoB
EF094553	23/01/25	04524	Moore Australia WA Pty Ltd	2,046.00	Training
EF094556	23/01/25	04643	Nyoongar Outreach Services Inc	6,875.00	Security Services
EF094557	23/01/25	04693	Allwest Plant Hire Australia Pty Ltd	8,525.00	Plant/Equipment Hire - December 2024
EF094560	23/01/25	04794	Stiles Electrical Services Pty Ltd	43,147.59	Electrical Contractor - Miles Park Sports Lighting Upgrade
EF094561	23/01/25	04908	Tamper Evident	255.20	Plastic Seals
EF094562	23/01/25	04917	Environmental Industries Pty Ltd	18,945.85	Landscape Maintenance - Ascot Waters
EF094563	23/01/25	04974	Turf Care WA Pty Ltd	51,339.11	Turf Maintenance - Various Parks
EF094568	23/01/25	05190	Mark Foote	1,815.00	Building Maintenance - COB
EF094569	23/01/25	05205	N and H Sanders	10,150.00	Floor Coverings - COB Community Halls
EF094570	23/01/25	05252	AAAC Towing Pty Ltd	610.50	Towing Vehicles
EF094571	23/01/25	05283	IRP Pty Ltd	7,374.95	Labour/Personnel Hire
EF094572	23/01/25	05336	West-Sure Group Pty Ltd	466.57	Cash Transit Service - Dec 24
EF094573	23/01/25	05339	Elliotts Filtration Pty Ltd	1,589.50	Reticulation Parts & Repairs
EF094575	23/01/25	05427	Horizon West Landscape & Irrigation Pty Ltd	7,021.74	Gardening Maintenance - Various Locations
EF094576	23/01/25	05436	Pooltime Belmont	850.00	Building Maintenance - Pool Epsom Avenue
EF094578	23/01/25	05493	Daphn	1,952.50	Computer Software Maintenance - Website Support
EF094579	23/01/25	05523	Go Doors Pty Ltd	7,474.42	Building Maintenance - Various Locations
EF094580	23/01/25	05558	BlueFit Pty Ltd	77,898.24	Oasis Management Subsidy - December 2024
EF094581	23/01/25	05568	Allstate Kerbing and Concrete	5,928.56	Kerbing and Concrete - COB
EF094582	23/01/25	05572	Pack & Send Welshpool	199.57	Postage
EF094584	23/01/25	05623	Tree Planting and Watering - Baroness Holdings	62,457.45	Street Tree Watering Services for CoB
EF094585	23/01/25	05642	Steve's Sand Sifting for Playground Services	768.57	Sand Sifting - Various Parks
EF094586	23/01/25	05692	Newground Water Services Pty Ltd	527.67	Reticulation Installation
EF094588	23/01/25	05703	Vital Interpreting Personnel - Auslan (WA) Pty Ltd	891.91	Professional Fees - Auslan Interpreters
EF094589	23/01/25	05771	Alisco Pty Ltd	184.26	Cleaning Services
EF094590	23/01/25	05782	Jane Wetherall	1,305.00	Professional Fees - Design Review Panel
EF094591	23/01/25	05809	Specialized Cleaning Group t/as Clean Sweep	26,219.60	Belmont Carparks - Sweeping Services
EF094593	23/01/25	05840	Commercial Aquatics Australia Pty Ltd	14,707.00	Oasis Expenses - Monthly Maintenance
EF094594	23/01/25	05897	HopgoodGanim Lawyers	2,225.58	Legal Expenses
EF094595	23/01/25	05920	Boults Black and White Light	23,528.92	Electrical Services - Let's Celebrate Christmas
EF094596	23/01/25	05944	Delron Cleaning Pty Ltd - Ventia	96,857.62	Cleaning Services - Various Locations
EF094597	23/01/25	05950	Commercial and Industrial Mowing - DJ & TM Luckin	6,072.00	Gardening Maintenance - Various Locations
EF094600	23/01/25	06067	TK Elevator Australia Pty Ltd	1,037.65	Building Maintenance
EF094601	23/01/25	06094	Boyan Electrical Services	337,654.49	Electrical Contractor (Including Tomato Lake installation)
EF094602	23/01/25	06104	Flick Anticimex Pty Ltd	4,593.99	Pest Control - COB
EF094603	23/01/25	06130	Amalgam Recruitment	6,279.06	Labour/Personnel Hire
EF094604	23/01/25	06159	Macrame By Amala	1,925.00	Community Art Classes
EF094605	23/01/25	06203	Ngala Boodja Aboriginal Land Care	9,127.76	Maintenance of Natural Areas COB
EF094606	23/01/25	06210	366 Solutions Pty Ltd	3,036.00	Training - Working Smart
EF094607	23/01/25	06229	Renee Parnell of Wrenscape	750.00	Art Awards/Exhibition - Workshop
EF094609	23/01/25	06276	Efficient Site Services (WA)	1,782.00	Building Construction - COB
EF094610	23/01/25	06282	Dell Financial Services Pty Ltd	26,745.04	Plant/Equipment Hire - Oct 24 to Jan 24
EF094611	23/01/25	06293	Freo Fire Maintenance Services Pty Ltd	15,398.62	Fire Equipment/Service
EF094612	23/01/25	06304	Prestige Property Maintenance	16,730.45	Gardening Maintenance
EF094614	23/01/25	06345	SoCo Studios - Travis Hayto Photography	4,867.50	Photography/Framing Expenses
EF094615	23/01/25	06377	Choiceone Pty Ltd	43,001.96	Labour/Personnel Hire
EF094616	23/01/25	06389	Netstar Australia Pty Ltd	275.00	GPS Tracker Fee
EF094618	23/01/25	06472	Overall Perth Gutter Cleaning	1,325.50	Cleaning Services - Various Location
EF094619	23/01/25	06528	Diplomatik Pty Ltd	6,379.96	Professional Fees - Recruitment Services
EF094620	23/01/25	06561	Pinyo Fordham	760.00	Professional Fees - Marketing
EF094621	23/01/25	06580	Omnicom Media Group	6,359.20	Advertising
EF094623	23/01/25	06592	Grosvenor Engineering Group	8,494.06	Electrical Contractor - COB
EF094624	23/01/25	06608	Robert Walters Pty Ltd	2,544.30	Labour/Personnel Hire
EF094625	23/01/25	06612	My Media Intelligence Pty Ltd	140.36	Professional Fees - Marketing
EF094628	23/01/25	06633	D.C.W. Enterprises T/as Rural Fencing Supplies	44.88	Fencing
EF094629	23/01/25	06654	Billi Australia Pty Ltd	1,337.52	Office Equipment Maintenance
EF094630	23/01/25	06662	Tool Kit Depot	15.00	Tools/Tool Repairs
EF094634	23/01/25	06712	Ozipond Solutions	5,500.00	Gardening Maintenance
EF094635	23/01/25	06718	Empire Roofing Services	4,000.00	Building Maintenance - COB
EF094636	23/01/25	06751	HFM Asset Management	1,617.00	Building Maintenance - Licence Fee
EF094637	23/01/25	06764	Built Environment Collective Pty Ltd	28,637.68	Oasis Expenses
EF094638	23/01/25	06795	AMPAC Debt Recovery (WA) Pty Ltd	473.00	Professional Fees - Debt Collection
EF094639	23/01/25	06798	Aspire Performance Training	385.00	Professional Fees - Recruitment Services
EF094641	23/01/25	06824	Sophie G Nixon	1,200.00	Library - Entertainment Expense - Artwork
EF094642	23/01/25	06833	First Choice Gates (WA)	836.00	Fencing
EF094644	23/01/25	06847	Trayd Australia Pty Ltd	25,617.52	Building Maintenance - COB
EF094645	23/01/25	06866	Jetwave WA	165.00	Cleaning Services
EF094646	23/01/25	06884	McLeods Lawyers	5,883.05	Legal Expenses
EF094647	23/01/25	06888	Veolia Water Operations Pty Ltd	4,161.30	Building Maintenance - COB
EF094648	23/01/25	06900	AMS Installation & Maintenance Solutions	7,754.51	Airconditioning/Refrigeration Maintenance - COB
EF094649	23/01/25	06928	Integrity Staffing	1,720.51	Labour/Personnel Hire
EF094650	23/01/25	06929	Brett David Investments T/A Successful Projects	4,132.58	Professional Fees - Engineering - Ornamental Lake Renewal
EF094651	23/01/25	06934	Positively Green Pty Ltd	7,813.66	BSRC Bowling Green Maintenance
EF094652	23/01/25	06938	LGC Equipment Hire	7,019.10	Plant/Equipment Hire - Christmas Concert
EF094653	23/01/25	06943	Complete Resurfacing Solutions	38,802.50	Building Maintenance - Faulkner Park Concrete Resurfacing
EF094654	23/01/25	06959	Elite Compliance Pty Ltd	44,695.75	Professional Fees - Pool Barrier Inspection
EF094657	23/01/25	06990	Wildlife & Eco Kayak Tours	400.00	Community Exercise Classes
EF094658	23/01/25	06993	Pure Environmental WA	1,391.50	Cleaning Services

## Attachment 12.7.1 January 2025 payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF094659	23/01/25	06995	Jerra Nominees & Neil Norrish	29,330.86	Turf Maintenance - Gerry Archer
EF094660	23/01/25	06996	Newground Facilities Management Pty Ltd	28,363.50	Turf Maintenance - COB
EF094662	23/01/25	07001	Fluidra Group Australia Pty Ltd	2,270.77	Oasis Expenses
<b>Contractors Total</b>				<b>4,601,130.02</b>	
<b>Councillor Payments</b>					
EF094237	08/01/25	00919	Janet Powell	3,148.17	Councillor Sitting Fee
EF094241	08/01/25	01369	Philip Marks	3,148.17	Councillor Sitting Fee
EF094245	08/01/25	02145	Robert Rossi	12,675.91	Councillor Sitting Fee
EF094256	08/01/25	03916	Bernard Ryan	3,148.17	Councillor Sitting Fee
EF094263	08/01/25	05084	Jenny Davis	3,148.17	Councillor Sitting Fee
EF094264	08/01/25	05085	George Sekulla	3,148.17	Councillor Sitting Fee
EF094273	08/01/25	05828	Deborah Sessions	5,171.40	Councillor Sitting Fee
EF094284	08/01/25	06704	Christopher John Kulczycki	3,148.17	Councillor Sitting Fee
EF094293	08/01/25	06968	Jarrod Harris	3,148.17	Councillor Sitting Fee
EF094450	23/01/25	00919	Janet Powell	3,148.17	Councillor Sitting Fee
EF094476	23/01/25	01369	Philip Marks	3,148.17	Councillor Sitting Fee
EF094496	23/01/25	02145	Robert Rossi	12,668.92	Councillor Sitting Fee
EF094538	23/01/25	03916	Bernard Ryan	3,148.17	Councillor Sitting Fee
EF094565	23/01/25	05084	Jenny Davis	3,148.17	Councillor Sitting Fee
EF094566	23/01/25	05085	George Sekulla	3,148.17	Councillor Sitting Fee
EF094592	23/01/25	05828	Deborah Sessions	5,171.40	Councillor Sitting Fee
EF094632	23/01/25	06704	Christopher John Kulczycki	3,148.17	Councillor Sitting Fee
EF094655	23/01/25	06968	Jarrod Harris	3,148.17	Councillor Sitting Fee
<b>Councillor Payments Total</b>				<b>79,762.01</b>	
<b>Credit Card 2310</b>					
EF094407	22/01/25	03526	IPWEA	363.00	Membership Fee
EF094407	22/01/25	03526	Aspects of Kings	100.00	Gifts - Adachi Citizen Delegation
EF094407	22/01/25	03526	Winner Circle	17.99	Raffle Tickets - Christmas Tree Competition
EF094407	22/01/25	03526	Coles	214.00	Gift Card - as per Employee Policy
EF094407	22/01/25	03526	TIMG LitSupport	199.07	Local Govt Acts 1995
EF094407	22/01/25	03526	TIMG LitSupport	152.31	Local Govt Regulations 1996
EF094407	22/01/25	03526	Work Health & Safety	990.00	Registrations
EF094407	22/01/25	03526	Coles	200.00	Gift Card - as per Employee Policy
EF094407	22/01/25	03526	SP Bits	230.00	Gifts - Adachi Citizen Delegation
EF094407	22/01/25	03526	SP Shopify	215.00	Gifts - Adachi Citizen Delegation
EF094407	22/01/25	03526	Google	11.09	Subscription
<b>Credit Card 2310 Total</b>				<b>2,692.46</b>	
<b>Credit Card 4739</b>					
EF094409	22/01/25	06409	News Pty Ltd	28.00	Subscription
EF094409	22/01/25	06409	Western Power	655.00	Application Fee
EF094409	22/01/25	06409	CPA Australia	877.04	Membership Fee
EF094409	22/01/25	06409	Company Director	725.00	Membership Fee
EF094409	22/01/25	06409	Chat GPT	63.88	Membership Fee
EF094409	22/01/25	06409	Intertek Inform	47.10	Information Fee
EF094409	22/01/25	06409	ASIC	60.00	Subscription
EF094409	22/01/25	06409	Google	11.09	Subscription
<b>Credit Card 4739 Total</b>				<b>2,467.11</b>	
<b>Credit Card 7563</b>					
EF094410	22/01/25	06834	CPP State Library	18.17	Parking
EF094410	22/01/25	06834	CPP Convention Centre	14.13	Parking
<b>Credit Card 7563 Total</b>				<b>32.30</b>	
<b>Credit Card 8380</b>					
EF094408	22/01/25	06342	Social Status	1,438.23	Subscription
EF094408	22/01/25	06342	Miss Maud	38.25	Catering
EF094408	22/01/25	06342	Campaign Monitor	1,680.80	Subscription
EF094408	22/01/25	06342	Microsoft	2,031.87	Subscription
EF094408	22/01/25	06342	Adobe	39.59	Subscription
EF094408	22/01/25	06342	Dominos	353.50	Catering
EF094408	22/01/25	06342	Twilio	31.97	Subscription
EF094408	22/01/25	06342	Facebook	157.29	Advertising
EF094408	22/01/25	06342	Nordpass	(91.03)	Subscription credit
EF094408	22/01/25	06342	Facebook	1,250.00	Advertising
<b>Credit Card 8380 Total</b>				<b>6,930.47</b>	
<b>Credit Card 8670</b>					
EF094411	22/01/25	06849	CPP Convention Centre	25.24	Parking
EF094411	22/01/25	06849	99 Bikes	100.00	Gift Cards - Student Awards
EF094411	22/01/25	06849	Coast 2 Coast Mounts	157.65	Hardware
<b>Credit Card 8670 Total</b>				<b>282.89</b>	
<b>Fuels and Utilities</b>					
EF094229	08/01/25	00042	Alinta Energy	738.30	Light, Power, Gas
EF094230	08/01/25	00323	John Christie	630.00	Phone/Internet expenses
EF094239	08/01/25	01252	Water Corporation	22,248.71	Water, Annual & Excess
EF094240	08/01/25	01274	Synergy	13,262.24	Light, Power, Gas
EF094255	08/01/25	03592	Steven Harling	13.30	Parking
EF094326	17/01/25	01274	Synergy	83,263.32	Light, Power, Gas
EF094333	17/01/25	02631	Ampol - Caltex	16,402.99	Fuel, Oil, Additives
EF094338	17/01/25	03592	Steven Harling	162.69	Parking
EF094374	17/01/25	06424	Telstra Limited	44,058.97	Phone/Internet expenses
EF094413	23/01/25	00042	Alinta Energy	1,757.95	Light, Power, Gas
EF094468	23/01/25	01252	Water Corporation	2,411.80	Water, Annual & Excess
EF094472	23/01/25	01274	Synergy	63,941.78	Light, Power, Gas
EF094510	23/01/25	02471	Western Power	9,975.00	Light, Power, Gas
EF094514	23/01/25	02631	Ampol - Caltex	17,240.87	Fuel, Oil, Additives
EF094535	23/01/25	03592	Steven Harling	72.95	Parking
EF094617	23/01/25	06424	Telstra Limited	7,150.96	Phone/Internet expenses
EF094627	23/01/25	06614	Oracle Customer Management Solutions	13,185.96	Phone/Internet expenses
EF094633	23/01/25	06707	Motorpass - 1617 - BP Welshpool	402.70	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5911 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 0085 - Coles Express Perth	86.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 0591 - BP Express	118.20	Fuel, Oil, Additives



## Attachment 12.7.1 January 2025 payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF094633	23/01/25	06707	Motorpass - 6934 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 9327 - BP Welshpool	331.54	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 6978 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 2466 - BP Bibra Lake	117.73	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5578 - Puma Burswood	216.32	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5523 - Ampol Cannington	243.96	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 4232 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 1411 - 7 Eleven Carlisle	253.51	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 1661 - Coles Express Cloverdale	430.85	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 1178 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5974 - Coles Express Cloverdale	93.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 7657 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 9084 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 2681 - Coles Express Cloverdale	295.83	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 2065 - Coles Express Cloverdale	115.69	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 3289 - United Southern River	573.63	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5561 - BP Carlisle	191.15	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5103 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5818 - BP Greenwood	331.37	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 9157 - Caltex Mount Lawley	160.58	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 1893 - Ampol Midvale	608.55	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 3239 - Caltex Gwelup	168.94	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 7149 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 3748 - BP Carlisle	273.79	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 1754 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5447 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 9603 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 1917 - Coles Express Cloverdale	51.51	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 6284 - Caltex Mount Lawley	529.01	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 9357 - Ampol Forrestdale	305.55	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 1615 - Coles Express Bull creek	131.10	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 3839 - Ampol Belmont	195.45	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 3847 - BP Mindarie	172.73	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 2474 - WEX Card Fee	12.67	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 2516 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 4361 - Liberty Gosnells	342.69	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 3567 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 6390 - Ampol Bentley	261.39	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 4083 - Caltex Burswood	96.68	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5625 - Coles Express Cloverdale	213.22	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 4201 - Ampol Ascot	253.62	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 7786 - Ampol Kingsley	338.28	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5490 - Ampol Bunbury	207.09	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5997 - BP Cannington	114.41	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 0091 - Ampol Applecross	293.30	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 4565 - Ampol Willetton	158.52	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 3741 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 0327 - Ampol Rivervale	53.63	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 0177 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 1658 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 6153 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 7033 - Ampol Belmont	282.53	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5317 - Atlas Fuel Ascot	145.44	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 6117 - Coles Express Cloverdale	243.92	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 2562 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 3517 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 4060 - BP Connect North Perth	160.62	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 0387 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 1187 - Puma Burswood	318.78	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 6973 - Ampol Murdoch	206.77	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 3142 - Coles Express Banksia Grove	314.71	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 5189 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 9357 - Ampol Forrestdale	209.93	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 4878 - 7-Eleven Carlisle	93.76	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 4886 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 4358 - BP Express Carlisle	76.97	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 9969 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 7569 - WEX Card Fee	3.00	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 8830 - Coles Express Cloverdale	98.42	Fuel, Oil, Additives
EF094633	23/01/25	06707	Motorpass - 9265 - WEX Card Fee	3.00	Fuel, Oil, Additives
<b>Fuels and Utilities Total</b>				<b>461,415.70</b>	
<b>Materials</b>					
EF094233	08/01/25	00617	Jacksons Drawing Supplies Pty Ltd	276.35	Craft/Display Materials
EF094246	08/01/25	02201	Neverfail Springwater Limited	44.85	Beverages
EF094254	08/01/25	03431	Shop for Shops Pty Ltd	318.21	Craft/Display Materials
EF094259	08/01/25	04491	Woolworths Group - Functions/Catering only	712.24	Groceries
EF094268	08/01/25	05445	Moddex Group Pty Ltd	84,139.55	Plant/Equipment - Modular Rail Bike safe
EF094309	17/01/25	00185	Benara Nurseries	517.18	Gardening - Plants/Supplies
EF094310	17/01/25	00220	Burswood Trophies	283.25	Badges & Pendants
EF094311	17/01/25	00231	Bunnings Group Ltd	1,076.67	Hardware
EF094318	17/01/25	00664	Kmart Australia Limited	208.50	Stationery & Printing
EF094325	17/01/25	01263	West Australian Newspapers Ltd	293.37	Publications/Newspapers
EF094330	17/01/25	01906	Frazzcon Enterprises	2,335.58	Street & Parking Sign Maintenance - December 2024
EF094345	17/01/25	04394	JB Hi-Fi Belmont Forum - Library purchases	2,162.56	Books/CDs/DVDs
EF094348	17/01/25	04491	Woolworths Group - Functions/Catering only	137.98	Groceries
EF094354	17/01/25	04981	WOW Wilderness EcoProjects	620.82	Gardening - Plants/Supplies
EF094361	17/01/25	05432	Bloomin Boxes	150.00	Flowers
EF094371	17/01/25	06234	Brandworx Australia	186.09	Uniforms
EF094412	23/01/25	00009	Cafe Corporate	668.80	Groceries
EF094414	23/01/25	00099	Ausrecord Pty Ltd	452.76	Stationery & Printing

# Attachment 12.7.1 January 2025 payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF094417	23/01/25	00132	Bolinda Publishing Pty Ltd	64.35	Books/CDs/DVDs
EF094419	23/01/25	00203	BOC Gases Australia Ltd	354.64	Welding Equipment/Supplies
EF094422	23/01/25	00231	Bunnings Group Ltd	2,967.89	Hardware
EF094423	23/01/25	00233	Bunzl Limited	780.54	Cleaning Products
EF094425	23/01/25	00285	City of Armadale	1,372.23	Stationery & Printing
EF094430	23/01/25	00403	Boral Construction Materials Group Ltd	1,715.92	Road/Drainage Material
EF094434	23/01/25	00617	Jacksons Drawing Supplies Pty Ltd	280.75	Craft/Display Materials
EF094435	23/01/25	00627	Jason Signmakers	392.89	Signs
EF094436	23/01/25	00664	Kmart Australia Limited	435.25	Stationery & Printing
EF094443	23/01/25	00778	Modern Teaching Aids Pty Ltd	1,671.84	Stationery - Digital Binoculars
EF094445	23/01/25	00832	Officeworks	124.35	Stationery & Printing
EF094446	23/01/25	00850	Pacific Safety Wear Malaga	723.80	Safety Clothing/Equipment
EF094456	23/01/25	01073	Spotlight Pty Ltd	253.50	Craft/Display Materials
EF094458	23/01/25	01083	SERCUL South East Regional Centre for Urban Landcare	2,356.60	Gardening Maintenance
EF094464	23/01/25	01206	Access Icon Pty Ltd t/a Cascada	730.40	Concrete Products - COB
EF094470	23/01/25	01265	Westbooks	1,192.18	Books/CDs/DVDs
EF094477	23/01/25	01398	Winc Australia Pty Ltd	3,238.60	Stationery & Printing
EF094479	23/01/25	01426	Sprayline Spraying Equipment	529.93	Gardening - Plants/Supplies
EF094483	23/01/25	01568	Allstate Safety Products	184.80	Safety Clothing/Equipment
EF094484	23/01/25	01570	Blackwoods	1,151.24	Hardware
EF094495	23/01/25	02088	Lock Stock & Farrell Locksmith	1,685.00	Hardware
EF094497	23/01/25	02168	Ergolink	1,999.91	Office Furniture
EF094508	23/01/25	02431	ASB Branded Merchandise - ASB Marketing P/L	4,276.80	Promotional Items
EF094511	23/01/25	02498	City of South Perth	10,445.55	Impound Cats & Dogs - November 24 & December 24
EF094516	23/01/25	02649	ALS Library Services Pty Ltd	85.26	Books/CDs/DVDs
EF094521	23/01/25	02862	James Bennett Pty Ltd	4,467.34	Books/CDs/DVDs
EF094522	23/01/25	02912	Sanity Music Stores Pty Ltd	612.97	Books/CDs/DVDs
EF094523	23/01/25	02922	United Fasteners	20.26	Hardware
EF094526	23/01/25	03117	Six Axis Nominees T/A OCP Sales	269.12	Subscription
EF094527	23/01/25	03144	COS Complete Office Supplies Pty Ltd	1,775.26	Stationery & Printing
EF094536	23/01/25	03660	Safe T Card Australia Pty Ltd	107.80	Safety Clothing/Equipment
EF094537	23/01/25	03856	SEM Distribution - newspaper delivery	169.32	Publications/Newspapers
EF094539	23/01/25	04036	CleverPatch Pty Ltd	350.06	Craft/Display Materials
EF094540	23/01/25	04053	Totally Workwear TWW	1,722.73	Safety Clothing/Equipment
EF094547	23/01/25	04394	JB Hi-Fi Belmont Forum - Library purchases	85.02	Books/CDs/DVDs
EF094551	23/01/25	04491	Woolworths Group - Functions/Catering only	343.80	Groceries
EF094554	23/01/25	04525	B & S Printing Company	682.00	Stationery & Printing
EF094555	23/01/25	04537	Cameron Aitkenhead t/as Head Office Studio	10,670.00	Books/CDs/DVDs - Adachi Graphic Design Service
EF094558	23/01/25	04759	StrataGreen	220.13	Gardening Maintenance
EF094559	23/01/25	04763	Merchandising Libraries Pty Ltd	2,641.65	Books/CDs/DVDs
EF094564	23/01/25	05082	Accidental Health and Safety Perth	3,095.74	Medical/First Aid Supplies
EF094567	23/01/25	05144	Tangibility Pty Ltd	781.00	Stationery & Printing
EF094574	23/01/25	05402	Heatley Sales Pty Ltd	1,197.06	Safety Clothing/Equipment
EF094577	23/01/25	05465	QBD Books	1,105.46	Books/CDs/DVDs
EF094587	23/01/25	05701	Bing Technologies Pty Ltd	5,430.96	Stationery & Printing - Mails
EF094598	23/01/25	05992	Corsign WA	7,390.46	Signs
EF094599	23/01/25	06005	MDM Entertainment Pty Ltd	317.17	Books/CDs/DVDs
EF094608	23/01/25	06234	Brandworx Australia	7,106.90	Uniforms
EF094622	23/01/25	06589	OverDrive Australia Pty Ltd	2,134.98	Books/CDs/DVDs
EF094631	23/01/25	06681	Prefet Pty Ltd T/A Minuteman Press Perth	3,061.41	Stationery & Printing - Various Events
EF094640	23/01/25	06800	The Aivish Family Trust T/as Fruit Break	1,530.80	Groceries
EF094643	23/01/25	06844	Print and Sign Co	246.40	Stationery & Printing
EF094656	23/01/25	06988	RELX Trading Australia	6,547.16	Computer Software Subscription
<b>Materials Total</b>				<b>197,681.94</b>	
<b>Other</b>					
EF094235	08/01/25	00795	LGISWA	500.00	Insurance Premiums
EF094236	08/01/25	00865	PBF Australia Ltd	11,502.00	Insurance Premiums - Membership
EF094253	08/01/25	03071	Department of Transport - Vehicle Owner Searches	468.65	Vehicle Ownership Searches
EF094257	08/01/25	04079	Belmont Men's Shed Inc	13,750.00	Grants General - 2024/2025 Memorandum of Understanding
EF094285	08/01/25	06752	Sarah Jessop	866.50	Membership Fee
EF094294	08/01/25	06998	Gauri Thanasingam	208.70	Family Domestic Initiative - Hampers
EF094298	08/01/25	99998	Rent Choice	458.10	Rates Refund
EF094299	08/01/25	99998	Complete Approvals	147.00	Application Fee Refund
EF094300	08/01/25	99998	Rebecca Lill	450.00	Sports Donation
EF094301	08/01/25	99998	Elizabeth Sienna	284.35	Refund
EF094302	08/01/25	99998	Kailah-Jane French	2,261.80	Rates Refund
EF094303	08/01/25	99998	Paul & Rosemarie Linkermann	51.70	Application Fee Refund
EF094304	08/01/25	99998	First Capital Real Estate	407.55	Rates Refund
EF094305	08/01/25	99998	Great Aussie Patios	147.00	Application Fee Refund
788892	17/01/25	00893	Petty Cash - Library	365.50	Petty Cash Recoup
EF094334	17/01/25	03071	Department of Transport - Vehicle Owner Searches	545.35	Vehicle Ownership Searches
EF094335	17/01/25	03453	Clare Bridges	1,800.00	Staff Reimbursement - Employee Expense
EF094392	17/01/25	99998	A-B-M Gomes Pty Ltd	1,092.73	Rates Refund
EF094393	17/01/25	99998	Nada Treacher	250.00	Your Neighbour Grant
EF094394	17/01/25	99998	Vicki Anne Westcott	201.32	Your Neighbour Grant
EF094395	17/01/25	99998	Lynette Bellis	162.10	Your Neighbour Grant
EF094396	17/01/25	99998	Wangli Wu	669.60	Crossover Subsidy
EF094397	17/01/25	99998	Virender Kumar	98.10	Application Fee Refund
EF094398	17/01/25	99998	Travis and Lesley Brown	676.38	Crossover Subsidy
EF094399	17/01/25	99998	Myra Hind	250.00	Your Neighbour Grant
EF094400	17/01/25	99998	Benjamin James Rogers	55.84	Rates Refund
EF094401	17/01/25	99998	Yvonne Irene Berry	717.42	Rates Refund
EF094402	17/01/25	99998	Deniel Bending	213.88	Your Neighbour Grant
EF094403	17/01/25	99998	Jasmine Cronin	850.00	Sports Donation
EF094404	17/01/25	99998	Ethan Revell	850.00	Sports Donation
EF094405	21/01/25	01236	Department of Fire and Emergency Services	332,315.41	Emergency Services Levy December 2024
EF094416	23/01/25	00116	OneMusic - Australasian Performing Right Assoc	2,004.30	Subscription
EF094467	23/01/25	01244	Western Australian Treasury Corporation	40,626.19	Govt Guarantee Fee Dec 2024
EF094471	23/01/25	01270	Perth Racing - WA Turf Club	24,579.19	Sponsorship - 2025 Perth Racing
EF0944626	23/01/25	06613	Host Tel	290.00	State Emergency Services Expense

# Attachment 12.7.1 January 2025 payments

Pmnt Ref	Date	CR Code	Supplier	Pmnt Amnt	Description
EF094666	23/01/25	99998	Glynis Merle Berber	100.00	Rates Refund
EF094667	23/01/25	99998	Mervyn George Dalby	778.04	Rates Refund
EF094668	23/01/25	99998	Robin Kay Jordan	919.51	Rates Refund
EF094669	23/01/25	99998	Shelford Construction	370.62	Crossover Subsidy
EF094670	23/01/25	99998	Dilhan Wijesinghe	750.51	Crossover Subsidy
EF094671	23/01/25	99998	Daniel Arthur	676.38	Crossover Subsidy
EF094672	23/01/25	99998	Pike Tessa Julie	62.41	Rates Refund
EF094673	23/01/25	99998	Estate of the Late Edward J Dymnicki	1,814.12	Rates Refund
EF094674	23/01/25	99998	Rent Choice	392.40	Rates Refund
EF094675	23/01/25	99998	David Andrew Johnson	646.69	Rates Refund
		<b>Other Total</b>		<b>446,627.34</b>	
<b>Property, Plant &amp; Equipment</b>					
EF094280	08/01/25	06400	4Park Pty Ltd T/A Forpark Australia	165,000.00	Playground Equipment
EF094358	17/01/25	05207	Department of Planning, Lands and Heritage	189.80	Document Lodgement Fee
EF094367	17/01/25	05962	Active Discovery	5,665.00	Playground Equipment - Selby Park
EF094480	23/01/25	01428	Innova Group Pty Ltd - Mity Lite Tables	4,352.70	Office Furniture - Redcliffe Community Centre
EF094583	23/01/25	05621	Grillex	24,467.30	Street Furniture - BBQ
EF094613	23/01/25	06332	New Eagle International Pty Ltd T/A UMart	596.75	Computer Hardware
		<b>Property, Plant &amp; Equipment Total</b>		<b>200,271.55</b>	
<b>Salaries/Wages</b>					
WG000201	02/01/25	COB	City of Belmont Payroll	799,442.73	Salaries/Wages
EF094228	06/01/25	99971	SuperChoice	165,157.98	Superannuation Contribution
EF094295	08/01/25	99952	Child Support Agency	1,421.05	Salaries/Wages
EF094296	08/01/25	99954	City of Belmont Social Club	415.00	Salaries/Wages
EF094297	08/01/25	99962	LGRCEU - WA Shire Councils Union	132.00	Salaries/Wages
WG000801	09/01/25	COB	City of Belmont Payroll	166,868.56	Salaries/Wages
WG001501	16/01/25	COB	City of Belmont Payroll	790,643.61	Salaries/Wages
EF094406	21/01/25	99971	SuperChoice	307,764.96	Superannuation Contribution
EF094663	23/01/25	99952	Child Support Agency	1,757.79	Salaries/Wages
EF094664	23/01/25	99954	City of Belmont Social Club	815.00	Salaries/Wages
EF094665	23/01/25	99962	LGRCEU - WA Shire Councils Union	143.00	Salaries/Wages
		<b>Salaries/Wages Total</b>		<b>2,234,561.68</b>	
<b>Training and Conferences</b>					
EF094232	08/01/25	00602	Local Government Professionals Australia WA	1,040.00	Conference Expenses
EF094322	17/01/25	01043	City of Swan	268.00	Membership Fee
EF094324	17/01/25	01240	WA Local Government Association	544.50	Training
EF094415	23/01/25	00110	Australian Institute of Management	2,222.00	Training
EF094485	23/01/25	01605	ATM Australian Training Management	395.00	Training
EF094486	23/01/25	01609	First 5 Minutes Pty Ltd	2,181.47	Training
EF094545	23/01/25	04351	Akolade Pty Ltd	2,858.90	Conference Expenses
EF094661	23/01/25	06999	Disc Profiles Australia	14,751.00	Training - DISC Accreditation
		<b>Training and Conferences Total</b>		<b>24,260.87</b>	
<b>MUNI Total</b>				<b>8,104,192.47</b>	
<b>Trust Funds</b>					
EF094306	14/01/25	150748	Building and Construction Industry Training Fund	491.75	Building and Construction Industry Training Fund
EF094307	14/01/25	154102	Building and Energy - Building Services Levy	52,724.83	Building and Energy - Building Services Levy
		<b>Trust Funds Total</b>		<b>53,216.58</b>	
<b>TRUST Total</b>				<b>53,216.58</b>	
<b>Grand Total</b>				<b>8,157,409.05</b>	
				8,157,409.05	
			Breakdown - Cheques :	365.50	
			EFT :	8,157,043.55	

## 12.8 Monthly Financial Report for January 2025

Voting Requirement	:	Simple Majority
Subject Index	:	32/009 Financial Operating Statements
Location/Property Index	:	N/A
Application Index	:	N/A
Disclosure of any Interest	:	N/A
Previous Items	:	N/A
Applicant	:	N/A
Owner	:	N/A
Responsible Division	:	Corporate and Governance

### Council role

**Executive** The substantial direction setting and oversight role of the Council e.g. adopting plans and reports, accepting tenders, directing operations, setting and amending budgets.

### Purpose of report

To provide Council with relevant monthly financial information for the 2024-25 financial year.

### Summary and key issues

The following report includes a concise list of material variances for the month ending 31 January 2025.

#### Officer Recommendation

That the Monthly Financial Reports as at 31 January 2025 as included in Attachment 12.8.1 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 2024-25 financial year.

## Report

At the June 2024 Ordinary Council Meeting, Council adopted the materiality threshold for the 2024-25 financial year as \$100,000. The below table provides a summary of significant variances based on this materiality threshold. The detailed financial activity report is included at Attachment 12.8.1.

Report Section	Budget YTD	Actual YTD	Report Comments
<b>Operating Activities</b>			
<b>Revenue from operating activities</b>			
<b>Fees and charges</b>			
Finance	99,875	211,065	Income relating to on charging of bank fee associated with large rates payment made by credit card.
City Facilities & Property	650,308	808,556	Income from hire of City facilities above budget.
Safer Communities	563,804	699,226	Income from Building Applications significantly higher than anticipated. This has been addressed at the March Budget Review.
<b>Interest earnings</b>			
Finance	4,133,812	4,697,554	Higher than anticipated interest as a result of end of year underspends and subsequent higher end of year cash balances.
<b>Other revenue</b>			
City Facilities & Property	247,066	377,647	On-charging of prior period outgoings resulting in increased revenue for period.
<b>Expenditure from operating activities</b>			
<b>Employee costs</b>			

Report Section	Budget YTD	Actual YTD	Report Comments
Works	(1,037,301)	(1,307,118)	Some design costs to be reallocated to capital projects.
<b>Materials and contracts</b>			
Governance, Strategy & Risk	(529,970)	(177,508)	WA Electoral Commission costs not invoiced. Legal Services lower than forecast. ABEF training attendance lower than expected, reducing cost.
Finance	(320,827)	(429,258)	Bank fee associated with large rates payment made by credit card. Fee amount has been on charged and paid.
Information Technology	(1,845,985)	(2,200,203)	Higher than expected Microsoft/VMware licensing costs, and earlier invoicing than prior years for other major software/cloud subscriptions.
Public Relations & Stakeholder Engagement	(548,927)	(426,674)	Minor project delay and some cost savings anticipated
Works	(4,595,869)	(3,587,281)	Variance due to Waste Services expenses not yet incurred.
Design, Assets & Development	(352,818)	(238,363)	Variances due to timing of consultant invoices.
Parks, Leisure & Environment	(5,232,243)	(3,578,088)	Decreased seasonal activities including watering (at start of season) and delays in receiving contractor invoices.
City Facilities & Property	(2,392,238)	(2,074,137)	Variances due to timing of invoices.
Planning Services	(293,444)	(157,729)	Expenses not yet incurred as budgeted for consultants on certain planning projects and legal matters.

Report Section	Budget YTD	Actual YTD	Report Comments
Safer Communities	(1,642,885)	(1,466,935)	Underspends have been as a result of lower than anticipated use of legal services and pending in default property demolition in Health area, delayed implementation of community safety initiatives, delayed Rangers purchases and delayed payment of contractor costs in Emergency Management. These have been addressed at the March Budget review.
Economic & Community Development	(1,513,624)	(1,089,431)	Expenses not yet incurred as budgeted including aged accommodation fees and maintenance, youth services and other program contracts.
Library, Culture & Place	(1,637,565)	(1,346,105)	Projects are in progress with some timing variances.
<b>Other expenditure</b>			
Economic & Community Development	(594,609)	(434,157)	Faulkner Park Retirement Village contributions not yet incurred.
<b>Investing Activities</b>			
<b>Inflows from investing activities</b>			
<b>Non-operating grants, subsidies and contributions</b>			
Works	1,201,531	808,929	2nd payment of 40% of MRRG grants yet to be received.
City Projects	Nil	230,083	Funding for Esplanade Foreshore Stabilisation from DBCA received in FY2023, budget to be reallocated from Parks.
Parks, Leisure & Environment	318,013	87,931	Funding for Esplanade Foreshore Stabilisation from DBCA received in FY2023, budget to be reallocated to City Projects.

Report Section	Budget YTD	Actual YTD	Report Comments
City Facilities & Property	552,792	287,702	Outstanding Funds for Middleton Park & Tomato Lake. Grant for Centenary Park was not awarded
<b>Proceeds from disposal of assets</b>			
<b>Outflows from investing activities</b>			
<b>Payments for property, plant and equipment</b>			
Information Technology	(607,801)	(40,426)	Delay in network hardware refresh due to other high priority projects.
Design, Assets & Development	(620,764)	(348,250)	Vehicles awaiting delivery or not required, to be adjusted at March Review.
City Facilities & Property	(1,510,000)	(1,057,336)	Tomato Lake Solar Lighting Project due to commence.
Safer Communities	(150,000)	(11,208)	Delayed installation of CCTV equipment. This has been addressed at the March Budget review
<b>Payments for construction of infrastructure</b>			
Works	(3,569,120)	(2,763,061)	Capital program progressing well, lag in invoices submitted for completed work.
City Projects	(4,808,360)	(1,477,555)	Esplanade Foreshore and Ornamental Lakes Renewal works commenced later than original schedule, however, are on track to complete as planned. Expenditure timings to be amended in March review.
Parks, Leisure & Environment	(2,946,020)	(898,371)	Variance reflects outstanding contractor invoices and delayed commencement of some projects compared to original schedule.

## 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 for January [ <b>12.8.1</b> - 12 pages]



**CITY OF BELMONT**  
**MONTHLY FINANCIAL REPORT**  
**For the period ended 31 January 2025**

***LOCAL GOVERNMENT ACT 1995***  
***LOCAL GOVERNMENT (FINANCIAL MANAGEMENT) REGULATIONS 1996***

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# Attachment 12.8.1 Monthly Financial Report for January

## CITY OF BELMONT STATEMENT OF FINANCIAL ACTIVITY FOR THE PERIOD ENDED 31 JANUARY 2025

	Supplementary Information	Amended Budget Estimates (a) \$	YTD Budget Estimates (b) \$	YTD Actual (c) \$	Variance* \$ (c) - (b)	Variance* % ((c) - (b))/(b)	Var.
<b>OPERATING ACTIVITIES</b>							
<b>Revenue from operating activities</b>							
Rates		59,869,936	59,565,956	59,481,698	(84,258)	(0.14%)	
Grants, subsidies and contributions		2,643,219	584,400	431,385	(153,015)	(26.18%)	▼
Fees and charges		10,451,111	8,729,051	9,211,764	482,713	5.53%	▲
Interest revenue		6,763,202	3,538,875	4,199,331	660,456	18.66%	▲
Other revenue		643,980	347,999	543,183	195,184	56.09%	▲
Profit on asset disposals		87,469	43,734	4,291	(39,443)	(90.19%)	
Fair value adjustments to financial assets at fair value through profit or loss		4,203	0	0	0	0.00%	
		<b>80,463,120</b>	<b>72,810,015</b>	<b>73,871,652</b>	<b>1,061,637</b>	<b>1.46%</b>	
<b>Expenditure from operating activities</b>							
Employee costs		(28,143,531)	(14,058,100)	(14,301,776)	(243,676)	(1.73%)	▼
Materials and contracts		(37,775,248)	(18,443,422)	(15,452,870)	2,990,552	16.21%	▲
Utility charges		(2,392,832)	(1,195,769)	(1,096,462)	99,307	8.30%	
Depreciation		(12,935,924)	(6,467,967)	(7,583,158)	(1,115,191)	(17.24%)	▼
Finance costs		(520,949)	(221,328)	(227,271)	(5,943)	(2.69%)	
Insurance		(938,950)	(938,211)	(835,197)	103,014	10.98%	▲
Other expenditure		(1,530,081)	(865,975)	(632,052)	233,923	27.01%	▲
Loss on asset disposals		0	0	(55,591)	(55,591)	0.00%	
		<b>(84,237,515)</b>	<b>(42,190,772)</b>	<b>(40,184,377)</b>	<b>2,006,395</b>	<b>4.76%</b>	
Non-cash amounts excluded from operating activities	Note 2(b)	12,819,160	6,424,233	8,204,352	1,780,119	27.71%	▲
<b>Amount attributable to operating activities</b>		<b>9,044,765</b>	<b>37,043,476</b>	<b>41,891,627</b>	<b>4,848,151</b>	<b>13.09%</b>	
<b>INVESTING ACTIVITIES</b>							
<b>Inflows from investing activities</b>							
Proceeds from capital grants, subsidies and contributions		4,343,198	1,598,987	1,362,696	(236,291)	(14.78%)	▼
Proceeds from disposal of assets		867,997	867,997	308,417	(559,580)	(64.47%)	▼
		<b>5,211,195</b>	<b>2,466,984</b>	<b>1,671,113</b>	<b>(795,871)</b>	<b>(32.26%)</b>	
<b>Outflows from investing activities</b>							
Payments for property, plant and equipment	3	(5,925,414)	(1,814,003)	(1,284,141)	529,862	29.21%	▲
Payments for construction of infrastructure	3	(21,554,982)	(8,282,370)	(3,647,474)	4,634,896	55.96%	▲
<b>Amount attributable to investing activities</b>		<b>(22,269,201)</b>	<b>(7,629,389)</b>	<b>(3,260,502)</b>	<b>4,368,887</b>	<b>57.26%</b>	
<b>FINANCING ACTIVITIES</b>							
<b>Inflows from financing activities</b>							
Transfer from reserves	2	18,446,042	0	0	0	0.00%	
		<b>18,446,042</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00%</b>	
<b>Outflows from financing activities</b>							
Repayment of borrowings		(641,885)	(311,971)	(311,971)	0	0.00%	
Payments for principal portion of lease liabilities		(105,427)	0	0	0	0.00%	
Transfer to reserves	2	(5,288,109)	0	0	0	0.00%	
		<b>(6,035,421)</b>	<b>(311,971)</b>	<b>(311,971)</b>	<b>0</b>	<b>0.00%</b>	
<b>Amount attributable to financing activities</b>		<b>12,410,621</b>	<b>(311,971)</b>	<b>(311,971)</b>	<b>0</b>	<b>0.00%</b>	
<b>MOVEMENT IN SURPLUS OR DEFICIT</b>							
<b>Surplus or deficit at the start of the financial year</b>		1,313,815	1,313,815	5,868,521	4,554,706	346.68%	▲
Amount attributable to operating activities		9,044,765	37,043,476	41,891,627	4,848,151	13.09%	▲
Amount attributable to investing activities		(22,269,201)	(7,629,389)	(3,260,502)	4,368,887	57.26%	▲
Amount attributable to financing activities		12,410,621	(311,971)	(311,971)	0	0.00%	
<b>Surplus or deficit after imposition of general rates</b>		<b>500,000</b>	<b>30,415,931</b>	<b>44,187,675</b>	<b>13,771,744</b>	<b>45.28%</b>	▲

### KEY INFORMATION

▲ ▼ Indicates a variance between Year to Date (YTD) Budget and YTD Actual data as per the adopted materiality threshold.

\* Refer to Note 3 for an explanation of the reasons for the variance.

This statement is to be read in conjunction with the accompanying Financial Statements and Notes.

**CITY OF BELMONT**  
**STATEMENT OF FINANCIAL POSITION**  
**FOR THE PERIOD ENDED 31 JANUARY 2025**

	Supplementary Information	30 June 2024	31 January 2025
		\$	\$
<b>CURRENT ASSETS</b>			
Cash and cash equivalents	1	18,105,527	15,221,099
Trade and other receivables		24,999,921	33,156,896
Other financial assets		40,704,180	69,152,208
Inventories		262,339	255,201
Contract assets		37,717	0
Other assets		3,483,614	4,048,912
<b>TOTAL CURRENT ASSETS</b>		<b>87,593,298</b>	<b>121,834,316</b>
<b>NON-CURRENT ASSETS</b>			
Trade and other receivables		515,832	441,899
Other financial assets		21,135,546	21,135,546
Property, plant and equipment		341,517,776	340,079,103
Infrastructure		292,331,375	290,791,495
Right-of-use assets		158,975	158,975
Intangible assets		236,828	203,135
<b>TOTAL NON-CURRENT ASSETS</b>		<b>655,896,332</b>	<b>652,810,153</b>
<b>TOTAL ASSETS</b>		<b>743,489,630</b>	<b>774,644,469</b>
<b>CURRENT LIABILITIES</b>			
Trade and other payables		7,632,119	3,357,032
Other liabilities		1,833,787	2,874,947
Lease liabilities		105,428	105,428
Borrowings		641,884	329,913
Employee related provisions		4,987,945	4,638,678
<b>TOTAL CURRENT LIABILITIES</b>		<b>15,201,163</b>	<b>11,305,998</b>
<b>NON-CURRENT LIABILITIES</b>			
Other liabilities		151,558	151,558
Lease liabilities		57,042	57,042
Borrowings		10,976,367	10,976,367
Employee related provisions		541,262	541,263
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>11,726,229</b>	<b>11,726,230</b>
<b>TOTAL LIABILITIES</b>		<b>26,927,392</b>	<b>23,032,228</b>
<b>NET ASSETS</b>		<b>716,562,238</b>	<b>751,612,241</b>
<b>EQUITY</b>			
Retained surplus		195,472,409	230,522,412
Reserve accounts	2	69,265,334	69,265,334
Revaluation surplus		451,824,495	451,824,495
<b>TOTAL EQUITY</b>		<b>716,562,238</b>	<b>751,612,241</b>

This statement is to be read in conjunction with the accompanying notes.

NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY  
FOR THE PERIOD ENDED 31 JANUARY 2025

1 BASIS OF PREPARATION AND SIGNIFICANT 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 where no inconsistencies exist.

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. Supporting 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.

**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.

**Judgements and estimates**

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.

The balances, transactions and disclosures impacted by accounting estimates are as follows:

- estimated fair value of certain financial assets
- impairment of financial assets
- estimation of fair values of land and buildings, infrastructure and investment property
- estimation uncertainties made in relation to lease accounting
- estimated useful life of intangible assets

**MATERIAL ACCOUNTING POLICES**

Significant accounting policies utilised in the preparation of these statements are as described within the 2023-24 Annual Budget. Please refer to the adopted budget document for details of these policies.

**PREPARATION TIMING AND REVIEW**

Date prepared: All known transactions up to 31 January 2025

**CITY OF BELMONT**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**FOR THE PERIOD ENDED 31 JANUARY 2025**

**2 STATEMENT OF FINANCIAL ACTIVITY INFORMATION**

	Supplementary Information	Amended Budget Opening 30 June 2024	Last Year Closing 30 June 2024	Year to Date 31 January 2025
<b>(a) Net current assets used in the Statement of Financial Activity</b>				
<b>Current assets</b>		\$	\$	\$
Cash and cash equivalents	1	17,777,674	18,105,527	15,221,099
Trade and other receivables		23,613,744	24,999,921	33,156,896
Other financial assets		29,118,043	40,704,180	69,152,208
Inventories		276,212	262,339	255,201
Contract assets		0	37,717	0
Other assets		3,316,206	3,483,614	4,048,912
		74,101,879	87,593,298	121,834,316
<b>Less: current liabilities</b>				
Trade and other payables		(4,956,993)	(7,632,119)	(3,357,032)
Other liabilities		(2,082,606)	(1,833,787)	(2,874,947)
Lease liabilities		(39,341)	(105,428)	(105,428)
Borrowings		(666,573)	(641,884)	(329,913)
Employee related provisions		(4,273,584)	(4,987,945)	(4,638,678)
		(12,019,097)	(15,201,163)	(11,305,998)
<b>Net current assets</b>		<b>62,082,782</b>	<b>72,392,135</b>	<b>110,528,318</b>
<b>Less: Total adjustments to net current assets</b>	Note 2(c)	(55,628,292)	(66,523,614)	(66,365,816)
<b>Closing funding surplus / (deficit)</b>		<b>6,454,490</b>	<b>5,868,521</b>	<b>44,162,502</b>

**(b) Non-cash amounts excluded from operating activities**

The following non-cash revenue and expenditure has been excluded from operating activities within the Statement of Financial Activity in accordance with *Financial Management Regulation 32*.

	Amended Budget	YTD Budget (a)	YTD Actual (b)
<b>Non-cash amounts excluded from operating activities</b>	\$	\$	\$
<b>Adjustments to operating activities</b>			
Less: Profit on asset disposals	(87,469)	(43,734)	(4,291)
Less: Fair value adjustments to financial assets at fair value through profit and loss	(4,203)	0	0
Add: Loss on asset disposals	0	0	55,591
Add: Depreciation	12,935,924	6,467,967	7,583,158
Movement in current employee provisions associated with restricted cash	(25,092)	0	0
- Pensioner deferred rates	0	0	(73,933)
- Employee provisions	0	0	643,827
<b>Total non-cash amounts excluded from operating activities</b>	<b>12,819,160</b>	<b>6,424,233</b>	<b>8,204,352</b>

**(c) Current assets and liabilities excluded from budgeted deficiency**

The following current assets and liabilities have been excluded from the net current assets used in the Statement of Financial Activity in accordance with *Financial Management Regulation 32* to agree to the surplus/(deficit) after imposition of general rates.

	Amended Budget Opening 30 June 2024	Last Year Closing 30 June 2024	Year to Date 31 January 2025
<b>Adjustments to net current assets</b>			
Less: Reserve accounts	(61,067,348)	(69,265,334)	(69,265,334)
Add: Financial assets at amortised cost	0	20,927,619	20,927,619
- EMRC receivable	0	(20,927,619)	(20,927,619)
Add: Current liabilities not expected to be cleared at the end of the year:			
- Current portion of borrowings	666,573	641,884	329,913
- Current portion of lease liabilities	39,341	105,428	105,428
- Current portion of employee benefit provisions held in reserve	4,733,142	1,994,408	2,464,177
<b>Total adjustments to net current assets</b>	<b>(55,628,292)</b>	<b>(66,523,614)</b>	<b>(66,365,816)</b>

**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.



## Attachment 12.8.1 Monthly Financial Report for January

**CITY OF BELMONT**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**FOR THE PERIOD ENDED 31 JANUARY 2025**

### 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 2024-25 year is \$100,000.

Description	Var. \$	Var. %
	\$	%
<b>Revenue from operating activities</b>		
<b>Fees and charges</b>		
Safer Communities - Building application and Health related licence income higher than expected for the period -(\$141,382)	482,713	5.53%
Finance-Income relating to oncharging of bank fee associated with large rates payment made by credit card -(\$126,767)		Timing
City Facilities & Property - Various hire and lease revenue amounts above budget by amounts below variance threshold - (\$130,367)		Timing
<b>Interest revenue</b>		
Finance - Higher than anticipated interest as a result of end of year underspends and subsequent higher end of year cash balances -(\$647,173)	660,456	18.66%
		Timing
<b>Other revenue</b>		
City Facilities and Property-Variou utility reimbursement amounts above budget by amounts below variance threshold-(\$114,964)	195,184	56.09%
		Timing
<b>Expenditure from operating activities</b>		
<b>Employee costs</b>		
Salaries are below budget due to vacancies currently being recruited by the City	(243,676)	(1.73%)
Works - Some design costs to be reallocated to capital projects - \$191,554		Permanent Timing
<b>Materials and contracts</b>		
Information Technology - Higher than expected Microsoft/VMware licensing costs, and earlier invoicing than prior years for other major software/cloud subscriptions. - \$391,764	2,990,552	16.21%
Works - Various variance amounts above budget by amounts below variance threshold-(\$123,890)		Timing
Park Leisure & Environment - Decreased seasonal activities including watering and maintenance of trees and delays in receiving contractor invoices -\$1,645,925		Timing
City Facilities & Property - Various material and contracts expenses below budget by amounts below variance threshold -\$412,733		Timing
Economic & Community Development -Expenses not yet incurred as budgeted including aged accommodation fees and maintenance, youth services program and other contracts-\$449,270		Timing
Library,Culture & Place - Projects are in progress with some timing variances and delay in receiving invoices for completed works. -\$430,318		Timing
Governance,Strategy & Risk- SCP review undertaken in FY24. Expenses relating to extraordinary election yet to be incurred from electoral commission-\$295,947		Timing
Finance - Bank fee associated with large rates payment made by credit card. Fee amount has been oncharged and paid - (\$229,585)		Timing
Safer Communities -Realised savings due to more cost effective CB radio System purchase. Various material and contract expenses in Community Safety and Building Control below budget by amounts below variance threshold. - \$174,892		Timing
PR& Stakeholder Engagement - Delay in advertising and branding expenditure due to other project priorities. -\$126,762		Timing
Planning Services - Expenses not yet incurred as budgeted for consultants on certain planning projects and legal matters- \$114,399		Timing
<b>Other expenditure</b>	233,923	27.01%
Economic & Community Development - Faulkner Park Retirement Village contributions not yet incurred. -\$115,275		Timing
<b>Inflows from investing activities</b>		
<b>Proceeds from capital grants, subsidies and contributions</b>		
Parks, Leisure & Environment - Funding for Esplanade Foreshore Stabilisation from DBCA received in FY2023 ,budget to be reallocated - (\$230,083)	(236,291)	(14.78%)
City Facilities & Property - Some works for Middleton Park completed ahead of schedule in order to align with grant requirements - \$120,661		Timing
Works-2nd payment of 40% of MRRG grants yet to be claimed. - (\$331,953)		Timing
<b>Outflows from investing activities</b>		
<b>Payments for property, plant and equipment</b>		
Information Technology - Delays in network hardware refresh due to other high priority projects -\$298,668	529,862	29.21%
Design,Asset & Development - Vehicles awaiting delivery or not required, to be adjusted at March Review- \$199,670		Timing
Safer Communities - Underspend in CCTV projects due to hardware supply delays - \$140,000		Timing
<b>Payments for construction of infrastructure</b>		
Works - Major projects in progress, expenditure spread to be amended in March review - \$1,090,163	4,634,896	55.96%
Parks,Leisure & Environment -Reflects current program which was delayed due to changes in project specification however all projects are on target for completion within this FY 2024-25 - \$1,971,693		Timing
City Projects - Esplanade foreshore and Ornamental Lakes works to commence in January 2025. Budget to be ammended in March review - \$2,648,308		Timing

**CITY OF BELMONT**  
**SUPPLEMENTARY INFORMATION**

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## Attachment 12.8.1 Monthly Financial Report for January

### CITY OF BELMONT SUPPLEMENTARY INFORMATION FOR THE PERIOD ENDED 31 JANUARY 2025

#### 1 INVESTMENT PORTFOLIO

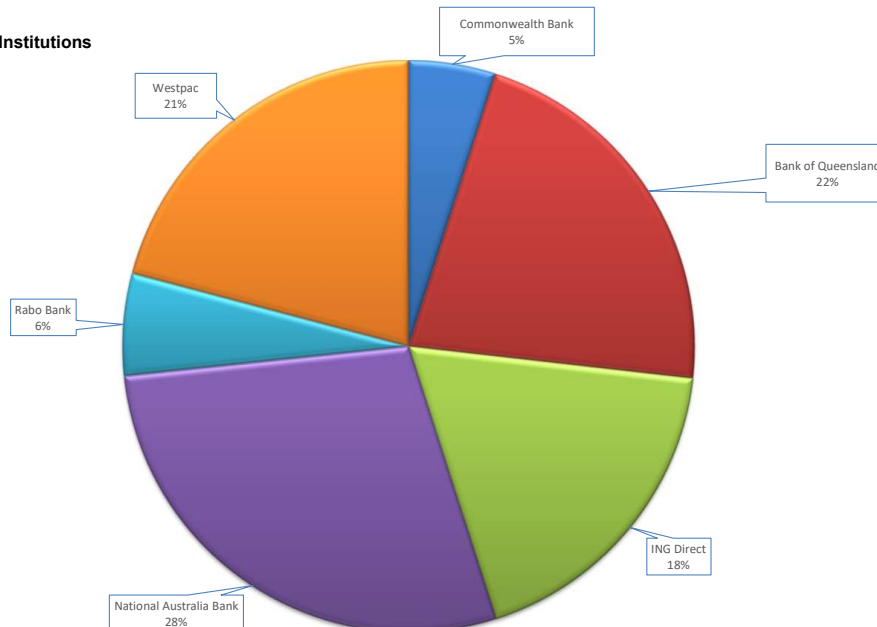
##### BY INVESTMENT HOLDINGS

	Municipal \$	Reserve \$	Trust-Reserve \$	Total \$	Total %
Municipal Account	447,882	-	-	447,882	0.45%
On-Call Account	4,493,075	-	-	4,493,075	4.47%
Term Deposits	25,000,000	70,537,949	(0)	95,537,949	95.08%
	29,940,957	70,537,949	(0)	100,478,905	100.00%

##### BY INSTITUTION

	Rating	Municipal \$	Reserve \$	Trust-Reserve \$	Total \$	Total %	Policy Max %
Commonwealth Bank	AA	4,940,957	-	-	4,940,957	4.92%	40%
Bank of Queensland	A	11,000,000	10,979,242	-	21,979,242	21.87%	30%
ING Direct	A	8,000,000	10,347,558	-	18,347,558	18.26%	30%
National Australia Bank	AA	4,000,000	24,424,826	-	28,424,826	28.29%	40%
Rabo Bank	A	-	5,795,230	-	5,795,230	5.77%	30%
Westpac	AA	2,000,000	18,991,093	-	20,991,093	20.89%	40%
		29,940,957	70,537,949	-	100,478,905	100.00%	

##### Investment Institutions



##### BY CREDIT RATINGS

Rating	Municipal \$	Reserve \$	Trust Reserve \$	Total \$	Total %	Policy Max %
AAA	-	-	-	-	0.00%	100%
AA	10,940,957	43,415,919	-	54,356,876	54.10%	100%
A	19,000,000	27,122,030	-	46,122,030	45.90%	80%
BBB / NR	-	-	-	-	0.00%	60%
	29,940,957	70,537,949	-	100,478,905	100.00%	

# Attachment 12.8.1 Monthly Financial Report for January

## CITY OF BELMONT SUPPLEMENTARY INFORMATION FOR THE PERIOD ENDED 31 JANUARY 2025

### 2 RESERVE ACCOUNTS

Reserve name	Budget Opening Balance	Budget Interest Earned	Budget Transfers In (+)	Budget Transfers Out (-)	Budget Closing Balance	Actual Opening Balance	Actual Interest Earned	Actual Transfers In (+)	Actual Transfers Out (-)	Actual YTD Closing Balance
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<b>Restricted by Council</b>										
Administration building Reserve	254,062	11,264	0	0	265,326	257,553	2,266	(2,266)	0	257,553
Aged Accommodation - Homewest Reserve	998,563	42,501	8,583	0	1,049,647	1,010,521	8,890	(8,890)	0	1,010,521
Aged Community Care Reserve	235,668	10,449	0	0	246,117	238,905	2,102	(2,102)	0	238,905
Aged persons housing Reserve	224,620	32,618	0	(257,238)	0	244,913	2,155	(2,155)	0	244,913
Aged Services Reserve	1,146,414	50,828	0	0	1,197,242	1,162,167	10,224	(10,224)	0	1,162,167
Ascot Waters Marina Maintenance & Restoration	1,091,037	48,399	0	(50,000)	1,089,436	1,106,061	9,731	(9,731)	0	1,106,061
Belmont District Band Reserve	50,559	2,242	0	0	52,801	51,256	451	(451)	0	51,256
Belmont Oasis Refurbishment Reserve	4,456,122	197,568	0	0	4,653,690	4,517,364	39,742	(39,742)	0	4,517,364
Belmont Trust Reserve	1,657,363	74,620	0	(216,324)	1,515,659	1,681,259	14,791	(14,791)	0	1,681,259
Building maintenance Reserve	4,657,748	233,538	0	(200,000)	4,691,286	4,739,102	41,693	(41,693)	0	4,739,102
Capital Projects Reserve	5,827,421	0	1,747,544	(2,703,590)	4,871,375	5,827,421	51,268	(51,268)	0	5,827,421
Car Parking Reserve	66,674	2,956	0	0	69,630	67,592	595	(595)	0	67,592
Carry Forward Projects Reserve	1,744,079	0	0	(1,647,757)	96,322	1,744,079	15,344	(15,344)	0	1,744,079
District valuation Reserve	23,651	1,049	95,000	0	119,700	23,680	208	(208)	0	23,680
Election expenses Reserve	2,030	6,412	75,000	0	83,442	8,497	75	(75)	0	8,497
Environment Reserve	884,673	69,281	0	0	953,954	927,841	8,163	(8,163)	0	927,841
Faulkner Park Retirement Village Buy Back Reserve	2,533,333	112,319	0	0	2,645,652	2,568,147	22,594	(22,594)	0	2,568,147
Faulkner Park Retirement Village Owners Maintenance Reserve	515,197	31,613	0	0	546,810	525,106	4,620	(4,620)	0	525,106
History Reserve	179,010	7,937	0	0	186,947	181,468	1,597	(1,597)	0	181,468
Information Technology Reserve	1,486,554	65,908	0	0	1,552,462	1,506,984	13,258	(13,258)	0	1,506,984
Land acquisition Reserve	10,904,340	467,902	0	0	11,372,242	11,039,182	97,119	(97,119)	0	11,039,182
Long Service Leave Reserve - Salaries	3,449,639	86,855	0	(153,273)	3,383,221	2,103,512	18,506	(18,506)	0	2,103,512
Long Service Leave Reserve - Wages	528,885	11,137	0	(5,753)	534,269	360,665	3,173	(3,173)	0	360,665
Miscellaneous Entitlements Reserve	779,710	35,942	0	0	815,652	791,398	6,962	(6,962)	0	791,398
Plant replacement Reserve	1,633,290	75,365	587,126	(1,008,951)	1,286,830	1,650,203	14,518	(14,518)	0	1,650,203
Property development Reserve	21,704,520	703,244	0	(10,564,852)	11,842,912	17,573,013	154,602	(154,602)	0	17,573,013
Public Art Reserve	411,617	18,870	0	(30,000)	400,487	417,466	3,673	(3,673)	0	417,466
Ruth Faulkner library Reserve	49,432	2,192	0	0	51,624	50,113	441	(441)	0	50,113
Streetscapes Reserve	529,620	23,481	0	(500,000)	53,101	536,898	4,723	(4,723)	0	536,898
Urban Forest Strategy Management Reserve	125,066	5,545	0	0	130,611	126,788	1,115	(1,115)	0	126,788
Waste Management Reserve	4,674,332	282,028	0	(1,108,304)	3,848,056	4,808,297	42,302	(42,302)	0	4,808,297
Workers Compensation/Insurance Reserve	1,400,052	60,793	0	0	1,460,845	1,417,883	12,474	(12,474)	0	1,417,883
	<b>74,225,281</b>	<b>2,774,856</b>	<b>2,513,253</b>	<b>(18,446,042)</b>	<b>61,067,348</b>	<b>69,265,334</b>	<b>609,375</b>	<b>(609,375)</b>	<b>0</b>	<b>69,265,334</b>

**CITY OF BELMONT  
SUPPLEMENTARY INFORMATION  
FOR THE PERIOD ENDED 31 JANUARY 2025**

**INVESTING ACTIVITIES**

**3 CAPITAL ACQUISITIONS**

	Amended			
	Budget	YTD Budget	YTD Actual	YTD Actual Variance
	\$	\$	\$	\$
<b>Capital acquisitions</b>				
Buildings - non-specialised	3,345,946	683,828	894,132	210,304
Furniture and equipment	1,123,801	601,000	84,542	(516,458)
Plant and equipment	1,405,667	504,175	305,467	(198,708)
Other property, plant and equipment	50,000	25,000	0	(25,000)
<b>Acquisition of property, plant and equipment</b>	<b>5,925,414</b>	<b>1,814,003</b>	<b>1,284,141</b>	<b>(529,862)</b>
Infrastructure - Roads	4,782,500	2,313,679	1,392,469	(921,210)
Infrastructure - Reserves Improvements	15,210,159	5,082,727	1,537,978	(3,544,749)
Infrastructure - Footpath Network	845,697	573,424	545,605	(27,819)
Infrastructure - Drainage Network	716,626	312,540	171,422	(141,118)
<b>Acquisition of infrastructure</b>	<b>21,554,982</b>	<b>8,282,370</b>	<b>3,647,474</b>	<b>(4,634,896)</b>
<b>Total capital acquisitions</b>	<b>27,480,396</b>	<b>10,096,373</b>	<b>4,931,615</b>	<b>(5,164,758)</b>
<b>Capital Acquisitions Funded By:</b>				
Capital grants and contributions	4,343,198	1,598,987	0	(1,598,987)
Other (disposals & C/Fwd)	867,997	867,997	308,417	(559,580)
Reserve accounts				
Belmont Trust Reserve	216,324	0	0	0
Building maintenance Reserve	200,000	0	0	0
Capital Projects Reserve	2,703,590	0	0	0
Carry Forward Projects Reserve	1,647,757	0	0	0
Long Service Leave Reserve - Wages	5,753	0	0	0
Plant replacement Reserve	1,008,951	0	0	0
Property development Reserve	10,564,852	0	0	0
Public Art Reserve	30,000	0	0	0
Streetscapes Reserve	500,000			
Contribution - operations	17,501,530	7,629,389	4,623,198	(3,006,191)
<b>Capital funding total</b>	<b>39,589,952</b>	<b>10,096,373</b>	<b>4,931,615</b>	<b>(5,164,758)</b>

**MATERIAL ACCOUNTING POLICIES**

Each class of fixed assets within either plant and equipment or infrastructure, is carried at cost or fair value as indicated less, where applicable, any accumulated depreciation and impairment losses.

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 *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.

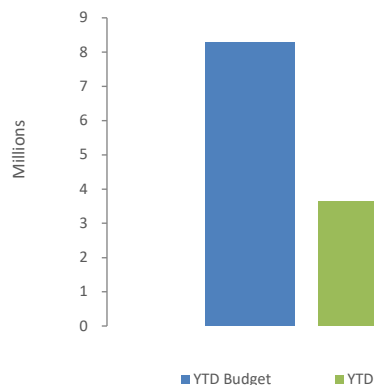
**Initial recognition and measurement for assets held at cost**

Plant and equipment including furniture and equipment is recognised at cost on acquisition in accordance with *Financial Management Regulation 17A*. Where acquired at no cost the asset is initially recognise at fair value. Assets held at cost are depreciated and assessed for impairment annually.

**Initial recognition and measurement between mandatory revaluation dates for assets held at fair value**

In relation to this initial measurement, cost is determined as the fair value of the assets given as consideration plus costs incidental to the acquisition. For assets acquired at zero cost or otherwise significantly less than fair value, cost is determined as fair value at the date of 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.

**Payments for Capital Acquisitions**



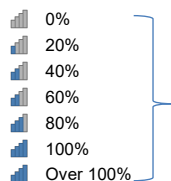


**CITY OF BELMONT**  
**SUPPLEMENTARY INFORMATION**  
**FOR THE PERIOD ENDED 31 JANUARY 2025**

**INVESTING ACTIVITIES**

**3 CAPITAL ACQUISITIONS - DETAILED**

**Capital expenditure total**  
**Level of completion indicators**



Percentage Year to Date Actual to Annual Budget expenditure where the expenditure over budget highlighted in red.

*Level of completion indicator, please see table at the end of this note for further detail.*

	Account Description	Amended			Variance (Under)/Over
		Budget	YTD Budget	YTD Actual	
		\$	\$	\$	\$
City Projects		11,042,220	3,709,438	1,061,134	(2,648,304)
Parks and Environment		4,878,885	2,601,853	630,160	(1,971,693)
Buildings and facilities		2,635,000	585,000	740,816	155,816
Infrastructure Capital Works		6,344,823	3,199,643	2,109,496	(1,090,147)
Furniture and equipment		1,123,801	601,000	84,542	(516,458)
Plant and equipment		1,405,667	504,175	305,467	(198,708)
Other		50,000	25,000	0	(25,000)
		<b>27,480,396</b>	<b>11,226,109</b>	<b>4,931,615</b>	<b>(6,294,494)</b>

## Attachment 12.8.1 Monthly Financial Report for January

### CITY OF BELMONT SUPPLEMENTARY INFORMATION FOR THE PERIOD ENDED 31 JANUARY 2025

#### 4 BUDGET AMENDMENTS

Amendments to original budget since budget adoption. Surplus/(Deficit)

Description	Council Resolution	Classification	Non Cash Adjustment \$	Increase in Available Cash \$	Decrease in Available Cash \$	Amended Budget Running Balance \$
<b>Budget adoption</b>						497,000
October Budget Review	October OCM #12.4	Opening surplus(deficit)	(4,990,527)			(4,493,527)
October Budget Review	October OCM #12.4	Operating revenue		367,633		(4,125,894)
October Budget Review	October OCM #12.4	Operating expenses			(154,263)	(4,280,157)
October Budget Review	October OCM #12.4	Capital revenue		972,549		(3,307,608)
October Budget Review	October OCM #12.4	Capital expenses			(7,400,921)	(10,708,529)
October Budget Review	October OCM #12.4	Non cash item	11,208,529			500,000
Tender 19-2024-Wilson Park Zone 2	December OCM #14.1	Capital expenses			(2,000,000)	(1,500,000)
Tender 19-2024-Wilson Park Zone 2	December OCM #14.1	Capital revenue		2,000,000		500,000
			<b>6,218,002</b>	<b>3,340,182</b>	<b>(9,555,184)</b>	

## **12.9 Statutory Compliance Audit Return 2024**

(report to follow)

## **13 Reports by the Chief Executive Officer**

### **13.1 Request for leave of absence**

### **13.2 Notice of motion**

Nil.

## **14 Matters for which the meeting may be closed**

### **14.1 Tender 21/2024 - Centenary Park Sports Lighting Upgrade**

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)(c) a contract entered into, or which may be entered into, by the local government and which relates to a matter to be discussed at the meeting.

### **14.2 Tender 22/2024 - Wilson Park Precinct (Zone 2) Public Art Commission**

This report is confidential 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)(c) a contract entered into, or which may be entered into, by the local government and which relates to a matter to be discussed at the meeting.

## **14.3 WALGA Sustainable Energy Project - Phase Two Contract**

This report is confidential 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)(c) a contract entered into, or which may be entered into, by the local government and which relates to a matter to be discussed at the meeting.

## **15 Closure**