



LEGEND

OPPORTUNITIES

- NEW LOCAL ACCESS LINK
- PEDESTRIAN ORIENTED STREET / OPEN SPACE LINK
- IMPROVE PERMEABILITY
- EXISTING SHARED PATH
- VIEWS TO THE SWAN RIVER
- VIEWS TO THE CITY SKYLINE
- LANDMARK SITE & HEIGHT
- COMMERCIAL EXPOSURE
- USES TO CAPTURE VIEWS & DIRECTLY RELATE TO PARKS
- PROPOSED ROAD CLOSURE
- LOCAL SHOPPING
- RIVERFRONT CONNECTION
- POSSIBLE VEHICULAR ACCESS
- LANDSCAPE REFERENCE POINT
- POSSIBLE REROUTE OF REGIONAL PEDESTRIAN LINK
- POTENTIAL TO REDUCE ROAD WIDTH

CONSTRAINTS

- LIMITED ACCESS
- RESTRICTED ACCESS
- SIGNIFICANT MORETON BAY FIG TREE
- EXISTING COMPENSATING BASIN
- HERITAGE LISTED SITES
- EXISTING SERVICES CORRIDOR TO BE RETAINED
- RIDGELINE RESTRICTING VIEWS

MISCELLANEOUS

- PEDESTRIAN CROSSING
- PEDESTRIAN UNDERPASS

STRUCTURE PLAN AREA

OPPORTUNITIES & CONSTRAINTS PLAN THE SPRINGS REDEVELOPMENT AREA, RIVERVALE

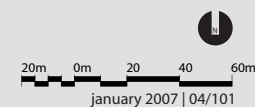












FIGURE
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-  A pedestrian link (underpass) currently exists to existing residential areas, commercial uses and a shopping centre located south-east of subject site.
 -  The site is relatively flat, with a steep embankment down to river, which offers significant river views from land close to the River. Elevated development would also benefit from these opportunities.
 -  The site on the corner of Great Eastern Highway and Graham Farmer Freeway has the potential to benefit from the views to the skyline of Perth City, Swan River and the Darling Scarp. The site also enjoys good commercial exposure due to its corner location on Gt Eastern Highway and Graham Farmer Freeway.
 -  Existing services and infrastructure, including roads, are already located on site, reducing construction costs of the new development.

3.4.2 CONSTRAINTS

Various constraints also influenced the planning of the site. Constraints affecting the land include:

-  The limited vehicular access from Great Eastern Highway to lots fronting the road.
-  Limited access to the corner 'landmark' site located on Great Eastern Highway and Graham Farmer Freeway.
-  Although services and infrastructure are already located on site, they are not sufficient for the proposed density of the development.
-  The existence of significant Moreton Bay Fig Tree centrally within a developable lot.
-  Heritage listed trees and residences.
-  The fragmented land ownership of the site.

4 EXISTING SERVICE INFRASTRUCTURE

4.1 ROADS

Primary access to the site is provided via a signalised intersection located at Great Eastern Highway and Brighton Road and via the Riversdale Road bridge which links the site with the adjoining Burswood Light Industrial Area.

A geotechnical investigation of the road pavements has indicated that the subgrade of the road is sound, however the wearing course will require rehabilitation and replacement.

4.2 DRAINAGE AND STORMWATER MANAGEMENT

The precinct falls predominantly within two drainage catchments. These catchments include Riversdale Road, which discharges to the Swan River via a 225 mm diameter outfall pipe located within Cracknell Park, and the Rowe Avenue infiltration basin, which serves the majority of the remainder of the site.

A preliminary review of these catchments indicates that the existing 225 mm diameter pipe is adequate for a 1 in 5 year storm event. However, water quality control may potentially become an issue, as at present there is no pollution control infrastructure installed within the precinct.

Generally, the drainage pipework within the road reserves is limited and would not meet Council's current minimum requirements. At present, all lots are required to retain stormwater on site

4.3 WATER AND SEWER SERVICES

Figure 10 details the size and location of the existing water and sewer services within The Springs Precinct.

All lots within the precinct are currently serviced by water. The majority of the lots are serviced by sewer, with the exception of lots located along the eastern portion of Riversdale Road.

4.4 POWER SUPPLY

The Springs Precinct is currently serviced by underground power and Western Power street lighting.

Existing Western Power substations include Riversdale Road, Brighton Road, Rowe Avenue and Hawksburn Road with associated High Voltage (HV) and Low Voltage (LV) underground cables distributed throughout the area. Whilst the existing system has the capacity to meet the demands of the existing land uses, it will not be sufficient when redevelopment of the land occurs.

4.5 TELECOMMUNICATIONS

Telecommunication cables, currently owned by Telstra, are located in all existing road reserves.

4.6 MOVEMENT NETWORK

4.6.1 EXISTING ROADS AND TRAFFIC VOLUME

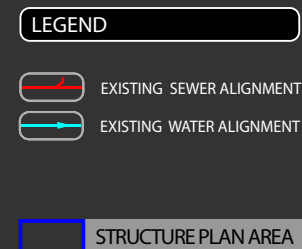
GREAT EASTERN HIGHWAY

The Great Eastern Highway is a primary distributor road and major service road for the Perth Metropolitan Region. It fronts the south eastern boundary of the subject land and comprises three lanes eastbound and four/five lanes westbound, and provides access onto the Graham Farmer Freeway.

At the time of preparing the report, current traffic volumes indicate a two-way movement of about 52,000 vehicles per day adjacent to the study area.

BRIGHTON ROAD

Brighton Road is a local access street marking the eastern boundary of the site. It comprises a standard 7.2 metre wide carriageway with widening at the Great Eastern Highway traffic signals to provide two approach lanes. Current traffic volumes indicate a two-way movement of about 3,000 vehicles per day.



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RIVERSDALE ROAD

Riversdale Road is a local access street that links the subject site with adjoining neighbouring localities and is constructed with a standard 7.2 metre wide carriageway.

At the time of initially preparing the Structure Plan report, traffic data stated an average traffic volume of 777 vehicles per day.

4.6.2 PEDESTRIAN AND DUAL USE PATHS

Footpaths are currently provided within road reserves throughout the site.

Pedestrian movement across the Great Eastern Highway is catered for by pedestrian signals at Great Eastern Highway/Brighton Road and by an underpass to Surrey Road.

The site is adjacent to district cycle routes to the localities of Perth CBD, Subiaco and Claremont. Easy access to recreational cycle routes is currently provided.

4.6.3 PUBLIC TRANSPORT

Burswood railway station is located approximately 700-750 metres walk from the subject site. A high frequency train service to Perth is provided. The estimated travel time between Burswood station and the City station is approximately eight minutes.

There are currently eight bus routes servicing Great Eastern Highway that provide access to the CBD. Bus services become more frequent during peak periods. The estimated travel time by bus from the subject site to the CBD is approximately 30 minutes.

4.6.4 CAR PARKING

There is parking available on-street within the existing Springs area that would appear to sufficiently cater for the every day uses.

Surveys of parking associated with the mosque have not been undertaken, however, it is understood that there is a considerable amount of spill over parking onto the street and adjacent vacant land during regular worship and other events. Visual inspection suggests that the scheme parking requirement for a "Place of Worship" would not be met on site.

The commercial properties fronting Great Eastern Highway have existing access to the highway and most parking occurs to the front of the buildings. Other commercial land uses have car parks to the rear, serviced by Rowe Avenue. Site inspections indicate that sufficient parking has been provided on site for most of the commercial land uses.

Residential properties within the study area are provided with sufficient on-site parking and parking on-street during the week was not noted to be high. During the weekend there is an increased demand for on-street parking for Cracknell Park. Site inspection did not indicate that the level of parking significantly affected adjacent streets, although local residents have raised this as an issue.

5 EXISTING ENVIRONMENT

5.1 TOPOGRAPHY

Directly adjacent the Swan River, the site rises steeply from the river foreshore at RL 4.0 to approximately RL 17.0 at Riversdale Road.

The precinct generally comprises an east-west ridge running centrally through the site. The site rises to a maximum RL of 19 and descends to RL 14 at the southern portion of the site, located at the corner of Great Eastern Highway and the Graham Farmer Freeway. Surface contours are shown in **Figure 11**.

5.2 EXISTING VEGETATION

5.2.1 THE SPRINGS STRUCTURE PLAN AREA

The site comprises a highly modified urban landscape.

A total of 323 'significant' trees have been identified on site (excluding Cracknell Park) as shown on **Figure 11**. Overall, the existing trees are in reasonable condition in both health and structure. A number of healthy and aesthetically pleasing specimens of Jacaranda, Spotted Gum, Lemon Scented Gum, Sugar Gum, Stone Pine and Hills Fig have been noted and are proposed to be retained as part of the development process.

A total of 148 trees within the precinct have been recommended for removal due to poor health and structural condition.

Cracknell Park and the residential and commercial areas within the site comprise mixed Australian native and exotic tree, shrub and grass species. No significant remnant indigenous vegetation remains within the park.



Photo 10: Mixed exotic and Australian native species to the existing Springs residential and commercial area.

5.2.2 SWAN RIVER FORESHORE RESERVE

The Swan River and its foreshore have been altered significantly over time through dredging and filling. No significant, intact remnant indigenous landscape vegetation remains on the river foreshore abutting the subject site; however indigenous reed and sedge species do exist on the Swan River's immediate shoreline.

While the foreshore reserve is highly modified, it does form an integral part of the Swan River riverine environment and provides links to important regional indigenous landscapes. As such, it has been identified as a 'Greenways Link' between identified Bush Forever Sites in the WAPC 'Bush Forever' Policy.



LEGEND

 EXISTING TREE (S)

 STRUCTURE PLAN AREA

EXISTING VEGETATION THE SPRINGS REDEVELOPMENT AREA, RIVERVALE

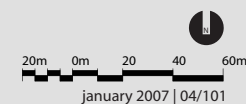


FIGURE
11





Photo 11: Indigenous reed and sedge species existing on the Swan Rivers water's edge

The Swan River foreshore includes a broad mix of indigenous and exotic plant species including invasive weed species. Tree species include Mature specimens of Eucalyptus sp. (Eucalypt), Platanus sp. (Plane Tree), Phoenix sp. (Date Palm) and Brachiochyton sp. (Flame tree).



Photo 12: Exotic species including Brachiochyton sp. and kikuyu lawns to the existing Swan River foreshore at Cracknell Park



Photo 13: Exotic species including Phoenix and Oleander to the existing Swan River foreshore

5.3 HERITAGE AND CULTURE

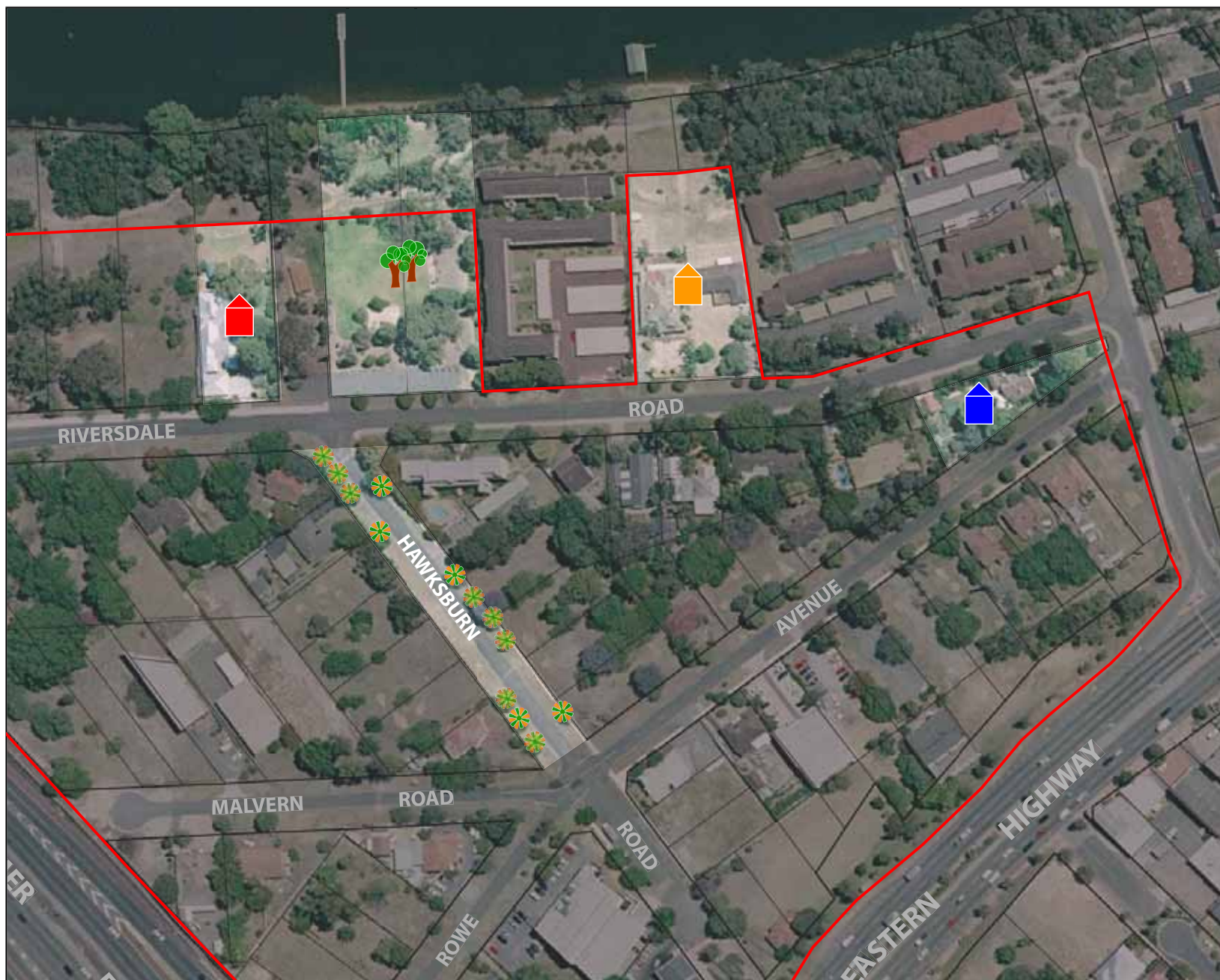
According to the City of Belmont 'Revised Municipal Heritage Inventory 2002' there are a number of sites of local heritage significance within the precinct.

These sites are depicted in **Figure 12**.

The inventory only addresses those sites that were historically significant from white settlement of the area to present. The directory does not consider aboriginal heritage.

Clause 7.4 of TPS 14 specifies that "notwithstanding any other provisions of the Scheme to the contrary, the approval of the Council is required for the following development on or in relation to any place or object on the Heritage List".

Therefore, planning approval will be required prior to the demolition or removal of any heritage listed sites with the precinct. It is noted that approval has been granted by Council to demolish the heritage listed building on Lot 80 Riversdale Road and clear the site, however, until such a time as the building is demolished the house cannot be delisted.



LEGEND

HERITAGE LISTED FLAME TREE

LOT 27 / 28 (CRACKNELL PARK)

LOT 29

LOT 134

LOT 603

STRUCTURE PLAN AREA

HERITAGE SITES

THE SPRINGS REDEVELOPMENT AREA, RIVERVALE

(City of Belmont Municipal Inventory)

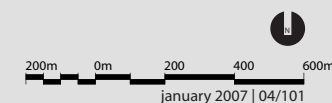


FIGURE
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5.3.1 HAWKS BURN ROAD FLAME TREES

The Flame Trees (*Erythrina indica*) located on Hawksburn Road are identified on the City's Municipal Inventory as being of heritage significance, with a recommendation of a high level of protection and conservation.

The trees are believed to have been planted by the Belmont Young Men's Club during or before 1926.

An arboricultural report prepared by Arbor Logic, arboricultural consultants (refer **Appendix A**) indicates that the existing trees are likely to be between fifty to seventy years old and have advised that they have concerns as to whether the existing trees are the original trees that were planted by the Belmont Young Men's Club.

Some trees are currently in decline and the majority, through continued poor management practices, have structural damage and acceptable to poor form which will jeopardize the viability of the street trees in the long term.

5.3.2 ABORIGINAL HERITAGE

Following a search of the Department of Aboriginal Affairs, Register of Aboriginal Sites, a number of Aboriginal Heritage sites have been identified in the general vicinity of the subject land as follows:

Site No.	Name	Type
16718	Riversdale Road	Artefacts/Scatters Archaeological Deposits
3536	Swan River	Mythological
17061	Old Campsite 1 (east of subject land)	
15916	Burswood Island	Artefacts/Scatters

From the information currently available on the register, it has not been possible to confirm if any of these sites directly impact on The Springs, although it is considered unlikely. Sites 16718 and 3536 are most closely located in relation to the subject land.

The register identifies the Swan River as a mythological site. The Aboriginal Heritage Act directs the Aboriginal Cultural Material Committee to give primary consideration to sacred beliefs (i.e. mythology) associated with a place and its ritual or ceremonial usage in the evaluation of any place. Therefore, as a mythological site, the Swan River is in the most significant category of Aboriginal site.

Given the heritage value associated with the Swan River, any modification to the River would require clearance under Section 18 of the Aboriginal Heritage Act and subsequent consultation with Aboriginal Elders of the area.

The development proposals identified for The Springs Precinct will not involve any modifications to the Swan River or its foreshores.

It is, however, recommended that further investigation be undertaken to determine, more precisely, the location of the registered sites. If appropriate a Section 18 clearance should be obtained for any development prior to commencement of works.