



# Metro Outer Joint Development Assessment Panel Agenda

**Meeting Date and Time:** Monday, 7 August 2023; 9:30am  
**Meeting Number:** MJDAP/262  
**Meeting Venue:** Electronic Means

To connect to the meeting via your computer -  
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*This DAP meeting will be conducted by electronic means (Zoom) open to the public rather than requiring attendance in person.*

## 1 Table of Contents

1. Opening of Meeting, Welcome and Acknowledgement.....	2
2. Apologies.....	2
3. Members on Leave of Absence.....	2
4. Noting of Minutes.....	2
5. Declarations of Due Consideration.....	2
6. Disclosure of Interests.....	3
7. Deputations and Presentations.....	3
8. Form 1 – Responsible Authority Reports – DAP Applications .....	3
8.1 Lot 154 Nairn Drive, Lot 9101 Sherry Street, Baldivis .....	3
9. Form 2 – Responsible Authority Reports – DAP Amendment or Cancellation of Approval .....	3
Nil.....	3
10. State Administrative Tribunal Applications and Supreme Court Appeals ..	3
11. General Business.....	3
12. Meeting Closure .....	3



## **Attendance**

### **DAP Members**

Eugene Koltasz (Presiding Member)  
Sheryl Chaffer (A/Deputy Presiding Member)  
Jason Hick (Third Specialist Member)  
Cr Lorna Buchan (Local Government Member, City of Rockingham)  
Cr Mark Jones (Local Government Member, City of Rockingham)

### **Officers in attendance**

Lisa Hall (Western Australian Planning Commission)  
Aiden O'Brien (Western Australian Planning Commission)

### **Minute Secretary**

Stephen Haimes (DAP Secretariat)

### **Applicants and Submitters**

Sandra McLeish (Department of Finance)  
Rachel Bridges (Department of Finance)

### **Members of the Public / Media**

Nil.

## **1. Opening of Meeting, Welcome and Acknowledgement**

The Presiding Member declares the meeting open and acknowledges the traditional owners and pay respects to Elders past and present of the land on which the meeting is being held.

This meeting is being conducted by electronic means (Zoom) open to the public. Members are reminded to announce their name and title prior to speaking.

## **2. Apologies**

Karen Hyde (Deputy Presiding Member)

## **3. Members on Leave of Absence**

Nil.

## **4. Noting of Minutes**

Signed minutes of previous meetings are available on the [DAP website](#).

## **5. Declarations of Due Consideration**

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.



## 6. Disclosure of Interests

Nil.

## 7. Deputations and Presentations

The Western Australian Planning Commission and City of Mandurah may be provided with the opportunity to respond to questions of the panel, as invited by the Presiding Member.

## 8. Form 1 – Responsible Authority Reports – DAP Applications

### 8.1 Lot 154 Nairn Drive, Lot 9101 Sherry Street, Baldivis

Development Description: Baldivis Police Station  
Applicant: Department of Finance  
Owner: Stockland Development Pty Ltd  
Responsible Authority: Western Australian Planning Commission  
DAP File No: DAP/23/02482

## 9. Form 2 – Responsible Authority Reports – DAP Amendment or Cancellation of Approval

Nil.

## 10. State Administrative Tribunal Applications and Supreme Court Appeals

File No. & SAT DR No.	LG Name	Property Location	Application Description	Date Lodged
DAP/22/02346 DR47/2023	City of Joondalup	8 Elcar Lane, Joondalup	Two Storey Mixed Used Development	17/03/2022
DAP/18/01543 DR 75/2022	City of Joondalup	Lot 649 (98) O'Mara Boulevard, Iluka	Commercial development	02/05/2022
DAP/22/02394 DR69/2023	City of Mandurah	Lot 9124 Cobaki Brace, Lakelands	Proposed Bulky Goods Showroom	28/04/2023
DAP/22/02379 DR98/2023	City of Swan	Lot 31 (No.1487) Neaves Road, Bullsbrook	Proposed roadhouse	16/06/2023

## 11. General Business

In accordance with Section 7.3 of the DAP Standing Orders 2020 only the Presiding Member may publicly comment on the operations or determinations of a DAP and other DAP members should not be approached to make comment.

## 12. Meeting Closure

# **Lot 154 Nairn Drive, Lot 9101 Sherry Street, Baldivis – Baldivis Police Station**

## **Form 1 – Responsible Authority Report** (Regulation 12)

<b>DAP Name:</b>	Metro Outer JDAP	
<b>Local Government Area:</b>	City of Rockingham	
<b>Applicant:</b>	Department of Finance	
<b>Owner:</b>	State of Western Australia	
<b>Value of Development:</b>	\$14 million <input checked="" type="checkbox"/> Mandatory (Regulation 5) <input type="checkbox"/> Opt In (Regulation 6)	
<b>Responsible Authority:</b>	Western Australian Planning Commission	
<b>Authorising Officer:</b>	Director Metro South - Land Use Planning	
<b>Department of Planning File No:</b>	28-50231-1	
<b>DAP File No:</b>	DAP/23/02482	
<b>Application Received Date:</b>	11 May 2023	
<b>Report Due Date:</b>	26 July 2023	
<b>Application Statutory Process Timeframe:</b>	60 Days	
<b>Attachment(s):</b>	1. Development Plans and Elevations 2. Site Aerial Plan 3. Applicant's Report 4. Approved Subdivision Plan 5. Community Engagement Report 6. Design Review 7. Metropolitan Region Scheme Zoning Map 8. Local Planning Scheme No.2 Zoning Map 9. Baldivis Activity Centre Structure Plan 10. Town Centre Integrated Development Guide Plan 11. Landscape Plan 12. Transport Impact Statement 13. Waste Management Plan 14. Bushfire Management Plan	
<b>Is the Responsible Authority Recommendation the same as the Officer Recommendation?</b>	<input checked="" type="checkbox"/> Yes	Complete Responsible Authority Recommendation section
	<input type="checkbox"/> No	Complete Responsible Authority and Officer Recommendation sections

### **Responsible Authority Recommendation**

That the Metro Outer Joint Development Assessment Panel resolves to **Approve** Development Assessment Panel application reference DAP/23/02482 and accompanying plans (**Attachment 1**) in accordance with the provisions of the



*Metropolitan Region Scheme* for the proposed Baldivis Police Station, and subject to the following conditions:

### **Conditions**

1. This decision constitutes planning approval only and is valid for a period of four years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
2. The development being carried out in accordance with the approved plans date stamped 4 July 2023 (attached) by the Department of Planning, Lands and Heritage on behalf of the Western Australian Planning Commission.
3. All stormwater is to be disposed of in accordance with the Drainage Plan (prepared by Stantec dated 30 June 2023, Revision C) in consultation with the City of Rockingham and the satisfaction of the Western Australian Planning Commission.
4. Prior to commencement of works, the applicant is to prepare and submit a Construction Management Plan, in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission. The Construction Management Plan must be prepared by a suitably qualified person and detail how the construction of the development will be maintained including, but not limited to:
  - a) Dust, noise, erosion, lighting and environmental hazards management;
  - b) Earthworks stabilisation to prevent sand drift;
  - c) Public safety and security;
  - d) Hours of construction;
  - e) Traffic management plans during construction, including any proposed road closures, parking and loading areas;
  - f) Toilet facilities for construction workers;
  - g) Protection of public infrastructure;
  - h) Material and equipment delivery, storage and removal from site;
  - i) Parking arrangements for staff, contractors and visitors;
  - j) Construction waste disposal strategy and location of waste disposal bins;
  - k) Complaint management procedure; and
  - l) Dilapidation report(s).

The approved Construction Management Plan must be implemented prior to the commencement of works and thereafter maintained for the duration of works in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission.

5. Prior to commencement of works, the applicant is to prepare plans to provide for one short term bicycle parking space on the development site for visitors, and a minimum of eight long term bicycle facilities provided within the development, in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission. The bicycle parking spaces are to be provided prior to occupancy.

6. Prior to commencement of works, the applicant is to prepare a Bicycle Parking and End of Trip Facilities plan in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission. The end of trip facilities are to be provided prior to occupancy.
7. The pylon sign shall be located no closer than 1.8m to the road reserve boundary of Sherry Street.
8. Prior to occupation of the development, all signage shown in the approved development plans, including luminance maximums, must be installed and maintained thereafter in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission.
9. Prior to commencement of works, a revised waste management plan is to be prepared in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission. The revised waste management plan is to detail, but not limited to:
  - a) updated site plan;
  - b) the location of bin storage areas and bin collection areas;
  - c) anticipated waste generation volumes and types;
  - d) number, volume and type of bins;
  - e) general design considerations to ensure bin store and waste receptacles can be suitably cleaned;
  - f) bin storage management and hygiene management;
  - g) waste collection vehicle(s); and
  - h) frequency of waste services.

The revised waste management plan is to be implemented.

10. Public art to the value of 1% of the estimated total construction cost, being provided accordance with the WA State Government Percent for Art Scheme. The public art is to be provided in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission.
11. The applicant/landowner is to submit detailed information relating to external finishes and colour schemes in consultation with the City of Rockingham. Prior to occupation of the development, the approved external finishes and colour schemes are to be implemented in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission.
12. Prior to commencement of works, a Landscape Management Plan is to be prepared in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission. The Landscape Management Plan is to detail:
  - a) the location, number and type of proposed trees and shrubs, including calculations for the landscaping areas;
  - b) detailed landscape, irrigation/reticulation, lighting and street furniture plans; and
  - c) paving materials for the footpaths, which are to be carried across driveways.

The approved Landscape Management Plan is to be implemented and thereafter maintained for the duration of the development, in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission.

13. Prior to occupation of the development, all car parking areas must meet the following requirements:
- a) The provision and maintenance of a minimum of 57 on-site car parking spaces (including one ACROD bay), which are designed, constructed, sealed, kerbed, drained and marked in accordance with Australian/New Zealand Standard AS/NZS 2890.1:2004, Parking facilities, Part 1: Off street car parking.
  - b) The provision and maintenance of car parking space(s) dedicated to people with disabilities, which are designed, constructed, sealed, kerbed, drained and marked in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009, Parking facilities, Part 6: Off street parking for people with disabilities and which are linked to an entrance of the development by a continuous accessible path of travel designed and constructed in accordance with Australian Standard AS 1428.1 2009, Design for access and mobility, Part 1: General Requirements for access New building work.
  - c) Vehicle parking, manoeuvring and circulation areas are to be suitably constructed, sealed, kerbed, line marked and drained in consultation with the City of Rockingham to Australian Standard AS2890.

The development is to comply with the above requirements and be maintained for the duration of the development, in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission.

14. Prior to occupation of the development, crossovers must be designed and constructed in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission.
15. The Bushfire Attack Level Assessment Report prepared by Bushfire Prone Planning and dated 31 March 2023 is to be amended. The amended report is to be in the form a Bushfire Management Plan that:
- a) classifies vegetation within Reserve 52070 (the drainage basin), which the current Bushfire Attack Level Assessment Report identifies as Area 4;
  - b) identifies the extent of works required (in terms of modifying existing landscaping and vegetation) to ensure the intended development on the site is located in an area subject to a bushfire attack level of 29 or less;
  - c) includes an Implementation Table which outlines management responsibilities and addresses criteria set out in the *Guidelines for Planning in Bushfire Prone Areas*;
  - d) includes a Landscape Management Plan prepared in consultation with the City of Rockingham, which clearly sets out the extent of any vegetation management that may be necessary to ensure development on the site is located in an area subject to a bushfire attack level rating not exceeding BAL-29; and
  - e) provides for the implementation of the Landscape Management Plan, at the landowners/applicant's cost.
- in consultation with the City of Rockingham and to the satisfaction of the Western Australian Planning Commission.
16. Prior to occupation of the development, information to be provided to demonstrate that the measures contained in the updated Bushfire Management Plan, required in Condition 15, have been implemented. The information should include a completed 'Certification by Bushfire Consultant' from the Bushfire Management Plan.

## Advice Notes

1. This decision constitutes planning approval under the Metropolitan Region Scheme only. It is the applicant's responsibility to comply with all other applicable legislation and obtain all required approvals, licences and permits prior to commencement of this development.
2. All development must comply with the provisions of the Health Regulations, Building Code of Australia, Public Building Regulations and all other relevant Acts, Regulations and Local Laws. This includes the provision of access and facilities for people with disabilities in accordance with the Building Codes of Australia.
3. Any damage to public assets and reserves arising during the development activity are to be repaired and restored in accordance with the "Local Government Guidelines for Restoration and Reinstatement in WA" and to the requirements of the City of Rockingham.
4. With regard to Condition 6, the City of Rockingham advises the applicant/landowner to refer to its *Planning Policy 3.3.14 - Bicycle Parking and End of Trip Facilities*.
5. All existing street trees adjacent the development site are to protected throughout the course of development in accordance with Australian Standard AS 4970-2009 Protection of Trees on Development Sites.
6. APA Group advises that anyone proposing to carry out construction or excavation works in proximity to a gas pipeline must contact 'Before You Dig Australia' ([www.byda.com.au](http://www.byda.com.au)) to determine the location of buried gas infrastructure.
7. Prior to the commencement of development works, the landowner/applicant needs to be aware of their obligations under the *Aboriginal Cultural Heritage Act 2021*. The *Aboriginal Cultural Heritage Management Code* sets out the process for meeting those obligations.

## Reasons for Responsible Authority Recommendation

N/A

## Details: outline of development application

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone	Urban
Local Planning Scheme	City of Rockingham Local Planning Scheme No. 2
Local Planning Scheme - Zone/Reserve	District Town Centre
Structure Plan/Precinct Plan	Baldivis Activity Centre Structure Plan
Structure Plan/Precinct Plan - Land Use Designation	Mixed Used, Medium Density Residential

Use Class and permissibility:	Civic Use (D)
Lot Size:	Proposed 5514m <sup>2</sup>
Existing Land Use:	Vacant
State Heritage Register	No
Local Heritage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Heritage List <input type="checkbox"/> Heritage Area
Design Review	<input type="checkbox"/> N/A <input type="checkbox"/> Local Design Review Panel <input checked="" type="checkbox"/> State Design Review Panel <input type="checkbox"/> Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

### Proposal:

The application proposes a new police station on a proposed 5514m<sup>2</sup> lot (**Attachment 1** - Development Plans and Elevations, **Attachment 2** - Site Aerial Plan). The proposal would have three street frontages, along Nairn Drive, Sherry Street and Settlers Avenue.

The proposal includes the following key elements:

- An 1,800m<sup>2</sup> police station with a maximum height of 7.8m, with a skillion roof.
- Approximate 2880m<sup>2</sup> secure compound comprising vehicular parking for police and staff, three outbuildings, and equipment, storage, waste and service areas.
- An 3.0m to 4.7m high security perimeter walls to the north, west and south.
- Parking - 57 car bays and three motorcycle bays.
- 23 of the parking bays would be undercover, mounted with photovoltaic panels.
- Two electric vehicle chargers.
- Secure storage for 10 bicycles within outbuilding 3.
- Two separate entry and exit points on Sherry Street.
- End of trip facilities - 74m<sup>2</sup> gymnasium, toilets, change rooms and lockers.
- Parking bays within the Settlers Avenue road reserve to be created as part of an approved subdivision proposal.
- An illuminated free standing pylon sign and flag poles at the north west corner, nearby the public entrance.
- Public access from the north-east corner of Sherry Street and Settlers Avenue.
- Landscaped buffers.

The internal layout of the proposed buildings has not been provided for operational security reasons, and accordingly the prepared security plan and stormwater management plan have not been attached to the (publicly available) WAPC RAR.

The police station will operate 24 hours/day, seven days/week. It will initially accommodate approximately 50 staff and grow to 100 staff at full capacity (**Attachment 3** - Applicant's Report).

## **Background:**

The development is proposed to be located on the corner of Sherry Street, Nairn Drive and Settlers Avenue, Baldivis (the site). The site is vacant and cleared. The site would be located north of the Stocklands Baldivis Shopping Centre, west and south of future mixed use/residential, and east of the Tamworth Wetland, abutting Nairn Road.

The State Government has announced a commitment to construct the Baldivis Police Station at the site. The Western Australian Planning Commission (WAPC) recently approved an application to subdivide the land which would create the site for the Baldivis Police Station (**Attachment 4** - Approved Subdivision Plan).

The site is proposed to be purchased in freehold by the WA Police Force and is under a sales agreement with the current landowner.

## **Legislation and Policy:**

### Legislation

*Metropolitan Region Scheme (MRS)*

*Planning and Development Act 2005*

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

*Planning and Development (Development Assessment Panels) Regulations 2011*

Section 6 of the *Planning and Development Act 2005* provides that the proposed police station (a public work) is exempt from planning approval under the City of Rockingham Local Planning Scheme No. 2, as a public authority (Department of Finance and WA Police Force) is undertaking the works. However, approval is required under the *Metropolitan Region Scheme*.

### State Government Policies

*State Planning Policy 3.7 - Planning in Bushfire Prone Areas*

*State Planning Policy 4.2 - Activity Centres for Perth and Peel*

*State Planning Policy 7.0 - Design of the Built Environment*

*Development Control Policy 5.1 - Regional Roads (Vehicular Access)*

*Planning Bulletin 87- High Pressure Gas Transmission Pipelines in the Perth Metropolitan Area*

### Local Planning Scheme

City of Rockingham Local Planning Scheme No. 2 (LPS No. 2)

### Structure Plans/Activity Centre Plans

Baldivis Activity Centre Structure Plan

### Local Policies

Local Planning Policy PP3.2.4 Baldivis Town Centre

## Consultation:

### Public Consultation

Land surrounding the site is yet to be developed. However, residents in the surrounding community were invited to two public meetings on 15 February and 24 March 2023, facilitated under the proponent's Community and Stakeholder Engagement Plan (CSEP). There was no attendance at the February meeting and one resident provided their support in response to the invitation to the March meeting. No public concerns have been raised (**Attachment 5** - Community Engagement Report).

Community engagement is expected to continue during the construction phase.

### Referrals/Consultation with Government/Service Agencies

Agency	Comments
City of Rockingham	Support subject to conditions.
Department of Heath	Support subject to conditions - connection to utilities.
APA	Support subject to condition for a Safety Management Study
AGIG;	The proposal is not in proximity to the Dampier to Bunbury Natural Gas Pipeline corridor. No objections or conditions.

### Design Review Panel Advice

#### *Office of the Government Architect*

The applicant referred the proposal to the Office of the Government Architect (OGA) prior to lodging the application. The OGA review was generally positive and did not raise any major design concerns. The main comments related to activation of the boundary walls and view corridors, integration of parking within the site, public access, reducing the impact of the bulk and scale, and preference for a two story design.

#### *Local Design Review*

Prior to lodgement, consultation occurred with the City between December 2022 and March 2023. Further refinement of the design outcome has occurred post lodgement.

Below is a summary of the recommendations/comments:

- Primary concern is the streetscape and public entrance at Sherry Street;
- Landscape response on Nairn Drive and Sherry Street and provision of street trees;
- Screening along Sherry Drive;
- Incorporation of environmental sustainability initiatives into the design;
- Additional management plans to address waste management, acoustics and traffic management; and
- Public art response should be integral to the wall design.

The proponent's response to the OGA and City's comments is provided in the Design Review at **Attachment 6**. In response to the above, the modified development plans improve streetscape outcomes, including adjustments to the screening on the Sherry

Drive public entrance. Also, public artwork, boundary treatments and landscaping will provide an opportunity to improve the interface with the public realm on the eastern and southern edges and adjacent the public entry area. Landscaping is also proposed on the recreation reserve abutting the southern boundary wall.

### **Planning Assessment:**

The proposal has been assessed against all the relevant legislative requirements and the planning framework. The following matters have been identified as key considerations for the determination of this application.

#### Regional Planning Framework

##### *Metropolitan Region Scheme*

Clause 30(1) of the MRS requires the WAPC to have regard to the following factors when determining a development application:

1. *The purpose for which the land is zoned/reserved under the Scheme;*

The proposed location of the police station is consistent with the Urban zoning under the MRS (**Attachment 7**)

2. *The orderly and proper planning of the locality; and*

The proposed site is entirely vacant and is zoned for urban use under the MRS. No access to an Other Regional Roads reservation under the MRS is proposed, as access will be gained from Sherry Street, which is a local road. A single lot is proposed for the development, as recently approved by the WAPC. The proposal is also consistent with the planning framework for the locality, as discussed within this report.

3. *The preservation of amenities of the locality.*

The proposed police station will provide an essential facility for the community. The proposal has been designed to respond to the site characteristics in a location that is not yet developed. The matters raised by the OGA and the City regarding activation of the boundaries can be addressed through the detailed design stage and conditions.

#### Local Planning Framework

##### *Local Planning Scheme No.2*

The site is within the District Town Centre Zone of LPS No.2 (**Attachment 8** - Local Planning Scheme No.2). The objective for the zone is:

*"To establish a clear and concise statement of planning and main street principles to guide the development of 'Main Street' Town Centre having due regard to the objectives and principles outlined within a prepared District Town Centre Policy, and supported by any other Plan or Policy that the local government may adopt from time to time as a guide to future development within the zone."*

Due regard is to be given to the principles of the Baldivis Activity Centre Structure Plan (SP) and the City's Planning Policy PP 3.2.4 Baldivis Town Centre.



A police station would be considered a Civic Use, which is a discretionary (D) use within this zone. The planning framework provides for a discretionary use to be approved.

#### *Baldivis Activity Centre Structure Plan*

The Baldivis Activity Centre Structure Plan (SP) applies to the site and surrounding land to guide future development of the Baldivis activity centre (**Attachment 9** - Baldivis Activity Centre Structure Plan).

The SP was approved by the WAPC in 2012. The SP identifies the site within the Transition Precinct and it will provide for a mix of land uses and medium density residential. Development fronting Settlers Avenue to incorporate active street frontage. The proposal is considered to be compatible with the SP.

#### *Planning Policy 3.2.4 Baldivis Town Centre*

The City's planning policy contains an Indicative Development Guide Plan (IDGP), which identifies the site within the Transition Precinct (**Attachment 10** - Indicative Development Guide Plan). Mixed uses with a minimum two stories and frontages to the main street are preferred. The proposal is considered compatible with the IDGP.

#### Design Consideration and Impact on Amenity

The OGA reviewed the proposal prior to the application being lodged, and the City reviewed the design prior to and following lodgement of the application.

Design quality of relevant development proposals is guided by the objectives, measures and principles outlined in *State Planning Policy 7.0 - Design of the Built Environment*.

The OGA and the City's comments are generally positive in relation to the building design. An issue raised relates to ensuring the external finishes and exterior public realm are reflective of building design excellence. In this respect, the operational needs of a regional police station require solid boundary walls as a requirement of the WA Police for security reasons. Perimeter walls of the compound are proposed along the western, southern and parts of the northern boundaries, and privacy screens on the eastern boundary, fronting Settlers Avenue.

In response to the concerns raised by the City, the perforated privacy screens along Settlers Avenue have been setback closer to the main building, to one metre, and the landscape strip widened. Indicative solid concrete seating is proposed, framing the public entrance, and the landscape management plan will be updated to refine furniture placement (**Attachment 11** - Landscape Plan).

Also, public artwork will be applied to boundary walls facing Nairn Drive and Sherry Avenue through the WA Government Percent for Art Scheme, which requires 1% of the construction budget to be spent on artwork where the construction budget is for works over \$2 million.

It is considered that suitable public artwork and landscaping can address amenity concerns and soften the impact of the walls, whilst balancing the operational needs of the police station. Conditions are recommended requiring the public artwork and landscaping management be undertaken in consultation with the City.

## Transport Considerations

### *Road network*

Nairn Drive is identified as an Other Regional Road under the Metropolitan Region Scheme and is classified as a local distributor road in the Main Roads WA functional road hierarchy. No access is proposed from the development to Nairn Drive, in accordance with WAPC *Development Control Policy 5.1 - Regional Road (Vehicular Access)*, as all access is proposed from Sherry Street, which is classified as a local road.

A revised Transport Impact Assessment (prepared by Transcore, June 2023 Rev.r01a) (**Attachment 12**) analyses the operation of the police station and considers peak shift changes in traffic flows. The report concludes there will be negligible impact upon the local road network, which is supported

### *Development access*

Access/egress is proposed from two locations on Sherry Street. The City raised concerns with the interaction between waste management vehicles and emergency vehicles exiting the compound and requested the accesses be widened. The modified development plans address these access matters, as waste collection is now proposed external to the site, from Sherry Street.

## Waste Management

The waste management plan should be further revised (**Attachment 13** - Waste Management Plan), to include an updated site plan and to detail internal and external waste storage design, anticipated volumes and waste collection vehicle type and address hygiene matters. As waste is proposed to be collected from Sherry Street, the collection points and addressing site safety are important considerations. Condition 9 addresses these matters.

## Parking Considerations

The secure compound will contain parking bays, which have increased from 54 to 57, including one ACROD bay, compared with the original development plan. 32 bays are dedicated for staff and 20 for operational vehicles. Three motorcycle bays are also proposed.

Crossover at major shift represents the potential where all personnel from Shift Two arrive and park in the compound prior to the Shift One personnel departing. It is anticipated that this would represent 40 FTE at shift crossover. Operational bays could be utilised during shift change as typically half the operational vehicles will be out on patrol.

Three on-street visitor parking bays are also proposed, adjacent the development on Settlers Avenue. These will be created as part of an approved subdivision application for the site.

The City raised a concern that the design of the internal carpark is inconsistent with Australian Standards. Condition 13 is recommended, to address this concern.

### Drainage Considerations

All stormwater is proposed to be contained on site in accordance with a revised Stormwater Management Plan. The plan demonstrates that the drainage system is designed for the 1 in 100 year ARI event (1% AEP) in below-ground storage cells and that no discharge will occur to the adjoining drainage basin on Reserve 52070. Condition 3 provides for the stormwater management plan to be implemented.

### Landscape Considerations

A Landscaping Management Plan (**Attachment 11**) was prepared for the original development proposal and has not been updated to reflect the modified development plans, which increases the areas proposed to be landscaped.

Although the City has requested a revised landscape management plan address the planting of and ongoing management of street trees within road reserves, the planting of trees will be addressed by the related subdivision proposal. Also, ongoing maintenance of trees within the local road reserves falls within the City's remit.

It is recommended that Condition 12 be imposed, requiring a revised Landscape Management Plan to further refine landscaping requirements. The revised plan is also referenced in recommended condition 15, relating to a Bushfire Management Plan, to ensure consistency between the plans.

### Bushfire Considerations

Part of the site is declared as bushfire prone by the Commissioner for Fire and Emergency Services, pursuant to s.18P of the *Fire and Emergency Services Act 1998*. This is the primary trigger for the application of *State Planning Policy 3.7 - Planning in Bushfire Prone Areas* (SPP3.7), which does not support more-intensive development in bushfire prone areas, unless the bushfire risk can be suitably mitigated.

The City raised concerns regarding the classification of vegetation within the Bushfire Management Plan (**Attachment 14** - Bushfire Management Plan). This relates to the existing drainage, and proposed public open space lot to the south of the site. In this respect, the City requests further justification for the existing classification, and/or commitments from the Applicant, regarding the required vegetation modifications and its maintenance to achieve bushfire-safe construction standards for the proposed development. Following discussions between the City and Applicant, agreement has been reached regarding the necessary procedures and Condition 15 details the requirements for a revised Bushfire Management Plan (BMP). Imposition of the condition is supported as well as a requirement for BMP implementation.

### Gas Infrastructure

The Parmelia Gas Mainline is located approximately 250 metres east of the proposed development site. The gas pipeline operator, APT Parmelia Pty Ltd (APA Group) requests a safety management study be prepared and its recommendations implemented.

The proposed development works fall well outside the 110m setback to sensitive development (60m to industrial/commercial), required under *Planning Bulletin 87- High Pressure Gas Transmission Pipelines in the Perth Metropolitan Area*. The requested safety study is not warranted, in this instance.

A local gas line is located within Nairn Drive, adjacent the site. An advice note alerting the applicant to 'dial before you dig' is proposed.

#### City of Rockingham Recommendation

The City recommends the application be conditionally approved. The City's recommended conditions have been reviewed and are generally supported, except where discussed within this report. Its requested conditions have been modified where necessary to reflect a decision under the MRS.

#### **Conclusion:**

The proposal is consistent with the purpose for which the land is zoned under the Metropolitan Region Scheme and WAPC policy and practice. On this basis, it is recommended that the application be approved, subject to conditions.

#### Alternatives

N/A





DEPARTMENT OF PLANNING, LANDS AND HERITAGE	
DATE	FILE
04-Jul-2023	28-50231-1

# BALDIVIS POLICE STATION

DEVELOPMENT APPLICATION

JUNE 2023



DA - Drawing list	
Drawing Number	Drawing Name
DA.000	BALDIVIS COVER PAGE
DA.101	SITE LOCATION PLAN - BALDIVIS
DA.102	SITE PLAN - BALDIVIS
DA.103	SITE CONTEXT ELEVATIONS
DA.104	SHADOW DIAGRAM - 21 JUNE 2022 - NOT IN USED
DA.105	SHADOW DIAGRAM - 21 DECEMBER 2022 - NOT IN USED
DA.201	BUILDING FLOOR PLAN (CONFIDENTIAL)
DA.202	BUILDING FLOOR PLAN (OUTLINE)
DA.210	ROOF PLAN & PLANT ROOM
DA.401b	ELEVATIONS - BALDIVIS

DA - Drawing list	
Drawing Number	Drawing Name
DA.411	3D VIEWS
DA.412	3D VIEWS
DA.413	3D VIEWS
DA.414	3D VIEWS
DA.415	3D VIEWS

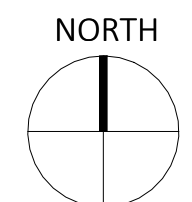




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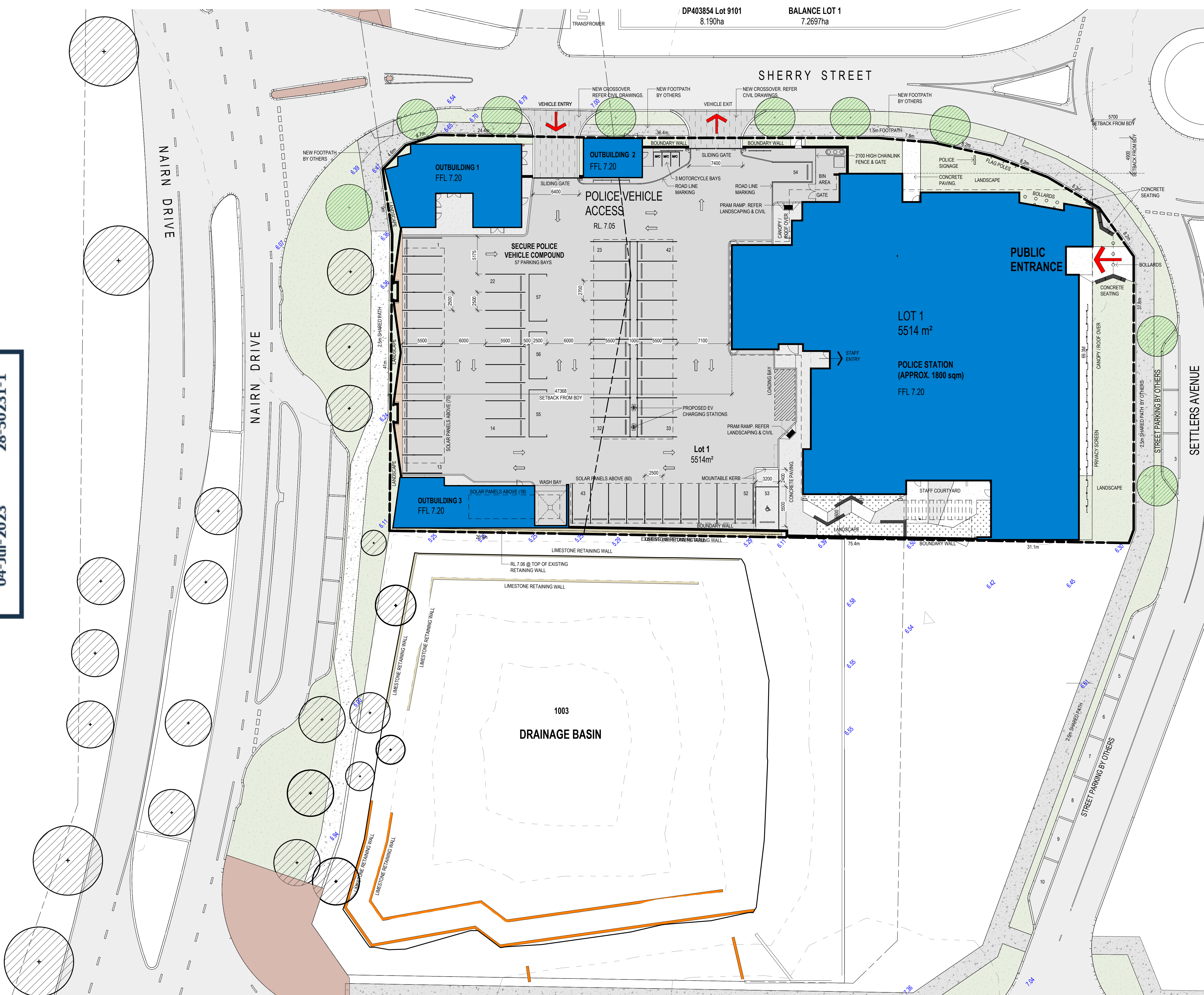


REV.	DESCRIPTION	DATE
C	UPDATE BOUNDARY ALIGNMENT	13.02.2023
D	UPDATE CARPARK CANOPY AND STREET CANOPY	21.03.2023
E	SITE UPDATES: STREET CANOPY REMOVED	05.04.2023
F	FINAL DEVELOPMENT APPLICATION	26.04.2023
G	LOCATION PLAN UPDATES	04.05.2023
H	REVISED SUB-DIVISION PLAN	30.06.2023

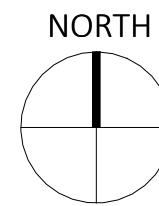
STATUS	DEVELOPMENT APPLICATION
DRAWING TITLE	
SITE LOCATION PLAN - BALDIVIS	

DRAWN BY	SH
APPROVED	GH
PROJECT No.	2275





- LEGEND**
- EXISTING STREET TREES
  - PROPOSED STREET TREES
  - TREE TO BE REMOVED
  - EXISTING LEVEL
  - EXISTING PAVING
  - EXISTING CONCRETE FOOTPATH
  - NEW CONCRETE CROSSOVER
  - NEW CONCRETE FOOTPATH
  - CONCRETE TYPE A
  - CONCRETE TYPE B
  - EXISTING RETAINING WALL
  - PLANTING / LANDSCAPE. REFER LANDSCAPE DRAWINGS
  - PROPOSED POLICE STATION, OUTBUILDINGS & STRUCTURES



REV.	DESCRIPTION	DATE
F	ISSUED FOR CLIENT REVIEW	02.02.2023
G	UPDATE BOUNDARY ALIGNMENT	13.02.2023
H	UPDATE CARPARK CANOPY AND STREET CANOPY	21.03.2023
I	SITE UPDATES: STREET CANOPY REMOVED	05.04.2023
J	FINAL DEVELOPMENT APPLICATION	28.04.2023
K	REVISED SUB-DIVISION PLAN	30.06.2023





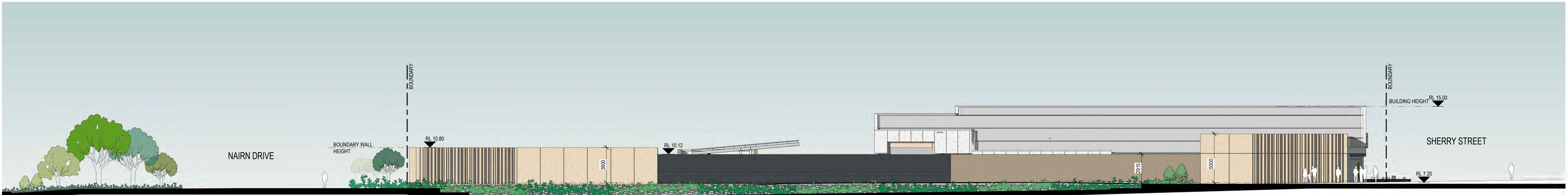
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1 : 200



CONTEXT ELEVATION - SETTLERS AVENUE  
1 : 200



CONTEXT ELEVATION - SHERRY STREET  
1 : 200



CONTEXT ELEVATION - LOOKING FROM DRAINAGE BASIN  
1 : 200

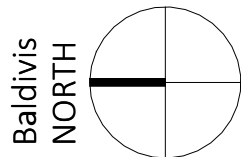
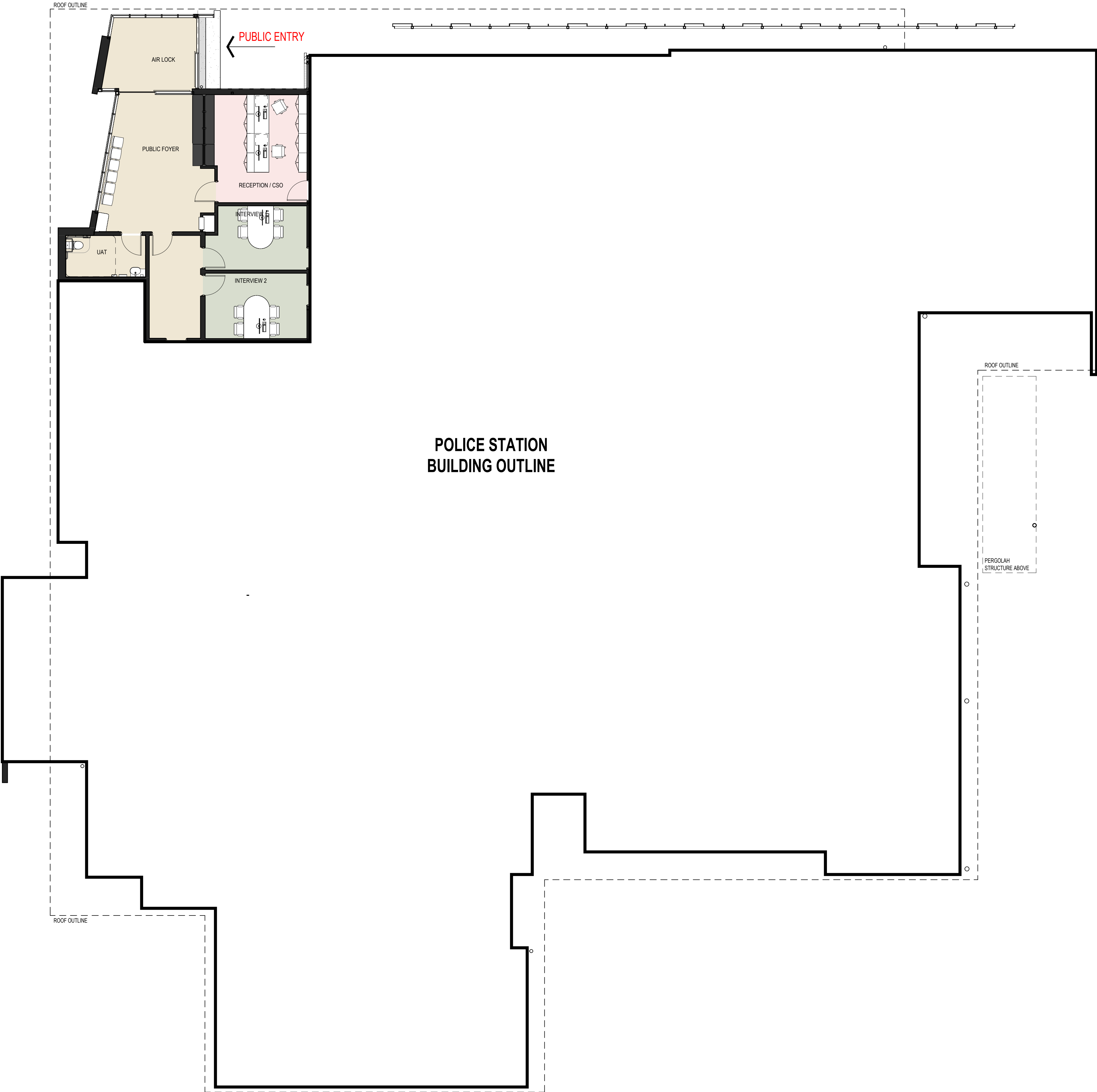


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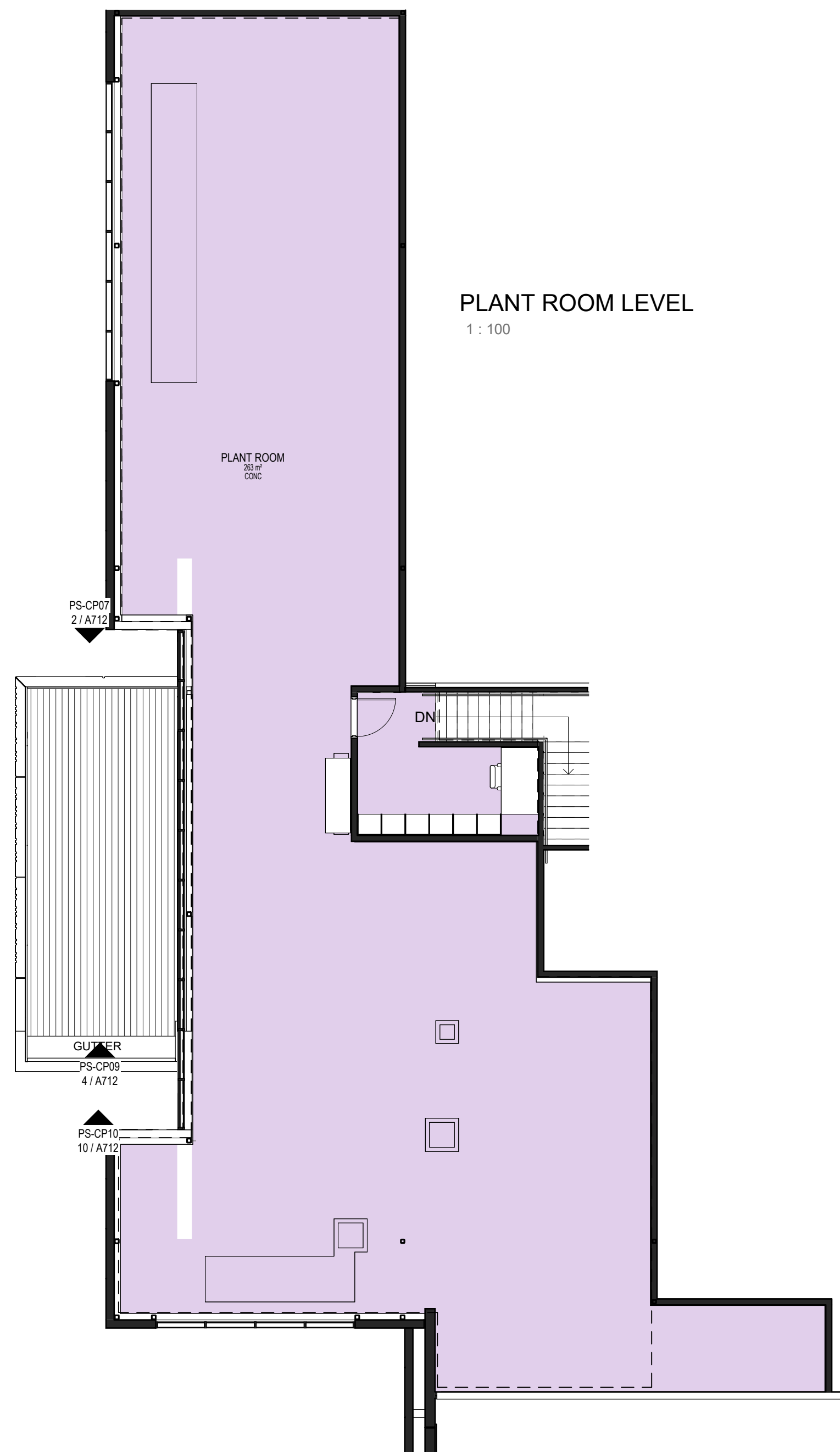
DATE04-Jul-2023

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FLOOR PLAN  
1:100



REV.	DESCRIPTION	DATE
E	SCHEMATIC DESIGN REV 4	10.12.2022
F	CLIENT REVIEW REVISIONS	12.01.2023
G	EXTERNAL WALL COLOUR UPDATES	16.02.2023
H	FINAL DEVELOPMENT APPLICATION	02.03.2023
I	FINAL DEVELOPMENT APPLICATION	26.04.2023
J	REVISED SUB-DIVISION PLAN	30.06.2023







# MATERIALS KEYNOTES

- 1 PRECAST CONCRETE WITH VERTICAL FLUTED RIB PATTERN.  
COLOUR: REFER SCHEDULE ( CONCRETE COLOUR SYSTEMS)
- 2 BRICKWORK: AUSTRAL BRICK - MINERAL CONTOURS.  
COLOUR: FELDSPAR TAUPE
- 3 BRICKWORK: AUSTRAL BRICK - METALLIX.  
COLOUR: CARBIDE
- 4 METAL ROOF SHEETING.  
COLOUR: COLORBOND ULTRA- WHITEHAVEN
- 5 ALUMINIUM WINDOWS- VIRIDIAN EVANTAGE BLUE GREEN GLASS.  
FRAME FINISH- ANODISERS WA COLOUR - MILLBROOK
- 6 CLADDING- PREFINISHED COMPRESSED FIBRE CEMENT  
COLOUR: SATIN WHITE WITH EXPRESSED JOINTS & FIXINGS
- 7 SOFFITS- SUSPENDED ALUMINIUM BATTENS.  
FINISH: ANODISERS WA COLOUR - MILLBROOK
- 8 SUNSCREEN- PIC PERF PERFORATED ARTWORK SCREEN  
FINISH: ANODISERS WA COLOUR- COSSACK
- 9 STEEL VERANDAH / PERGOLA.  
PAINT FINISH: REFER SCHEDULE
- 10 PLANT ROOM LOUVRES: ACOUSTIC LOUVRES IN  
ALUMINIUM FRAME WITH POWDERCOAT FINISH

BOUNDARY WALL: PRECAST CONCRETE + FACE  
BRICKWORK WITH ANTI GRAFFITI FINISH APPLIED.

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28-50231-1  
DATE  
04-Jul-2023





VIEW 1

REV.	DESCRIPTION	DATE
A	ISSUED FOR CLIENT REVIEW	02.02.2023
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VIEW 2

REV.	DESCRIPTION	DATE
A	ISSUED FOR CLIENT REVIEW	02.02.2023
B	UPDATE CARPARK CANOPY AND STREET CANOPY	21.03.2023
C	SITE UPDATES: STREET CANOPY REMOVED	05.04.2023
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E	REVISED SUB-DIVISION PLAN	30.06.2023





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DATE	FILE
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VIEW 4

REV.	DESCRIPTION	DATE
A	ISSUED FOR CLIENT REVIEW	02.02.2023
B	UPDATE CARPARK CANOPY AND STREET CANOPY	21.03.2023
C	SITE UPDATES: STREET CANOPY REMOVED	05.04.2023
D	FINAL DEVELOPMENT APPLICATION	26.04.2023
E	REVISED SUB-DIVISION PLAN	30.06.2023

STATUS	DEVELOPMENT APPLICATION
DRAWING TITLE	
3D VIEWS	

DRAWN BY	SH
APPROVED	GH
PROJECT No.	2275





DEPARTMENT OF PLANNING, LANDS AND HERITAGE	
DATE	FILE
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VIEW 5

REV.	DESCRIPTION	DATE
A	ISSUED FOR CLIENT REVIEW	02.02.2023
B	UPDATE CARPARK CANOPY AND STREET CANOPY	21.03.2023
C	SITE UPDATES: STREET CANOPY REMOVED	05.04.2023
D	FINAL DEVELOPMENT APPLICATION	26.04.2023
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VIEW 6





## Legend

☐ Cadastre (View 1)


Aerial

**DPLH BUSINESS USE ONLY**

Internal Spatial Viewer



0 0.11 0.22 Kilometres

1: 5,000 at A4

Projection: WGS 1984 Web Mercator Auxiliary Sphere  
Graticules (if visible): GDA 1994 Latitude/Longitude

## Notes:

\* The data that appears on the map may be out of date, not intended to be used at the scale displayed, or subject to license agreements. The map should only be used in matters related to Department of Planning, Lands and Heritage business.

\* This map is not intended for measurement purposes.

Map was produced using DPLH's InQuery.

Date produced:

13-Jun-2023





# Baldivis Police Station

## Development Assessment Panel Planning Report

May 2023



# Document control

## Revision history

Version	Date	Author/Editor	Summary of changes
1.0	20 April 2023	R Bridges	

## Approvals

Version	Date	Name	Title
1.0	4 May 2023	R Bridges	A/Assistant Director, SP&AP

# Contents

1. Preliminary.....	5
1.1. Introduction.....	5
1.2. Project Background.....	5
1.3. Public Works.....	6
2. Site Details.....	7
2.1. Location.....	7
2.2. Site Ownership and Tenure.....	7
2.3. Site History.....	7
3. Description of Works.....	8
3.1. Proposed Development.....	8
3.2. Design and Built Form.....	10
3.3. Access & Parking.....	11
3.4. Landscaping.....	12
3.5. Sustainability.....	12
4. Site Considerations.....	14
4.1. Environment.....	14
4.2. Heritage.....	14
4.3. Servicing.....	14
4.4. Transport and access.....	15
4.5. Bushfire Risk.....	16
5. Planning Framework.....	17
5.1. Metropolitan Region Scheme.....	17
5.2. Local Planning Scheme.....	17
5.3. Baldivis Town Centre Integrated Development Guide Plan.....	19
5.4. Baldivis Activity Centre Structure Plan.....	21
5.5. Other Local Planning Policies.....	22
5.6. State Planning Policies.....	23
6. Pre-lodgement Engagement.....	28
6.1. City of Rockingham.....	28

6.2. Department of Planning, Lands & Heritage.....	31
6.3. Design Review.....	31
6.4. Community Engagement .....	32
7. Conclusion.....	34

# 1. Preliminary

## 1.1. Introduction

This Development Assessment Panel (DAP) development application is being submitted by the Department of Finance (DoF), on behalf of the Western Australian Police Force (WA Police Force), for the construction of a new single-storey, fit-for-purpose Baldivis Police Station.

As part of the 2021 State Election, the Government announced a commitment of \$19 million for a new police station to be built within the Baldivis precinct. The construction value of the works in this DAP application is approximately \$14 million.

This project seeks to construct a new fit-for-purpose police station that can effectively and comprehensively accommodate the Baldivis district police services. The proposed Baldivis Police Station site includes sufficient area in line with the anticipated increase of police officers to meet community needs currently, and into the future (up to 100 full-time equivalent at full capacity). The station will accommodate police staff and sworn officers conducting general duties.

The works are anticipated to be completed, and the Baldivis Police Station operational, by December 2024.

## 1.2. Project Background

The suburb of Baldivis falls within the Mandurah Police District currently policed from the Rockingham and Mandurah police stations. A new, contemporary police station will enable increased capacity to support the predicted urban growth in the district, and subsequent increase in demand for services in this area. The Baldivis Police Station will service the areas of Baldivis, Golden Bay, Karnup, Keralup, Secret Harbour, Port Kennedy, Warnbro and Singleton, ensuring adequate police response times and community access to police in the area.

WA Police Force worked with the DoF, Department of Planning, Lands and Heritage (DPLH), City of Rockingham (City), and engaged external consultants, to identify suitable sites to establish a new police station in Baldivis.

Following a comprehensive land search, and due diligence of suitable Crown land sites, expansion of the land search to include privately owned land was required. A total of 19 sites were assessed for operational suitability and achievability. Of these 19 sites, the only land option with an appropriate land area was freehold land owned by Stockland Development Pty Ltd (Stockland).

In June 2022, WA Police Force started negotiations with Stockland in pursuing a sale arrangement for a site and in January 2023 negotiations were agreed.

### **1.3. Public Works**

The proposed development is to be undertaken as a public work under the *Public Works Act 1902*. DoF and WA Police Force as public authorities are exempt under Section 6 of the *Planning and Development Act 2005* from the requirement to obtain development approval for public works under the local planning scheme.

The Section 6 exemption does not extend to the requirements of a Region Planning Scheme and as such, a development approval under the Metropolitan Region Scheme (MRS) is required for the Baldivis Police Station.

The Western Australian Planning Commission (WAPC) is the delegated authority in the determination of development applications for public works on zoned land. As the cost of the proposed works is estimated at \$14 million, this necessitates determination of the development application by the DAP, with the WAPC as the responsible authority.

## 2. Site Details

### 2.1. Location

The Baldivis Police Station will be located on Lot 154 on Deposited Plan 403855 and a portion of Lot 9101 on Deposited Plan 403854 (the site). The site is located within the Pindjarup Region, home of the Noongar peoples, in the City of Rockingham, 46km south of the Perth CBD (**Appendix A** - Location and Site Plan).

The site is located on the northern fringe of the Baldivis Town Centre and bound by Sherry Street to the north with an apartment development beyond, Nairn Drive to the west, undeveloped land owned by Stockland to the north-east and east, and a public open space reserve/drainage basin to the south (Reserve 52070).

The site is vacant, cleared of vegetation and has a total area of 5,229m<sup>2</sup>. The site is a corner lot with three street frontages, including a 50 metre frontage to Nairn Drive. Direct vehicle access is not permitted from Nairn Drive with access currently gained from Sherry Street.

### 2.2. Site Ownership and Tenure

The site currently comprises two vacant lots, Lot 154 on Deposited Plan 403855 (1,680m<sup>2</sup>) and a portion of Lot 9101 on Deposited Plan 403854 (3,549m<sup>2</sup>).

Both lots are currently in freehold ownership by Stockland Development Pty Ltd. A copy of the Certificate of Title's (LR2874/11 and LR2866/870) are included in **Appendix B**.

### 2.3. Site History

A subdivision application to excise the portion of land required for the Baldivis Police Station and create a separate Certificate of Title was lodged with the WAPC in March 2023 and is currently being assessed (WAPC Ref: 2023-226755).

The application seeks to create the Baldivis Police Station lot; extend Sherry Street to the north of the site as a 15m road reserve; create a four way intersection to the north east of the site; extend Settlers Avenue from the south of the site as an 18m road reserve; and create a future development lot south of the site. A copy of the proposed subdivision plan is included in **Appendix C**.

An agreement is in place between Stockland and WA Police Force for the purchase of the new lot at the completion of the subdivision process.



### 3. Description of Works

A key objective of WA Police Force is for all future police stations to have the same look and feel, thereby enabling staff to readily and easily assimilate into a new environment. A step to achieving this outcome is a new standardised police station design, with an internal functional layout and flow, that will provide a highly flexible contemporary workplace for WA Police Force. The Baldivis Police Station design is based upon this new standard design and will be used for all new medium to large scale police stations, such as the proposed Forrestfield Police Station which is currently being progressed in the City of Kalamunda.

#### 3.1. Proposed Development

The Baldivis Police Station comprises two main elements: the main police station building (1,800m<sup>2</sup>) and a secure compound (2,100m<sup>2</sup>). The compound includes secure sheltered vehicle parking for staff and police vehicles, a wash bay, waste bins and three outbuildings (360m<sup>2</sup>) to house various ancillary functions. The compound will be surrounded by a security wall ranging from 3.4m to 4.3m in height. A landscaping strip will be established between the building and the road reserve.

##### **Police station building**

- The public entrance point has intentionally been located on the northeast corner of the site to provide the public address from the future Settlers Avenue and will be serviced 24/7. This space is approximately 40m<sup>2</sup> in area and includes a customer service area and waiting area, two interview rooms and universal accessible public toilet.
- The building has a gross floor area of approximately 1,700m<sup>2</sup> with generous eaves overhangs resulting in an overall roofed area of 2,000m<sup>2</sup>.
- Internal spatial arrangement within the building is sized and arranged in a highly organised manner to suit police operations. For the purpose of this submission this detailed arrangement is confidential and not included on the plans.
- The skillion roof has an apex at 7.8m on the northern boundary sloping down to the lower parapet line to the south at 3.3m above the floor level. Eaves lines vary between 3m and 2.7m above floor level.

- A 251m<sup>2</sup> fully enclosed mechanical services plantroom is concealed within the roof void.
- The building is intentionally set back from the boundary with Settlers Avenue and Sherry Street to incorporate a landscaped buffer between the building and the footpath. Building setbacks are 2m on the eastern boundary and 4.3m on the northern boundary.
- The building form has been activated through the use of a varied palette of materials (precast concrete and face brickwork).

### **Secure vehicle compound**

- The compound accommodates 54 car parking bays, of which one will be an ACROD bay, and 3 motorcycle bays.
- 37 of the car parking bays will have shelters which will incorporate photovoltaic panels mounted above to generate onsite electricity.
- Perimeter walls will be a minimum of 2.4m in height from the paving level within the compound. The lower portion of the walls will act as retaining structures in the order of 600mm to 800mm in various locations.
- Paving within the car parking area will be interlocking trafficable concrete pavers.

### **Outbuildings**

- Various ancillary functions including a Western Power substation, emergency power generator, power storage batteries, fire tanks, fire pumps, police equipment, general stores, and end of trip bike storage are to be accommodated within three outbuildings in the compound.

### **Signage**

- A freestanding pylon illuminated sign will be installed on the Sherry Street boundary to alert passers-by that the building is a police station (Police Detail PC-301 & PC-302). Further illuminated signage will be mounted on the building to identify the location of the public entry point.
- Attached to the façade of the police station building will be a backlit Police Crest and signage denoting 'Baldivis Police Station'.

- At the public entrance point there will be signage outlining etiquette and contact details for 24/7 access.

## **Public Art**

- Artwork will take the form of a graphic design integrated into the boundary walls on Nairn Drive (46m long x 4m high) and a sunscreen structure located within the landscaping of Settlers Avenue. The artwork is likely to be a motif derived from flora and fauna in the Baldivis precinct and referencing the adjacent Tamworth Wetland reserve. The artwork is likely to be a combination of recessed elements in the precast concrete as well as applied metal and painted graphics.
- The Public Art Strategy for the project has been prepared in accordance with the State Government's Percent for Art Policy. Final details of the public art will be determined in consultation with the City.

Site plans, floor plans, elevations and perspectives are contained in **Appendix D - Development Plans**.

## **3.2. Design and Built Form**

The built form relies on the prominent cantilevering wedge shaped fascia to achieve its unique form. The roofline maintains a simple clean line whilst the eaves line is intentionally manipulated (incised) to prominently signal the building entrance and to allow building elements to protrude or recede from the roof overhang.

### **Police station**

Ground level walls comprise of pigmented precast concrete with grooved vertical striations in a random pattern. The concrete is proposed to be a limestone colour appropriate to the coastal setting. The deeper recessed sections of the façade will be face brickwork.

The public entry airlock and public reception offer an opportunity to incorporate generous amounts of visible glazing from the two street frontages. This is an intentional design element to emphasise the entrance to passers-by and to make the place as welcoming as can be. The airlock walls will be fully glazed when viewed from both Settlers Avenue and Sherry Street, and pathways will be well lit from the public parking from Settlers Avenue for visitors arriving after hours.

## **Secure vehicle compound boundary walls**

The compound boundary walls will form a prominent component of the overall built form. The boundary walls on Nairn Drive and a portion of Sherry Street will be in the order of 4.2m in height subject to the final height of the earthworks to be retained within the site. These walls will be constructed from pigmented precast concrete with an integrated graphic design. Lower walls are proposed to be constructed from face brickwork.

### **3.3. Access & Parking**

Access to the site and parking arrangements have been designed based on minimising emergency response time, separating the different users of the station and ensuring all vehicles can enter and exit the site in forward gear. The site provides a separate entry and exit access point from Sherry Street, with sliding gates to control access to the secure compound and sallyport, and to allow larger vehicles such as waste removal trucks to enter and exit the site in forward gear.

Parking provision for the site is proposed to include:

- 54 standard car parking bays (37 under shelters), including 1 ACROD bay, 1 delivery bay, 1 custody parking bay, 1 wash bay within the secure compound;
- 3 designated motorcycle parking bays within the secure compound;
- Dedicated secure staff bicycle storage capable of housing up to 6 bicycles;
- Installation of 2 electric vehicle charging stations initially, followed by a further 8 as the electric vehicle fleet increases; and
- 7 on-street parking bays in the verge of Settlers Avenue for visitor parking.

The parking within the secure compound is sufficient for the anticipated staff and police operational vehicles requirements .

Public pedestrian access to the Baldivis Police Station will be via the reception /foyer area at the north eastern corner of the building with footpath access from Settlers Avenue. This access point also takes advantage of the proposed on-street parking, and nearby bus stops.

End of trip facilities include a 75m<sup>2</sup> gymnasium, toilet facilities, change rooms with 6 showers (50/50 split), clothing lockers for the full staff complement (100 personnel) as well as Universal Access facilities.

The waste disposal bin storage is located in a dedicated area of the secure compound and waste collection vehicles will enter the secure compound weekly or as required for waste collection (**Appendix E** - Waste Management Plan).

### 3.4. Landscaping

The design philosophy for the Baldivis Police Station landscape is to provide a safe, attractive and functional landscape for visitors and staff, while achieving low water-use and minimising on-going maintenance requirements. The landscape design will draw inspiration from the features in the adjacent Tamworth Wetland.

A key objective in the design of the landscape is the minimisation of on-going maintenance. Appropriate species selection and placement within the landscape will reduce the irrigation requirements, and in some areas may eliminate the need for irrigation entirely once planting has become established.

Plant selections will include relocated mature grass trees, low native shrubs and sedges, groundcovers and species endemic to the Baldivis area.

On the northern boundary (Sherry Street), the public entrance zone will include a 7m to 8m wide landscape strip that intentionally forms the foreground to the public foyer when viewed from the street. Towards the western end the landscaping reduces to a 1m wide landscape buffer between the footpath and the boundary walls.

On the eastern boundary (Settlers Avenue), a 4m wide landscape strip will include a freestanding sunscreen set within the landscaping to provide privacy for staff whilst adding visual stimulation when viewed from the street.

On the western boundary (Nairn Drive), a varying width landscape strip between the footpath and secure compound wall will include similar plant species to those existing within the Nairn Drive verge. It is also proposed that the existing interlocking paving within the Nairn Drive road reserve at the intersection with Sherry Street be removed and replaced with an additional tree and landscaping.

Refer to **Appendix F** for a copy of the landscape design package prepared by Ecoscape, including schematic landscape design, 3D visualisations, planting and materials palette.

### 3.5. Sustainability

WA Police Force is committed to supporting the State Government's target of achieving net zero emissions by 2050. The sustainability objective for the design and construction of the Baldivis Police Station building is to develop a highly energy efficient building where the yearly running costs are completely offset by

renewable energy generated on site. The following initiatives have been incorporated:

- The design of the new building prioritises passive solar design principles to minimise the size of heating, ventilation and cooling systems and reduce ongoing energy costs;
- The building utilises solar power with battery standby to produce its own power supply and feed any excess into the grid;
- Water capture and recycling technology - roof pitches and drainage systems have been selected to minimise maintenance requirements and to limit damage which may be caused by an overflow;
- Building materials, finishes, elements and systems have been selected on the basis of 'whole of life' costs and to minimise maintenance requirements;
- Exclusion in the use of gas; and
- Reducing vehicle fuel consumption by facilitating provision of electrical vehicles and installing charging facilities.

Overall, the design will comfortably achieve a 4-star Greenstar equivalency rating.

A Sustainable Design Assessment has been undertaken by Full Circle Design Service to support the proposal and outlines an assessment of the expected sustainability outcomes for the Baldivis Police Station (**Appendix G** - Sustainable Design Assessment Report).

## 4. Site Considerations

### 4.1. Environment

#### Flora & Fauna

The site has previously been cleared with no significant flora or fauna on the site.

#### Contamination

The site is not listed on the Department of Water and Environmental Regulation (DWER) Contaminated Sites register under the *Contaminated Sites Act 2003*. As the register holds information only on known contaminated sites, this does not preclude the possibility that contamination exists.

Measures will be included as part of the works contract to ensure any excavated material will be managed and disposed of appropriately.

### 4.2. Heritage

The site is not listed on the State Register of Heritage Places or on the City's local municipal heritage list. No registered sites of Aboriginal significance have been identified in the Aboriginal Heritage Inquiry System.

### 4.3. Servicing

Nairn Drive and Settlers Avenue as well as Sherry Street are fully serviced with gas, power, NBN, sewer and water infrastructure within their road reserves. The service agencies have indicated that all services can be extended to the site. The site will be provided with reticulated power, water and sewerage services, and NBN (**Appendix H - Services & Stormwater Management Plans**). A gas connection is not required.

A low voltage pillar has been provided to the site, however, the power requirements for the Baldivis Police Station will require an upgrade to a high voltage configuration and this is subject to Western Power review.

#### Drainage/Water Management

It is envisaged that the 1 in 5 year ARI event will be required to be contained on site in accordance with the Baldivis Activity Centre Structure Plan Water Management Strategy by 360 Environmental, 2021.

The design will provide underground storage for the 1 in 5 year ARI event (**Appendix H - Services & Stormwater Management Plans**). Based on an infiltration rate of 5.0m/day, as identified within the geotechnical report for in-situ sands,

approximately 80m<sup>3</sup> of below ground infiltration storage (via soakwells and/or drainage cells) will be required to contain the 1 in 5 year ARI event, which equates to approximately 175m<sup>2</sup> of a combination of single and double stacked drainage cells (**Appendix I** - Geotechnical Report). Underground storage units will likely be located within on-ground carparking areas, with exact location/s determined during the detailed design stage. The presence of groundwater may influence the location and sizing of underground storage units at the site.

Events greater than the design storm event will be flood routed to Sherry Street via non-destructive overland flow paths.

Stormwater from any new roofed areas will be contained on site. It is anticipated a stormwater retention condition will be applied and will be fully complied with.

#### 4.4. Transport and access

A Transport Impact Assessment (TIA) has been undertaken by Transcore in December 2022 to support the proposed (**Appendix J** - TIA). The TIA has been prepared in with the WAPC's *Transport Impact Assessment Guidelines (2016)* to understand the impact of the proposal on the site and locality. The impact of future surrounding land uses, and anticipated growth of the adjacent shopping centre have been considered due to their influence on the movement of vehicles, public transport and active transport (walking and cycling) in the surrounding area.

The findings of the TIA are summarised as follows:

- The peak period of traffic generation of the Baldivis Police Station is anticipated to occur around the 4PM end-of-shift period, with total traffic generation of approximately 43 vehicle movements during the police PM peak-hour (3:30PM-4:30PM).
- The PM-peak hour (3:15PM–4:15PM) of existing traffic flows on Nairn Drive would also be the overall busiest period for total traffic on Nairn Drive and Sherry Street.
- Traffic analysis confirms the full-movement driveway crossover for the Baldivis Police Station and Sherry Street / Nairn Drive unsignalised T-intersection will operate satisfactorily with the additional traffic flows generated by the Baldivis Police Station.
- The impact of development traffic on the surrounding road network will not be significant.



- The existing bus services on Safety Bay Road will provide a satisfactory level of public transport accessibility to the site.
- Sufficient pedestrian access connection will be provided from the existing footpath on Sherry Street and extension of Settlers Avenue.

Overall, the proposed development of the Baldivis Police Station will not result in a significant traffic impact on the surrounding roads and locality. No significant road safety issues have been identified in relation to the proposed development.

Settlers Avenue is proposed to be extended into the undeveloped Stockland land holding to the east of the site and create a north-south main street. Settlers Avenue has been constructed as far north as the POS reserve south of the site, and is proposed to kink to the right in order to accommodate the Baldivis Police Station on the site.

A swept path analysis has been undertaken to demonstrate how commercial vehicles/trucks servicing the site are able to enter, circulate and exit the site in forward gear, including turning movements in and out the loading bay (**Appendix K** - Swept path analysis).

## 4.5. Bushfire Risk

A portion of the site is identified as being located within a designated bushfire prone area and as such, compliance with *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7) and supporting Guidelines for Planning in Bushfire Prone Areas is required.

A Bushfire Attack Level (BAL) Assessment Report has been prepared to support this development application (**Appendix L** - BAL Assessment Report). The BAL assessment indicates the proposed development subject to this application will have an indicative BAL rating of BAL-12.5.

## 5. Planning Framework

### 5.1 Metropolitan Region Scheme

The site is zoned Urban under the Metropolitan Region Scheme (MRS). The purpose of the Urban zone is to provide for residential development and associated local employment, recreation, open space and other community facilities. The proposed Baldivis Police Station is consistent with the intent of the Urban zoning under the MRS and can be approved accordingly.

The site is adjacent to Nairn Drive, which is reserved as an 'Other Regional Road' under the MRS. The proposed development does not impact the existing constructed road reserve or seek to establish any new vehicle access points to the regional road.

#### Matters to be considered

As a public work, the proposal is to be considered and assessed under clause 30 of the MRS which requires the decision maker to have regard to the following factors when determining a development application:

**(i) *The purpose for which the land is zoned or reserved under the Scheme.***

The Baldivis Police Station is consistent with the Urban zoning under the MRS.

**(ii) *The orderly and proper planning of the locality;***

The Baldivis Police Station complies with the strategic and statutory planning intent for the site in a civic context and activity centre setting. The Baldivis Police Station will be strategically located adjacent to an activity centre with suitable connectivity and access.

**(iii) *The preservation of amenities of the locality.***

The amenity of the locality is being enhanced through the construction of the Baldivis Police Station with the site located in a prominent position. The ultimate development intent for the site will complement the amenities and services in the Baldivis activity centre and local area.

### 5.2 Local Planning Scheme

The site is zoned District Town Centre under the City of Rockingham Local Planning Scheme No. 2 (LPS 2) which seeks to encourage mixed use development and diversity within the Baldivis Town Centre.

In the Zoning Table under LPS 2 the Baldivis Police Station would be considered as a Civic Use, meaning *premises used by a government department, an instrumentality of the state, or local government for administrative, recreational or other purposes*". A Civic Use is a discretionary (D) use in the District Town Centre zone therefore the proposal can be approved accordingly.

Sections 4.5 and 4.15 of LPS 2 apply to this proposal. The Baldivis Town Centre Integrated Development Guide Plan (Guide Plan) and Planning Policy No 3.2.4: Baldivis Town Centre (Planning Policy) were prepared to fulfill clause 4.5 of LPS 2 and applies to all applications for development and subdivision with the District Town Centre Zone. Further explanation regarding compliance with the two documents is provided in sections 5.3 and 5.4 of this report.

Clause 4.15 of LPS 2 outlines the parking requirements for land in the District Town Centre Zone. As the site is to be developed for a purpose not specified in Table 3 of clause 4.15, the minimum number of car parking bays required is to be determined have regard to:

- (i) the nature of the proposed development;
- (ii) the number of employees likely to be employed on the site;
- (iii) the anticipated demand for parking; and
- (iv) the orderly and proper planning of the locality.

The development provides for 54 onsite car parking bays in the secure compound with 28 allocated for operational vehicles and 26 for staff (excluding the delivery and custody parking bays). The parking provided within the secure compound is sufficient for the anticipated police operational requirements and staff. No visitor parking is provided on the site, however, 7 on-street embayment car parking bays are to be provided on Settlers Avenue to the east of the site. The on-street car parking will be interspersed with street trees providing shade for pedestrians on the footpath and continuing the theme of the avenue of existing trees from the core of the Town Centre from the south.

Overall, the design of the Baldivis Police Station is compliant with LPS 2.

## **Environmental Conditions**

The site is located within an area that is subject to environmental conditions in accordance with section 68 of the *Environmental Protection Act 1986* (EP Act). The environmental conditions, imposed by the Minister for the Environment contained in Statements under Section 48F and 48G of the EP Act, are incorporated into Schedule 7 of LPS 2.

The environmental conditions require that the following environmental management plans be prepared in accordance with Ministerial Statement 00527 and implemented in accordance with the plans and to the requirements of the City:

- Drainage and Nutrient Management Plan;
- Soil and Groundwater Contamination and Remediation Plan; and
- Pipeline Protection Plan.

The environmental conditions were applied in February 2000 through Amendment 295 to the City of Rockingham's previous Town Planning Scheme No.1, which sought to rezone the site and surrounding land from Rural zone to Baldivis Town Centre zone.

Ministerial Statement 00527 outlines that the drainage and nutrient management plan is to be prepared for the whole of the amendment area to ensure that the rate, quantity and quality of water leaving the area will not adversely impact on the Tamworth Hill Swamp, the Stakehill Groundwater Area groundwater supply and the Peel-Harvey estuarine system. The remediation plan is required only for land that has previously been used for horticulture purposes, which is not applicable to the site. The pipeline protection plan is required only for land within or abutting the Parmelia gas pipeline easement area, which is not applicable to the site.

Ministerial Statement 00527 also outlines that the plans are to be prepared prior to commencement of site works for subdivision or development. It is anticipated that the drainage and nutrient management plan requirement will be dealt with through the imposition of a condition on the subdivision approval creating the lot for this development. However, if this is not the case then it is anticipated that a condition will be applied to this development and will be fully complied with.

### **5.3 Baldivis Town Centre Integrated Development Guide Plan**

The Baldivis Town Centre Integrated Development Guide Plan (Guide Plan) and Planning Policy No 3.2.4: Baldivis Town Centre (Planning Policy) were prepared to fulfill clause 4.5.4 of LPS 2 and applies to all applications for development and subdivision with the District Town Centre Zone.

The Guide Plan illustrates building envelopes, indicative building configurations, pedestrian and vehicular access, and indicative carparking layouts. The Planning Policy sets out general policy requirements and specific dedicated precinct requirements. The site is located partially within the Core Precinct and partially within the Transition Zone under the Planning Policy.

The proposal complies with the general policy requirements in clause 7 and the requirements of the Core and Transition Precinct in clauses 8.1 and 8.3 of the Planning Policy as follows:

- The Baldivis Police Station is a civic use which is a preferred use within the Core precinct.
- The Baldivis Police Station adds to the provision of land uses and activities provided for in the town centre and creates an integrated mixed use environment.
- The Baldivis Police Station is a landmark building that will frame the corner of the Settlers Avenue and Sherry Street intersection and visually identify Settlers Avenue as the 'main street'.
- The building places great emphasis on the public entry point, achieved through the use of generous areas of glazing (approximately 4.2-4.9m high) and a 7-8m wide landscape strip towards Sherry Street & 2m wide landscape strip towards Settlers Avenue, to create an inviting entrance to the public foyer. The peak of the 7.8m high skillion roof form is cut away on the corner to further emphasis the entry point and will be visible as a clear and intuitive wayfinding device for visitors.
- The design of the Baldivis Police Station provides for a single storey building that has an equivalent parapet height of two storeys. This results in a two-storey massing that transitions to the multistorey residential developments on the northern side of Sherry Street reinforcing the desired urban character of the Core Precinct whilst providing a transition into the character of the Transition Precinct.
- The Baldivis Police Station will front and address the east-west pedestrian corridor linking Settlers Avenue and the shopping centre with Nairn Drive.
- Public art will play an important role in activating the Nairn Drive and Settlers Avenue elevations. Feature walls with proposed public art facing Nairn Drive, and a perforated screen with public art in front of 3-meter-high glazing fronting Settlers Avenue are proposed instead of blank walls. The boundary wall facing the adjoining drainage basin/public open space area will be constructed out of pre-cast concrete panels. It is anticipated that this will comprise of murals/graphics integrated into and/or applied to the pigmented precast panels on Nairn Drive and Perf-Pic graphic designs applied to the freestanding sunscreen fronting Settlers Avenue.
- Window frontages on the Settlers Avenue frontage are to remain transparent and have been increased in height to 3m above the privacy sunscreen to create an interactive frontage from the street and surveillance at all times, as

per advice from the City of Rockingham. This is in line with the Planning Policy's requirement for 3m ceiling height on ground floors for core precincts.

- The majority of the Baldivis Police Station parking is provided to the rear of the main building and is not visible from the street. No car parking proposed between the road reserve boundary and building frontages.
- Shared visitor on-street carparking is provided for on Settlers Avenue.
- The number of access driveways crossing pavements has been minimised with only one entry and one exit access point to the secure compound from Sherry Street. This also achieves street front continuity, and limits vehicular/pedestrian conflict points on the main street, Settlers Avenue.
- Delivery and service vehicles have rear access to the Baldivis Police Station building to remove vehicular/pedestrian conflict on Settlers Avenue.
- While there are no awnings along the street, tree canopy along Settlers Avenue and Sherry Street will provide shade for pedestrians.
- The streetscape works including pavements, kerbside parking, street trees and lighting will be provided by Stockland as part of the sub-division works and have been identified on the plans.

It is acknowledged that while some of the criteria of the Planning Policy cannot be met specifically because of the operations and security requirements of WA Police Force, the overall the design of the Baldivis Police Station responds to the requirements of the Guide Plan and Planning Policy.

## **5.4 Baldivis Activity Centre Structure Plan**

The BACSP prescribes a series of principles aiming to create a harmonious and vibrant centre that is a community focal point for social interaction and effectively services the urban needs of the Baldivis locality.

The site is located within the Transition Precinct in the BACSP which provides for a mix of land uses that create opportunities for residential dwellings co-located with small scale non-residential development in an urban setting. The area of the Transition Precinct fronting Settlers Avenue is identified as having an 'active frontage' requiring commercial development in a main street format. Preferred uses within the Transition Precinct include community and civic facilities.

The BACSP identifies Lot 154 for medium density residential development and Lot 9101 for mixed use development. The proposed road to the east of the site is

identified as requiring an active street frontage as this forms an extension of Settlers Avenue as the main street from the Baldivis shopping centre to the south. In accordance with the BACSP land to the north and north east beyond Sherry Street is to be developed for medium and low density residential development and land to the east beyond Settlers Avenue is to be developed for mixed use development.

The development of the Baldivis Police Station on the site is consistent with the BACSP and will facilitate expansion locally and continue to contribute to operational adjacencies such as local emergency management arrangements, intended for a broad range of emergency scenarios, including bushfires. The proposed design responds adequately to address street activation whilst maintaining operational security for WA Police Force.

## 5.5 Other Local Planning Policies

### **Planning Policy No.3.3.25: Percent for public art - private developer contribution**

The City recognises the importance of public art in achieving better planning outcomes and supports the establishment of public art to improve the amenity of the City through *Planning Policy No.3.3.25 – Percent for public art – private developer contribution* (PP 3.3.25). LPP 3.3.25 applies to all development applications with an estimated construction cost to the value of \$5 million or greater and requires that an art contribution of a value of not less than one percent of the building works.

WA Police Force is committed to providing an art contribution, as required by the State Government's Percent for Art Policy, through on an on-site contribution as a component of the Baldivis Police Station development and within part(s) of the site that are publicly accessible. It is anticipated that the art contribution will provide an opportunity to improve the aesthetic appeal of the boundary walls of the site and that local community engagement (particularly including local Aboriginal engagement) will inform the commission.

An expression of interest process was advertised publicly in February 2023 for the Percent for Art and the project team is currently assessing the submissions. Options for art contribution(s) on the site will be discussed with the City as the proposal progresses.

## 5.6 State Planning Policies

### State Planning Policy 4.2 - Activity Centres for Perth and Peel

Under *State Planning Policy 4.2: Activity Centres for Perth and Peel (SPP 4.2)*, Baldivis is identified as one of seven district centres within the south-west sub-region. District centres have a greater focus on servicing the daily and weekly needs of residents and provides services, facilities and job opportunities that reflect the particular needs of their catchment.

Under SPP 4.2, activity centre precinct structure plans need to be prepared for district centres and should be endorsed by the WAPC prior to a *major development* being approved to ensure the development of the activity centre is integrated, cohesive and accessible. The proposal does not meet the threshold of additional activity centre use floorspace and therefore, the requirement for a precinct structure plan is not triggered by this proposal. Furthermore, the proposal is considered to address an immediate and demonstrated local need.

The Baldivis Activity Centre Structure Plan (BACSP) provides the planning framework for managing land use and development within the Baldivis Activity Centre. Compliance with the BACSP is discussed in section 5.4 of this report.

### State Planning Policy 7 - Design of the Built Environment

*State Planning Policy 7: Design of the Built Environment (SSP 7)* addresses the importance of design quality, and sets out the principles, processes and considerations which apply to the design of the built environment in Western Australia, across all levels of planning and development.

SPP 7 establishes a set of ten 'Design Principles', providing a consistent framework to guide the design, review and decision-making process for planning proposals. Table 1 below provides an assessment of the Baldivis Police Station against the ten design principles of SPP 7.

**Table 1:** Assessment against Schedule 1 - Design Principles of SPP 7

	Design element	Design outcome
1.	<b>Context and character</b> <i>Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.</i>	Civic presence is achieved through the use of a distinctive roof form; clearly legible public entry point; landscaped setbacks and a rich selection of building materials. The built form intentionally departs from the residential and retail architectural that characterises the surrounding town centre precinct.  The design aims to convey the importance and place of the WA Police Force within the Baldivis and wider community.



		<p>The design addresses the following planning requirements:</p> <ul style="list-style-type: none"> <li>• Is a sensitive response to the site and setting</li> <li>• Preserves natural assets</li> <li>• Improves the quality and character of open spaces</li> <li>• Creates a safe environment for users</li> <li>• Readily accessible to the public</li> <li>• Visually unobtrusive within the context</li> <li>• Offers comfortable pedestrian access</li> <li>• Universally accessible.</li> </ul>
<b>2.</b>	<p><b><i>Landscape quality</i></b></p> <p><i>Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.</i></p>	<p>The landscape design solution plays an important role in adding character to the new development and forming a visual and physical buffer between the footpath (public) to the Baldivis Police Station building.</p> <p>Street frontages on Sherry Street and Settlers Avenue will receive selections of native plant species that are endemic to the local area. Landscaping will be native plant selections that are endemic to the local area.</p> <p>Proposed species have been selected for suitability to the site conditions, providing good ground coverage combined with low mature height to achieve Crime Prevention Through Environmental Design (CPTED) sightline and concealment principles.</p> <p>A hierarchy of paving treatments directs visitors to the main entrance, while providing functional access to secondary entry points and secure areas.</p> <p>For security reasons trees will not be planted within the site boundaries, however, verge trees have been proposed as indicated in the Site Plan DA102. This includes 3 verge trees on Settlers Avenue and 6 trees on Sherry Street.</p> <p>Given the nature of police operations, there are no opportunities for deep soil planting within the secure compound.</p>
<b>3.</b>	<p><b><i>Built form and scale</i></b></p> <p><i>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</i></p>	<p>The occupied portions of the Baldivis Police Station will be located at ground floor level providing a highly flexible contemporary workplace for WA Police Force. This has the potential for the built form to be low scale with little connection to the surrounding context. However, the design solution addresses this by adopting a skillion roof form with a ridge line at 7.8m above the ground level to the north and a roof pitch of 6 degrees transitioning down to a gutter line of 3m. This results in a two-storey massing that transitions to the multistorey residential developments on the northern</p>

		<p>side of Sherry Street. Logically the built form diminishes in height towards the stormwater basin on the southern boundary.</p> <p>WA Police Force requires boundary walls to be of solid construction and unclimbable. In this instance the massing is an unavoidable dominant feature when viewed from Nairn Drive where it is proposed that an artwork graphic design is integrated into the wall construction alongside landscaping to soften this impact.</p>
<b>4.</b>	<p><b><i>Functionality and build quality</i></b></p> <p><i>Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life cycle.</i></p>	<p>The internal planning has informed the buildings form and its expression, capturing a high level of privacy for WA Police Force. The building is functionally efficient with spaces optimally placed to suit the day-to-day 24/7 operational requirements of WA Police Force.</p> <p>Internal circulation corridors are generous in width and aligned to suit police operations in the most functionally efficient manner possible. Broadly speaking circulation follows a H format linking staff amenities to each functional area. Staff toilets have been intentionally placed in the centre of the building for ease of access by all.</p> <p>The public visitor reception includes a 40sqm waiting room with direct access to the reception counter (open 24/7), 2 discrete meeting rooms and a Universally Accessible Toilet facility. Generous windows provide views out to the landscaped areas and importantly provide connection to the outdoors. The reception area will receive high quality finishes throughout including engineered stone reception counter fronts, ceramic tile flooring and aluminium battened acoustic ceiling.</p>
<b>5.</b>	<p><b><i>Sustainability</i></b></p> <p><i>Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes</i></p>	<p>The aim is to construct a facility that generates sufficient power through renewable energy to cover the 24/7 power demands of the Baldivis Police Station. This will be achieved using a large photovoltaic array located above the vehicle parking using shelters with solar panels that double as shade protection for the vehicles.</p> <p>The development is designed to achieve a minimum 4 star Greenstar rating. Note that a formal GBCA application will not be submitted so this will remain a desktop rating only.</p> <p>Sanitary fixtures and fitting will meet the Water Efficiency Labelling and Standards and National Construction Code requirements.</p>

		<p>Landscaped areas will be native species specifically selected for their resilience to the climatic conditions. Reticulation will be installed and serviced by scheme water.</p> <p>WA Police Force will include 2 charging points for electrical vehicles in the first instance with provision for additional infrastructure in the future.</p>
<b>6.</b>	<p><b>Amenity</b></p> <p><i>Good design provides successful places that offer a variety of uses and activities while optimising internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.</i></p>	<p>Being a 24/7 operational police station, the facility includes generous amenities for staff and visiting police officers. The facilities include, changerooms, showers, lockers, bike storage, gym, meals preparation, lounge, and indoor/outdoor seating areas.</p> <p>Members of the public will have access to essential amenities such as shelter within the reception area and access to a universally accessible toilet facility.</p>
<b>7.</b>	<p><b>Legibility</b></p> <p><i>Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.</i></p>	<p>The public entry point is made clearly legible at the intersection of Sherry Street and Settlers Avenue. Backlit signage will assist to direct members of the public as they approach from Nairn Drive and along Settlers Avenue.</p>
<b>8.</b>	<p><b>Safety</b></p> <p><i>Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.</i></p>	<p>On Sherry Street and Settlers Avenue building setbacks will be landscaped using native plant species in order to remove places of concealment.</p> <p>The public entry point will be clearly legible on approach as well as being well signposted from the street frontages.</p> <p>The main staff office has large windows facing Settlers Avenue that will be separated from the street by a free standing perforated aluminium screen. This screen serves to reduce solar gain from the west as well as addressing WA Police Force concerns for staff safety within the office area. It is anticipated that the screen will provide filtered views from Settlers Avenue towards the windows. Passers-by will be aware of lighting within the office space in the evenings.</p> <p>Boundaries will be well lit where appropriate and full perimeter CCTV security will be included.</p>
<b>9.</b>	<p><b>Community</b></p> <p><i>Good design responds to local community needs as well as the wider social context, providing</i></p>	<p>WA Police Force has engaged Element to facilitate community engagement. This process commenced in February 2023 and will be conducted over a number of months to determine community needs and aspirations</p>

	<i>environments that support a diverse range of people and facilitate social interaction.</i>	for the Baldivis Police Station. The findings of this engagement will be made available to the City on conclusion. An outline of the engagement process so far has been included in <b>Appendix M</b> – Community Engagement Report.
<b>10.</b>	<p><b>Aesthetics</b></p> <p><i>Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.</i></p>	<p>The built form will intentionally depart from the surrounding future residential and retail aesthetics. This has been done to emphasise the civic status of the Baldivis Police Station within the community.</p> <p>The prominent wedge formed roof structure cantilevers roughly 2m beyond the façade in a unique manner. This design was intentionally adopted for its clean lines and sculpted form. The soffit has been intentionally carved away to announce the building entry and to allow some of the precast elements to punch out towards the street.</p> <p>Lower elements in the composition are robust in nature to satisfy the briefed requirements of maintenance minimisation and vandal resistance. These materials include pigmented precast concrete and two selected face bricks. The colour palette is intentionally within the range of limestone and driftwood (taupe and charcoal).</p> <p>The materials selected for the primary paving treatments are intended to match the building finishes to provide the public-facing areas of the Baldivis Police Station with a distinct character that compliments both the built and natural aspects of the site.</p> <p>The plant species chosen for the site will provide an attractive floral and foliage display throughout the year.</p>

## 6. Pre-lodgement Engagement

### 6.1. City of Rockingham

Discussions have been ongoing with the City since the search for a suitable site for a future police station in Baldivis began. The City suggested the site as a potential location for a future police station at site selection stage in 2021. Early on the City indicated its support for a police station in this location and encouraged further discussion with Stockland to progress appropriate planning.

Discussions have also been undertaken between the City and WA Police Force to gain a thorough understanding of the local issues and wider area implications to be addressed as part of the overall development of a future police station. The City has also provided advice in relation to the design and layout of the police station in relation to the BACSP.

#### Meeting 1

An initial meeting was held with the City on 6 October 2022 attended by WA Police Force, DoF and senior officers of the City. The project team outlined the future station (and site) operational and security requirements and provided context to the City for the project parameters (access and egress; visibility to and from the building; and template design for all future police stations). The City provided the following feedback:

- Would like to see a two storey element (potentially a parapet).
- Need to see main street elements in the design on Settlers Avenue as Settlers Avenue is the priority street.
- Need to consider the policy framework.
- Project can utilise the City's Design Review Panel.
- Acknowledged that there would be concurrent subdivision and development applications.
- Noted bushfire requirements.
- Acknowledged that there needs to be a balance between urban design principles and police requirements.
- Confirmed the need for a roundabout as shown on subdivision plan.

#### Meeting 2

Another meeting was held on 7 December 2022 attended by WA Police Force, DoF, Hunt Architects and senior officers of the City. Draft concept designs were presented and discussed. The following details the outcomes of the meeting:

- It was agreed that in principle the design solution offered a suitable design response to the future Baldivis town centre and addresses the City's objectives for the area, with the building addressing Main Street and the intersection with Sherry Street.
- The City supported the public entry being located on the eastern boundary at the future roundabout rather than on the Nairn Drive/Sherry Street intersection. The City also supported the proposed appearance and configuration of the entrance addressing the street/intersection.
- Whilst acknowledging the operational and security constraints the WA Police Force need to operate under, the City provided the following suggestions/comments:
  - Prefer the removal of the perforated aluminium screen from the eastern boundary to achieve greater activation of the building by allowing the public to see the windows. It was explained that the screen is required for security reasons, and would be perforated with a public art component. Without the screen, the windows would likely require an upgrade to bullet resistant glass and would include translucent blinds. The City suggested that windows could be increased in height to allow the upper portion of the window to be kept unobscured so that views into the building could still be achieved.
  - Addition of a street canopy on the eastern boundary for weather protection. Whilst the City's preference is a canopy that is integrated with the façade it was acknowledged that this would detract from the current design solution and that a free-standing canopy may be an appropriate alternative solution.
  - Opposed to off-street staff/visitor parking on the southern side of the Baldivis Police Station and access off the Main Street. The City expects all visitor parking to be parallel on-street parking.
  - Whilst the southern section of land could be used for future building expansion opportunities, which was supported by the City, the utilisation of this land requires further investigation i.e. landscaping solutions.
  - The 3.6m to 4m tall boundary on Nairn Drive was acknowledged, with further activation of this edge to be considered where possible, including installation of public art.

## **Pre-lodgement advice**

Pre-lodgement advice was sought from the City in March 2023 following design review and changes to the draft plans to address the City's initial considerations. The City provided an assessment against key elements of the local planning framework; the planning process, and provided some technical comments in the areas of traffic, urban water and landscape.

The City advised that from a policy context the proposal did not adequately address the objectives and performance standards under the Planning Policy and

the alignment of Settlers Avenue was inconsistent with the BACSP and the IDGP. The City requested demonstration that the realignment of Settlers Avenue did not affect future development and future land uses on the land to the east of the site, and the street connections to the north and east.

Stockland has undertaken preliminary master planning for their landholding that is generally consistent with this application and the current subdivision proposal for the Baldivis Police Station lot and Settlers Avenue road reserve. The proposed spatial layout can be seen in Figure 1. The master plan demonstrates that the intent of the BACSP and IDGP is upheld with the realignment of Settlers Avenue and there is no impact to future lots or land uses or street connections in the undeveloped portion of the BACSP and IDGP area.

The realignment of Settlers Avenue also provides an opportunity to break the continuous north-south road and signify the change from the retail core of the Town Centre to the mixed use and residential Transition Precinct. While it is acknowledged that the realignment of Settlers Avenue results in the creation of an unusual-shaped lot to the south of the Baldivis Police Station site, this sits outside the scope of this application. Stockland has to undertake further detailed work before developing concept plans for this area and will liaise with the City in this regard. Within the site boundaries the design of the Baldivis Police Station and associated landscaping is in line with the BACSP and IDGP.



**Figure 1** - Stockland master plan

Overall, the City's feedback has been taken into consideration and integrated where possible to the overall design of the Baldivis Police Station, including revisions of site planning for the development to front face Settlers Avenue; massing the building by extending the vertical glazing along Settlers Avenue to allow for greater transparency; limiting the visitor parking to be parallel on-street parking; providing street trees to the Settlers Avenue extension and Sherry Street; providing a more substantive landscape response and extending the landscape design to the verges; and activation of the boundary wall along Nairn Drive by re-designing the wall to include low level landscaping as well as public art.

## **6.2. Department of Planning, Lands & Heritage**

Discussions have been ongoing with the Planning division at DPLH since the search for a suitable site for a future police station in the Baldivis area began. DPLH recognised in 2021 that there were limited suitable site options in Baldivis for a new police station and indicated support for WA Police Force to progress investigating, planning and potentially acquiring a suitable site in this location from Stockland. At the time DPLH acknowledged that the site is located within an Urban zone, has no environmental constraints and subject to detailed planning presented a straightforward and timely pathway to development.

A meeting was held with DPLH on 12 December 2022 where draft concept designs were presented and discussed. DPLH indicated that the critical factors to consider included the built-form outcome/interface with Nairn Drive and Main Street, considering the expectations for Baldivis Town Centre as expressed through structure planning for the area. DPLH also indicated preference for the Baldivis Police Station to progress through a design review process and to be assessed against the ten design principles of SPP 7. This considerations have been addressed in the design of the Baldivis Police Station, with a review against SPP 7 included in part 5.6 of this report.

## **6.3. Design Review**

### **Office of the Government Architect**

The Baldivis Police Station is not eligible for design review by the State Design Review Panel, however, it was referred to the Office of the Government Architect (OGA) for design advice and two review assessments were undertaken (**Appendix N** - OGA comments and design response).

The overall response from the OGA was positive in that a considered design approach had been followed for the Baldivis Police Station and the outcome



delivered *‘an array of specialist operational requirements into an attractive and highly functional architectural proposal’*.

The outcomes of the design review process has resulted in modifications to the development plans, including:

- Re-design of the site so the building faces the northward extension of Settlers Avenue;
- All parking is contained within the secure compound;
- Activation along Settlers Avenue by increase of the Public Art scope to include artwork on the perforated screen;
- The material of the wall in the south-east corner has been designed to be precast concrete with vertical fluted rib pattern, which creates an engaging pattern on the wall;
- Replacement of the canopy structure facing extension of Settlers Avenue for street trees and landscaping;
- Improved landscape design that contributes to the streetscape character of Sherry Street and future extension of Settlers Avenue;
- Art panels have been included on the western boundary wall but excludes the northern boundary wall, as recommended by the OGA.

Further consideration will be given to architectural language of the boundary wall along Nairn Drive after concept proposal for Public Art is received from the shortlisted artists.

### **City of Rockingham - independent review**

As part of the City’s pre-lodgement assessment in March 2023 the City obtained an independent urban design review by Mackay Urbandesign (**Appendix O** - City of Rockingham comments and design response).

The outcomes of the design review by the City has resulted in modifications to the development plans, including but not limited to, substantive changes to the landscape design along Nairn Drive and Sherry Street, including in the road reserve; increased setbacks; and increased public art scope to add a substantive art response on the perforated screen along Settlers Avenue, which will add to the street activation. Stockland have advised the landscaping in the reserve along Sherry Street and Settlers Avenue can be accommodated.

## **6.4. Community Engagement**

Alongside the development application process WA Police Force is seeking to ensure local community and key stakeholders are kept informed and where possible engage on specific matters that may require targeted feedback. The focus is on the inform level of engagement, with some areas of more detailed

consultation. WA Police Force has engaged Element to facilitate this community engagement process.

The engagement process primarily involved the establishment of resident roundtable sessions, typically an informal meeting method. This has been utilised to connect with interested residents (primarily residents and owners of Jarvis Rise apartment (north of the site) and provide project information and, where possible seek views and feedback on negotiable aspects of the project (**Appendix M** - Community Engagement Report).

Direct flyers were dropped by Element into the letterboxes of the apartment residents in February 2023 to gauge the level of interest in the project. The first resident roundtable session was organised for 21 February, but there was no interest from the residents.

DoF obtained the details of the apartment owners from City of Rockingham and a second set of flyers were distributed in March 2023 to the owners as well as the residents, asking the interested persons to get in touch with Element by 6 April 2023. Nil interest has been received to date.

In the absence of any interest from the community so far, Element will review the engagement process.

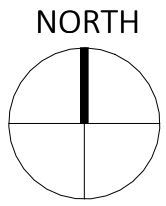
## **7. Conclusion**

The proposal forms the overall delivery of the Baldivis Police Station which aims to provide police facilities for Baldivis and the surrounding area now and into the future. It will also ensure that critical project timeframes can be met to deliver on a major State Government commitment.

Overall, the City is supportive of the project and consultation will remain open and ongoing through project development.

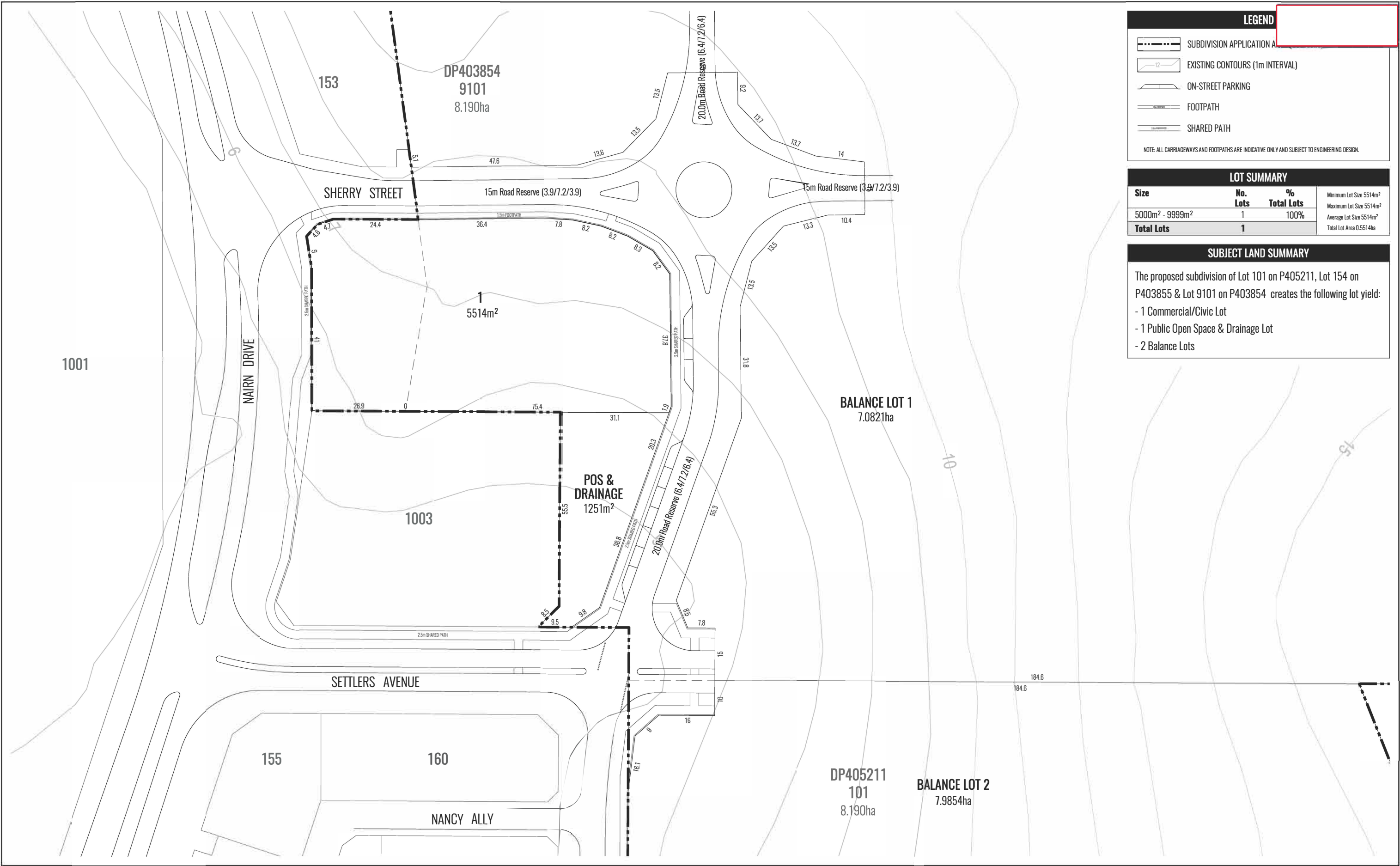
Having regard to the above, the proposal clearly demonstrates the suitability of the proposed use for the site. Accordingly, we request the Metro Outer Joint Development Assessment Panel grant approval for the proposed development.





REV.	DESCRIPTION	DATE
B	ISSUED FOR CLIENT REVIEW	02.02.2023
C	UPDATE BOUNDARY ALIGNMENT	13.02.2023
D	UPDATE CARPARK CANOPY AND STREET CANOPY	21.03.2023
E	SITE UPDATES STREET CANOPY REMOVED	05.04.2023
F	FINAL DEVELOPMENT APPLICATION	26.04.2023
G	LOCATION PLAN UPDATES	04.05.2023





# PROPOSED SUBDIVISION PLAN

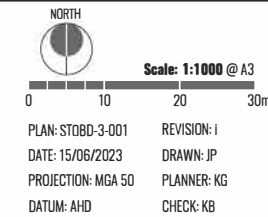
Lot 101 Settlers Avenue & Lots 154 & 9101 Sherry Street, BALDIVIS PAGE 1 of 2

A Stockland Project

DEPARTMENT OF PLANNING, LANDS  
AND HERITAGE

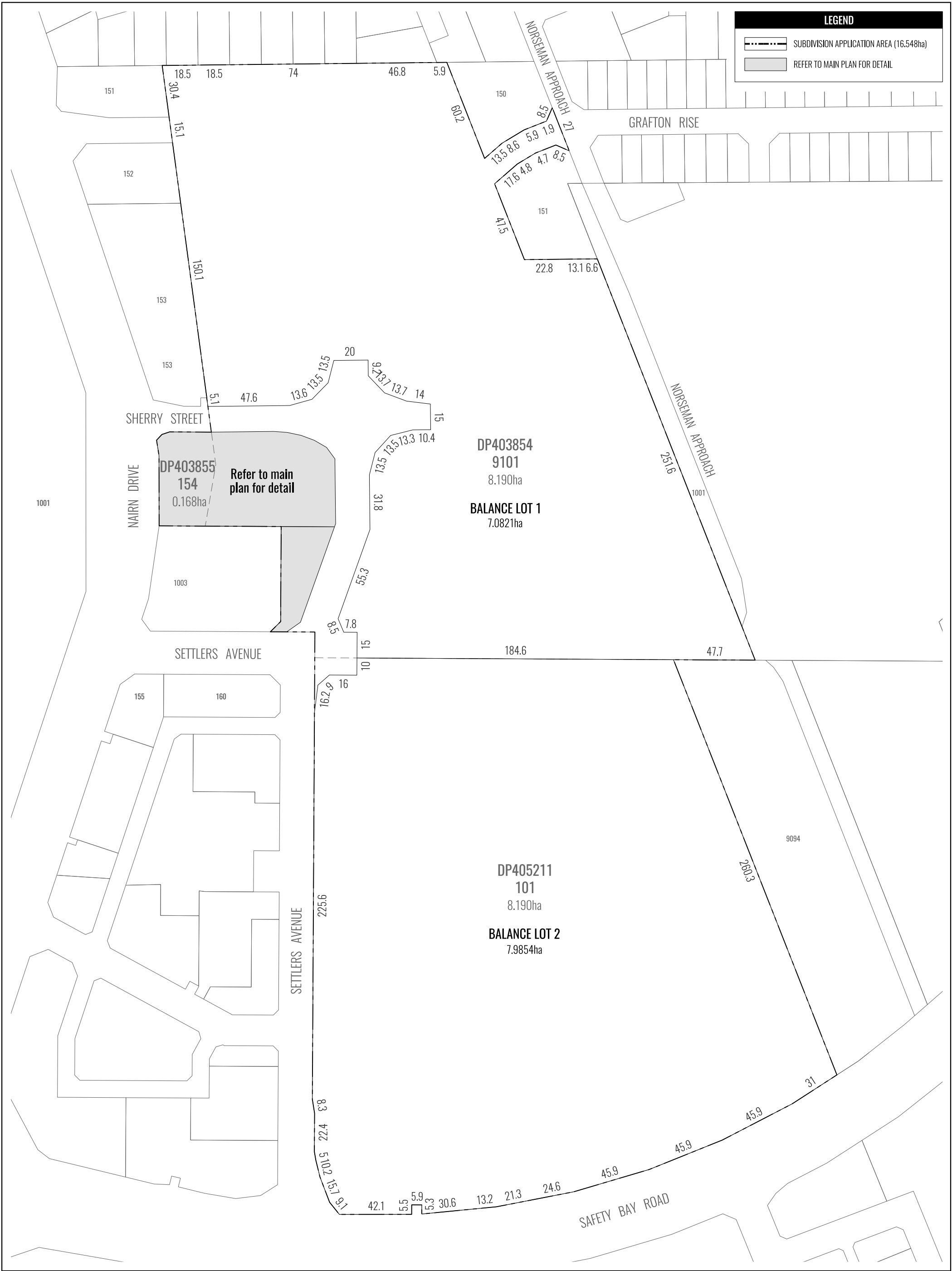
DATE  
22-Jun-2023

FILE  
163392



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# BALANCE LOT DETAIL

Lot 101 Settlers Avenue & Lots 154 & 9101 Sherry Street, BALDIVIS PAGE 2 of 2

A Stockland Project

NORTH

0

20

40

60m

PLAN: STOB0-3-001

DATE: 15/06/2023

PROJECTION: MGA 50

DATUM: AHD

REVISION: 1

DRAWN: JP

PLANNER: KG

CHECK: KB

Scale: 1:2000 @ A3

cdp

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## MEMORANDUM

Date	21 April 2023	Project	Forrestfield and Baldivis Police Station
Sender	Joshua Scrutton	File Ref	22-606
Subject	Overview of Engagement	Attachments	1. Flyer dated 8 February 2023 2. Flyer dated 24 March 2023

## Project Overview

As part of the 2021 State Election, the government announced a commitment to construct a new Police Station within Baldivis Town Centre to service the broader Mandurah Police District (the Project). A new station will enable capacity to support the predicted urban growth and resulting demand for Police services. A site on the existing corner of Sherry Street and Nairn Drive was identified as a suitable location.

## Stakeholder Engagement

A summary of the stakeholder engagement undertaken is set out in **Table 1** below:

**Table 1 – Stakeholder engagement**

Stakeholder	Purpose
Stockland (owner of the preferred site)	Negotiations over land acquisition To inform and discuss road design adjacent to the Project site To discuss the sub-division of the site To obtain existing site information
City of Rockingham (the City)	To inform and discuss engagement approach Review of the Project's design by the City's Design Review Panel
Department of Fire and Emergency Services (DFES)	To inform and discuss DFES design requirements
Department of Planning, Lands & Heritage (DPLH)	To inform and discuss the Project's design, engagement approach & JDAP application
Office of the Government Architect (OGA)	As a State Government project, the Project team sought design review and advice from the OGA.
Western Power	To inform and discuss Western Power's design requirements

Further stakeholder meetings may be held, as the Project progresses.

## Community Engagement

In the project's Community and Stakeholder Engagement Plan (CSEP), resident roundtable meetings were identified as the most appropriate methodology to ensure that nearby residents were kept informed about the project. The meeting is primarily an informative engagement activity, but it allows for feedback to be given. The round table meeting offers residents an opportunity to meet with the project team and discuss aspects of its design, landscape, public art and timings in an informal setting.

The first round table meeting was scheduled for 21 February 2023 at the Mary Davies Community and Library Centre at 6pm. An expression of interest for the round table meeting (see attached Flyer 1) was mailed on 8 February 2023 to

all residents within the multiple dwelling development located directly north of the proposed site at No. 1 Sherry Street, Baldivis. The flyer invited the residents to lodge their interest via a dedicated project email address.

No residents contacted the project team for further information or to register their interest in attending the roundtable meeting. Notwithstanding, the project team were available on the 21 February 2023 in the event an interested resident passed by. No residents attended the meeting.

A second flyer (see attached Flyer 2) was sent to residents and owners on 24 March 2023. The flyer included key project details and invited residents and owners to contact the project team via the project email address. One resident responded, in support of the project. No further feedback or interest in attending a resident roundtable meeting was received. Consequently, a second round table meeting was not required.

In the absence of interest from the residents, WA Police Force and Finance are in discussion with Element regarding the best approach to inform the community of the commencement of construction on site (currently anticipated to be October 2023).



## Consultation with Office of the Government Architect

Discussions have been ongoing with the Office of the Government Architect since December 2022, once the schematic design commenced for the project.

The comments from OGA and the response from the project team are summarised below.

OGA Comment 23/02/2023	Design Response 27/03/2023	OGA Response 31/03/2023	Design Response
1. It is recommended that consolidation of all parking within the main carpark be pursued, and consideration given to activating the south-east corner of the station.	<p>All proposed parking bays are contained within the secure compound area, with access from Sherry Street.</p> <p>The land to the southern side of the police station building has been removed from the development site and will remain in the ownership of Stockland. No development is proposed in this area.</p>	Parking is consolidated to the main carpark; however the activation of the south-east corner has not improved, resulting in the view corridor along the main street terminating in a blank wall at the northern end. Consideration should be given to how this could be improved.	<p>The Percent for Art solution on the perforated sunscreen on the east will result in further improvements and consequently address the OGA concerns.</p> <p>The balance of the lot to the south will likely be built up to the boundary and will conceal the southern façade which currently is of concern.</p> <p>The treatment of the south-east corner wall in precast concrete with vertical fluted rib pattern results in an improvement.</p>
2. The canopied public seating indicated to Sherry St and Settler's Ave will add activation and contribute to the high street setting. It is recommended the design of these takes stronger cues from the architectural language used for the station, to ensure a more integrated outcome.	<p>The canopy structure has been re-designed to have a more integrated building design response. The public seating has been removed due to safety implications for WA Police Force.</p> <p>Advice is sought from the OGA regarding the benefit of adding this structure to the scope from a design perspective. WA Police Force has been advised the canopy structure and associated works will cost approximately \$179K+GST, excluding recurring maintenance costs.</p>	The redesign of the canopy has resulted in a more integrated outcome. While it offers some weather protection for people being dropped off / waiting to be picked up, it's not clear how often it would be used. The provision of high-quality landscaping along this frontage (including meaningful tree canopy that will provide shade) may be a more successful method of contributing to the high street environment.	<p>A shelter over the footpath offers little in the way of design activation and offers no benefit to WA Police Force.</p> <p>The building design, Public Art and revised landscape design will offer the desired activation required.</p> <p>The street trees will offer some shade to the pedestrians along the Settlers Avenue extension.</p>
<p>3. Re: the Northern and East elevation:</p> <p>It is recommended that consideration is given to:</p> <p>1. reducing wall height, either by reducing</p>	The wall height along the north and east elevation has not been modified. However, the wall has been redesigned and landscaping added to reduce the visual bulk of the wall. The modified	Street trees are now shown along the northern edge, however the drawing notes that they are not part of the proposal. Trees should be provided within the site boundary to help mitigate	<p>Trees have been omitted from within the site boundary due to security and operational requirements.</p> <p>Refer to the 3D visuals which clearly illustrate that additional trees are not required. A well-</p>

<p>outbuilding height and/or or consolidating all outbuildings along the boundaries facing the drainage basin, where there is less streetscape impact</p> <p>2. reducing visual bulk via articulation and material variation, in a manner that integrates with the station design</p> <p>3. adding tree planting to this edge, particularly as there are no street trees indicated (on plan).</p>	<p>design uses different materials, applies art on the wall as part of the percent for art contribution, installs additional landscaping/mature planting in front of the wall within and outside the site. The wall takes advantage of the less usable portions of the site and leads to site efficiency as the boundary wall doubles up as the walls for the outbuildings.</p> <p>In the modified designs Nairn Drive boundary walls are anticipated to be 4.2m high. Boundary levels along Sherry Street rapidly increase from RL6.36 to RL7.00 which result in 600mm retaining along Nairn Drive when combined with the outbuilding.</p> <p>The following two options were explored: Alternative option 1 - If the outbuildings were moved away from the Nairn Drive boundary and replaced with parking shelters, the boundary wall could be 3.6 m high. Alternative option 2 - If no parking shelters were constructed on the Nairn Drive Boundary the wall, the boundary wall could be 3 m high.</p> <p>However, both options are not supported by WA Police Force as this would see a reduction of parking bays from 53 to 46 bays. WA Police Force have already compromised on the number of parking bays due to the removal of the land on the southern side of the police station (as the City of Rockingham did not support a crossover or parking in this location). Hence, a reduction in</p>	<p>the mass of blank walling along this face.</p> <p>Breaking up the wall into smaller forms is supported, however the angled panels lack integration with the architectural language used elsewhere. Retaining them as flat panels may be more successful and provide a simpler base for artwork application, and the addition of trees / larger scale planting to recessed areas would assist with mitigating visual bulk and providing shade.</p> <p>It's recommended that the artwork panels are provided to the western frontage only, as a response to the primary road of Nairn Street. The rationale behind locating an additional panel around the corner (to the northern façade) is not quite clear. It's recommended that the wall at this point draws on the language used to the northern elevation instead. It's also recommended that the north-western corner is simplified to become a flat panel of brick wall, or a simple rectilinear form. The concertina arrangement seems out of place in the context of the overall design.</p>	<p>considered native plant solution using endemic plant species is the preferred outcome.</p> <p>The angled walls relate not to the building but rather to Nairn Drive. Recommended that the Percent for Art solution is considered before determining if the wall alignments should change. The angled walls add visual interest for passers-by.</p> <p>Art panels have been changed to only the western frontage.</p> <p>The concertina has been simplified and forms part of the Sherry Street wall construction.</p>
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	parking bays is not a viable option.		
<p>4. While landscaping is indicated on the renders and elevations provided, a detailed landscape plan has not been provided. The landscape proposal will be important ensuring an adequate contribution to the streetscape environment. Further information is needed in order to comment.</p>	Landscape plan is attached.	<p>The landscape is quite a minimal response to a civic high street. The majority of trees indicated are to verges, with a note confirming that they are not intended as part of the proposal. Additional trees are warranted within the site boundary, along street edges, to provide adequate contribution to the streetscape character of this high street environment, while also mitigating solar gain impacts.</p>	Landscaping has been adjusted.
<p>5. A two-storey station could have integrated successfully, while removing the need to disrupt the high street alignment.</p> <p>The visual 'dead-end' created by the modified lot arrangement compromises the intention to deliver a continuous, active high-street environment along Settler's Ave. It would have been useful during early site planning to consider how the station might have been compressed into a smaller footprint, with certain functions located on an upper level, to prevent this outcome.</p> <p>The modified lot arrangement, along with the extent of large scale, inactive frontages to streetscapes and a</p>	<p>The single storey station was designed to deliver a fit-for-purpose police station in accordance with WA Police Force's Accommodation Standards and with a focus on optimal operating performance and flow between the five functional "activity space modules" on a single level. The long term aim of WA Police Force is to utilise this standardised, flexible and repeatable design for new medium to large satellite stations in the future, with the design also been used for the new Forrestfield police station.</p> <p>Particular emphasis has been focused on staff and the facilities being on the one level to optimise response time to duress calls and safety incidents. From an operational perspective, police stations of over one storey pose security risks and end up with underutilised space above the ground floor (evident in Warwick &amp; Scarborough Police Station). So, WA Police Force are looking to avoid</p>	<p>We acknowledge the operational needs of the WA Police Force, however remain concerned that such a templated approach, with no ability to entertain a potential two storey option where appropriate, will unduly compromise contextual responsiveness and the ability to align with strategic planning aims.</p>	<p>The building has a distinctive character to convey its civic purpose within the town centre context, as demonstrated on the 3D visuals.</p>

limited landscaping contribution results in compromised town centre streetscapes. A two-storey arrangement could have significantly improved this outcome.	repeat of similar issues in future police stations.		
6. The subtle folding articulation of the boundary wall facing Nairn St may reduce the monotony of expression to this streetscape, however it lacks integration with the broader proposal. Could the architectural language used elsewhere be employed to visually reduce the mass of this wall? There is also the potential for wall articulation to be coordinated with the 'percent for art' commission, via early artist engagement. Also, if outbuildings are able to be consolidated elsewhere this wall could reduce significantly in height.	<p>The wall design has been modified. The modified design uses different materials, applies art on the wall as part of the percent for art contribution, and installs additional landscaping/mature planting in front of the wall within and outside the site. The wall takes advantage of the less usable portions of the site and leads to site efficiency as the boundary wall doubles up as the walls for the outbuildings.</p> <p>Three shortlisted artists have been briefed on the Public Art component.</p>		
7. It is recommended that outbuildings are moved off streetscape edges and consolidated into a single form (or integrated into the main building) where possible, to reduce the extent of high walling to streetscape locations.	Please refer to response in item 3.		

## Consultation with City of Rockingham

Discussions have been ongoing with the City of Rockingham since December 2022, once the schematic design commenced for the project.

The feedback from the City and the response from the project team are summarised below.

City's comments 7/12/2022	Design Response	City's comments 31/03/2023	Design Response
The City requested the addition of a street canopy to the eastern boundary.	A 15 m x 3.2 m free-standing canopy structure has been included in front of the police station, along the Main Street. See drawing DA.103 - Site Context Elevations.	<ol style="list-style-type: none"> <li>1. Set back the development to provide a full-length landscape response to Nairn Drive and Sherry Street.</li> <li>2. Review the design against the Baldivis Town Centre policy.</li> <li>3. In the absence of better architectural interfaces to the public realm, provide a more substantive landscape response.</li> </ol>	<ol style="list-style-type: none"> <li>1. Full length Landscape responses have been included along Nairn Drive and Sherry Street. Note that Sherry Street landscaping is interrupted by two vehicular crossover points; two pedestrian footpath connections and an 8m outbuilding where zero setback applies.</li> <li>2. The Baldivis Town Centre policy has been reviewed and the objectives have been achieved. The only exception being that the occupied spaces are only contained within a single storey.</li> <li>3. A substantive landscape response has been included as illustrated in the 3D visuals.</li> </ol> <p>Based on the OGA's comment that <i>"while the canopy structure offers some weather protection for people, provision of high-quality landscaping along this frontage (including meaningful tree canopy) would be a better outcome"</i>, the canopy has been removed and a more substantive landscape has been proposed including street trees that will provide some shade to pedestrians.</p>

<p>The City requested removal of the perforated aluminium sunscreen from the eastern boundary to achieve greater activation of the building by allowing the public to see the windows.</p>	<p>Due to security reasons, WA Police Force wish to retain the perforated screen. The ceiling height of the police station has been increased to 2.7 m to allow for more transparency from the Main street into the police station. This design solution allows the public to see the transparent windows while still maintaining privacy and security for WA Police Force.</p>	<ol style="list-style-type: none"> <li>1. Set back the development to provide a full-length landscape response to Nairn Drive and Sherry Street.</li> <li>2. Establish a generosity of landscape in the setbacks.</li> <li>3. Provide street trees to the Settlers Avenue extension.</li> <li>4. Extend the landscape design to the verges.</li> <li>5. Provide a dense landscape buffer to the northern side of the open space reserve, subject to meeting bushfire requirements.</li> </ol>	<ol style="list-style-type: none"> <li>1. Included. Refer to response above.</li> <li>2. The landscape design has been revised as per the recommendation.</li> <li>3. Street trees have been proposed and Stockland have confirmed the landscape design will be implemented. Extension of landscaping in the road reserve along Nairn Drive has to be approved by the City.</li> <li>4. The Nairn Drive verge landscaping has been extended towards the intersection with Sherry Street.</li> <li>5. The secure compound is located north of the open space and zero setback distances apply.</li> </ol>
<p>The City is opposed to the off-street staff/visitor parking proposed on the southern side of the police station.</p>	<p>The land to the southern side of the police station building has been removed from the development site and will remain in the ownership of Stockland. All proposed parking bays are contained within the secure compound area of the police station.</p>	<ol style="list-style-type: none"> <li>1. Set back the development to provide a full-length landscape response to Nairn Drive and Sherry Street.</li> <li>2. Provide openings wherever possible to the public domain.</li> <li>3. Review the pitch direction of the roof to support PV panels.</li> </ol>	<ol style="list-style-type: none"> <li>1. A full length landscape strip has been included along Nairn Drive between the retaining walls and the existing footpath. Sherry Street includes landscaping of up to 8m in width adjacent to the public entrance reducing to a narrower 1m/1.5m strip along the secure compound.</li> <li>2. One public entry point is required by WA Police Force and it is appropriately located at the intersection of Sherry Street and Settlers Avenue.</li> <li>3. The roof pitch has been intentionally arranged so that the Sherry Street façade adopts a 2-storey massing which logically transitions to a lower scale on the southern boundary adjacent to the open space/drainage basin.</li> </ol>

			The PV array will form part of the vehicle shelters and will not be included on the main building.
The City expressed an interest in the southern landscaped strip being developed as a pocket park accessible to members of the public.	The land to the southern side of the police station building has been removed from the development site and will remain in the ownership of Stockland. No development is proposed in this area.	Review the placement and design of the east facing perforated screen along Settlers Avenue	The current placement of the perforated screen is appropriate as it will form a feature within the landscaping as opposed to being appended to the building. We anticipate that the screen will incorporate a Percent for Art graphic design.
The City understood the reasons for the height of the wall on the Nairn Drive boundary (3.6m to 4m tall) but requested that every effort should be given to activating this edge where possible.	<p>The design of the wall on the Nairn Drive boundary has been amended, to improve its visual appearance and soften its bulk, by:</p> <ul style="list-style-type: none"> <li>- using different materials;</li> <li>- applying art on the wall as part of the percent for art contribution;</li> <li>- installing additional landscaping/mature planting in front of the wall within the site; and</li> <li>- increasing the amount of vegetation within the Nairn Drive road reserve (subject to City of Rockingham approval).</li> </ul>	<ol style="list-style-type: none"> <li>1. Engage an ESD consultant and develop a sustainability strategy.</li> <li>2. Embed a wide range of sustainability initiatives into the design.</li> </ol>	<p>An ESD consultant forms part of the project team.</p> <p>ESD initiatives have been embedded into the design, see Appendix G for sustainable design report.</p>

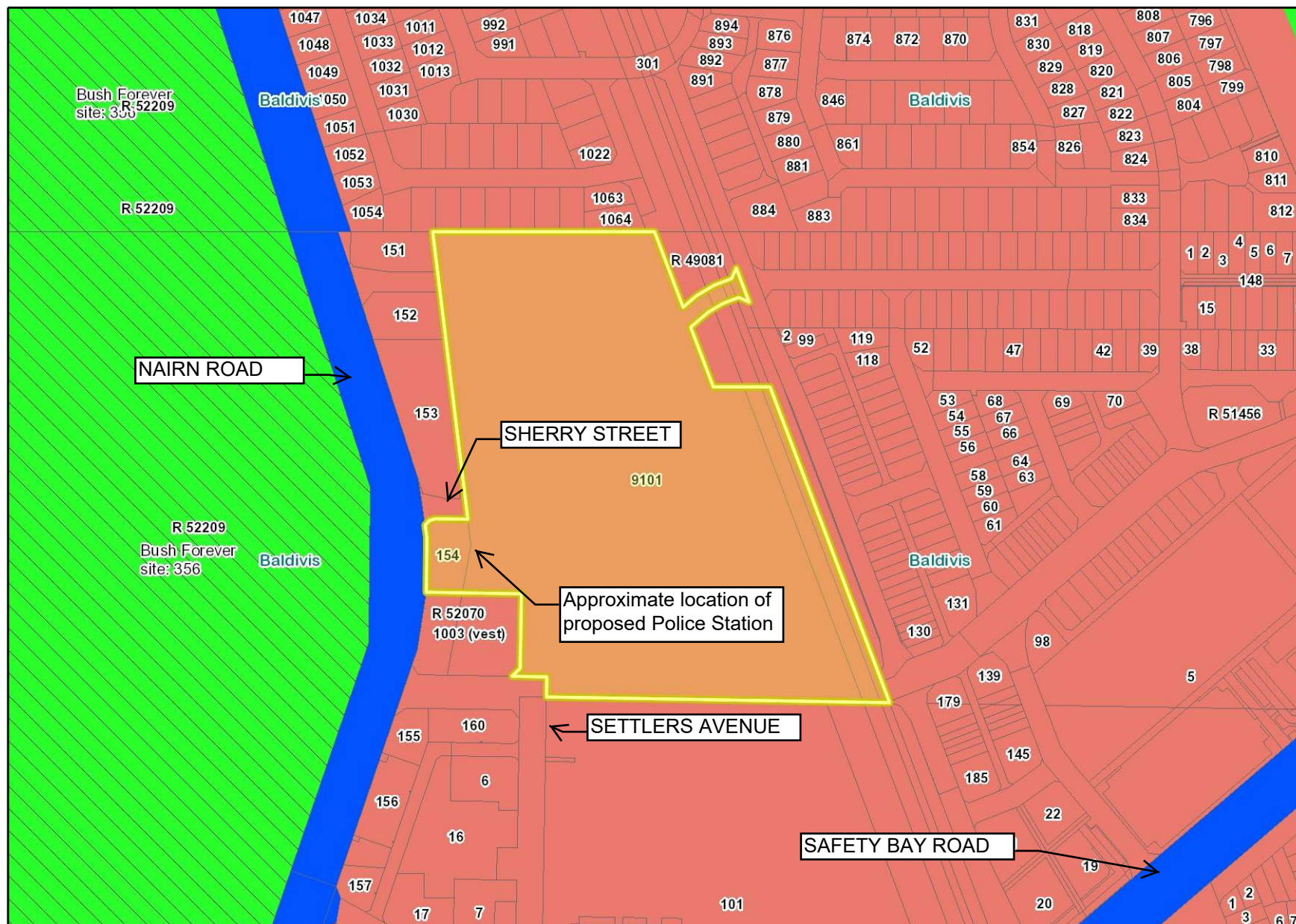
<p>The City indicated that a Waste Management Plan, an Acoustics Report and a Traffic Management Plan is required to be included as part of the development application and for internal review.</p>	<p>All three reports will be submitted as part of the JDAP application.</p>	<p>Create an environment that is conducive to the health and well-being of its occupants.</p>	<p>This request has been achieved and is in line with WA Police Force requirements for the occupants.</p>
		<p>Relocate the public entry(s) so that it is clearly visible in both directions along the street.</p>	<p>The public entry is prominently visible when approached from streets on the north, south and east. From the west the entry is less visible however a large free standing pylon sign and flag poles alert visitors to the entry location.</p>
		<p>Provide openings wherever possible to the public domain.</p>	<p>Extensive glazing including a large glazed entry door have been included in the public domain.</p>
		<p>Provide further guidance on the potential for the public art to celebrate the place.</p>	<p>Artwork will play a prominent part of the Nairn Drive and Settlers Avenue design solutions.</p> <p>Submissions are currently being prepared by 3 shortlisted artists.</p> <p>The Nairn Drive artwork is likely to include graphic designs integrated within the precast concrete moulds + applied finishes and materials.</p> <p>The Settlers Avenue artwork is likely to include graphic designs that will be applied and/or perforated into the aluminium screen panels.</p>





## Legend

- Localities
- Cadastre (View 1)
- Region Scheme Boundary
- Region Scheme Bush Forever Areas
- Region Scheme Zones and Reserves**
  - Other regional roads
  - Parks and recreation
  - Urban



DAP/23/02482 Metropolitan Region Scheme

**DPLH BUSINESS USE ONLY**

Internal Spatial Viewer



0 0.11 0.22 Kilometres

1: 5,000 at A4

Projection: WGS 1984 Web Mercator Auxiliary Sphere  
Graticules (if visible): GDA 1994 Latitude/Longitude

## Notes:

\* The data that appears on the map may be out of date, not intended to be used at the scale displayed, or subject to license agreements. The map should only be used in matters related to Department of Planning, Lands and Heritage business.

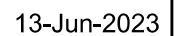
\* This map is not intended for measurement purposes.

Map was produced using DPLH's InQuiry.

Date produced:

13-Jun-2023





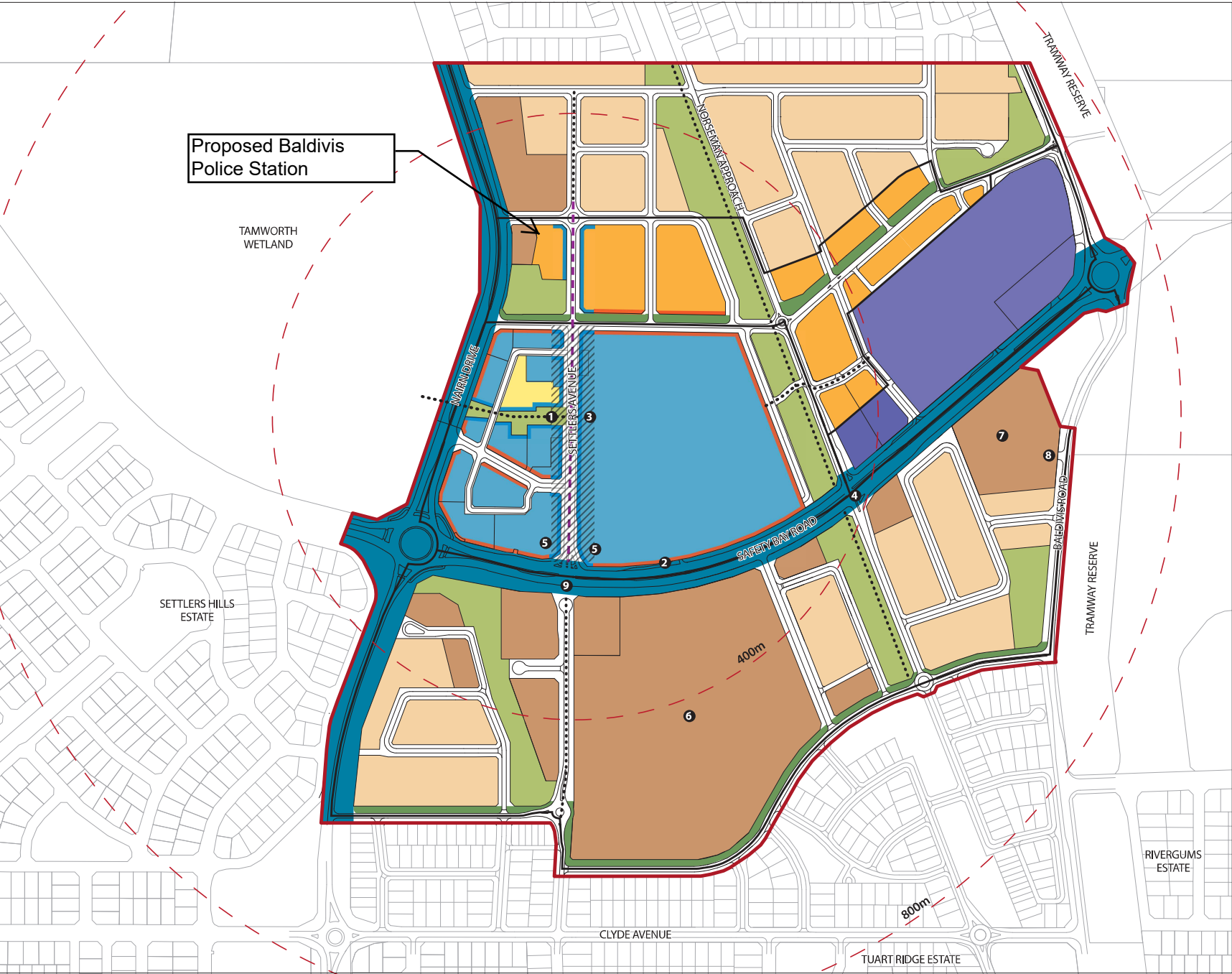
ATTACHMENT 9

LEGEND:

- Structure Plan Area
- Precinct Boundary
- Core
- Bulky Goods
- Mixed Use
- Medium Density Residential
- Low Density Residential
- Civic / Community Use
- Public Open Space / Drainage
- Arbour Ways
- Other Regional Road
- Active Street Frontage
- Passive Street Frontage
- Pedestrian / Cycle Link
- Main Street (Settlers Avenue)
- Walkable Catchments (400/800m)
- Core Main Street

NOTES:

- 1 Town Square
- 2 Left In Left Out Only
- 3 Primary Entrance To Shopping Centre
- 4 Traffic Signals (4 way intersection)
- 5 Built Form Landmark
- 6 Retirement Living
- 7 Additional Use of Nursing Home In Accordance With Approved Settlers Hills East Structure Plan
- 8 Driveway Access Permitted To Baldvis Rd
- 9 Traffic Signals (3 Way Intersection With Pedestrian Phase)









# BALDIVIS POLICE STATION

## LANDSCAPE DETAILED DESIGN REPORT

Department of Finance

**ecoscape**



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**Baldivis Police Station Landscape Detailed Design**  
**Our Reference: 4787-22-R3**  
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**ABN 70 070 128 675**

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Revision	Author	QA Reviewer	Approved	Date
0	P Jordan	N Croudace	P Jordan	29/03/2023
1	P Jordan	N Croudace	P Jordan	26/04/2023

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**Prepared for Department of Finance**

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This document should be cited as 'Ecoscape (Australia) Pty Ltd (2022) *Baldivis Police Station Landscape Detailed Design*, prepared for Department of Finance

# TABLE OF CONTENTS

<b>1</b>	<b>General</b>	<b>1</b>
1.1	Introduction	1
1.2	Information Sources	1
1.3	Standards & Policies	1
<b>2</b>	<b>Landscape</b>	<b>2</b>
2.1	Objectives	2
2.2	Landscape Design Approach	2
2.2.1	Planting	2
2.2.2	Paving	2
2.2.3	Fixed Furniture	2
<b>3</b>	<b>Irrigation</b>	<b>3</b>
3.1	Approach	3
3.1.1	Scheme Water Connection	3
<b>Appendix One</b>	<b>Landscape Design Development Drawings</b>	<b>4</b>
<b>Appendix Two</b>	<b>Species &amp; Materials Palette</b>	<b>9</b>
<b>Appendix Three</b>	<b>Visualisations</b>	<b>11</b>

# 1 GENERAL

## 1.1 INTRODUCTION

Ecoscape has been engaged by the Department of Finance as the Landscape Architectural Consultants for the Baldivis Police Station. Ecoscape will engage CADsult IDS as specialist subcontractors to undertake the design and documentation of the irrigation system for the project as the design progresses.

This report details the design to date for the landscape and irrigation component of the project.

## 1.2 INFORMATION SOURCES

The documents listed below outline the background information sources provided to Ecoscape during the detailed design phase:

- Architectural drawings, Hunt Architects
- *Bushfire Attack Level Assessment Report* (Baldivis), 2022, Bushfire Prone Planning.

## 1.3 STANDARDS & POLICIES

The design and documentation of this project will be progressed in accordance with relevant standards, codes of practices and guidelines, outlined below:

- AS 1428.1-2021 Design for access and mobility
- AS 4454-2003 Composts, soil conditioners and mulches
- State Planning Policy 7.0 Design of the Built Environment.



## 2 LANDSCAPE

### 2.1 OBJECTIVES

The design philosophy for the Baldivis Police Station landscape is to provide an attractive and functional landscape for visitors and staff, while minimising both water-use and maintenance. The landscape draws inspiration from the features of the surrounding area, with the intention to give the Baldivis Police Station precinct a site-appropriate character and minimise the visual impact of built form.

A key objective in the design of the landscape is the minimisation of on-going maintenance. Appropriate species selection and placement within the landscape will reduce the irrigation requirements, and in some areas may eliminate the need for irrigation entirely once planting has become established.

### 2.2 LANDSCAPE DESIGN APPROACH

#### 2.2.1 PLANTING

The Baldivis Police Station site provides narrow landscape areas along Settlers Avenue and Sherry Street.

The proposed planting palette consists predominantly of species endemic to the Baldivis area. It includes shrubs with a mature height of less than 1.5 metres, grass trees and groundcovers. The proposed planting species have been selected to provide good ground coverage combined with low mature height to achieve Crime Prevention Through Environmental Design (CPTED) sightline and concealment principles. The species selected are also known to perform well in WA conditions without the need for high levels of on-going maintenance.

Additional landscape planting and small trees are proposed for areas outside the site boundary along Settlers Avenue, Sherry Street and the corner of Sherry Street and Nairn Drive. Inclusion of planting in these areas will assist in softening the visual impact of the built form and create a cohesive landscape on both sides of the site boundary. Proposed landscape works outside the site boundary are subject to discussions with the landholder.

Refer to **Appendix One** for the proposed Baldivis Police Station planting plan and species list.

Refer to **Appendix Two** for images of proposed species.

Refer to **Appendix Three** for visualisations of the proposed landscape.

#### 2.2.2 PAVING

Two in situ concrete paving finishes are proposed for the site. Coloured, exposed aggregate finish concrete is used in high-traffic areas for the public realm and private courtyard areas of the Baldivis Police Station. Lower-traffic areas inside the secure compound are broom-finish concrete as a functional, low-cost paving finish.

The paving selections provide an attractive and low-maintenance finish that will complement the external building finishes.

Refer to **Appendix Two** for the proposed Baldivis Police Station paving selections.

#### 2.2.3 FIXED FURNITURE

Benches with woodgrain finish aluminium battens are proposed as a low-maintenance seating in the private courtyard within the secure compound. The benches complement the angular paving design.

Refer to **Appendix Two** for the proposed Baldivis Police Station furniture selections.

## **3** IRRIGATION

### **3.1** APPROACH

#### **3.1.1** SCHEME WATER CONNECTION

All new trees and planting areas inside the site boundary will be serviced by an automatic irrigation system.

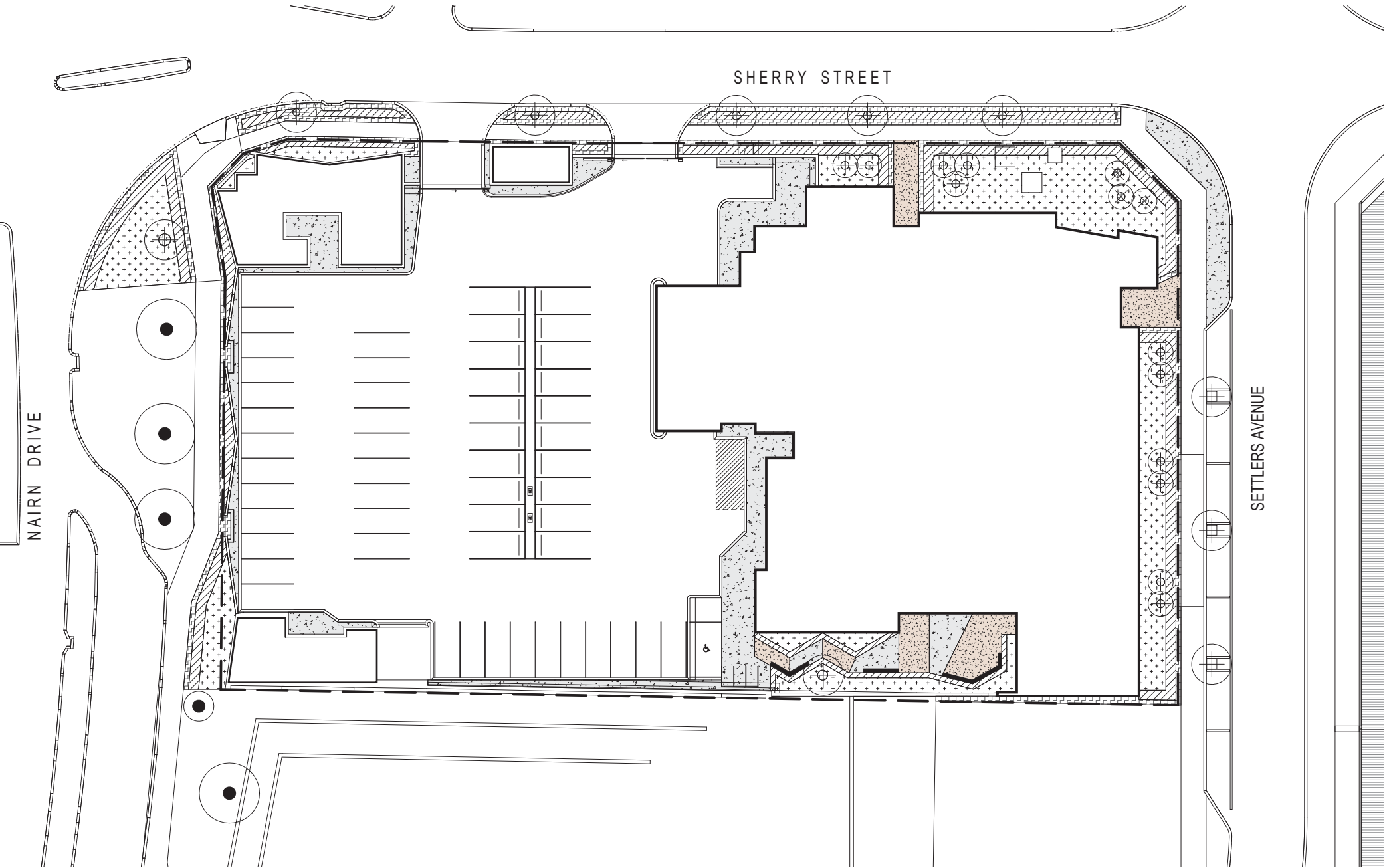
The proposed water source for irrigation is a scheme connection. This will be coordinated with the hydraulic engineering consultant as part of the irrigation design process.

## **APPENDIX ONE**

## **LANDSCAPE DESIGN DEVELOPMENT DRAWINGS**

# BALDIVIS POLICE STATION

## LANDSCAPE ARCHITECTURAL DRAWINGS



NOTES

ALL DRAWINGS TO BE READ IN COLOUR.

ALL COMPLETED WORKS TO BE PROTECTED AND MAKE GOOD ANY DAMAGE TO EXISTING WORKS CAUSED AS PART OF THIS CONTRACT. ALL WORK WITHIN DRIP LINES OF EXISTING TREES IS TO BE DONE BY HAND.

ALL SET OUT IS TO BE DONE BY A LICENSED SURVEYOR. THESE DRAWINGS WILL BE MADE AVAILABLE DIGITALLY TO THE SURVEYOR UPON REQUEST.

FIGURED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. INSETS AND DETAIL DRAWINGS TAKE PRECEDENCE & NOTIFY SUPERINTENDENT OF ANY IDENTIFIED DISCREPANCIES PRIOR TO UNDERTAKING WORK.

WHERE MIXED PLANTING IS PROPOSED PLANT IN GROUPS OF 3, 5 OR 7 OF THE SAME SPECIES.

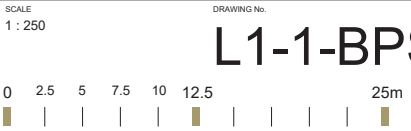
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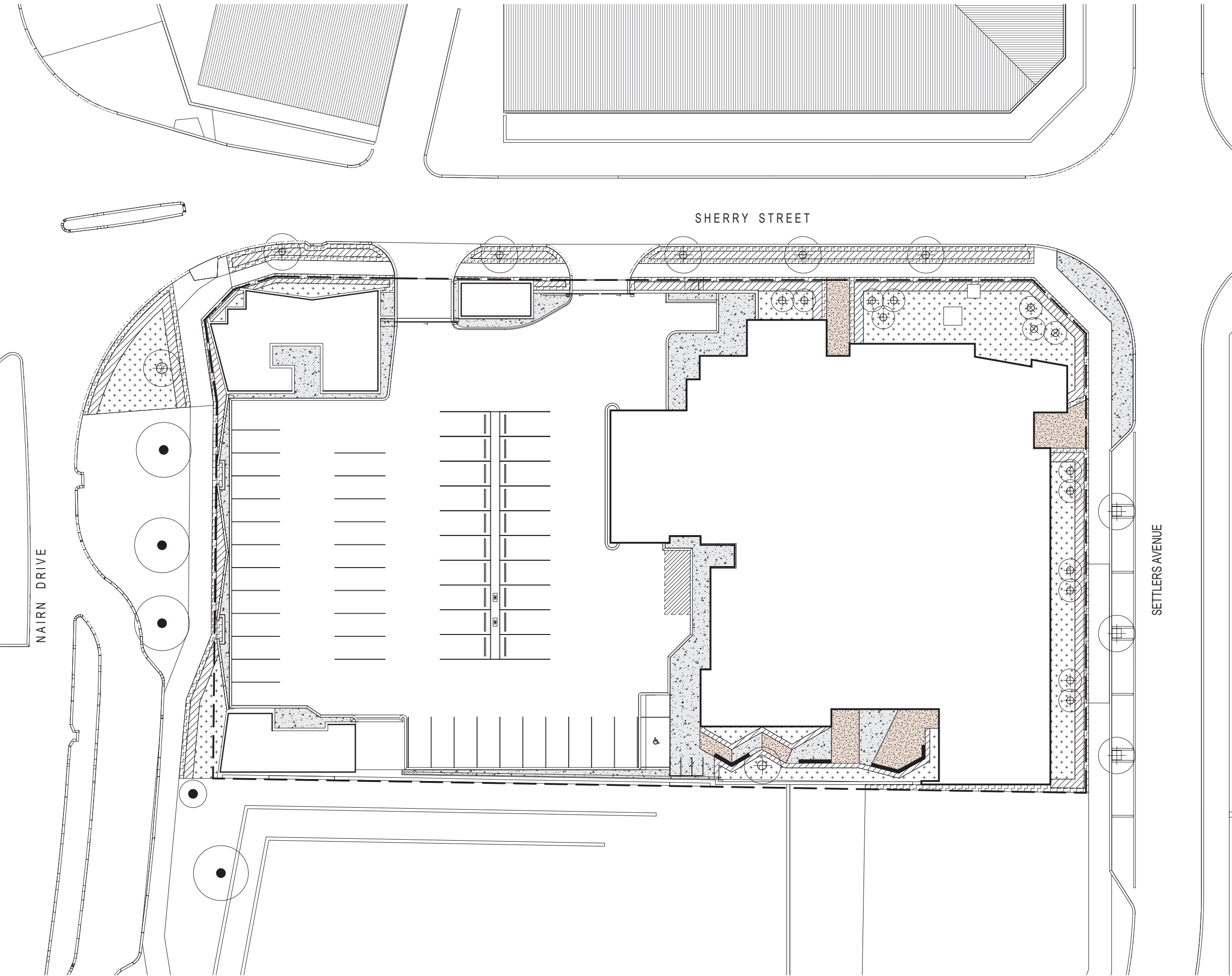
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L2-1-BPS	GENERAL ARRANGEMENT PLAN	1:200	C
L3-1-BPS	FINISHES AND FIXTURES PLAN	1:200	C
L4-1-BPS	PLANTING PLAN	1:200	C

### DESIGN DEVELOPMENT



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B	13.04.2023	DESIGN DEVELOPMENT
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PROJECT BALDIVIS POLICE STATION		
CLIENT DEPARTMENT OF FINANCE		PROJECT STAGE DESIGN DEVELOPMENT
DESIGNED RS/NS	DRAW RS/NS	CHECKED PJ
PROJECT No. 4787-22 BPS		ORIG. SIZE A1
DRAWING TITLE COVER SHEET		





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NOTE

ALL PROPOSED TREES AND PLANTING OUTSIDE THE EXTENT OF WORKS BOUNDARY IS SUBJECT TO APPROVAL BY THE CITY OF ROCKINGHAM

- LEGEND
- EXTENT OF WORKS BOUNDARY
  - TREE EXISTING TO BE RETAINED
  - ⊕ TREE / GRASS TREE PROPOSED
  - +++ MASS PLANTING - SHRUBS
  - /// MASS PLANTING - GROUND COVERS
  - MULCH ONLY
  - BROOM FINISH CONCRETE
  - EXPOSED AGGREGATE CONCRETE
  - ∨ BENCH SEATING

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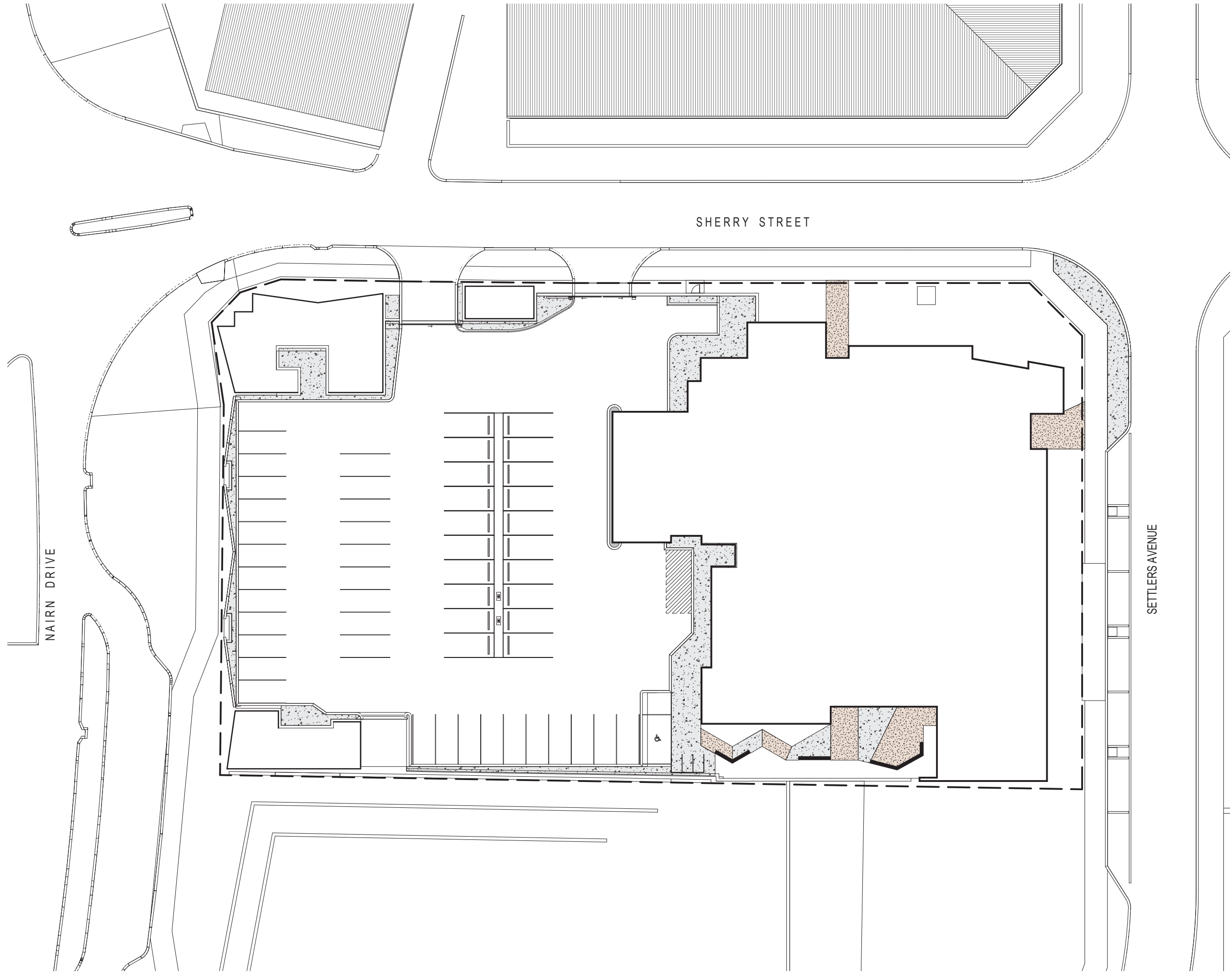
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GENERAL ARRANGEMENT PLAN

SCALE  
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WHERE MIXED PLANTING IS PROPOSED PLANT IN GROUPS OF 3, 5 OR 7 OF THE SAME SPECIES.

- LEGEND
- — — — — EXTENT OF WORKS BOUNDARY
  - BROOM FINISH CONCRETE
  - EXPOSED AGGREGATE CONCRETE
  - BENCH SEATING

DESIGN DEVELOPMENT

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A	29.03.2023	DESIGN DEVELOPMENT

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NORTH

PROJECT BALDIVIS POLICE STATION				
CLIENT DEPARTMENT OF FINANCE			PROJECT STAGE DESIGN DEVELOPMENT	
DESIGNED RS/NS	DRAW RS/NS	CHECKED PJ	PROJECT No. 4787-22 BPS	ORIG. SIZE A1

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**FINISHES AND FIXTURES PLAN**

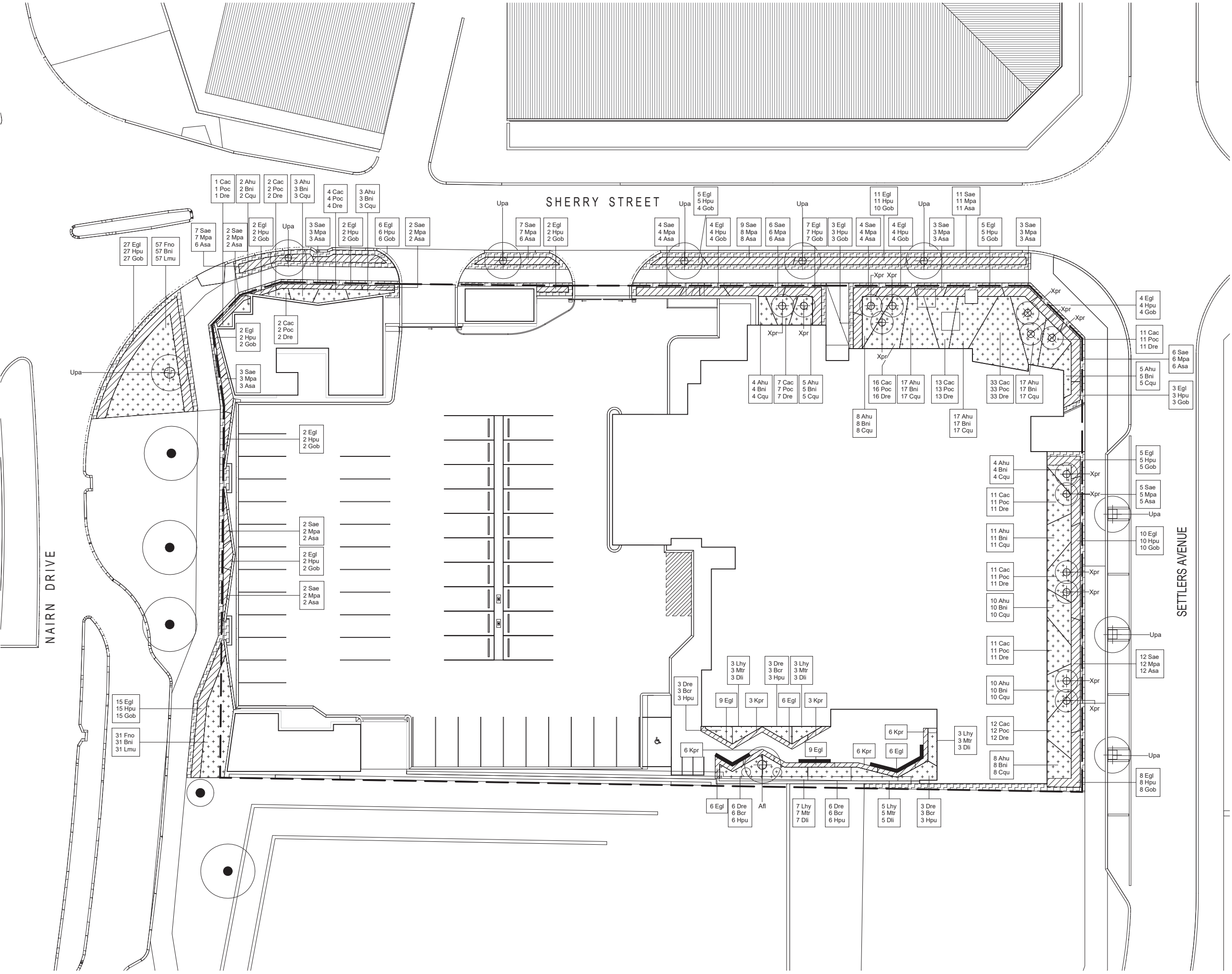
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NOTES

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- EXTENT OF WORKS BOUNDARY
  - TREE EXISTING TO BE RETAINED
  - ⊕ TREE / GRASS TREE PROPOSED
  - +++ MASS PLANTING - SHRUBS
  - ▨ MASS PLANTING - GROUND COVERS
  - ▨ MULCH ONLY

PLANT SCHEDULE			
Code	Botanical Name	Pot Size	Quantity
Tree			
Afi	Agonis flexuosa	45L	1
Upa	Ulmus parvifolia	45L	9
Xpr	Xanthorrhoea preissii	45L	14
Strap Leaves			
Ahu	Anigozanthos humilis	130mm	124
Cac	Conostylis aculeata	130mm	132
Dre	Dianella revoluta	130mm	153
Fno	Ficinia nodosa	130mm	88
Lhy	Lomandra hystrix	130mm	21
Lmu	Liriope muscari	130mm	88
Poc	Patersonia occidentalis	130mm	132
Low Shrub			
Bcr	Boronia crenulata	130mm	21
Bni	Banksia nivea	130mm	212
Cqu	Calothamnus quadrifidus	130mm	124
Dli	Dampiera linearis	130mm	21
Mpa	Myoporum parvifolium	130mm	57
Mtr	Melaleuca trichophylla	130mm	21
Groundcover			
Asa	Acacia saligna prostrate	130mm	57
Egl	Eremophila glabra prostrate	130mm	143
Gob	Grevillea obtusifolia prostrate	130mm	107
Hpu	Hemiantra pungens	130mm	128
Kpr	Kennedia prostrata	130mm	24
Sae	Scaevola aemula	130mm	57

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A	29.03.2023	DESIGN DEVELOPMENT
REV	DATE	ISSUE
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PROJECT BALDIVIS POLICE STATION		
CLIENT DEPARTMENT OF FINANCE		PROJECT STAGE DESIGN DEVELOPMENT
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PROJECT No. 4787-22 BPS		ORIG. SIZE A1
DRAWING TITLE PLANTING PLAN		



APPENDIX TWO

SPECIES & MATERIALS PALETTE

INDICATIVE IMAGERY



FURNITURE



Street Furniture Australia: Aria Seating System (Aluminium Woodgrain Battens)

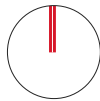
HARD SURFACE



Broom finish concrete



Exposed aggregate finish concrete  
Product: Hanson 'Oyster Cream'



## **APPENDIX THREE      VISUALISATIONS**





**Figure 1 View from corner of Settlers Avenue and Sherry Street, looking southwest**





**Figure 2 View from Settlers Avenue, looking west**





**Figure 3 View from Settlers Avenue, looking northwest**





**Figure 4 View from Sherry Street, looking southeast**





**Figure 5 View from corner of Settlers Avenue and Sherry Street, looking west**



# Proposed Subdivision for Future Police Station

Lot 26 Safety Bay Road, Baldivis  
Transport Impact Assessment

PREPARED FOR:  
Stockland

June 2023

# Document history and status

Author	Revision	Approved by	Date approved	Revision type
R Bajwa	r01	R White	20/12/2022	Draft
R Bajwa	r01a	R White	21/06/2023	Final

**File name:** t22.271.rb.r01a

**Author:** Roger Bajwa

**Project manager:** Behnam Bordbar

**Client:** Stockland

**Project:** Lot 26 Safety Bay Road, Baldivis

**Document revision:** r01a

**Project number:** t22.271

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# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2</b>	<b>PROPOSED SUBDIVISION.....</b>	<b>2</b>
<b>3</b>	<b>EXISTING SITUATION.....</b>	<b>3</b>
3.1	EXISTING LAND USE .....	3
3.2	EXISTING ROAD NETWORK.....	4
3.3	EXISTING TRAFFIC VOLUMES.....	5
3.4	PUBLIC TRANSPORT.....	7
3.5	PEDESTRIAN AND CYCLIST FACILITIES .....	8
3.6	CHANGES TO SURROUNDING ROAD NETWORK.....	8
<b>4</b>	<b>PROPOSED TRANSPORT NETWORK.....</b>	<b>9</b>
4.1	ROAD HIERARCHY.....	9
4.2	PUBLIC TRANSPORT.....	10
4.3	PEDESTRIAN AND CYCLIST FACILITIES .....	10
<b>5</b>	<b>INTEGRATION WITH SURROUNDING AREA.....</b>	<b>11</b>
<b>6</b>	<b>ANALYSIS OF THE TRANSPORT NETWORK.....</b>	<b>12</b>
6.1	ASSESSMENT PERIOD .....	12
6.2	TRAFFIC GENERATION.....	12
6.3	TRAFFIC FLOW FORECASTS .....	14
6.4	INTERSECTION ANALYSIS.....	19
6.5	TRAFFIC ON SURROUNDING ROADS .....	20
<b>7</b>	<b>CONCLUSIONS.....</b>	<b>21</b>

**APPENDIX A: LOCAL STRUCTURE PLAN**

**APPENDIX B: BALDIVIS TOWN CENTRE INTEGRATED DEVELOPMENT GUIDE  
PLAN**

**APPENDIX C: SIDRA INTERSECTION ANALYSIS**



## REPORT FIGURES

---

Figure 1: Site location .....	1
Figure 3: Existing land use in the vicinity of subject site .....	3
Figure 4: AM perk hour traffic volumes at Nairn Drive/ Settlers Avenue .....	5
Figure 5: PM perk hour traffic volumes at Nairn Drive/ Settlers Avenue .....	6
Figure 6: Existing bus routes .....	7
Figure 7: Bike map.....	8
Figure 8: Road hierarchy .....	9
Figure 9: 2022 Existing PM peak hour traffic flows in the vicinity of the subject site .....	15
Figure 10: PM peak-hour traffic flows for the future Baldvis Police Station.....	16
Figure 11: PM peak-hour total traffic flows with the future Baldvis Police Station .....	17
Figure 12: 2033 Future PM peak-hour total traffic flows .....	18
Figure 13: Nairn Drive and Sherry Street layout modelled in SIDRA Network.....	28

## REPORT TABLES

---

Table 1: Baldvis Police Station - Traffic Generation .....	13
Table 2: Baldvis Police Station - Driveway Traffic Flows .....	13
Table 3: Existing Residential Development - Driveway Traffic Flows .....	14
Table 4: SIDRA results – 10-year post-development PM peak-hour traffic flows (3:15PM-4:15PM) at Baldvis Police Station Crossover onto Sherry Street.....	29
Table 5: SIDRA results – 10-year post-development PM peak-hour traffic flows (3:15PM-4:15PM) at Sherry Street and Nairn Drive 'T'-intersection (Stage 1 of right turn) .....	30
Table 6: SIDRA results – 10-year post-development PM peak-hour traffic flows (3:15PM-4:15PM) at Sherry Street and Nairn Drive 'T' (Stage 2 of right turn) .....	30

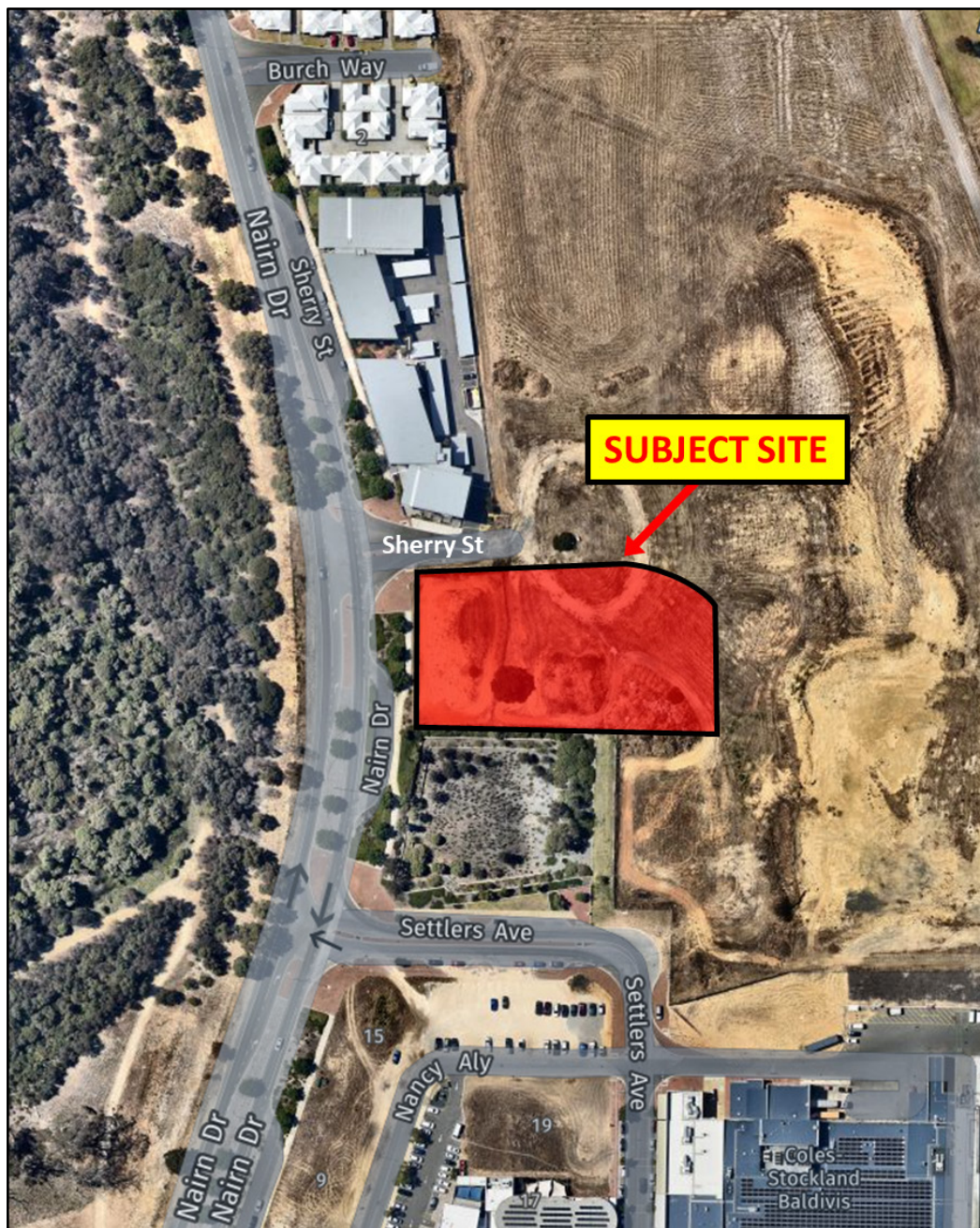




# 1 Introduction

This Transport Impact Assessment has been prepared by Transcore on behalf of Stockland with regard to a proposed subdivision of Lot 26 Safety Bay Road, Baldvis in the City of Rockingham. The purpose of the proposed subdivision is to accommodate a future police station at the subject site.

The subject site is located to the east of Nairn Drive in Baldvis. It is bordered by Nairn Drive to the west, Sherry Street to the north, a public open space to the south and vacant land to the east as shown in **Figure 1**.



**Figure 1: Site location**

## 2 Proposed Subdivision

---

The purpose of the proposed subdivision is to accommodate a future police station within part of Lot 26 Safety Bay Road, Baldivis. The proposed area of the subject site is 5,514m<sup>2</sup>. The proposed subdivision plan for future Baldivis police station site is shown in **Appendix A**.





## 3.2 Existing Road Network

Nairn Drive is classified as *Local Distributor* in the Main Roads WA functional road hierarchy as shown in **Figure 2**. It is currently constructed as a 2-lane divided road with a 7.5m central median (two 3.5m traffic lanes and approximately 1.5m of the shoulder sealed on each side of the road in the vicinity of the subject site. A 70km/h speed limit applies on Nairn Drive in this area.

Settlers Avenue is currently classified as an *Access Road* in the Main Roads WA functional road hierarchy. It is constructed as a single-carriageway, two-lane road. It connects to Safety Bay Road to the south and Nairn Drive to the west.

Sherry Street is an *Access Road*, providing access to the existing residential developments to the north. As part of the subdivision, Sherry Street and Settlers Avenue are both proposed to be extended to connect in the form of a roundabout intersection.

The Nairn Drive/Settlers Avenue and Nairn Drive/Sherry Street intersections are constructed as unsignalised T- intersections accommodating a single through lane in each direction on Nairn Drive.



### 3.3 Existing Traffic Volumes

Traffic volumes on Nairn Drive, Settlers Avenue and Sherry Street are not available on Main Roads WA website. Therefore, a traffic survey was undertaken on 17<sup>th</sup> November 2022 (Thursday) at the unsignalised T-intersection of Nairn Drive/Settlers Avenue for this project. The surveys were undertaken between 7AM–9AM and 3PM–5PM during the morning and afternoon peak periods respectively. The survey identified the morning and afternoon peak hour of the intersection as 8AM – 9AM and 3:15PM–4:15PM respectively. **Figure 3** and **Figure 4** show AM and PM peak hour traffic volumes at the Nairn Drive/ Settlers Avenue intersection.

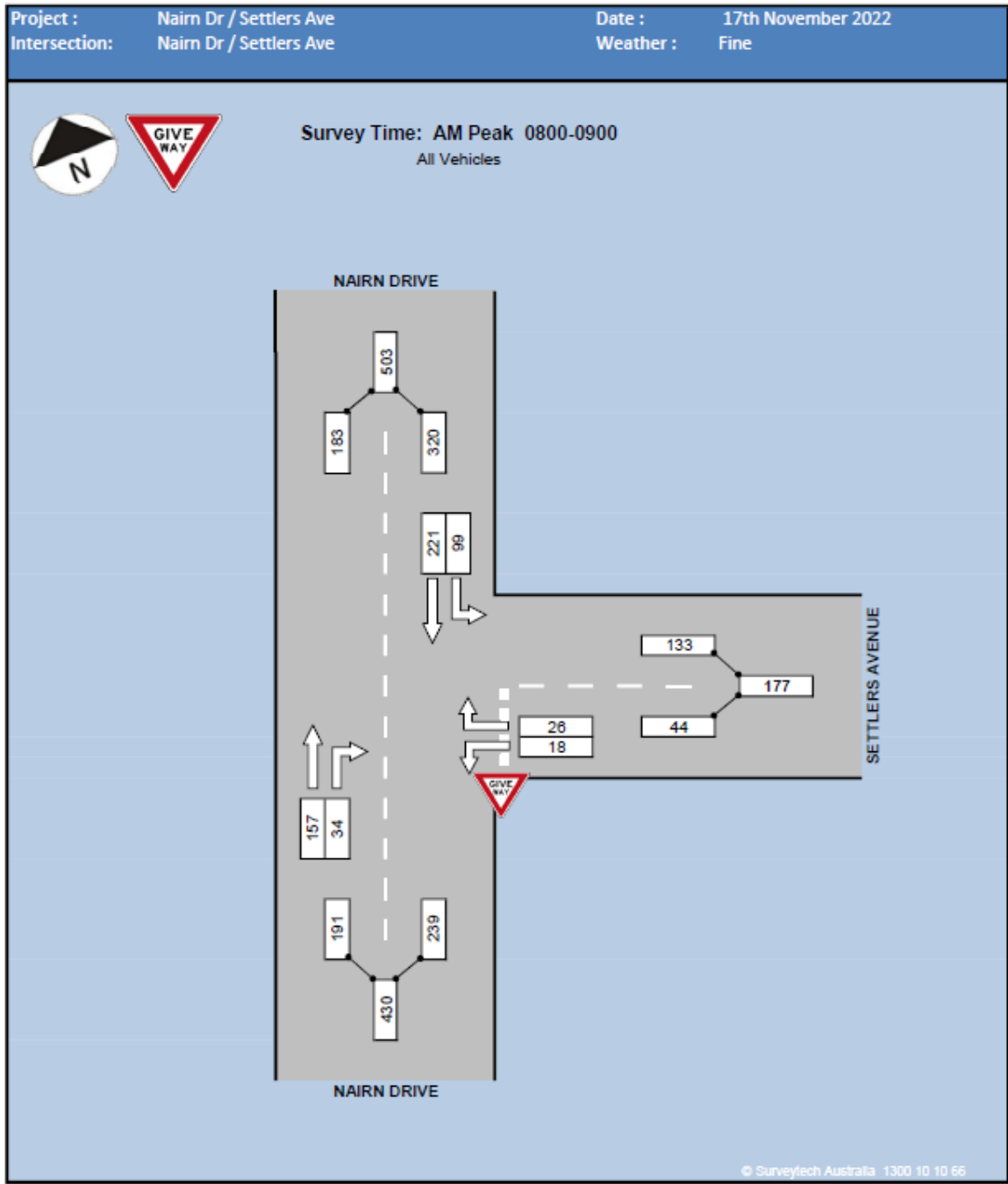
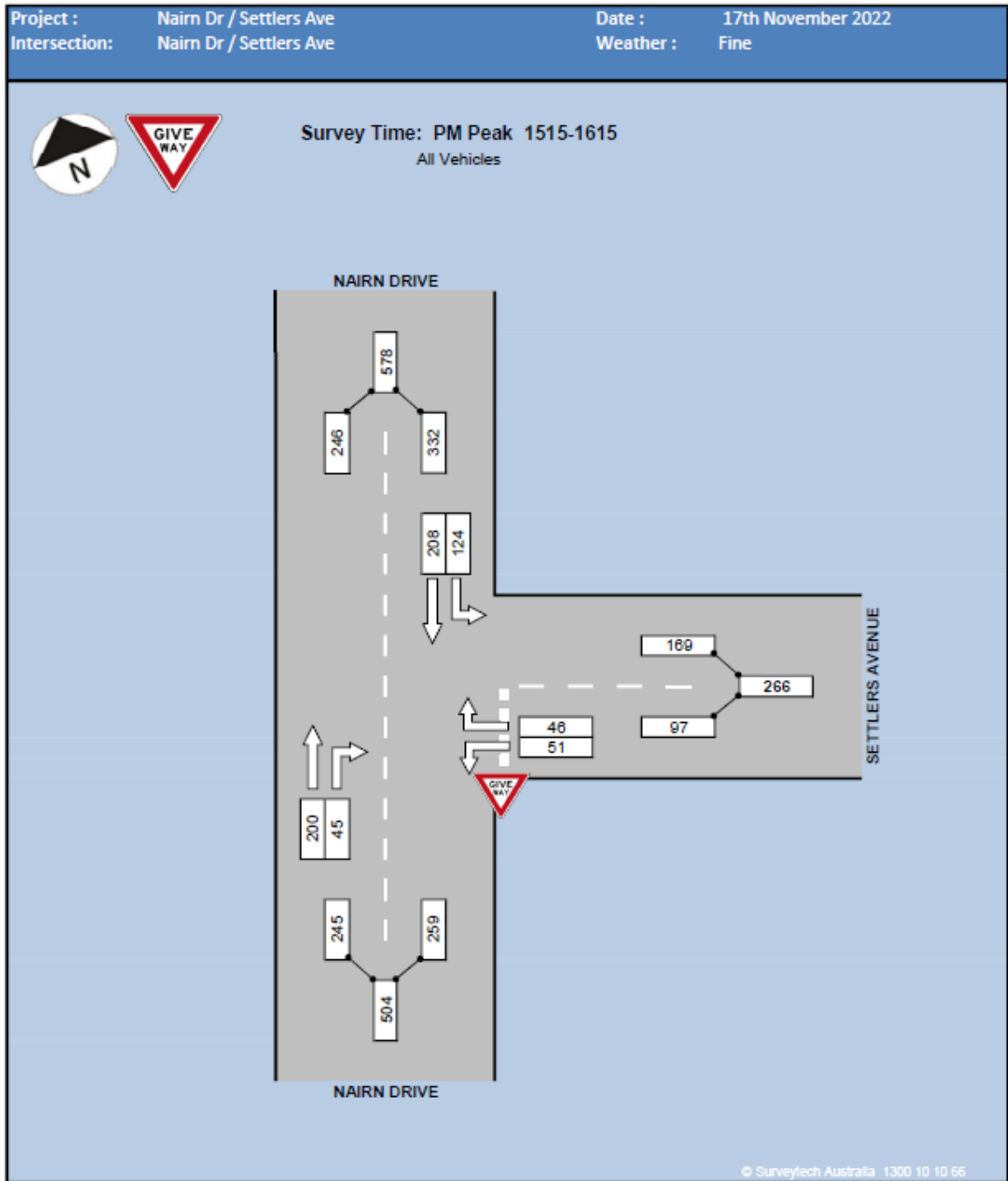


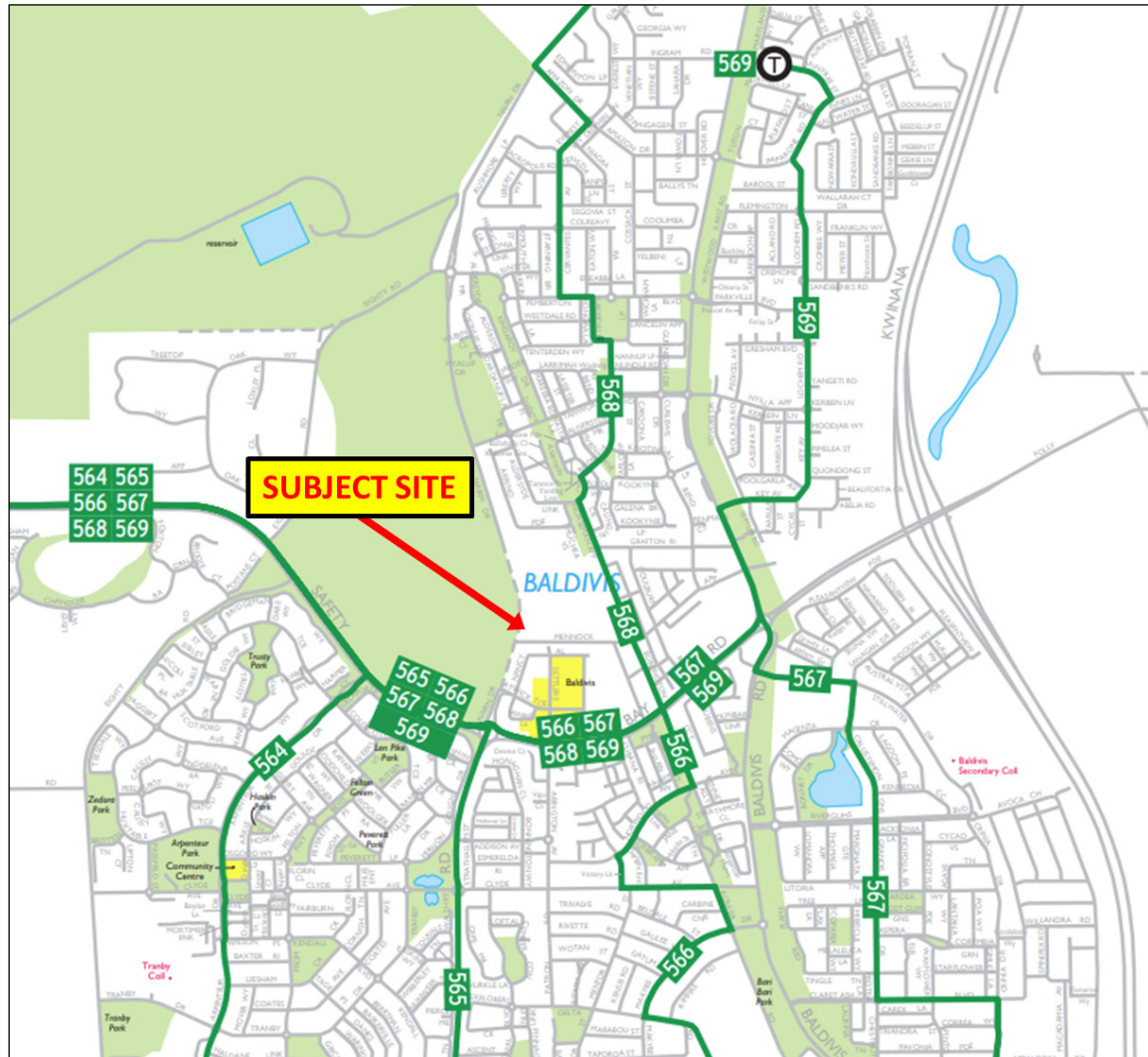
Figure 3: AM perk hour traffic volumes at Nairn Drive/ Settlers Avenue



**Figure 4: PM perk hour traffic volumes at Nairn Drive/ Settlers Avenue**

### 3.4 Public Transport

According to the current Transperth bus network map, Transperth routes 565-569 operate on Safety Bay Road, as shown in **Figure 5**. The nearest bus stop is located approximately 500m walking distance from the subject site. These bus services provide a direct link to Warnbro Station.

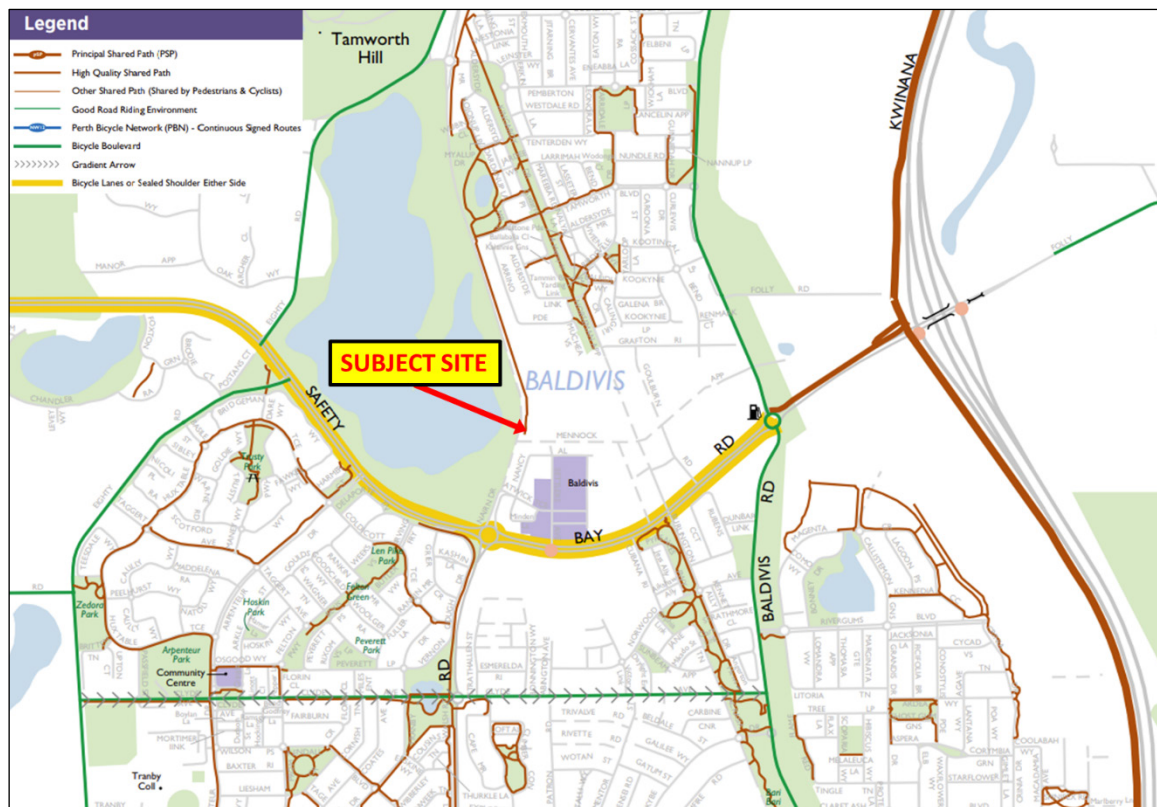


**Figure 5: Existing bus routes**

### 3.5 Pedestrian and Cyclist Facilities

Pedestrian access to the subject site is available via the existing external footpath network along the east of Nairn Drive. Pedestrian crossing facilities, including drop kerbs and refuge islands, are available at Nairn Drive/ Settlers Avenue T-intersection and Nairn Drive/ Sherry T-intersection and Nairn Drive/ Safety Bay Road roundabout.

According to the current Department of Transport Bike Maps, the existing bike path network within the locality of the subject site is classified as “Other Shared Path” along Nairn Drive and “Bicycle Lane” along Safety Bay Road. The Perth Bicycle Network Map illustrated in **Figure 6** shows the cyclist connectivity in the vicinity of the subject site.



**Figure 6: Bike map**

### 3.6 Changes to Surrounding Road Network

Long-term road network planning for this part of the Metropolitan Region includes the future extension of Nairn Drive north and south as the main north-south district distributor road through Baldy and Karnup.

Settlers Avenue (east of the police station) and Sherry Street (north of the police station) are proposed to be extended to form a roundabout intersection as shown in the Master Plan in **Appendix A**, as part of the longer-term planning shown in the *Baldy Town Centre Integrated Development Guide Plan* in **Appendix B**.



## 4 Proposed Transport Network

### 4.1 Road Hierarchy

The future extension of Settlers Avenue and Sherry Street adjacent to the subject site is shown in the *Baldivis Town Centre Integrated Development Guide Plan* in **Appendix B**.

Transcore prepared a *Baldivis Activity Centre Structure Plan Transport Assessment* report in 2012 as part of the planning for this Baldivis Town Centre. The proposed hierarchy of roads in and around the LSP area is illustrated in **Figure 7**. Settlers Avenue is planned as the Main Street for this town centre. Sherry Street is an Access Street within this town centre.

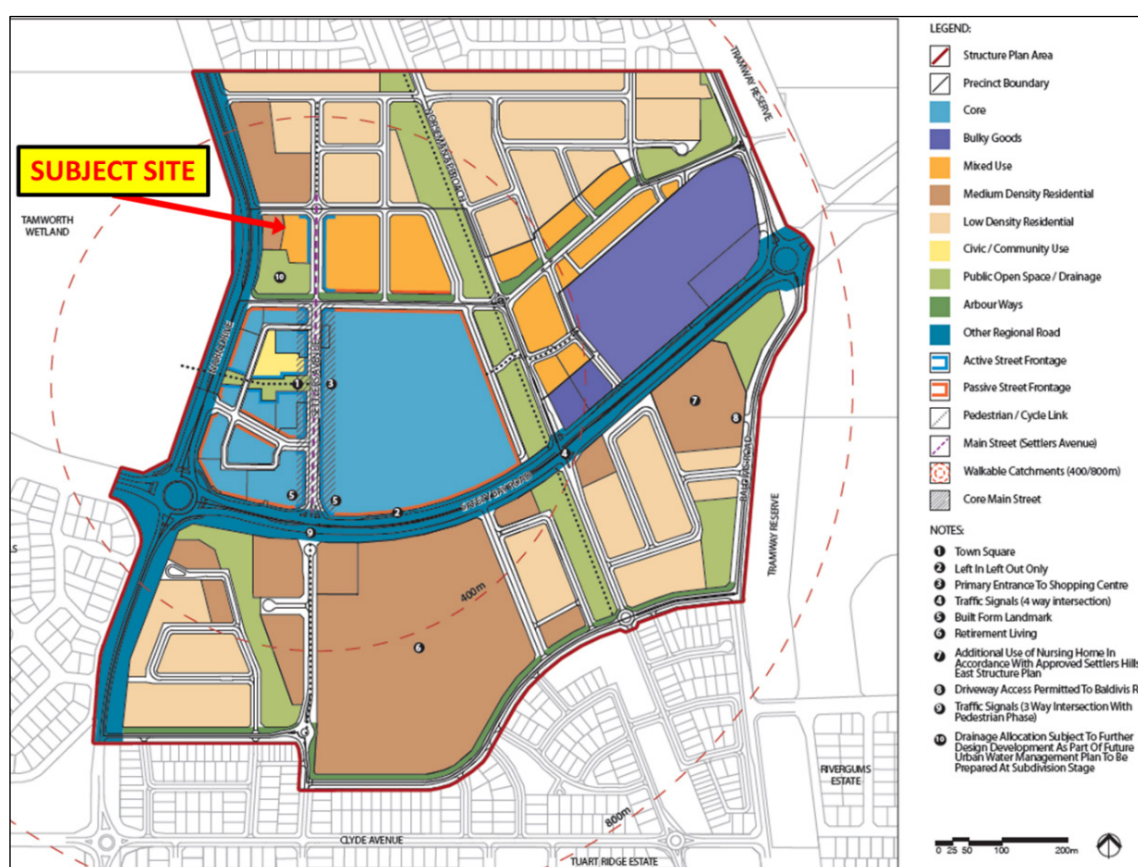


Figure 7: Road hierarchy

## 4.2 Public Transport

The existing bus services in the vicinity of the subject site are noted in **Section 3.4**. The Baldivis Activity Centre will be served by enhanced public transport routes in future including a potential bus rapid transit route linking from Baldivis to Warnbro station and Rockingham city centre by 2031.

## 4.3 Pedestrian and Cyclist Facilities

The proposed pedestrian and cyclist network within and adjacent to the LSP area is outlined in **Figure 7**.

The 2012 *Baldivis Activity Centre Structure Plan Transport Assessment* noted that “appropriate provision of facilities for pedestrians and cyclists are identified in the Western Australian Planning Commission’s Liveable Neighbourhoods policy guidelines. This includes provision of a path on at least one side of each access street and both sides of neighbourhood connector and integrator arterial roads. The City of Rockingham has also adopted a minimum width of 2 metres for all paths (and 2.5m adjacent to schools and shops) so that they are all classified as shared paths, usable by cyclists as well as pedestrians. It is anticipated that these existing policies would be reflected in the proposed Baldivis Activity Centre Structure Plan.”

## 5 Integration with Surrounding Area

---

The proposed subdivision is intended to accommodate a future police station. This land use is consistent with the planning for this site as part of the Baldivis Town Centre.

## 6 Analysis of the Transport Network

---

### 6.1 Assessment Period

Previous work on the Armadale police station project found that different business units within the Police operation have different shift start and end times. The largest number of staff worked 6AM to 4PM shifts on weekdays. This analysis of the operation of the proposed subdivision, particularly the police shift change times, indicates that the 4PM end-of-shift period would be the period of highest traffic flows generated by the future Police Station on the subject site.

As noted in **Section 3.3**, the existing AM peak hour on Nairn Drive (8:00AM-9:00AM) had traffic flows of 430vph (south of Settlers Avenue) and 503vph (north of Settlers Avenue) and the PM peak hour (3:15PM-4:15PM) had traffic flows of 504vph (south of Settlers Avenue) and 578vph (north of Settlers Avenue).

Further analysis of the development traffic generation during these periods indicates that total traffic flows on Nairn Drive, with the development traffic added, will be greatest during the PM peak hour (3:15PM-4:15PM), which basically coincides with the future Police Station PM peak period too. Accordingly, this will be the peak period used for analysis in this report.

WAPC *Transport Impact Assessment Guidelines* recommend analysis to be undertaken for the year of completion of development and ten years post-completion.

### 6.2 Traffic generation

The proposed Baldivis Police Station has a number of similarities to the Armadale and Fremantle Police Station developments, for which Transcore prepared detailed Transport Impact Assessment reports in 2018 and 2022 respectively. This allows Baldivis Police Station traffic generation to be estimated without requiring further details of future police staff numbers broken down by shift times that are not yet available for the future Baldivis Police Station.

The Fremantle Police Complex was projected to have a total staff number of approximately 358 full-time equivalent personnel, compared to approximately 100 full-time equivalent personnel anticipated at the future Baldivis Police Station. Accordingly, the peak traffic generation of the Fremantle development is anticipated to be approximately 28% of that calculated for the Fremantle Police Complex. Timing of peak traffic flows generated by the proposed police complex is determined primarily by shift change times, with various Business Units operating different patterns and timing of shifts.

Anticipated traffic movements generated by the proposed Baldivis Police Station during road network peak periods and around the main shift change times are set out in **Table 1**.



**Table 1: Baldvis Police Station - Traffic Generation**

Period	Hour	In (vph)	Out (vph)	Total (vph)
Police AM peak	5:30AM-6:30AM	26	2	28
	6:30AM-7:30AM	8	8	16
	7:30AM-8:30AM	15	2	17
Road AM peak	8:00AM-9:00AM	7	3	10
Police PM peak	3:30PM-4:30PM	3	40	43
Road PM peak	3:15PM-4:15PM	3	40	43

The current Master Plan in **Appendix A** shows that the crossover for the police station is proposed on Sherry Street opposite to the existing crossover for the multilevel residential development located to the north of Sherry Street.

It is assumed that 20 percent of the trips will travel via Sherry Street (east of the Driveway) and 80 percent of the trips will travel via Sherry Street (west of Driveway). Anticipated turn traffic flows at the driveway for each of the time periods listed in **Table 1** are shown in **Table 2**.

**Table 2: Baldvis Police Station - Driveway Traffic Flows**

Hour	Left-in	Right-in	Left-out	Right-out
05:30AM-06:30AM	5	21	2	0
06:30AM-07:30AM	2	6	6	2
07:30AM-08:30AM	3	12	2	0
08:00AM-09:00AM	1	5	2	1
3:30PM-4:30PM	1	2	32	8
3:15PM-4:15PM	1	2	32	8

Currently, Sherry Street only serves the existing residential development located to the north of the street. The existing traffic volumes on Sherry Street equate to traffic generated by the existing residential development. Traffic generation rates for the existing residential development have been sourced from the Institution of Transportation Engineers *Trip Generation Manual* (11<sup>th</sup> Edition) (Land Use 220: Multifamily housing (low-rise) not close to rail transit). The typical weekday trip rate is 6.74vpd per dwelling unit and the PM peak trip rate is 0.51vph per dwelling unit (63%

entering / 37% exiting). Therefore, the existing 51 apartments would be anticipated to generate up to 26 vehicle movements during the 3:15PM-4:15PM peak period of the Police Station (with 16 entering and 10 exiting).

As part of the proposed Master Plan, Sherry Street is proposed to be connected to Settlers Avenue. Thus, 20 percent of the residential traffic is assumed to travel via the east of Sherry Street when the proposed subdivision roads are constructed around the subject site. The resulting peak period traffic movements generated by this existing residential development are shown in **Table 3**.

**Table 3: Existing Residential Development - Driveway Traffic Flows**

Hour	Left-in	Right-in	Left-out	Right-out	In (vph)	Out (vph)	Total (vph)
Existing PM peak	16	0	10	0	16	10	26
Post-development PM peak	13	3	8	2	16	10	26

### 6.3 Traffic Flow Forecasts

Existing traffic flows in the vicinity of the subject site are documented in **Section 3.3** and existing weekday traffic flows during the PM peak hour (3:15PM-4:15PM) are illustrated in **Figure 8**.



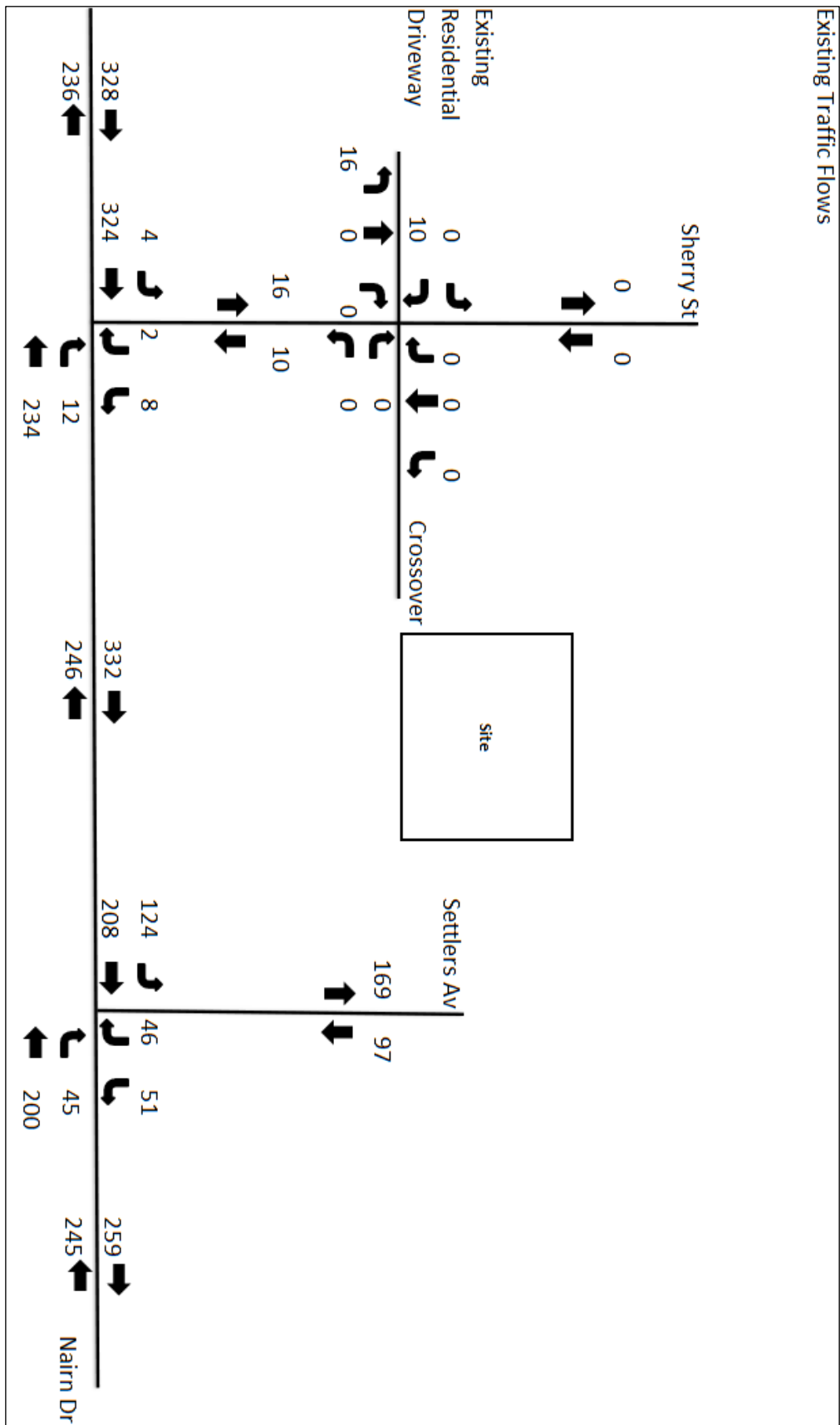
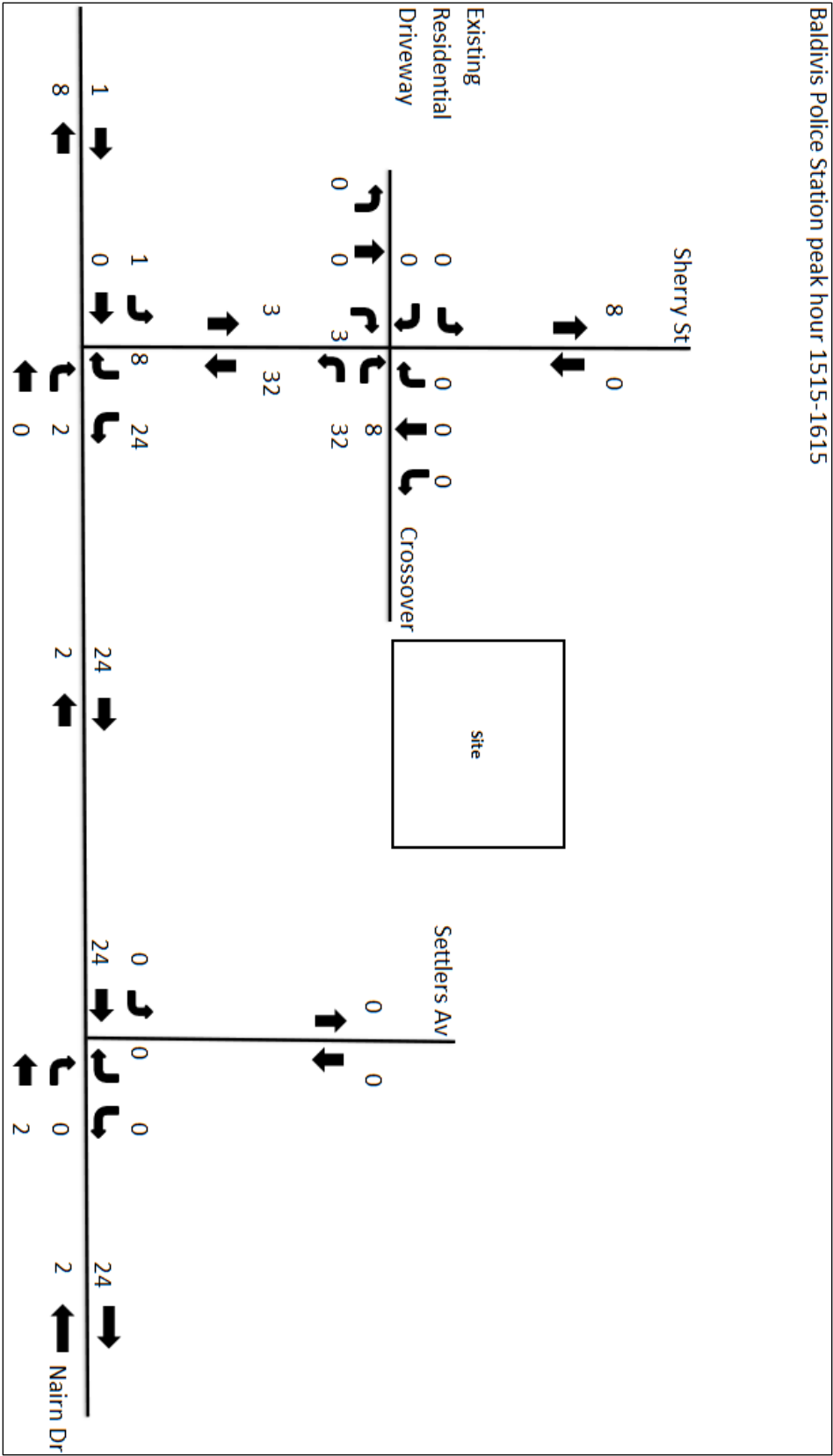


Figure 8: 2022 Existing PM peak hour traffic flows in the vicinity of the subject site

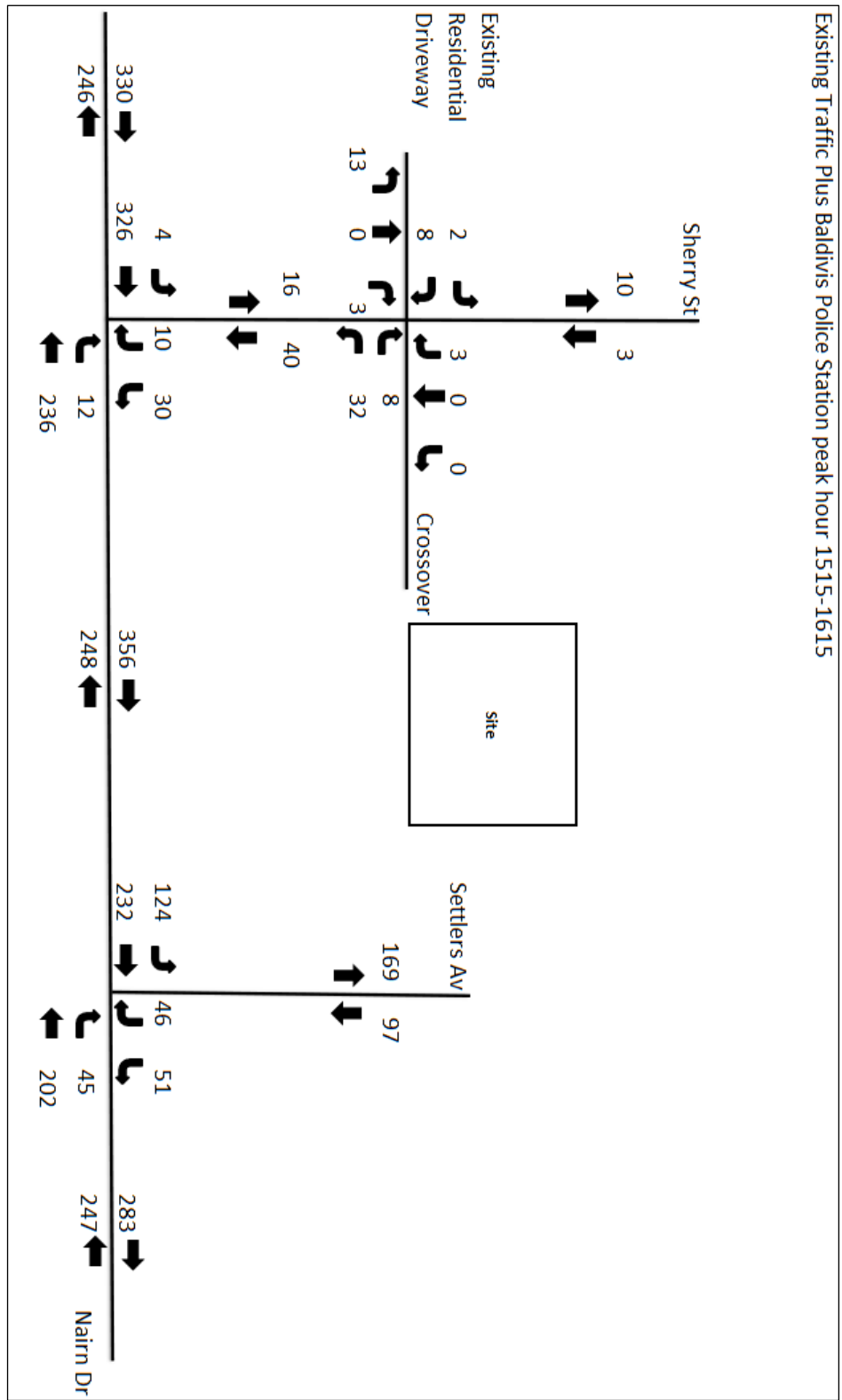
The total traffic expected to be generated by Baldvis Police Station is documented in **Section 6.2** and weekday traffic flows expected to be generated by Baldvis Police Station during the PM peak hour (3:15PM-4:15PM) are illustrated in **Figure 9**.



**Figure 9: PM peak-hour traffic flows for the future Baldvis Police Station**

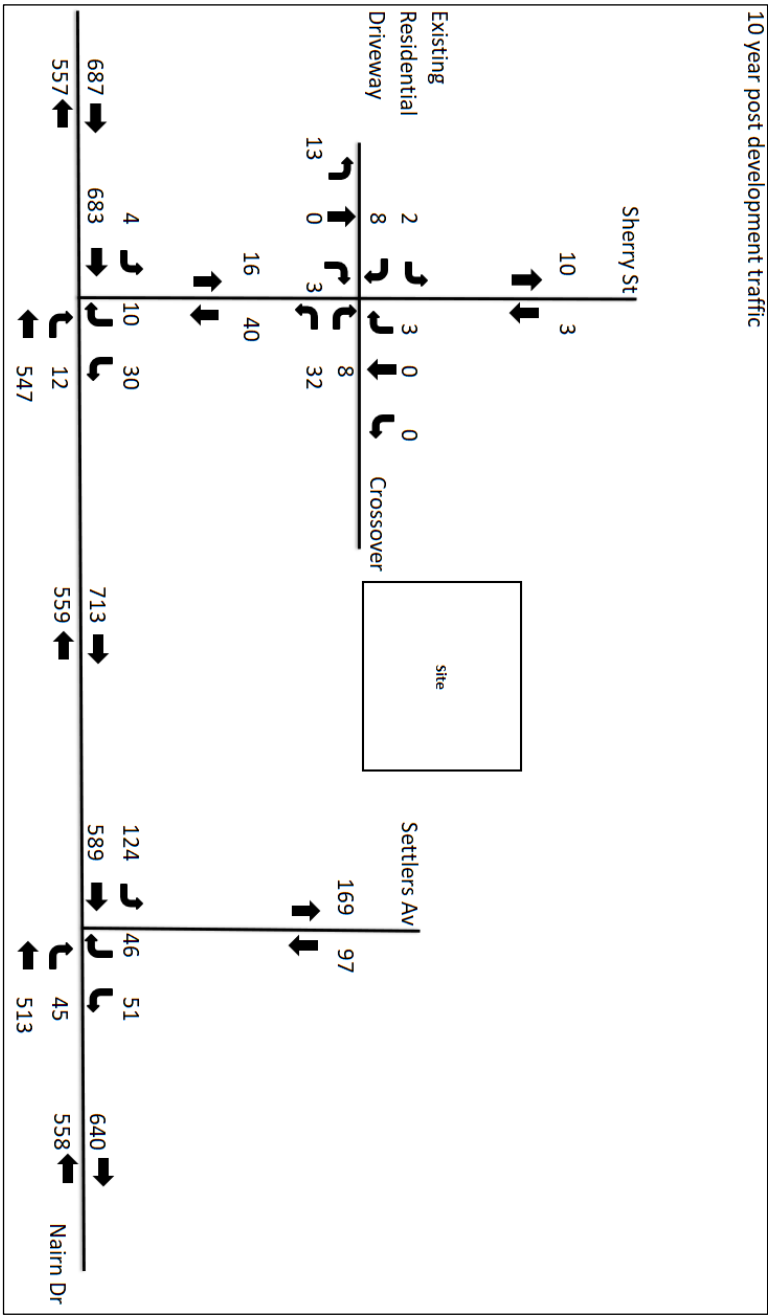


The proposed development traffic flows in **Figure 9** have been added to the existing (3:15PM-4:15PM) traffic flows from **Figure 8** to calculate future traffic flows during this peak period with full development and full occupancy of the subject site. The resulting peak hour traffic movements with the future police station development are shown in **Figure 10**.



**Figure 10: PM peak-hour total traffic flows with the future Baldvins Police Station**

In the 2012 *Baldivis Activity Centre Structure Plan Transport Assessment* was prepared which took into account full development of the Baldivis town centre. In that report the future PM peak hour traffic flows on Nairn Drive with full development of the Baldivis Town Centre were anticipated to be approximately 1,200vph on Nairn Drive south of the existing Settlers Avenue intersection and 1,300vph north of Sherry Street. Accordingly, these future, full-development, traffic flows on Nairn Drive have been adopted for the ten-years post development analysis for this proposed subdivision. Details of future development on the other vacant land east of the subject site is not yet known and would be subject to further subdivision application and accompanying traffic assessment. That other unknown future development cannot be factored into this ten-years post development traffic analysis at this stage. The resulting 2033 future peak hour traffic movements are shown in **Figure 11**.



**Figure 11: 2033 Future PM peak-hour total traffic flows**

## 6.4 Intersection Analysis

Intersection capacity analysis has been undertaken for Nairn Drive and Sherry Street for the modelled 2033 PM peak hour traffic flows corresponding to the traffic movements shown in **Figure 11**. The TIA report demonstrates that the proposed police station is not expected to not generate any additional turning movements to/from Settlers Avenue at this intersection. Therefore intersection analysis at that intersection is not required.

Capacity analysis of these intersections has been undertaken using the SIDRA computer software package. SIDRA is an intersection modelling tool commonly used by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics are defined as follows:

- Degree of Saturation is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for infrequent traffic flow up to one for saturated flow or capacity.
- Level of Service is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
- Average Delay is the average of all travel time delays for vehicles through the intersection.
- 95% Queue is the queue length below which 95% of all observed queue lengths fall.

The network layout modelled and the results of the SIDRA analysis for the Sherry Street crossover and Nairn Drive/ Sherry Street intersection for the 10-year post-development scenario are summarised in **Appendix C** and discussed in the following paragraphs.

### **Police Station full movement crossover**

The SIDRA results for the full movement crossover on Sherry Street indicate that this crossover would operate at a very good overall Level of Service (LoS) A during the critical PM peak hour in the future 10-years post-development scenario. This full movement crossover will operate with negligible queues and delays.

### **Intersection of Nairn Drive and Sherry Street**

With the addition of the future traffic including the development traffic in the future 10-years post-development scenario, SIDRA results indicate that the intersection will operate satisfactorily with (LoS) A during typical PM peak hour on most movements except (LoS) B for left turn movement from Sherry Street onto Nairn Drive and (LoS) C for the right turn out from Sherry Street. This intersection will operate with negligible queues and delays.

## 6.5 Traffic on Surrounding Roads

The WAPC Transport Impact Assessment Guidelines (2016) provides the following guidance on the assessment of traffic impacts:

“As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 percent may. All sections of the road with an increase greater than 10 percent 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 percent 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.”

The proposed amendment in LSP will not increase traffic flows on any roads adjacent to the subject site by the quoted WAPC threshold of +100vph. Therefore, the impact of development traffic on the surrounding road network will not be significant.



## 7 Conclusions

---

This Transport Impact Assessment has been prepared by Transcore on behalf of Stockland with regard to a proposed subdivision of Lot 26 Safety Bay Road, Baldivis in the City of Rockingham. The subject site is located to the east of Nairn Drive in Baldivis and is currently vacant land.

The purpose of the proposed subdivision is to accommodate a future police station at the subject site. The proposed area of the subject site is 6,087 m<sup>2</sup>. Vehicular access to the site will be provided from Sherry Street in the form of a full-movement crossover.

Baldivis Police Station is projected to have a total staff number of 100 full-time equivalent personnel with up to 50 staff on-site at a time. The peak period of traffic generation of the future Baldivis Police Station is anticipated to occur around the 4PM end-of-shift period, with total traffic generation of approximately 43 vehicle movements during the Police PM peak-hour (3:30PM-4:30PM).

The PM-peak hour (3:15PM–4:15PM) of existing traffic flows on Nairn Drive would also be the overall busiest period for total traffic on Nairn Drive and Sherry Street. Accordingly, traffic analysis has been undertaken for this overall PM-peak hour.

The traffic analysis confirms that the full-movement driveway crossover for the police station and Sherry Street / Nairn Drive unsignalised T-intersection will operate satisfactorily with the additional traffic flows generated by the proposed development.

The existing bus services on Safety Bay Road will provide a satisfactory level of public transport accessibility to the site.

Pedestrian access connection will be provided from the existing footpath on Sherry Street adjacent to the subject site.

In conclusion, the findings of this Transport Impact Assessment are supportive of the proposed subdivision.



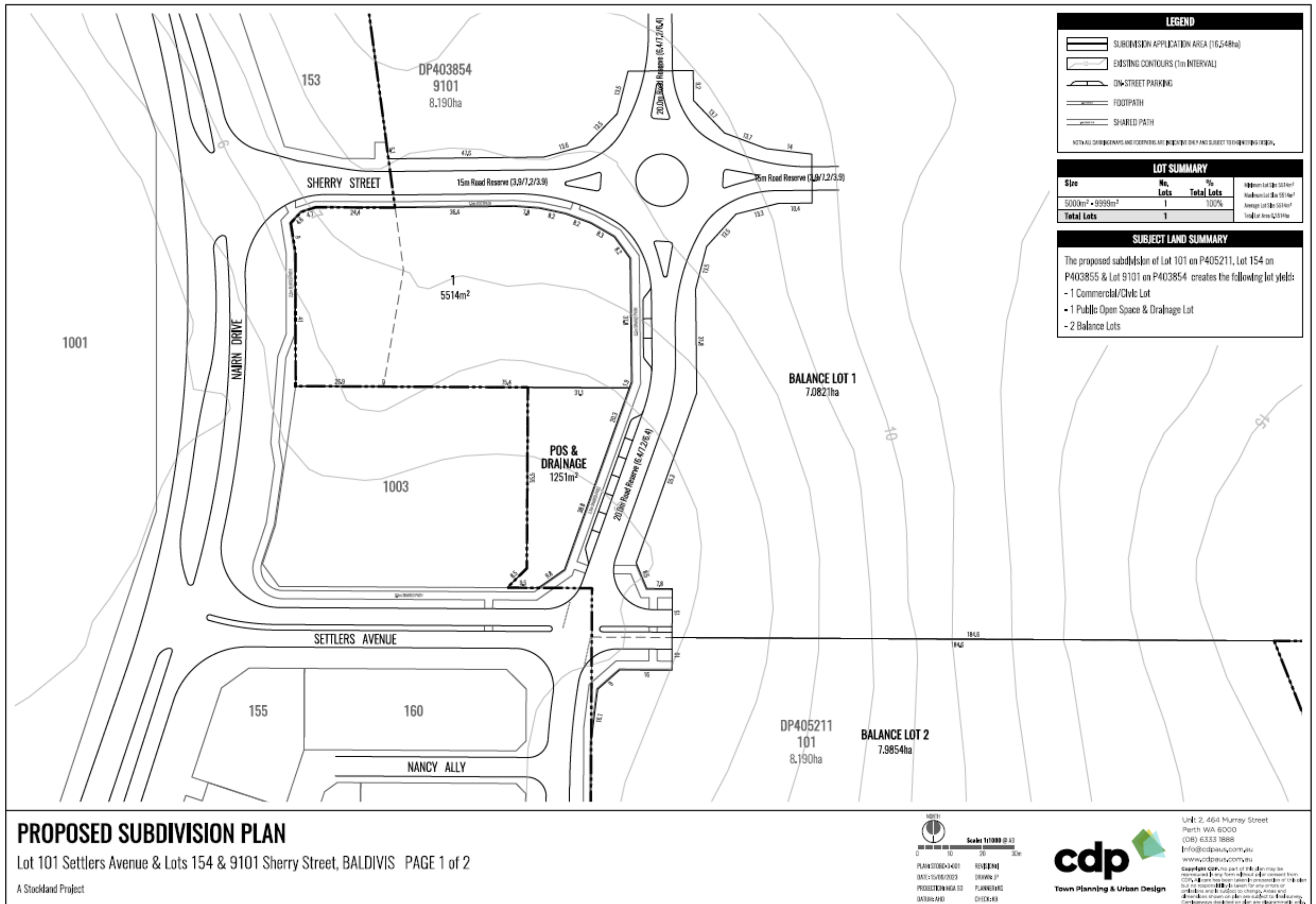
# Appendix A



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MASTER PLAN











# Appendix B



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## BALDIVIS TOWN CENTRE INTEGRATED DEVELOPMENT GUIDE PLAN



 Precinct Boundaries

**D** IDGP Boundaries

**D** Community Purpose Site

Retail Area Below

Pedestrian Route

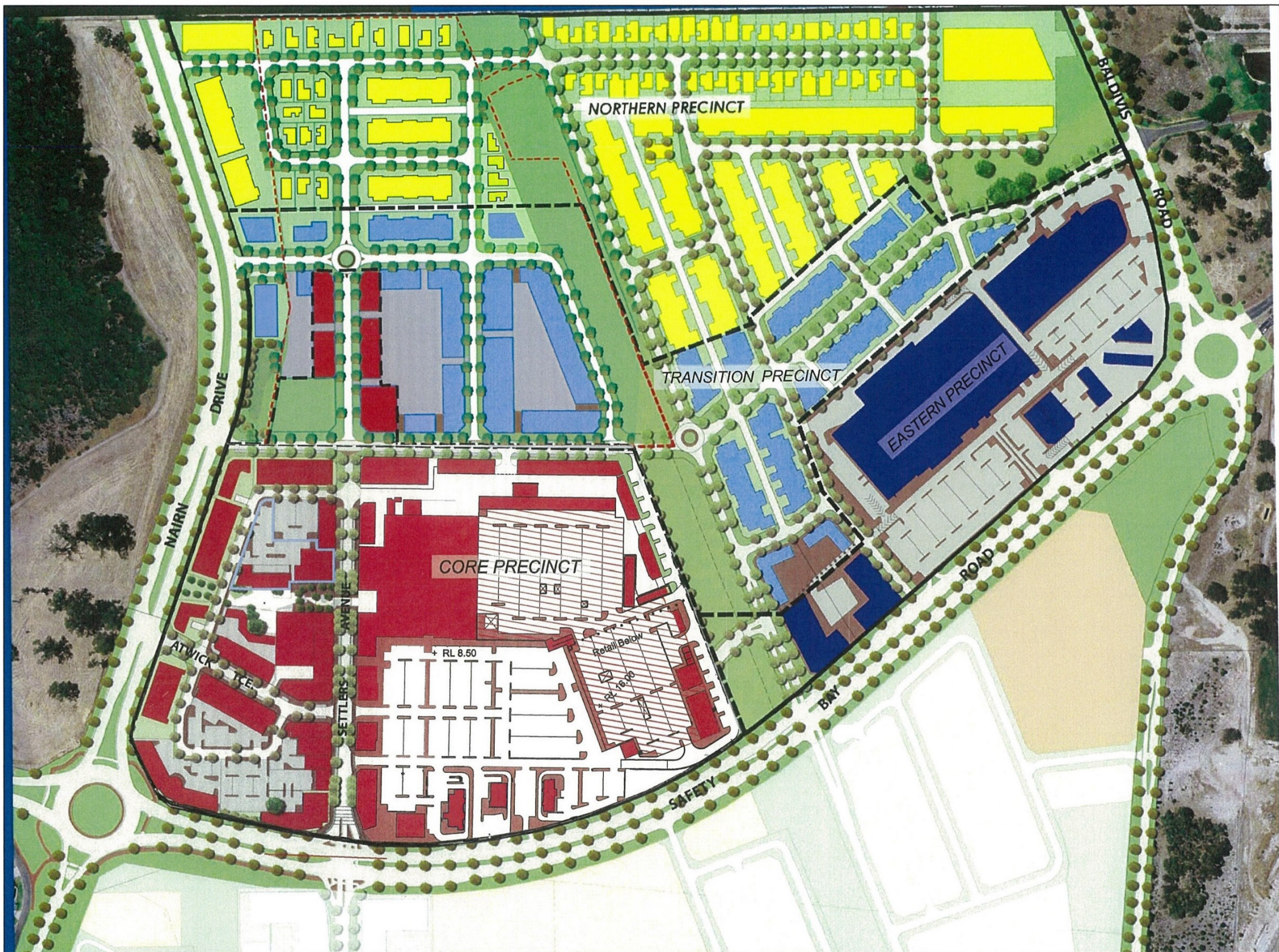
This plan shall be read in conjunction with the City of Rockingham's Town Planning Scheme No.2 and Planning Policy 3.2.4 - Baldivis Town Centre.

Expansion of the shopping centre on lot 1 in accordance with the integrated Development Guide Plan is conditional upon the following :-

- i. compliance with the City of Rockingham Local Commercial Strategy retail floorspace allocation, taking into account existing and approved retail development within the Baldivis Town Centre, and the priority allocation of floorspace to future 'main street' tenancies within the Core Precinct; and
- ii. construction of the tenancies fronting Settlers Avenue, as depicted on the IDGP, as part of the first stage of expansion.



**MGA**  
TOWN PLANNERS  
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## INTEGRATED DEVELOPMENT GUIDE PLAN

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Dwg: 2114/IDGP July 2013  
Scale 1:3000  
27 August 2013

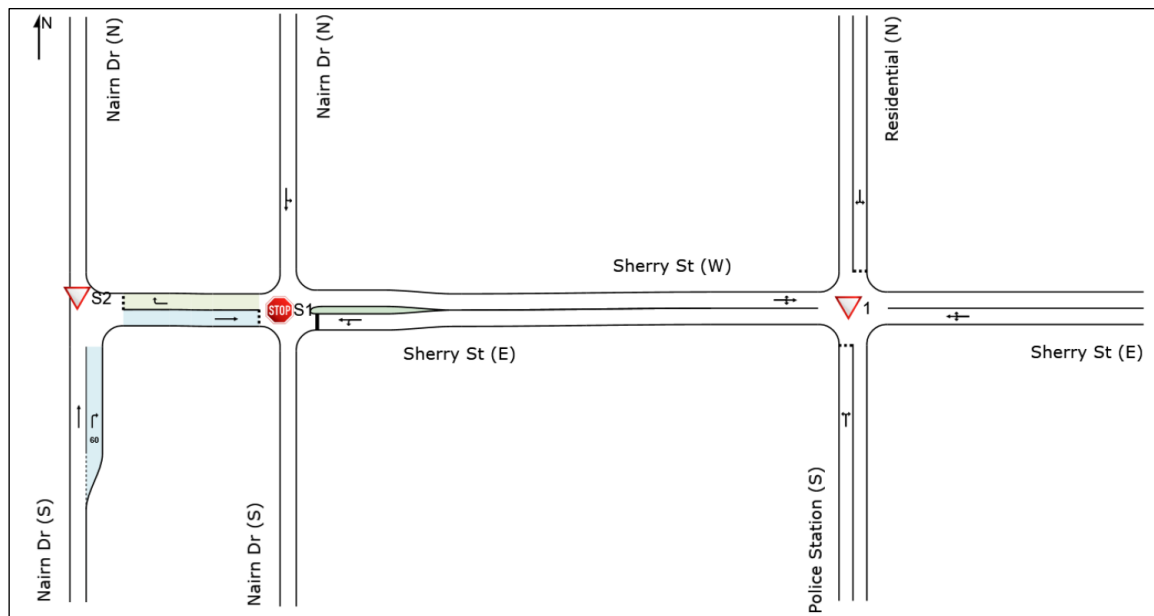


# Appendix C

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## SIDRA INTERSECTION ANALYSIS





**Figure 12: Nairn Drive and Sherry Street layout modelled in SIDRA Network**

The Nairn Drive T-intersection is modelled as a network of two intersections linked together to allow analysis of the right turn out from the side road in two stages (from side road to median then from the median into the northbound traffic flow).

SIDRA layout pictures are schematic functional drawings reflecting input data. They are not design drawings and they are not to scale.



**Table 4: SIDRA results – 10-year post-development PM peak-hour traffic flows (3:15PM-4:15PM) at Baldivis Police Station Crossover onto Sherry Street**

Vehicle Movement Performance														
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	Aver. Back Of Queue	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. veh	Dist ] m			km/h
South: Police Station (S)														
1	L2	All MCs	34	3.0	34	3.0	0.029	0.0	LOS A	0.0	0.3	0.01	0.03	19.4
3	R2	All MCs	8	3.0	8	3.0	0.029	0.6	LOS A	0.0	0.3	0.01	0.03	26.1
Approach			42	3.0	42	3.0	0.029	0.1	LOS A	0.0	0.3	0.01	0.03	21.7
East: Sherry St (E)														
4	L2	All MCs	1	3.0	1	3.0	0.003	4.3	LOS A	0.0	0.0	0.06	0.42	26.5
5	T1	All MCs	1	3.0	1	3.0	0.003	0.0	LOS A	0.0	0.0	0.06	0.42	29.1
6	R2	All MCs	3	3.0	3	3.0	0.003	4.4	LOS A	0.0	0.0	0.06	0.42	26.3
Approach			5	3.0	5	3.0	0.003	3.5	NA	0.0	0.0	0.06	0.42	26.8
North: Residential (N)														
7	L2	All MCs	2	3.0	2	3.0	0.009	0.0	LOS A	0.0	0.1	0.03	0.12	26.3
9	R2	All MCs	8	3.0	8	3.0	0.009	0.7	LOS A	0.0	0.1	0.03	0.12	18.0
Approach			11	3.0	11	3.0	0.009	0.5	LOS A	0.0	0.1	0.03	0.12	20.8
West: Sherry St (W)														
10	L2	All MCs	14	3.0	14	3.0	0.010	3.5	LOS A	0.0	0.1	0.01	0.48	24.9
11	T1	All MCs	1	3.0	1	3.0	0.010	0.0	LOS A	0.0	0.1	0.01	0.48	35.8
12	R2	All MCs	3	3.0	3	3.0	0.010	3.4	LOS A	0.0	0.1	0.01	0.48	24.7
Approach			18	3.0	18	3.0	0.010	3.2	NA	0.0	0.1	0.01	0.48	25.5
All Vehicles			76	3.0	76	3.0	0.029	1.2	NA	0.0	0.3	0.02	0.18	23.2



**Table 5: SIDRA results – 10-year post-development PM peak-hour traffic flows (3:15PM-4:15PM) at Sherry Street and Nairn Drive 'T'-intersection (Stage 1 of right turn)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	Aver. Back Of Queue	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed	
			[ Total HV ]	[ Total HV ]						[ Veh. veh	Dist ]				
			veh/h	%	veh/h	%	v/c	sec			m			km/h	
East: Sherry St (E)															
1	L2	All MCs	32	3.0	32	3.0	0.088	11.5	LOS B	0.1	0.9	0.66	1.02	0.66	26.5
2	T1	All MCs	11	3.0	11	3.0	0.088	15.1	LOS C	0.1	0.9	0.66	1.02	0.66	13.3
Approach			42	3.0	42	3.0	0.088	12.4	LOS B	0.1	0.9	0.66	1.02	0.66	24.3
North: Nairn Dr (N)															
3	L2	All MCs	4	3.0	4	3.0	0.380	6.4	LOS A	0.0	0.0	0.00	0.00	0.00	69.4
4	T1	All MCs	719	3.3	719	3.3	0.380	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.6
Approach			723	3.3	723	3.3	0.380	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.6
West: Median Storage															
5	T1	All MCs	13	3.0	13	3.0	0.019	3.7	LOS A	0.0	0.2	0.56	0.48	0.56	9.3
Approach			13	3.0	13	3.0	0.019	3.7	LOS A	0.0	0.2	0.56	0.48	0.56	9.3
All Vehicles			778	3.3	778	3.3	0.380	0.8	NA	0.1	0.9	0.04	0.07	0.04	65.8

**Table 6: SIDRA results – 10-year post-development PM peak-hour traffic flows (3:15PM-4:15PM) at Sherry Street and Nairn Drive 'T' (Stage 2 of right turn)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	Aver. Back Of Queue	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed	
			[ Total HV ]		[ Total HV ]					[ Veh. veh	Dist ]				
			veh/h	%	veh/h	%	v/c	sec			m			km/h	
South: Nairn Dr (S)															
2	T1	All MCs	576	3.3	576	3.3	0.303	0.0	LOS A	0.0	0.0	0.00	0.00	69.8	
3	R2	All MCs	13	3.0	13	3.0	0.007	6.3	LOS A	0.0	0.0	0.00	0.65	37.4	
Approach			588	3.3	588	3.3	0.303	0.2	NA	0.0	0.0	0.00	0.01	69.2	
East: Median Storage															
1	R2	All MCs	11	3.0	11	3.0	0.010	1.8	LOS A	0.0	0.1	0.32	0.37	37.7	
Approach			11	3.0	11	3.0	0.010	1.8	LOS A	0.0	0.1	0.32	0.37	37.7	
All Vehicles			599	3.3	599	3.3	0.303	0.2	NA	0.0	0.1	0.01	0.02	68.6	



# BALDIVIS POLICE STATION

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## Waste Services Delivery

### Proposal





# Table of Contents

<b>1. Facility Information .....</b>	<b>4</b>
1.1. Facility name .....	4
1.2. Address .....	4
1.3. Type of building uses.....	4
1.4. Room uses .....	4
1.5. Estimated waste volumes.....	4
1.6. Bin store .....	4
1.7. Internal bin management.....	5
<b>2. Service Plan Outline .....</b>	<b>6</b>
<b>3. Compliance.....</b>	<b>7</b>
3.1. Key legislation .....	7
3.2. Key standards.....	7
3.3. International and Australian Standards.....	7
3.4. Licence conditions .....	8
3.5. VEOLIA policies, procedures and work instructions .....	10
<b>4. Key Personnel and Responsibilities .....</b>	<b>11</b>
4.1. Nominated key personnel.....	11
<b>5. Contact Structure.....</b>	<b>14</b>
5.1. Contacts (business hours).....	14
<b>5.2.</b> Emergency and after hours support .....	14
5.3. Escalation pathways.....	15
<b>6. Service Methodology .....</b>	<b>16</b>
6.1. Service delivery .....	16
<b>6.2.</b> Equipment / bins.....	17
6.3. Scheduling.....	17
6.4. Method of collection.....	18
6.5. Waste truck vehicle on site movements .....	20
6.6. Table of specific waste types, containers and disposal methods .....	21



6.7.	Service schedule .....	23
6.8.	Service run sheets and reporting.....	24
6.9.	Additional service request procedure .....	24
6.10.	Staff and labour strategy .....	24
6.11.	Facilities management support.....	25
6.12.	Review and measurement of service delivery .....	25
<b>7.</b>	<b>Safety Management .....</b>	<b>26</b>
7.1.	Job specific risk assessment .....	26
7.2.	Job safety environment analysis.....	26
7.3.	Safe Operating Procedures .....	26
7.4.	Fatigue management.....	27
7.5.	Our life saving rules.....	28
<b>8.</b>	<b>Staff Training .....</b>	<b>29</b>
8.1.	General training .....	29
8.2.	OSH training.....	30
8.3.	Specific training .....	30
8.4.	Supervisor training.....	31
8.5.	Driver / Operator competence .....	31
8.6.	Training records.....	31
<b>9.</b>	<b>Contingency Measures .....</b>	<b>32</b>
<b>10.</b>	<b>Continuous Improvement .....</b>	<b>33</b>
<b>11.</b>	<b>Appendix 1: Site Plan .....</b>	<b>34</b>
<b>12.</b>	<b>Appendix 2: Traffic Flow Diagram.....</b>	<b>35</b>



# 1. Facility Information

## 1.1. Facility name

Baldivis District Police Station

## 1.2. Address

Cnr Nairn Dve & Sherry St, Baldivis WA

## 1.3. Type of building uses

Police Station

## 1.4. Room uses

- Offices
- Custody
- Kitchenettes
- Public areas

## 1.5. Estimated waste volumes

When the development is occupied (est 100 FTE), the following waste volumes are estimated for collection:

Waste streams	Estimated Annual Volumes
Batteries	4 kgs
Confidential Waste	200 kgs
Co-mingled Recycling	2 - 4 tonnes
General Waste <i>General Waste is waste that is not capable of being recycled, reprocessed or reused</i>	2 - 4 tonnes

## 1.6. Bin store

Each bin will be labelled and posters displayed for each waste stream to ensure correct segregation of waste is maintained.



### 1.7. Internal bin management

WA Police Force will appoint their maintenance and domestic services departments to manage the waste bins internally along with bin cleaning.

WA Police Force will provide their staff with the necessary training on waste flow procedures to ensure correct separation of waste streams. Refer 6.12 for further information.

WA Police Force will ensure bins are numbered so that one bin is filled before the next one is used.



## 2. Service Plan Outline

This Service Plan outlines how VEOLIA will undertake the following services for Baldivis District Police Station:

- General waste
- Comingled waste
- Confidential waste

The service will be transitioned and provided according to this plan with the aim of meeting agreed KPIs.

Both the mobilisation and ongoing work will be subject to the following;

- An agreed plan with measurable milestones
- Oversight by the VEOLIA manager
- Prompt action within agreed timeframes to rectify any gaps in service

## 3. Compliance

In delivering this Service Plan, VEOLIA will ensure its compliance with:

### 3.1. Key legislation

- WA - Environmental Protection Act 1986
- WA - Environmental Protection Regulations 1987
- WA - Environmental Protection (Rural Landfill) Regulations 2002
- WA - Environmental Protection (Controlled Waste) Regulations 2004
- WA – Environmental Protection (Unauthorised Discharges) Regulations 2004
- WA - Waste Avoidance and Resource Recovery Act 2007
- WA - Poisons Act 1964
- WA – Waterways Conservation Act 1976
- WA – Litter Act 1979
- WA – Health Act 1911
- WA - Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974

### 3.2. Key standards

- Standard AS/NZS 3816 Management of clinical and related Wastes
- Standard AS 4031:1992 Disposable sharps containers
- Standard AS 4123.7-2006 Mobile Waste Containers

### 3.3. International and Australian Standards

- ISO 9001: Quality Management Systems
- ISO14001: Environmental Management Systems
- AS/NZ 4801: Occupational Health and Safety Management Systems
- ISO 31000: Risk Management Systems



### 3.4. Licence conditions

VEOLIA Environmental Services, its subsidiaries and the nominated disposal sites hold the following licences:

Waste stream	Site stream	Primary Disposal Facility	Licence Required	Licence Number	Licence Expiry
Chemical		ERS	Yes		
		Cleartech	Yes		
Clinical	Incineration	VEOLIA Medical Solutions	Yes	L6537/1994/13	27/02/2036
	Sterilisation				
	Maceration				
Construction and demolition		Eco Resources	Yes	L8757/2013/1	
Cytotoxic		VEOLIA Medical Solutions	Yes	L6537/1994/13	27/02/2036
E-Waste		Total Green Recycling	No		
General waste		VEOLIA Welshpool Resource Recovery Park	Yes	L8954/2016/1	10/04/2026
		VEOLIA Bibra Lake Resource Recovery Park	Yes	L8798/2013/1	08/12/2030
		VEOLIA North Bannister Resource Recovery Park	Yes	L8871/2014/1	08/03/2020
Grease trap		VEOLIA Organics Resource Recovery Park	Yes	L8127/2006/3	10/01/2036
		VEOLIA North Bannister Resource Recovery Park	Yes	L8871/2014/1	08/03/2020
Green waste		VEOLIA Organics Resource Recovery Park	Yes	L8127/2006/3	10/01/2036
Hazardous	Batteries				

WASTE MANAGEMENT SERVICES  
PROPOSAL

Kitchen food		VEOLIA Organics Resource Recovery Park	Yes	L8127/2006/3	10/01/2036
Pharmaceutical		VEOLIA Medical Solutions	Yes	L6537/1994/13	27/02/2036
Radioactive (this is depleted radioactive material suitable for landfill)					
Recyclable	Cardboard	VEOLIA Welshpool Resource Recovery Park	Yes	L8954/2016/1	10/04/2026
		VEOLIA Bibra Lake Resource Recovery Park	Yes	L8798/2013/1	08/12/2030
		VEOLIA Landsdale Resource Recovery Park	Yes	L8477/2010/2	20/10/2035
	Comingled	VEOLIA Bibra Lake Resource Recovery Park	Yes	L8798/2013/1	08/12/2030
	Cartridges and toners				
	Fluorescent tubes				
	Mattresses				
	Polystyrene				
	Soft plastics				
	Sterile wrap				
	Timber				
Sanitary	Standard bin	VEOLIA Medical Solutions	Yes	L6537/1994/13	27/02/2036
Bulk	Mixed bulk waste				
Controlled Waste		VEOLIA Medical Solutions	Yes	T00143	28/02/2036
		VEOLIA Environmental Services	Yes	T00007 T00475	20/04/2030 20/04/2030



### 3.5. VEOLIA policies, procedures and work instructions

A comprehensive list of the Operating Procedures and Manuals applicable for all VEOLIA staff can be provided on request.

## 4. Key Personnel and Responsibilities

### 4.1. Nominated key personnel

Nominated Key Personnel	Position	Role in the contract	Experience
Damian Gallivan	Major Account Manager – CUA	<ul style="list-style-type: none"> <li>Account and relationship manager</li> <li>Oversee the delivery of all services</li> </ul>	Damian is responsible for full account management to VEOLIA government customers in metropolitan Perth. Damian has a deep understanding of the waste industry, systems and diversified waste stream composition
Mihail Mitanoski	Perth C&I Manager	<ul style="list-style-type: none"> <li>Management of Perth metropolitan solid and liquid waste collections</li> <li>Complete site risk assessments</li> </ul>	Mihail is an experienced Manager with 10 years' experience in waste logistics.
Tony Fasolo	State Equipment Manager	<ul style="list-style-type: none"> <li>Maintenance of standard and specialised equipment / bins on site</li> <li>Management and maintenance of VEOLIA's WA fleet and equipment</li> </ul>	Tony has extensive knowledge of equipment used in the waste management sector.
Anita Kodzoman	State EQS Manager	<ul style="list-style-type: none"> <li>Ensuring services are conducted in a safe and environmentally responsible manner, compliant with all Laws and quality standards affecting or related to the services</li> </ul>	Anita has over 20 years commercial safety experience and plays a key role in assisting in the safe provision of services to all VEOLIA sites and customers in Western Australia.
Gavin Denness	State Sales Manager	<ul style="list-style-type: none"> <li>Oversee account management</li> </ul>	Gavin has 21 years' experience working the waste industry in Perth, working for Cleanaway and VEOLIA. This has provided Gavin with exposure to all aspects of waste collections and infrastructure activities.



			<p>Gavin also has significant experience in the management of liquid and Industrial Services businesses including the transport treatment and disposal of liquid, hazardous and packaged waste.</p> <p>Gavin has significant experience in relationship and contract management for municipal authorities, in particular has had broad exposure to contract review teams and working with customers to manage performance against agreed KPIs.</p>
Paul Tomkinson	State Collections Manager	<ul style="list-style-type: none"> <li>Overall management of solid and liquid waste collection activities and collections personnel</li> <li>Driving operational efficiency for the services</li> </ul>	<p>Paul is responsible for the waste collection and transport business across WA and provides a wealth of experience in ensuring safe, efficient and recycling-centric collections for all WA clients</p>
Daniel Van Veen	State Infrastructure Manager	<ul style="list-style-type: none"> <li>Safeguarding the availability of VEOLIA facilities for waste, recycling, organics, liquid and medical waste collected under the contract</li> <li>Investigating new resource recovery opportunities for waste collected under the contract</li> </ul>	<p>Daniel has a Bachelor of Environmental Engineering and has been with VEOLIA since December 2006 in a range of senior operations roles. This has included 'Project Management' for a number of post collection sites in Victoria and the management of Biowise (a VEOLIA organic facility in Southern Perth).</p> <p>Daniel's key responsibility is the management of post collection infrastructure in Western Australia.</p> <p>Daniel has overall responsibility for the management of VEOLIA's landfills, materials recovery facilities, organics resource recovery facilities, advanced treatment resource recovery facilities, transfer stations, and service centres in WA.</p> <p>Daniel ensures the quality and safe management of waste processing and disposal at all VEOLIA WA facilities.</p>
Brett Phelan	State General Manager	<ul style="list-style-type: none"> <li>Overall business management</li> <li>Ensuring VEOLIA adopts best practices in waste management</li> </ul>	<p>Brett leads the VEOLIA WA Waste team, which includes overseeing a broad network of 11 waste management facilities. Brett has a long history at VEOLIA, with significant experience in</p>

		across all business units servicing the contract	managing commercial and municipal contracts across the State. Brett has researched, justified and implemented new resource recovery initiatives in many areas involving both municipal and commercial waste streams.
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## 5. Contact Structure

### 5.1. Contacts (business hours)

**Normal business hours (Monday to Friday, 7.30am-5.00pm)**

Contact A		Contact B
<b>Name</b>	Customer Service Centre	Damian Gallivan
<b>Position</b>		Major Account Manager - CUA
<b>Telephone number</b>	13 13 35	0429 445 357
<b>Email</b>	cscperth@Veolia-env.com.au	damian.gallivan@veolia.com

All enquiries or instructions will be responded to within one (1) hour during business hours.

**Each relevant site representative will be provided with a VEOLIA contact list with the mobile phone numbers for all personnel directly involved with the contract, including Managers and Supervisors.**

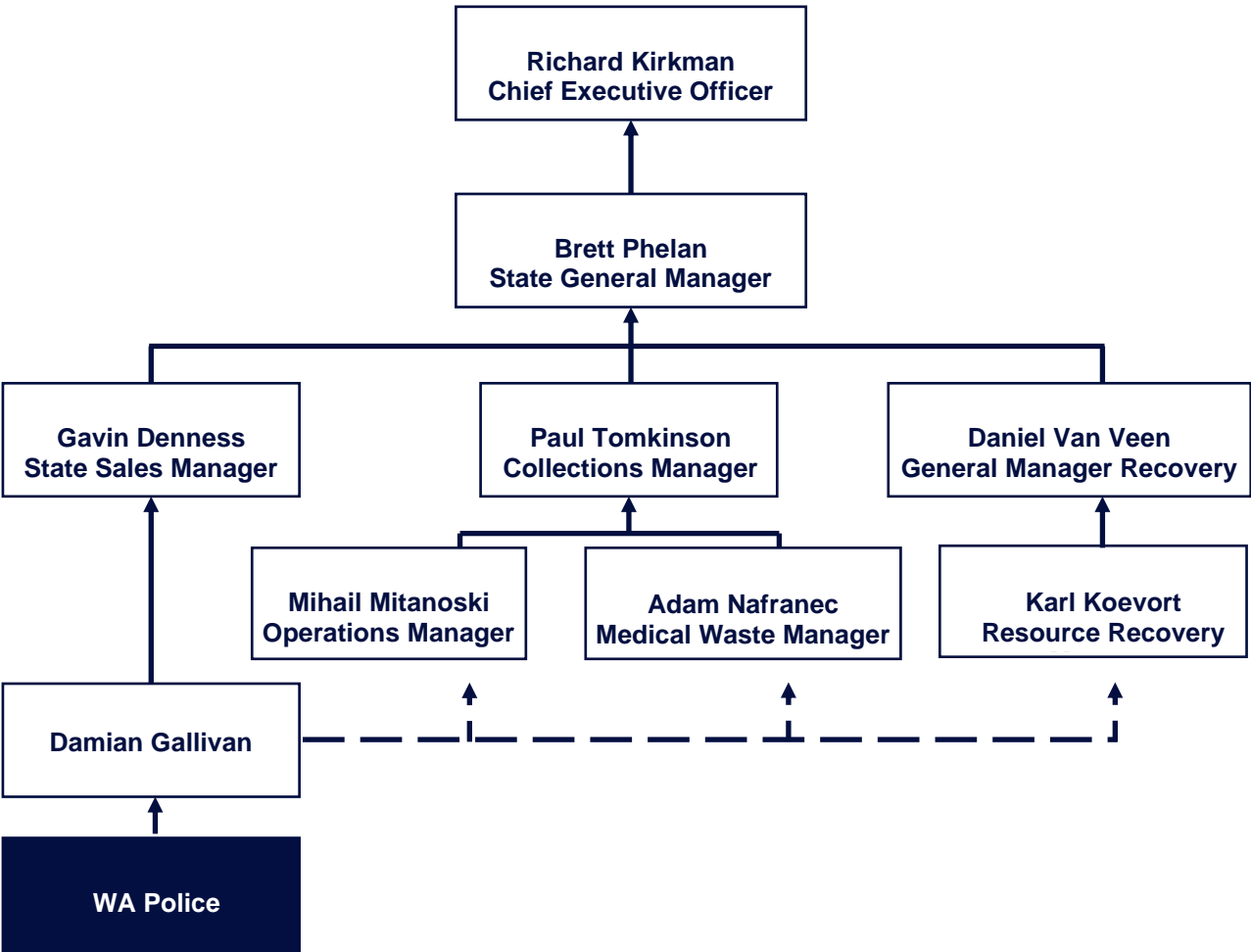
### 5.2. Emergency and after hours support

VEOLIA offer a 24/7 after hours' emergency number clients can call. VEOLIA operates 24 hours per day, 7 days per week, 365 days per year with an Emergency Supervisor available at times, every day of the year.

**Outside of normal business hours, there are two (2) Emergency / After Hours Operational Supervisors available 24 hours, 7 days per week.**

Contact A		Contact B
<b>Name</b>	After Hours Supervisor	Damian Gallivan
<b>Position</b>		Major Account Manager - CUA
<b>Telephone number</b>	13 13 35	0429 445 357

5.3. Escalation pathways





## 6. Service Methodology

### 6.1. Service delivery

VEOLIA will provide a discreet, safe, efficient and reliable service between the hours of 7.00am and 4.30pm as stipulated by Baldivis District Police Station.

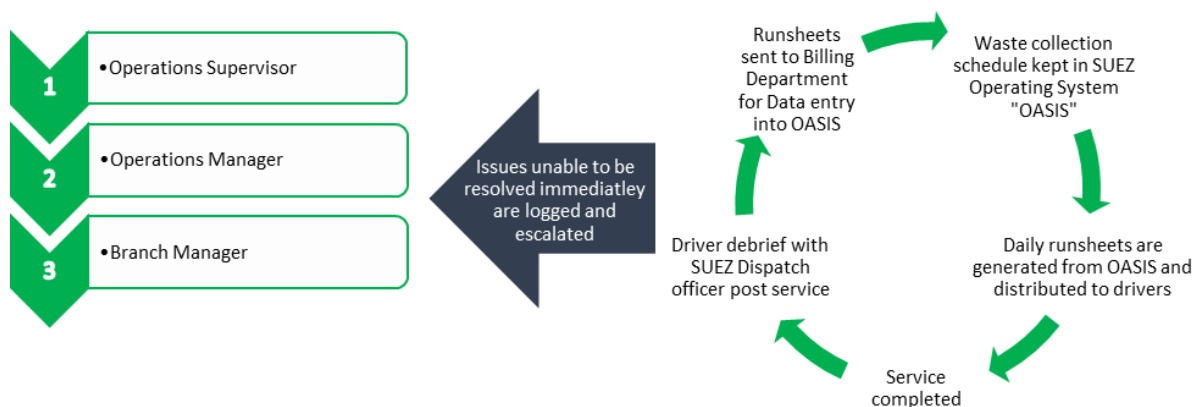


Figure 1: Service Model

VEOLIA will ensure that all waste is transported and treated or disposed of in accordance with:

- Waste stream classification – as presented by Baldivis District Police Station in the designated bins
- Relevant legislations (as outlined in Section 2)
- Specifications of disposal site licenses (as outlined in Section 2)

All waste collection services will be provided in accordance with this *VEOLIA Environmental Services, Waste Management Plan*.

## 6.2. Equipment / bins

All equipment installed, supplied and maintained will be well maintained throughout and the contract and comply with the requirements of relevant Workplace Health and Safety legislation.

Waste streams	Waste container specifics	
Batteries	<ul style="list-style-type: none"> <li>5lt buckets</li> </ul>	
Confidential waste	<ul style="list-style-type: none"> <li>240lt locked blue bin with blue lid</li> </ul>	
General waste	<ul style="list-style-type: none"> <li>240lt green bin with red lid</li> </ul>	
Mixed recycling	<ul style="list-style-type: none"> <li>240lt green bin with yellow lid</li> </ul>	
Sanitary waste	<ul style="list-style-type: none"> <li>28lt sanitary container</li> </ul>	

## 6.3. Scheduling

VEOLIA utilises the specialised operating system 'OASIS'. This system manages collection, days of service, frequency and allocates all services to routes. OASIS generated run sheets are printed on a daily basis for the proceeding day.

Collection activities will be specified as either:

- Permanent scheduled** – fixed locations and frequencies but with varying quantities
- Permanent on call** – fixed locations as a request for service at various frequencies and quantities
- Special services** – various locations, frequencies and quantities on a short term basis



6.4. Method of collection

VEOLIA will use Rear Lift Collection Vehicles to collect various waste types from the bin store. Our Rear Lift Vehicles are well suited to sites with limited access and space to minimise collection frequency.



Rear Lift Vehicle Specifications

Overall length	Up to 8m
Overall width	2.5m
Height (travel)	3.4m
Height (in operation)	3.4m
Weight (vehicle only)	13.0t
Weight (payload)	9.5t
Turning circle	25.0m

Each collection vehicle will contain the following resources:

- **Max Safe Smart brake** which prevents accidental truck roll away
- **DriveCam in cab camera** which records footage triggered by events such as hard braking
- **SWIFT on board** computer system
- **GPS tracking system** that can be viewed in real-time from our Dispatch department
- **Two way radio**
- **A Driver Operator Manual** detailing VEOLIA policies, procedures and regulatory obligations with specific instructions for pre-trip and post-trip vehicle inspections; Safe Operating Procedures; and Emergency and accident procedures
- **A Vehicle Condition Report** book utilised for detailing defective componentry
- **Emergency, Accident and Spill accessories** including safety triangles, fire extinguishers, first aid kits, shovels, brooms and spill kits





## 6.5. Waste truck vehicle on site movements

VEOLIA will service the waste bins from the verge on Sherry St.

Refer attached Site Plan which shows the entrance and exit.

VEOLIA service trucks will service the bins on the verge along Sherry St, adjacent to the bin storage area. The VEOLIA service truck will then proceed in a forward gear along Sherry St.

Refer attached traffic flow diagram which depict the access and manoeuvring of a rubbish truck. It is not anticipated that there will be any issues regarding the onsite movements of VEOLIA service truck.

## 6.6. Table of specific waste types, containers and disposal methods

Waste streams	Waste container specifics	Type of waste	Comments
Batteries	<ul style="list-style-type: none"> <li>Specific containers for disposal of batteries are available</li> <li>5L buckets or 205L drums</li> </ul>	<ul style="list-style-type: none"> <li>Lithium/nitrate batteries</li> </ul>	<ul style="list-style-type: none"> <li>Containers are collected by VEOLIA for sorting and safe disposal</li> </ul>
Confidential Waste	<ul style="list-style-type: none"> <li>Blue bin with blue lid fitted with padlock.</li> <li>x 240L exchanged as required</li> </ul>	<ul style="list-style-type: none"> <li>Material containing patient details, inc. handover sheets and material including addressograph labels.</li> <li>Other confidential material</li> </ul>	<ul style="list-style-type: none"> <li>Bins must be kept locked at all times</li> <li>Waste is stored in a secure area, shredded off site and residue recycled</li> </ul>
Co-mingled Recycling	<ul style="list-style-type: none"> <li>Green bin with yellow lid</li> <li>4 x 240lt Rear End Lift bin</li> </ul> <p><i>Under desk boxes are available</i></p>	<ul style="list-style-type: none"> <li>All paper, including office grade, newspaper and glossy magazines</li> <li>Unbroken glass which is completely empty of liquids</li> <li>Plastic bottles, cartons, cans etc.</li> </ul>	<ul style="list-style-type: none"> <li>All recycling waste placed in the same bin</li> <li>Waste removed from site by VEOLIA, sorted into categories and recycled</li> </ul>
Gardening Waste	<ul style="list-style-type: none"> <li>4m or 9m skip as required</li> </ul>	<ul style="list-style-type: none"> <li>Collected by Gardens and Grounds staff</li> </ul>	<ul style="list-style-type: none"> <li>Skip removed by VEOLIA to recycling plant.</li> </ul>
General Waste  <i>General Waste is waste that is not capable of being recycled, reprocessed or reused</i>	<ul style="list-style-type: none"> <li>Waste should be disposed of into clear or black plastic bags and then placed into a Green bin with red lid.</li> <li>8 x 240lt Rear End Lift bin</li> </ul>	<ul style="list-style-type: none"> <li>Kitchen waste</li> <li>Soiled recycling</li> </ul>	<ul style="list-style-type: none"> <li>Once the waste is placed in the green bin at room level it is not handled manually or decanted again.</li> <li>The waste is transferred directly to a bin on site. Bins emptied by VEOLIA and disposed at landfill.</li> </ul>
Sanitary waste	<ul style="list-style-type: none"> <li>28L foot pedal container</li> </ul>	<ul style="list-style-type: none"> <li>Sanitary tampons and pads</li> </ul>	<ul style="list-style-type: none"> <li>Bins exchanged by VEOLIA Medical Solutions</li> </ul>
Sharps	<ul style="list-style-type: none"> <li>Sharps container compliant with Australian Standards 4031, which, when full, is locked &amp;</li> </ul>	<ul style="list-style-type: none"> <li>Sharps such as needles, safety sharp devices, IV connectors, broken ampoules and scalpels</li> </ul>	<ul style="list-style-type: none"> <li>The waste is removed by VEOLIA and disposed of by high temperature incineration off site.</li> </ul>



	placed into a yellow clinical waste bin. NB: The sharps containers must be sealed before placing in the yellow clinical bin.		
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## 6.7. Service schedule

VEOLIA will provide the collection services in accordance with the agreed service schedule for the facility

Service area	Waste type	Service type	Quantity	Bin size	Service frequency	Services per week	Disposal method
Bin store	General waste	Rear lift	8	240lt	1 day / week	TBC	Landfill
Bin store	Comingled	Rear lift	4	240lt	1 day / week	TBC	Recycled
Ladies toilets	Sanitary	Van	5	22L	Monthly	TBC	Landfill
Admin or bin store	Confidential	Pantech	2	240L	On call	N/A	Shredded/recycled
Secure area	Clinical & sharps	Pantech CW	1	240L	On call	N/A	Incineration

VEOLIA will comply with any service timing restrictions and be mindful of service times to ensure minimal impact to the core business operation.

If for any reason VEOLIA is unable to complete a scheduled service, the customer will be notified by phone on the day of expected service. At which point, the customer will be advised the rescheduled date this service will be completed, which will be within 48 hours of original scheduled service.



## 6.8. Service run sheets and reporting

The VEOLIA collection driver is responsible every service for completing a run sheet, which will record:

- Customer name
- Collection address/location
- Quantity of bins and sizes (where applicable)
- Kilograms/tonnes/litres collected

Upon return to the VEOLIA depot, the collection driver will debrief with the VEOLIA Dispatch Officer. As part of Dispatch Officer's responsibilities they will:

1. Forward service documentation to the VEOLIA Billing Department

As part of the VEOLIA Billing Department responsibilities within the service model:

1. All receipts will be collated and compiled for the previous month's service
2. Hard copies of receipts will be stored with VEOLIA run sheets
3. Services will be billed with invoices being issued every calendar month

## 6.9. Additional service request procedure

All additional collection service requests should be made via the service contact list provided in Section 4. The service request is then entered into Oasis with the associated WO number.

Once the job is entered, it will be allocated to a specific route by the Dispatch Officer and printed on the drivers run sheet for the requested date of service. The waste collection service is then completed in accordance with the service model Figure 1 Section 5.1.

## 6.10. Staff and labour strategy

VEOLIA will ensure all workers undertaking waste collection services at Baldivis District Police Station are fit to work in accordance with:

- VEOLIA Company Policies

All VEOLIA employees or subcontractors will have been previously inducted to site as required; with VEOLIA, ensuring sufficient employees have undertaken induction to cover absence.

### 6.11. Facilities management support

VEOLIA will provide training for all personnel responsible for the management of waste within the waste compound. Specifically, training will be provided for:

- Waste management and segregation best practice
- Preparation of waste receptacles for collection
- VEOLIA collection systems by waste type

### 6.12. Review and measurement of service delivery

VEOLIA undertakes regular service reviews to ensure the level of service provided best meets the requirements of the contract.



Figure 2: Service review process

In conjunction with VEOLIA collection drivers and dispatch officers; and information provided by key Baldivis District Police Station representatives, VEOLIA would review the level of service provided on a monthly basis. This review is undertaken as part of the monthly reporting requirements.



## 7. Safety Management

### 7.1. Job specific risk assessment

Prior to commencing works, VEOLIA will complete a risk assessment using VEOLIA FORM013: EQS Inspection Checklist (Customer Site) to identify any potential risks and ensure all works to be undertaken are covered by an appropriate Safe Operating Procedure (SOP).

### 7.2. Job safety environment analysis

Prior to commencing works, VEOLIA will complete a series of Job Safety Environment Analysis (JSEAs) using VEOLIA FORM020: Risk Management to identify, analyse and record:

- The steps involved in performing each specific high hazard job.
- The existing and potential safety and health hazards associated with each step.
- The recommended action(s)/procedure(s) that will eliminate or reduce these hazards and the risk of a workplace injury or illness.

### 7.3. Safe Operating Procedures

Safe Operating Procedures and Work Instructions are developed from the JSEAs to outline a step-by-step instruction for carrying out each specific job. All VEOLIA employees completing the works must sign the JSEA before the task is undertaken or if there is any change to the task steps or additional hazard/controls are identified.

Safe Operating Procedures to be used for the contract are:

- Driver Manual – Rear Lift Collections; Front Lift Collections; Hook Lift Collections; Skip Lift Collections, Medical Waste Collections; Liquid Tanker Collections
- SOP007 Spill Response
- SOP010 Permit To Work System
- SOP017 Hazardous Chemicals (Including Dangerous Goods)
- SOP018 Needle Stick Injuries, Blood And Body Fluids Exposure
- SOP022 Safe Handling Procedures For Disposal Of Prescribed Industrial Wastes
- SOP023 Working At Heights
- SOP025 Manual Tasks -General Guidelines
- SOP027 Safe Handling Of Vaporous Wastes
- SOP028 Noise - General Guidelines
- SOP037 Calibration And Servicing Of Equipment
- SOP039 Waste Handling And Disposal

- SOP045 Drivecam
- SOP046 Safety Observations
- SOP049 Biosecurity Waste Procedure
- SOP050 Delivery And Service On Customers' Site
- SOP051 Working Near Overhead Obstructions
- SOP053 Working In High Temperatures And Exposure To Uv
- SOP082 Injury Management And Return To Work
- SOP092 Lone, Remote Or IsolaSmall Large Projects
- SOP154 Fatigue Management
- SOP155 Toolbox Talks
- SOP159 Personal Protective Clothing And Equipment
- SOP160 First Aid Management

## 7.4. Fatigue management

VEOLIA is committed to:

- Preventing and reducing the risks of fatigue in the workplace
- Providing better health and safety outcomes on a continual basis
- Reducing workplace incidents and injuries
- Encouraging continuous improvements in fatigue management

To support our commitment for fatigue management, VEOLIA has formally adopted:

- Policy - Fatigue Management
- Safe Operating Procedure - Fatigue Management
- Manual - Fatigue Management
- Toolbox Talk – Preventing Fatigue In the Workplace

Fatigue Management under the Contract will be managed in accordance with these documents.



## 7.5. Our life saving rules

VEOLIA has embedded 'Our Life Saving Rules' into all operations across all sites. These life-saving rules are designed to prevent life changing events from occurring. Our Life Saving Rules are:

# OUR LIFE SAVING RULES

These rules apply to all SUEZ workers including employees, agency staff, owner drivers, contractors and sub-contractors. It is the responsibility of all SUEZ workers to apply these rules and to ensure that others apply them as well.

 <p><b>I will not</b> handle my phone or other devices whilst driving or operating plant</p>	 <p><b>I will</b> ensure that the confined space atmosphere is safe and I have signed on to a PTW before entering</p>
 <p><b>I will</b> ensure I am fit for work and not under the influence of alcohol or drugs</p>	 <p><b>I will</b> ensure fall protection is in place and I have signed on to a PTW before working at heights</p>
 <p><b>I will not</b> walk or stand under a load</p>	 <p><b>I will only</b> enter bodies of water if I am trained and authorised</p>
 <p><b>I will</b> signal, reduce speed and check my mirrors and cameras before turning or reversing</p>	 <p><b>I will only</b> enter an excavated area if ground collapse systems are in place and I have signed on to a PTW</p>
 <p><b>I will</b> stay out of the path of moving vehicles and mobile plant</p>	 <p><b>I will</b> always follow isolation procedures and verify that there is no live energy before starting work</p>
 <p><b>I will</b> be trained, authorised and wear appropriate PPE when handling chemical products</p>	 <p><b>I will</b> ensure fire and explosion risks have been eliminated and I have signed on to a PTW before conducting hot work</p>



For further information on our life saving rules, please contact your EQS/HSEQ department.  
Issued September 2016



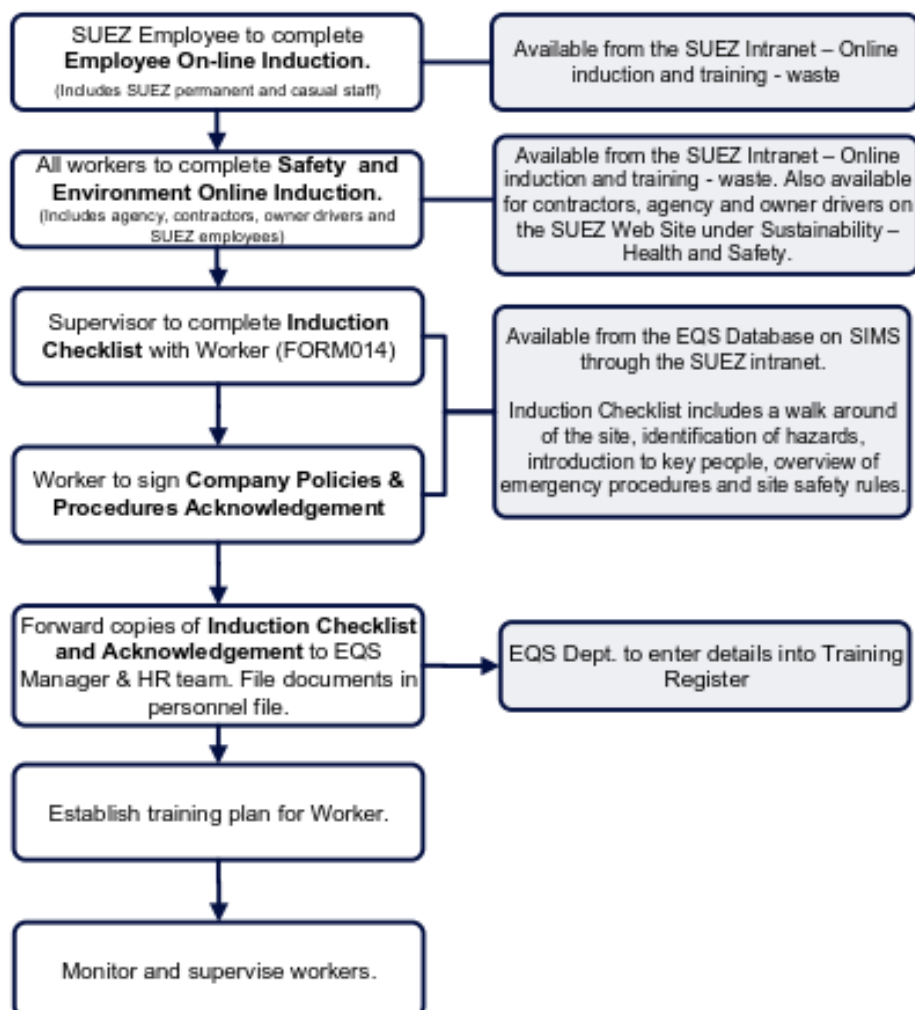
Our Life Saving Rules will be applied to the contract by all VEOLIA personnel.

## 8. Staff Training

### 8.1. General training

VEOLIA workers are trained in accordance with VEOLIA's Induction, Training and Competency Procedure to ensure that

- All workers are provided with the relevant information, training, instruction and supervision that is necessary to protect them from health and safety risks and to fulfill their roles and responsibilities,
- Workers can perform their required duties in a manner that meets legal, safety, quality and environmental requirements,
- Novice workers are identified, trained and supervised appropriately, and
- Appropriate records are maintained.





## 8.2. OSH training

OSH induction at VEOLIA is mandatory for all employees, labour hire and contract workers, to support the achievement of the highest possible safety and customer service levels. All employees assigned to the ASC contract will be required to complete and pass (100%) the VEOLIA National Safety and Environment Induction prior to commencing.

VEOLIA's National Safety and Environment Induction which is mandatory for all employees and contractors covers:

- Responsibilities (legislative, employee and contractor)
- Site safety rules
- PPE and signs
- Reporting hazards and incidents
- Emergency procedures and first aid
- Risk management (managing, controlling risks and job safety analysis)
- Driving vehicles and operating plant
- Traffic management and mobile plant
- Working at heights
- Excavation
- Confined spaces
- Isolation and tag out
- Fit for work
- Hot work
- Working with waste
- Electricity
- Hazardous chemicals
- Manual tasks

The VEOLIA induction program creates a high degree of awareness and understanding with regards to our safety and environment policies, procedures and practices, and an understanding of each individual's responsibilities.

## 8.3. Specific training

External training is provided to applicable staff in

- Overhead powerline awareness course,
- Hazardous/prescribed waste course,
- Confined space entry
- Working at heights
- First aid
- Other hazardous task training as required

Task specific internal training is also provided on a regular basis.

## 8.4. Supervisor training

Additional to the OHS (Safety and Environment) on line induction, our Supervisors also complete:

- Managing Contractors and visitors (online) Contains detail on OSH legislation.
- Roles and Responsibilities for Managers and Supervisors (online)
- Incident reporting and investigation (online)
- Risk Management (online)

## 8.5. Driver / Operator competence

An online training module for Driver Operator Training is completed by all new drivers prior to commencement of employment. At the end of the training module, drivers are tested on the information to ensure competency in VEOLIA operating policies and procedures.

New drivers including employees, casuals, owner drivers and relief drivers must undergo “on the job” training with an experienced driver, Supervisor or Driver Trainer prior to being allowed to operate a truck on their own. This must be in line with the requirements of the Driver Engagement, Induction and Training Process and must commence from the first day of their employment.

New drivers are instructed in all aspects of operation of the vehicle in line with the Driver Operator Manual, including:

- the completion of VCRs,
- truck familiarisation,
- bin servicing,
- site specific hazards,
- the on-board computer system, and
- completion of route sheets.

## 8.6. Training records

A Training Record Form is used to record attendance at internal and external training. This record is placed in the staff member’s personnel files for future reference and auditing purposes.



## 9. Contingency Measures

Our business model has built-in safeguard mechanisms for contingency purposes to ensure all contracted services can be completed on a day-to-day basis regardless of any adversity at hand. VEOLIA has both legal and contingency plans, and operational contingency plans that will allow us to provide service without interruption.

A variety of scenarios that may affect the smooth operation of this Contract have been considered and contingency measures detailed below to ensure timely response and minimal impact:

- **Daily service commitment:** VEOLIA SWIFT On Board identifies disruptions or delays to enable the Operations Supervisor to ascertain whether additional collection vehicle support is required to complete the services in line with the planned completion time.
- **Waste Collection Vehicles:** VEOLIA operates 127 waste collection vehicles across WA. We have sufficient spare fleet to ensure we have ongoing capacity to conduct collections in a spate of unscheduled breakdowns on any given day.
- **Drivers:** VEOLIA operates its large fleet of collection vehicles with dedicated drivers for each vehicle, along with 'relief drivers'. These relief drivers fill the void when the dedicated driver is on leave or when additional service requirements are needed. Our relief drivers can be mobilised at short notice.
- **Fleet Maintenance:** Detailed scheduled inspection and maintenance regimes and programs ensure optimal performance is continually maintained to minimise the occurrence of breakdowns.
- **Fleet Repairs:** We have fully equipped Service Centres in Welshpool, Bibra Lake and Gnangara to allow our staff mechanics to perform any emergency work, maintenance and repairs.
- **Management/Supervision:** VEOLIA WA has a large team of 24 Managers and 22 Supervisors with considerable experience managing the delivery of waste management services.
- **Industrial dispute:** In the event of industrial disruption, VEOLIA relies on the dispute resolution procedures within the Enterprise Agreements.

Our strong accredited Integrated Management Systems necessitate periodic monitoring, review and continual improvements to all contingency measures, to ensure they remain adequate on an ongoing basis as key logistical aspects and activities change.

## 10. Continuous Improvement

VEOLIA is committed to partnering with its customers to continually improve their waste management practices and processes.

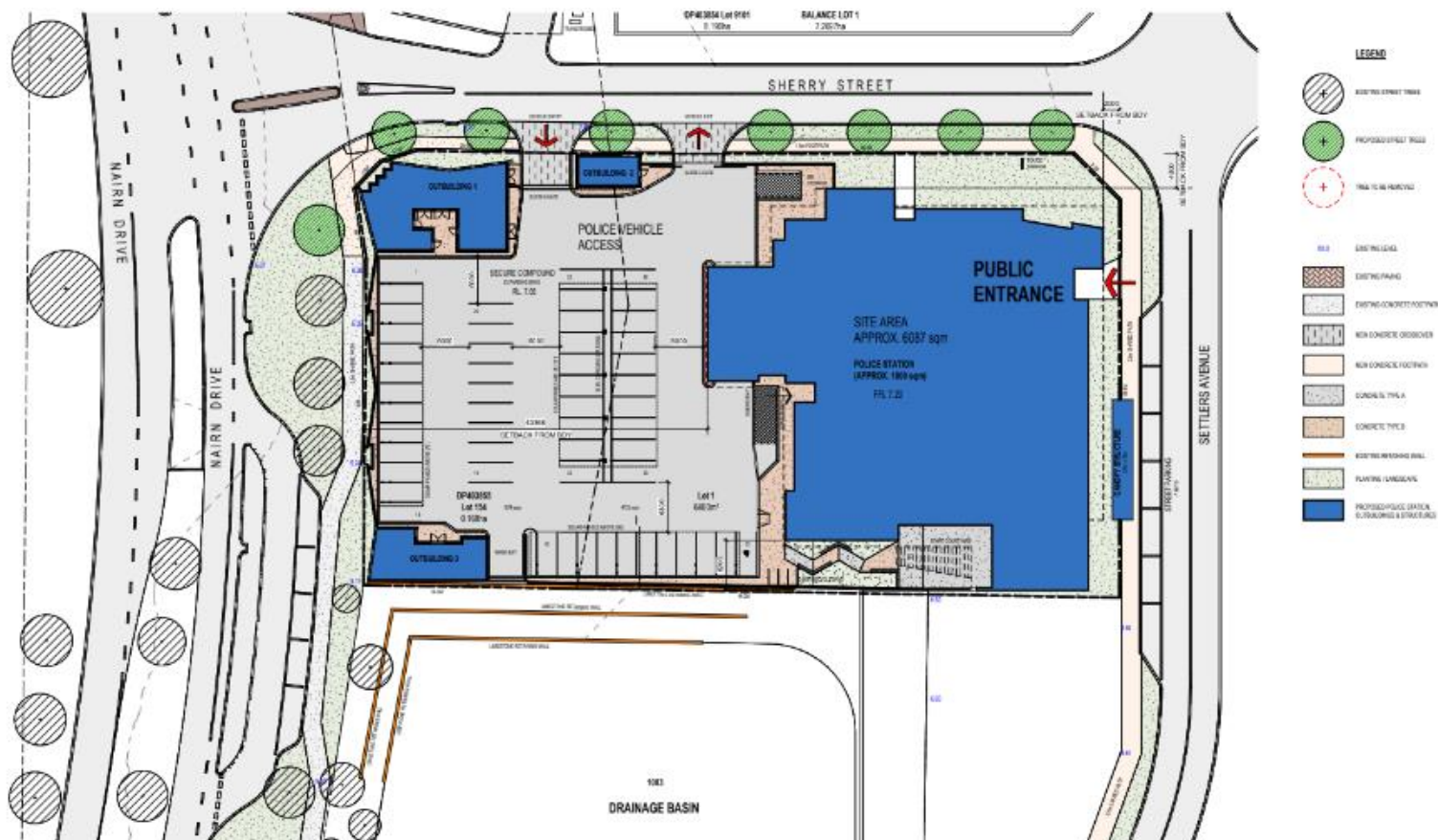
In line with best practice and the waste management hierarchy, VEOLIA will identify opportunities for improvement including (but not limited to):

- Promoting waste avoidance practices and supporting a positive staff culture
- Existing waste streams with new diversion services
- Improvements to waste management practices that will provide reduced OH&S risk and improved efficiency
- More cost effective collection services of resources and waste
- Improvement recommendations to reduce disposal of both clinical and general waste streams

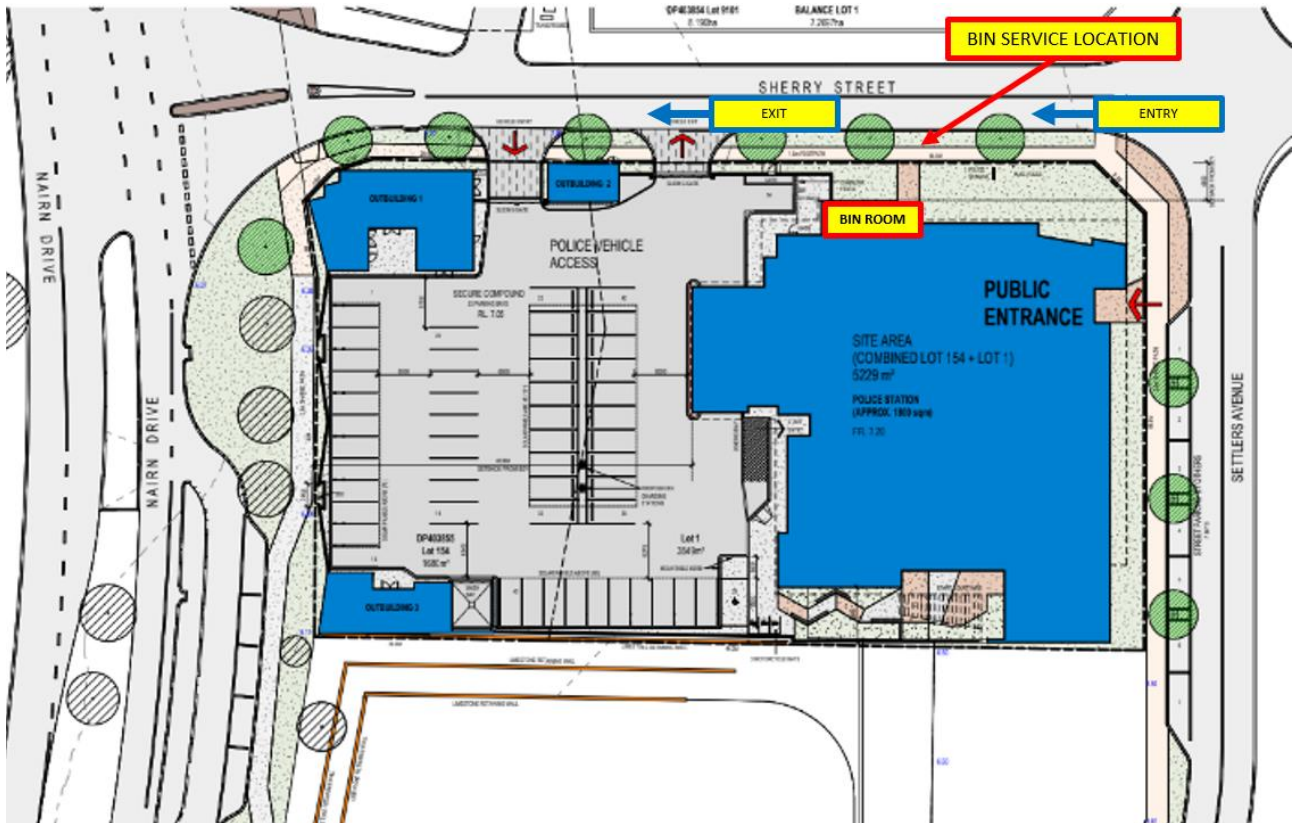


## 11. Appendix 1: Site Plan

Refer full plan provided by Architect



## 12. Appendix 2: Traffic Flow Diagram







# Bushfire Attack Level Assessment Report

- ◇ *Determined BAL rating*
- ◇ *Conditional BAL rating when relevant*
- ◇ *Identify conservation issues when required*
- ◇ *Assessment against the Bushfire Protection Criteria when required*
- ◇ *Provide a Property Bushfire Management Statement when required*

Produced Applying AS 3959:2018 Bushfire Attack Level Determination Methodology

Sherry Street & Nairn Drive, Baldavis

City of Rockingham

Report Date: 31 March 2023


Job Reference No: 220788

## COMPANY AND BUSHFIRE CONSULTANT DETAILS

BPP GROUP PTY LTD  
T/A BUSHFIRE PRONE PLANNING  
ACN: 39 166 551 784 | ABN: 39 166 551 784  
LEVEL 1, 159-161 JAMES STREET  
GUILDFORD WA 6055  
PO BOX 388  
GUILDFORD WA 6935  
08 6477 1144 | admin@bushfireprone.com.au

**I hereby declare that I am a BPAD accredited bushfire practitioner.**

**Accreditation No.** BPAD 27794

**Signature** 

**Date** 31 March 2023

Authorised Practitioner Stamp

Author:	Kyle Calder-Bryan
Co-Author:	Sarina Gorman (BPAD Level 2 No. 42204)
Reviewed:	Kathy Nastov (BPAD Level 3 No. 27794)

## ASSESSMENT AND REPORT DETAILS

**THIS REPORT HAS BEEN PREPARED BY AN ACCREDITED BPAD PRACTITIONER USING THE SIMPLIFIED BAL DETERMINATION PROCEDURE (METHOD 1) AS DETAILED IN SECTION 2 OF AS 3959:2018.**

Fire Protection Association Australia, as the accrediting body for BPAD accreditation, makes no warranties as to the accuracy of the information provided in the report. All enquiries related to the information and conclusions presented in this report must be made to the practitioner who prepared this report.

Version	Details	Site Assessment Date	Report Date
1.0	Original	16 September 2022	30 September 2022
1.1	Addition of updated site developments	16 September 2022	10 November 2022
1.2	Addition of updated site developments	16 September 2022	18 November 2022
1.3	Updates to Original Document to reflect design changes and inclusion of Vegetation Management Statement of Responsibility.	16 September 2022	31 March 2023

**Period of Validity:** Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the accredited practitioner and where required an updated report and/or BAL certificate issued.

**Limitations:** The protection measures that will be implemented based on information presented in this report are minimum requirements and they do not guarantee that buildings or infrastructure will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating.

This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required protection measures (including bushfire resistant construction) and any other required or recommended measures, will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.

All surveys, forecasts, projections and recommendations made in this report associated with the proposed development or use are made in good faith based on information available to Bushfire Prone Planning at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.

Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents, arising out of the services provided by their consultants.

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## TABLE OF CONTENTS

<b>1</b>	<b>PROPOSED BUILDING WORKS OR USE.....</b>	<b>2</b>
1.1.1	SITE PLAN .....	3
<b>2</b>	<b>INFORMATION FOR LOCAL GOVERNMENT BUILDING SERVICES (&amp; THE LANDOWNER).....</b>	<b>4</b>
2.1	BAL ASSESSMENT SUMMARY (CONTOUR MAP FORMAT) .....	5
2.1.1	BAL DETERMINATION METHOD(S) APPLIED AND THE LOCATION OF DATA AND RESULTS .....	5
2.1.2	BAL RATINGS DERIVED FROM THE CONTOUR MAP.....	5
2.1.1	IDENTIFICATION OF SHIELDED ELEVATIONS .....	6
2.1.3	BAL CONTOUR MAP(S).....	9
	<b>APPENDIX A: BAL ASSESSMENT DATA (DETAILED) AND SUPPORTING INFORMATION.....</b>	<b>13</b>
A1:	ASSESSED SITE INPUTS COMMON TO THE METHOD 1 AND METHOD 2 PROCEDURES .....	13
A1.1:	FIRE DANGER INDICES (FDI/ FDI/GFDI) .....	13
A1.2:	VEGETATION ASSESSMENT AND CLASSIFICATION.....	13
A1.3:	EFFECTIVE SLOPE .....	18
A1.4:	SEPARATION DISTANCE .....	19
	<b>APPENDIX B: ADVICE - ONSITE VEGETATION MANAGEMENT - THE APZ.....</b>	<b>20</b>
B1:	THE DIMENSIONS OF THE APZ TO BE ESTABLISHED AND MAINTAINED.....	20
B2:	THE STANDARDS FOR THE APZ AS ESTABLISHED BY THE GUIDELINES (DPLH, V1.4).....	23
B3:	THE STANDARDS FOR THE APZ AS ESTABLISHED BY THE LOCAL GOVERNMENT.....	24
B4:	MAINTAINING LOW THREAT AND NON-VEGETATED AREAS EXCLUDED FROM CLASSIFICATION.....	25
	<b>APPENDIX C: ADVICE - TECHNICAL REQUIREMENTS FOR VEHICULAR ACCESS .....</b>	<b>26</b>
	<b>APPENDIX E: ADVICE - BAL RATINGS – CORRESPONDING THREATS AND CONSTRUCTION REFERENCES.....</b>	<b>27</b>
	<b>ADDENDUM: .....</b>	<b>28</b>

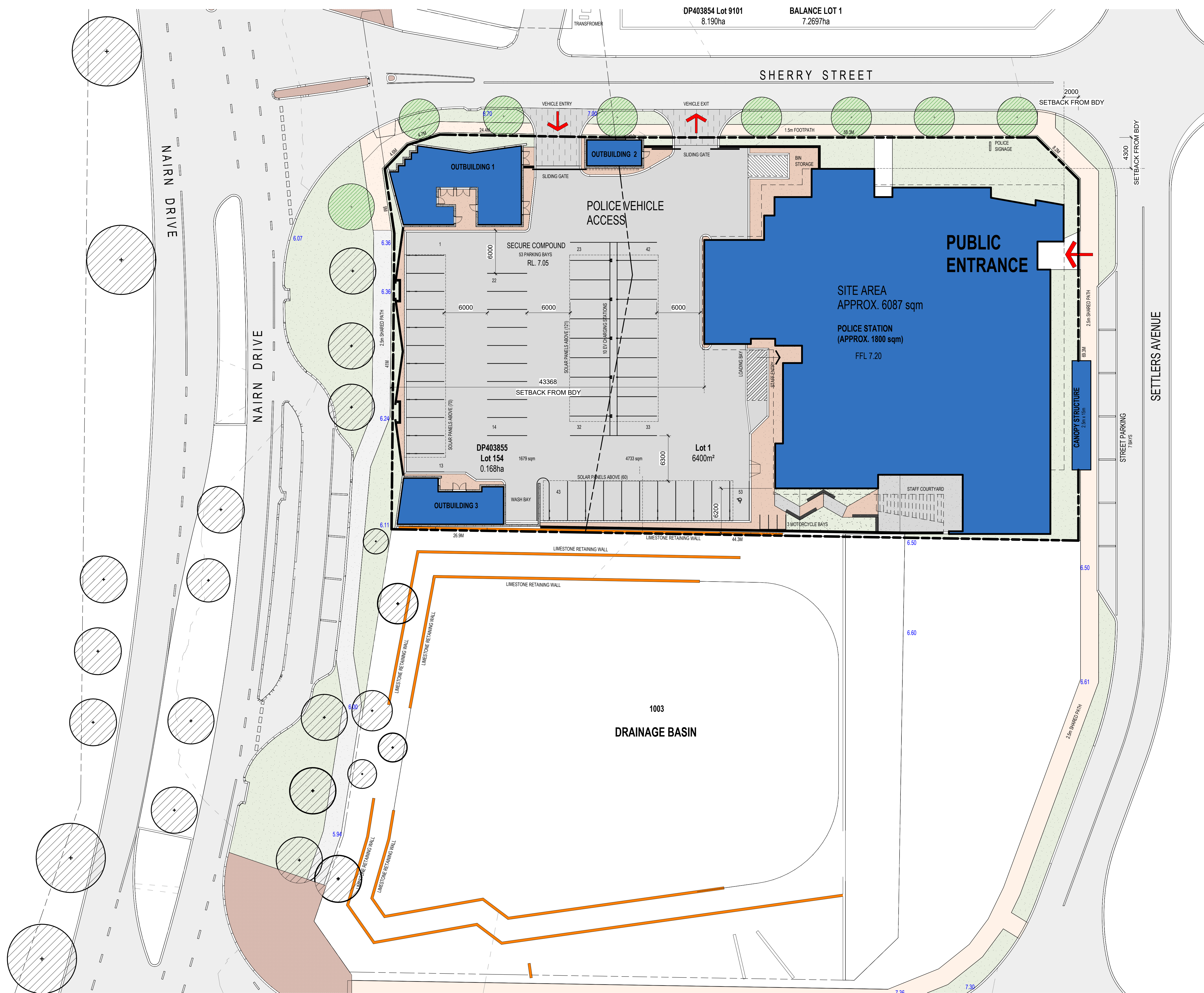
## LIST OF FIGURES

Figure 1:	Site plans relied upon to locate the building works on the lot. ....	3
Figure 2.1:	Classified vegetation and topography map.....	7
Figure 2.2:	Classified vegetation and topography map (post-development).....	8
Figure 3:	BAL Contour Map.....	9

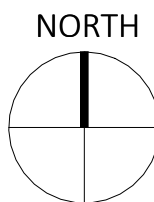
## 1 PROPOSED BUILDING WORKS OR USE

Planning Stage:	Development Application
Subject lot/site total area:	6087 m <sup>2</sup>
Primary Building Work and/or Use	Construction of a habitable building other than a single house or ancillary dwelling
Associated Building	N/A
Main Class of Building - Building Code of Australia (NCC)	Class 5
<b>Description of the proposed development/use:</b>	
Proposed Police Station and associated Outbuildings.	
<b>Description of Planned Staged Development and the Management of Potential Bushfire Planning Issues</b>	
<p>It is anticipated that the Balance Lot 1 (Lot 9101 Sherry Street) will be subsequently subdivided at a later stage consisting of a mix of commercial and residential allotments.</p> <p>In the interim – Refer to addendum contained within this Report - It is assumed for the purposes of assessment that Balance Lot 1 can achieve and maintain the exclusion requirements of s2.2.3.2 of AS3959-2018 to ensure that there is no increase in bushfire risk and its associated BAL rating impact on the Police Station Site (as indicated in this Plan) until such time Balance Lot 1 is subsequently subdivided and developed on as mentioned above. Note - Any classifiable vegetation that is onsite is within the control of the subject site's landowner and therefore can potentially be removed or modified to mitigate the bushfire risk subject to all relevant approvals.</p> <p>Note - A Memorandum of Understanding (MOU) is to be established to the satisfaction of the Decision Maker to manage the grassland vegetation within Balance Lot 1 to the specified distance (17 metres) from the proposed Police Station Site Boundary in accordance with the agreement 'in principle' made by the relevant Stakeholders (Stockland, WA Police and DFES).</p>	





- LEGEND**
- EXISTING STREET TREES
  - PROPOSED STREET TREES
  - TREE TO BE REMOVED
  - EXISTING LEVEL
  - EXISTING PAVING
  - EXISTING CONCRETE FOOTPATH
  - NEW CONCRETE CROSSOVER
  - NEW CONCRETE FOOTPATH
  - CONCRETE TYPE A
  - CONCRETE TYPE B
  - EXISTING RETAINING WALL
  - PLANTING / LANDSCAPE
  - PROPOSED POLICE STATION, OUTBUILDINGS & STRUCTURES



REV.	DESCRIPTION	DATE
C	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	15.12.2022
D	ADDITIONAL 19 BAYS STAFF PARKING	16.01.2023
E	ADDITIONAL 400sqm BUILDING FOOTPRINT	19.01.2023
F	ISSUED FOR CLIENT REVIEW	02.02.2023
G	UPDATE BOUNDARY ALIGNMENT	13.02.2023
H	UPDATE CARPARK CANOPY AND STREET CANOPY	21.03.2023

## 2 INFORMATION FOR LOCAL GOVERNMENT BUILDING SERVICES (& THE LANDOWNER)

### BUSHFIRE ATTACK LEVELS (BAL) - UNDERSTANDING THE RESULTS

The potential transfer (flux/flow) of radiant heat from the bushfire to a receiving object is measured in kW/m<sup>2</sup>. The AS 3959:2018 BAL determination methodology establishes the ranges of radiant heat flux that correspond to each bushfire attack level. These are identified as BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40 and BAL-FZ.

The bushfire performance requirements for certain classes of buildings are established by the Building Code of Australia (Vol. 1 & 2 of the NCC). The BAL will establish the bushfire resistant construction requirements that are to apply in accordance with AS 3959:2018 - *Construction of buildings in bushfire prone areas* and the NASH Standard – *Steel framed construction in bushfire areas (NS 300 2021)*, whose solutions are deemed to satisfy the NCC bushfire performance requirements.

#### DETERMINED BAL RATINGS

A BAL Certificate can be issued for a determined BAL. A BAL can only be classed as 'determined' for an existing or future building/structure when:

1. It's final design and position on the lot are known and the stated separation distance from classified bushfire prone vegetation exists and can justifiably be expected to remain in perpetuity; or
2. It will always remain subject to the same BAL regardless of its design or position on the lot after accounting for any regulatory or enforceable building setbacks from lot boundaries as relevant and necessary (e.g., R-codes, restrictive covenants, defined building envelopes) or the retention of any existing classified vegetation either onsite or offsite.

#### INDICATIVE BAL RATINGS

A BAL Certificate cannot be issued for an indicative BAL. A BAL will be classed as 'indicative' for an existing or future building/structure when the required conditions to derive a determined BAL are not met.

This class of BAL rating indicates what BAL(s) could be achieved and the conditions that need to be met are stated.

Converting the indicative BAL into a determined BAL is conditional upon the currently unconfirmed variable(s) being confirmed by a subsequent assessment and evidential documentation. These variables will include the future building(s) location(s) being established (or changed) and/or classified vegetation being modified or removed to establish the necessary vegetation separation distance. This may also be dependent on receiving approval from the relevant authority for that modification/removal.



## 2.1 BAL Assessment Summary (Contour Map Format)

### INTERPRETATION OF THE BAL CONTOUR MAP

The BAL contour map is a diagrammatic representation of the results of the bushfire attack level assessment.

The map presents different coloured contours extending out from the areas of classified vegetation. Each contour represents a set range of radiant heat flux that potentially will transfer to an exposed element (building, person or other defined element), when it is located within that contour.

Each of the set ranges of radiant heat flux corresponds to a different BAL rating as defined by the AS 3959:2018 BAL determination methodology.

The width of each shaded BAL contour will vary dependant on both the BAL rating and the relevant parameters (calculation inputs) for the subject site. Their width represents the minimum and maximum vegetation separation distances that correspond to each BAL rating (refer to the relevant table below for these distances).

The areas of classified vegetation to be considered in developing the BAL contours, are those that will remain at the intended end state of the subject development once earthworks, clearing and/or landscaping and re-vegetation have been completed. Variations to this statement that may apply include:

- Both pre and post development BAL contour maps are produced; and/or
- Each stage of a development is assessed independently.

### 2.1.1 BAL Determination Method(s) Applied and the Location of Data and Results

Procedure Method (AS 3959:2018)	Applied to the BAL Assessment	Location of the Site Assessment Data			Location of the Results
		Site Assessment Map	Calculation Input Variables		Assessed Bushfire Attack Levels and/or Radiant Heat Levels
			Summary Data	Detailed Data with Explanatory and Supporting Information	
Method 1 (Simplified)	Yes	Figure 2.1	Table 1	Appendix A1	Section 2.1.2 BAL Contour Map

### 2.1.2 BAL Ratings Derived from the Contour Map

Table 1: Indicative and determined BAL(s) for future buildings/structures on the proposed lot.

BUSHFIRE ATTACK LEVEL FOR FUTURE BUILDINGS / STRUCTURES ON STATED LOT <sup>1</sup>		
Proposal	Future Buildings / Structure	
	Indicative BAL <sup>2</sup>	Determined BAL <sup>2</sup>
Police Station	BAL-12.5	BAL-FZ
Outbuilding 1	BAL-12.5	BAL-FZ
Outbuilding 2	BAL-12.5	BAL-FZ
Outbuilding 3	BAL-12.5	BAL-FZ

<sup>1</sup> The assessment data used to derive the BAL ratings is sourced from Table 3 and Figure 3.

<sup>2</sup> Refer to the start of Section 3 for an explanation of indicative versus determined BAL ratings.

### 2.1.1 Identification of Shielded Elevations

IDENTIFICATION OF SHIELDED ELEVATION(S) – REDUCTION IN CONSTRUCTION REQUIREMENTS		
<p>In accordance with AS 3959:2018 Clause 3.5, where an elevation is not exposed to the source of bushfire attack, the construction requirements for that elevation can reduce to the next lower BAL, but not below BAL-12.5. This shall apply to all elements of the wall, including openings, but shall not apply to subfloors or roofs.</p> <p>When applicable, the shielded elevation(s) are identified on the site plan when practical, otherwise a separate diagram is provided as an addendum.</p>		
Proposed Building Works	Police Station	The shielding provisions cannot be applied.
Proposed Building Works	Outbuilding 1	The shielding provisions cannot be applied.
Proposed Building Works	Outbuilding 2	The shielding provisions cannot be applied.
Proposed Building Works	Outbuilding 3	The shielding provisions cannot be applied.







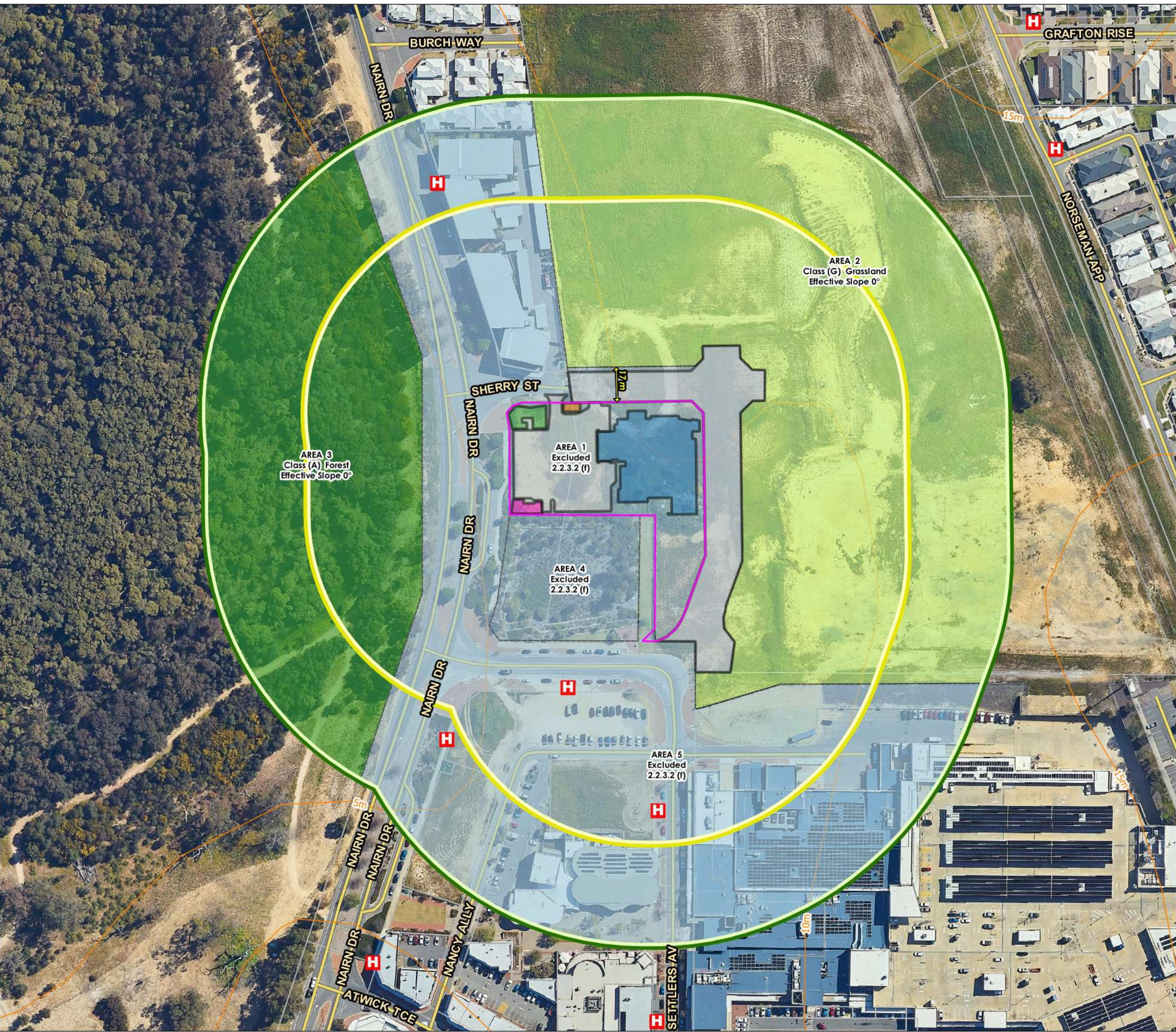


Figure 2.2

## Classified Vegetation & Topography (Post Development)

Sherry Street & Nairn Drive  
Baldvis  
City of Rockingham

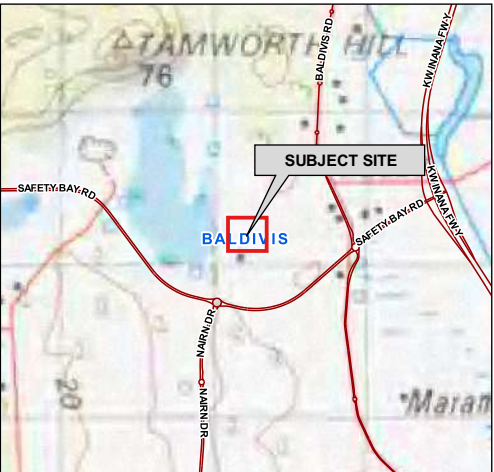
### ----- LEGEND -----

- H** Hydrant
- Elevation (m)
- ↔ Agreed Separation Distance (m)
- Subject Site
- Proposal**
  - Police Station
  - Outbuilding 1
  - Outbuilding 2
  - Outbuilding 3
  - Road Layout/Hardstand Areas
- Assessment Area**
  - 100m Buffer
  - 150m Buffer
- Classified Vegetation**
  - Class A - Forest
  - Class G - Grassland
  - Exclusion 2.2.3.2

0 25 50 75 100

Metres

### ----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50  
Projection: Universal Transverse Mercator Units: Metre  
Map by: Sarina Gorman 30-03-2023  
SCALE (A3): 1 : 1750



Figure 3

BAL Contour Map

Sherry Street & Nairn Drive  
Baldvis  
City of Rockingham

----- LEGEND -----

- H

 Hydrant
- Agreed Separation Distance (m)
- Subject Site
- Proposal

Police Station

Outbuilding 1

Outbuilding 2

Outbuilding 3

Road Layout/Hardstand Areas
- Assessment Area

100m Buffer
- Bushfire Attack Levels

BAL-FZ

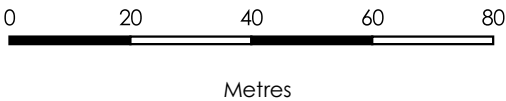
BAL-40

BAL-29

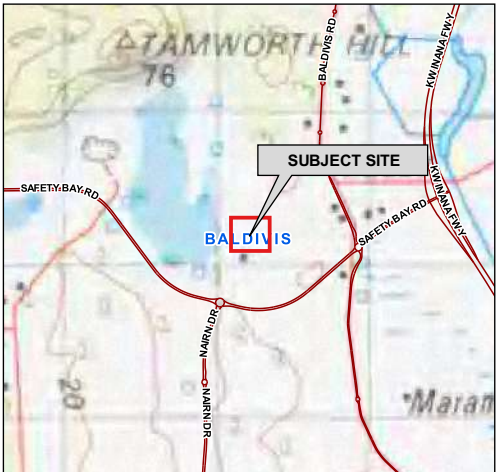
BAL-19

BAL-12.5

BAL-LOW



----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50  
Projection: Universal Transverse Mercator Units: Metre  
Map by: Sarina Gorman 31-03-2023  
SCALE (A3): 1 : 1250



#### 2.1.4 Site Assessment Data Applied to Construction of the BAL Contour Map(s)

RELEVANT CLASSIFIED VEGETATION	
Identification of Classified Vegetation that is Relevant to the Production of the BAL Contour Map(s)	Relevant Map
All identified areas of classified vegetation that exist at the time of the site assessment – both within the subject site (onsite) and external to the subject site (offsite) will be the relevant vegetation.	Figure No.2.1
<p>All identified classified vegetation areas, or portions of areas, within the subject lot are excluded. It is the classified vegetation external to the lot boundaries that is the relevant vegetation.</p> <p>This approach is applied to indicate the achievable bushfire attack levels within the specified lot and the resultant area of developable land where buildings will be subject to BAL-29 or less. It is based on the following assumptions:</p> <ol style="list-style-type: none"> <li>Any classified vegetation within a lot can potentially be managed or removed by the landowner to meet asset protection zone standards; and</li> <li>Future development and consequent removal/management of vegetation that may take place on any adjoining lot cannot be part of considerations for the subject lot.</li> </ol>	Figure No. 2.2
The relevant vegetation for the post-development BAL contour map will be any area of classified vegetation - both within the subject site (onsite) and external to the subject site (offsite) - that will remain at the intended end state of the subject development once earthworks, any clearing and/or landscaping and re-vegetation have been completed.	Figure No.3
Supporting Assessment Details: None Required.	



Table 2: The calculation inputs applied to determining the site specific separation distances corresponding to levels of potential radiant heat transfer (including BAL's).

SUMMARY OF CALCULATION INPUT VARIABLES APPLIED TO THE DETERMINATION OF SEPARATION DISTANCES CORRESPONDING TO RADIANT HEAT LEVELS <sup>1</sup>												
Applied BAL Determination Method		METHOD 1 - SIMPLIFIED PROCEDURE (AS 3959:2018 CLAUSE 2.2)										
The Calculation Variables Corresponding to the BAL Determination Method Applied												
Methods 1 and 2		Method 1			Method 2							
Vegetation Classification		FDI	Effective Slope		Site Slope	FFDI or GFDI	Flame Temp.	Elevation of Receiver	Flame Width	Fireline Intensity	Flame Length	Modified View Factor
			Applied Range	Measured								
Area	Class			degree range	degrees		degrees		K	metres	metres	kW/m
1	(G) Grassland	80	Upslope or flat 0	Flat 0	-	-	-	-	-	-	-	-
2	(G) Grassland	80	Upslope or flat 0	Flat 0	-	-	-	-	-	-	-	-
3	(A) Forest	80	Upslope or flat 0	Flat 0	-	-	-	-	-	-	-	-
4	Excluded cl 2.2.3.2(f)	80	Upslope or flat 0	Flat 0	-	-	-	-	-	-	-	-
5	Excluded cl 2.2.3.2(e & f)	80	N/A	N/A	-	-	-	-	-	-	-	-
<sup>1</sup> All data and information supporting the determination of the classifications and values stated in this table and any associated justification, is presented in Appendix A. Where the values are stated as 'default' these are either the values stated in AS 3959:2018, Table B1 or the values calculated as intermediate or final outputs through application of the equations of the AS 3959:2018 BAL determination methodology. They are not values derived by the assessor.												

Table 3: Vegetation separation distances corresponding to the radiant heat levels illustrated as BAL contours in Figure 3.

THE CALCULATED VEGETATION SEPARATION DISTANCES CORRESPONDING TO THE STATED LEVEL OF RADIANT HEAT <sup>1</sup>									
Vegetation Classification		Separation Distances Corresponding to Stated Level of Radiant Heat (metres)							
		Bushfire Attack Level						Maximum Radiant Heat Flux	
Area	Class	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL12.5	BAL-LOW	10 kW/m <sup>2</sup>	2 kW/m <sup>2</sup>
1	(G) Grassland	<6	6-<8	8-<12	12-<17	17-<50	>50	-	-
2	(G) Grassland	<6	6-<8	8-<12	12-<17	17-<50	>50	-	-
3	(A) Forest	<16	16-<21	21-<31	31-<42	42-<100	>100	-	-
4	Excluded cl 2.2.3.2(f)	-	-	-	-	-	-	-	-
5	Excluded cl 2.2.3.2(e & f)	-	-	-	-	-	-	-	-
<sup>1</sup> All calculation input variables are presented in Table 2. The summary 'printouts' of calculation input and output values for each area of classified vegetation are presented in Appendix A.									



## APPENDIX A: BAL ASSESSMENT DATA (DETAILED) AND SUPPORTING INFORMATION

### A1: Assessed Site Inputs Common to the Method 1 and Method 2 Procedures

#### A1.1: FIRE DANGER INDICES (FDI/ FDI/GFDI)

When using Method 1 the relevant FDI value required to be applied for each state and region is established by AS 3959:2018, Table 2.1. Each FDI value applied in Tables 2.4 – 2.7 represents both the Forest Fire Danger Index (FFDI) and a deemed equivalent for the Grassland Fire Danger Index (GFDI), as per Table B2 in Appendix B. When using Method 2, the relevant FFDI and GFDI are applied.

The values may be able to be refined within a jurisdiction, where sufficient climatological data is available and in consultation with the relevant authority.

Relevant Jurisdiction:	WA	Region:	Whole State	Method 1	Applied FDI:	80
				Method 2	Applied FFDI:	N/A
					Applied GFDI:	N/A

#### A1.2: VEGETATION ASSESSMENT AND CLASSIFICATION

##### Vegetation Types and Classification

In accordance with AS 3959:2018 clauses 2.2.3 and C2.2.3.1, all vegetation types within 100 metres of the 'site' (defined as "the part of the allotment of land on which a building stands or is to be erected"), are identified and classified. Any vegetation more than 100 metres from the site that has influenced the classification of vegetation within 100 metres of the site, is identified and noted. The maximum excess distance is established by AS 3959: 2018 cl 2.2.3.2 and is an additional 100 metres.

Classification is also guided by the Visual Guide for Bushfire Risk Assessment in WA (WA Department of Planning February 2016) and any relevant FPA Australia practice notes.

##### Modified Vegetation

The vegetation types have been assessed as they will be in their natural mature states, rather than what might be observed on the day. Vegetation destroyed or damaged by a bushfire or other natural disaster has been assessed on its expected re-generated mature state. Modified areas of vegetation can be excluded from classification if they consist of low threat vegetation managed in a minimal fuel condition, satisfying AS 3959:2018 s2.2.3.2(f), and there is sufficient justification to reasonable expect that this modified state will exist in perpetuity.

##### The Influence of Ground Slope

Where significant variation in effective slope exists under a consistent vegetation type, these will be delineated as separate vegetation areas to account for the difference in potential bushfire behaviour, in accordance with AS 3959:2018 clauses 2.2.5 and C2.2.5.

#### THE INFLUENCE OF VEGETATION GREATER THAN 100 METRES FROM THE SUBJECT SITE



Vegetation area(s) within 100m of the site whose classification has been influenced by the existence of bushfire prone vegetation from 100m – 200m from the site:



None





Assessment Statement: N/A

VEGETATION AREA 1				
Classification	G. GRASSLAND			
Types Identified	Tussock grassland G-22			
Effective Slope	Measured	Flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees
Additional Justification:		Tall unmanaged Class G Grassland with isolated trees and shrubs present.		
Post Development Assumptions:		Onsite vegetation classified as worst-case scenario. Vegetation can be managed and modified by subject site landowner.		
<div><div><p>-32.33219, 115.81447, -21.4m, 33° 16 Sep 2022 10:03:21</p></div><div><p>-32.33132, 115.81402, 18.5m, 236° 16 Sep 2022 10:02:21</p></div></div>				
PHOTO ID: 1		PHOTO ID: 2		
<div><div><p>-32.33103, 115.81358, -6.5m, 81° 16 Sep 2022 09:53:00</p></div><div><p>-32.33032, 115.81317, 12.9m, 111° 16 Sep 2022 09:43:40</p></div></div>				
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VEGETATION AREA 2				
Classification	G. GRASSLAND			
Types Identified	Tussock grassland G-22			
Effective Slope	Measured	Flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees
Additional Justification:		Tall unmanaged Class G Grassland vegetation.		
Post Development Assumptions:		Offsite vegetation classified as worst-case scenario. Vegetation cannot be managed or removed by subject site landowner.		
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VEGETATION AREA 3				
Classification	A. FOREST			
Types Identified	Open forest A-03			
Effective Slope	Measured	Flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees
Additional Justification:		Mixed tree species between 10 to 15 meters in height, with foliage cover greater than 70%. Understorey consists of grassy vegetation and leaf litter. Evident tree plantation.		
Post Development Assumptions:		Offsite vegetation classified as worst-case scenario. Vegetation cannot be managed or removed by subject site landowner.		
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VEGETATION AREA 4				
Exclusion Clause	2.2.3.2 (f) Low threat vegetation - high moisture content.			
Effective Slope	Measured	N/A	Applied Range (Method 1)	N/A
Additional Justification:	Low threat vegetation consists of a drainage and public recreation reserve which is maintained by the City of Rockingham.			
Post Development Assumptions:	It can reasonably be expected that the vegetation will continue to be maintained by the City of Rockingham and remain in a low threat state in perpetuity.			
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PHOTO ID: 11			PHOTO ID: 12	



VEGETATION AREA 5				
Exclusion Clause	2.2.3.2 (e) Non-vegetated areas and (f) Low threat vegetation - minimal fuel condition.			
Effective Slope	Measured	N/A	Applied Range (Method 1)	N/A
Additional Justification:	Non-vegetated areas include paved public roads and footpaths.			
	Low threat vegetation includes well-managed grass under 10mm as well as reticulated native verge vegetation with mulch ground covers.			
Post Development Assumptions:	Low threat vegetation can reasonably be expected to remain in a low threat state in perpetuity.			
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PHOTO ID: 15			PHOTO ID: 16	

### A1.3: EFFECTIVE SLOPE

#### Measuring

Effective slope refers to the slope “under the classified vegetation which most significantly influences bushfire behaviour (AS 3959:2018, clause B4, CB4). It is not the average slope.

It is described as upslope, flat or downslope when viewed from the exposed element (e.g., building) looking towards the vegetation – and measured in degrees. Ground slope has a direct and significant influence on a bushfire's rate of spread and intensity, which increases when travelling up a slope.

The slope under the vegetation in closest proximity to the exposed element(s), over the distance that will most likely carry the entire depth of the flaming front, will be a significant consideration in the determination of the effective slope. This distance is determined as a function of the potential quasi-steady rate of spread and expected residence time (i.e., the flaming combustion period at a single point on the ground), of a bushfire in the specific vegetation type/landscape scenario.

#### Slope Variation Within Areas of Vegetation

Where a significant variation in effective slope exists under a consistent vegetation type, these will be delineated as separate vegetation areas to account for the difference in potential bushfire behaviour, in accordance with AS 3959:2018 clauses 2.2.5 and C2.2.5.

#### Slope Variation Due to Multiple Development Sites

When the effective slope, under a given area of bushfire prone vegetation, will vary significantly relative to multiple proposed development sites (exposed elements), then the effective slopes corresponding to each of the different locations, are separately identified.

The relevant (worst case) effective slope is determined in the direction corresponding to the potential directions of fire spread towards the subject building(s).

#### Differences in Application of Effective Slope - AS 3959:2018 Method 1 versus Method 2 Procedures

The Method 1 procedure provides five different slope ranges from flat (including all upslopes) to 20 degrees downslope to define the effective slope and bushfire behaviour model calculations apply the highest value in each range (i.e., 0°, 5°, 10°, 15° or 20°).

The Method 2 procedure requires an actual slope (up or down in degrees) to be determined. AS 3959:2018, clause B1 limits the effective slope that can be applied to 30 degrees downslope and 15 degrees upslope. Where any upslope is greater than 15 degrees, then 15 degrees is to be used.

### SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

The effective slopes determined from the site assessment are recorded in Table 1 of this report. When their derivation requires additional explanation and justification, this is provided below.



## A1.4: SEPARATION DISTANCE

### Measuring

The separation distance is the distance in the horizontal plane between the receiver (building/structure or area of land being considered) and the edge of the classified vegetation (AS 3959:2018, clause 2.2.4)

The relevant parts of a building/structure from which the measurement is taken is the nearest part of an external wall or where a wall does not exist, the supporting posts or columns. Certain parts of buildings are excluded including eaves and roof overhangs.

The edge of the vegetation, for forests and woodlands, will be determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk (AS 3959:2018, clause C2.2.5).

### Measured Separation Distance as a Calculation Input

If a separation distance can be measured because the location of the building/structure relative to the edge of the relevant classified vegetation is known, this figure can be entered into the BAL calculation. The result is a determined BAL rating.

### Assumed Separation Distance as a Calculation Input

When the building/structure location within the lot is not known, an assumed building location may be applied that would establish the closest positioning of the building/structure relative to the relevant area of vegetation.

The assumed location would be based on a factor that puts a restriction on a building location such as:

- An established setback from the boundary of a lot, such as a residential design code setback or a restrictive covenant; or
- Within an established building envelope.

The resultant BAL rating would be indicative and require later confirmation (via a Compliance Report) of the building/structure actual location relative to the vegetation to establish the determined BAL rating.

## SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

Measured and assumed separation distances determined from the site assessment are recorded in Table 1 of this report.

When their derivation requires additional explanation and justification, including when the relevant R-Code or other regulated building setbacks are being applied, this is provided below.

## APPENDIX B: ADVICE - ONSITE VEGETATION MANAGEMENT - THE APZ

### THE ASSET PROTECTION ZONE (APZ) - DESCRIPTION

This is an area surrounding a habitable building containing either no fire fuels and/or low threat fire fuels that are managed in a minimal fuel condition. The primary objectives include:

- To ensure the building is sufficiently separated from the bushfire hazard to limit the impact of its direct attack mechanisms. That is, the dimensions of the APZ will, for most site scenarios, remove the potential for direct flame contact on the building, reduce the level of radiant heat to which the building is exposed and ensure some reduction in the level of ember attack (with the level of reduction being dependent on the vegetation types of present);
- To ensure any vegetation retained within the APZ is low threat and prevents surface fire spreading to the building;
- To ensure other combustible materials that can result in consequential fire (typically ignited by embers) within both the APZ and parts of the building, are eliminated, minimised and/or appropriately located or protected. (Note: The explanatory notes in the Guidelines provide some guidance for achieving this objective and other sources are available. Research shows that consequential fire, ignited by embers, is the primary cause of building loss in past bushfire events); and
- To provide a defensible space for firefighting activities.

## B1: The Dimensions of the APZ to be Established and Maintained

### UNDERSTANDING THE APZ PLANNING ASSESSMENT VERSUS ITS IMPLEMENTATION REQUIREMENTS

#### THE 'PLANNING BAL-29' APZ

*It is important to understand is that the 'Planning BAL-29' APZ is not necessarily the size of the APZ that must be physically established and maintained by a landowner. It is a screening tool for making planning approval decisions.*

The assessment against the Bushfire Protection Criteria is conducted for planning approval purposes. To satisfy acceptable solution 'A2.1: Asset Protection Zone', it must be demonstrated that certain minimum separation distances between the relevant building/structure and different classes of bushfire prone vegetation either exist or can be created and will remain in perpetuity.

The required minimum separation distances are those that will ensure the potential radiant heat impact on relevant existing or future buildings does not exceed 29 kW/m<sup>2</sup>. The area of land contained within these separation distances is described as an Asset Protection Zone (APZ) and is to be comprised of non-vegetated land or low threat vegetation managed in a minimal fuel condition.

The applicable minimum separation distances will vary dependent on the vegetation types, the slope of the land they are growing on and other relevant factors specific to the site and its use.

**The resulting 'Planning BAL-29' APZ dimensions may extend outside subject lot boundaries.**

It is the purpose of the bushfire consultant's 'Supporting Assessment Detail', that is presented in the assessment against the acceptable solution A2.1, that will identify and justify how any offsite land within the 'Planning BAL-29 APZ (which the subject landowner has no authority or responsibility to manage), will meet the requirements of being either non-vegetated land or low threat vegetation managed in a minimal fuel condition and justifiably can be considered likely to remain in this state in perpetuity. Or otherwise, explain how this condition cannot be met.

*It is the 'Planning BAL-29' APZ dimensions that will be stated in relevant tables and shown on maps as necessary in this BMP. The exceptions are the tables that are included within this appendix - when relevant to the subject lot(s) - which will present 'BAL Rating' and 'Landowner' APZ dimensions.*



### THE 'BAL RATING' APZ

The 'BAL Rating' APZ will ensure that the potential radiant heat exposure of the building/structure will be limited to the level that the applied construction requirements, (i.e., those corresponding to the building/structure's determined BAL rating), are designed to resist.

The minimum dimensions of the 'BAL Rating' APZ to be established and maintained will be those that correspond to the determined BAL rating for the specific building/structure. They will account for the specific conditions on and surrounding the subject lot.

***The required dimensions of the 'BAL Rating' APZ establish the size of the APZ that must physically exist either entirely within a subject lot or in combination with an area of adjoining land.***

***If in combination with adjoining (offsite) land, it must be justified how the offsite land can most reasonably be expected to either remain unvegetated or be able to meet and maintain the APZ Standards in perpetuity, without any actions by the owner of the subject lot.***

The applicable determined BAL rating will have been stated in the relevant assessment section of this BMP when it can be assessed as a 'determined' rather than 'indicative' rating. Otherwise, it will be shown on the BAL Certificate that is submitted as part of a building application.

### THE 'LANDOWNER' APZ

**Dimensions:** The 'Landowner' APZ is to be established and maintained by the owner of the subject lot. The minimum dimensions are the 'BAL Rating' APZ dimensions except that they will be limited to the distance that they can be established within the subject lot. (Note: Any removal of native vegetation may require the approval of the relevant authority.

The remaining required separation distance outside the subject lot has been assessed by the bushfire consultant and it can justifiably be considered likely to remain as low threat vegetation, managed in a minimal fuel condition (if necessary) in perpetuity without the owner of the subject lot being required to take any action for which they do not have the authority.

These minimum 'within the lot' APZ dimensions will only be greater when the relevant local government's annual firebreak / hazard reduction notice (issued under s33 of the Bushfires Act 1954), specifies the APZ dimensions to be applied within the lot and they are greater. Consequently, the 'Landowner' APZ dimensions can be a combination of the 'BAL Rating' Dimensions and the Local Government requirements. Check their annual notice for revisions to these requirements.

***The dimensions of the 'Landowner' APZ establish the size of the APZ that must be established and maintained by the landowner within the subject lot.***

**Location:** The 'Landowner' APZ for which the landowner has the responsibility to establish and maintain, is that which will exist entirely within the boundaries of the relevant lot, unless an approved formal and enforceable agreement allows them to manage a specified area of land external to the subject lot.

In most cases the landowner will only have authority and responsibility to establish and manage the APZ within the subject lot.

Otherwise, when there is a remaining part of the 'BAL Rating' APZ existing outside the subject lot, then these areas of land will, in most situations, include non-vegetated areas (e.g., roads / parking / drainage / water body), formally managed areas of vegetation (e.g., public open space / recreation areas / services installed in a common section of land) or an APZ on a neighbouring lot that is required to be established and maintained by the owner of that adjoining lot.

*For vulnerable land uses, the 'BAL Rating' APZ and 'Landowner' APZ will also refer to the dimensions corresponding to radiant heat impact levels of 10 kW/m<sup>2</sup> and 2 kW/m<sup>2</sup> (calculated using 1200K flame temperature).*

*For development applications only, the 'Landowner' APZ dimensions are also shown on the Property Bushfire Management Statement when it is a required component of this report.*

Table B1.1: The applicable 'Landowner' APZ Dimensions when indicative BAL ratings have been established by the BMP.

THE 'LANDOWNER' APZ DIMENSIONS TO BE ESTABLISHED AND MAINTAINED							
Relevant Buildings(s)	Classified Vegetation  Refer to Fig 3	Minimum Required Separation Distances (m) - Building to Vegetation					
		The 'BAL Rating' APZ				As Directed by the Applicable Local Government Firebreak / Hazard Reduction Notice	The 'Landowner' APZ  (limited to the subject lot boundary unless otherwise justified)
		Corresponding to the Stated 'Indicative' BAL					
		BAL-29	BAL-19	BAL-12.5	BAL-LOW		
Proposed Police and associated Outbuildings.	Area 1 (Grassland)	8	12	17	50	N/A	Will be dependent on the subsequent 'Determined' BAL rating.  It is then to be calculated as the greater of the 'BAL Rating' distance or the 'Firebreak Notice' distance, and no greater than the distance to the lot boundary.
	Area 2 (Grassland)	8	12	17	50		
	Area 3 (Forest)	21	31	42	100		
	Area 4	-	-	-	-		
	Area 5 (Excluded)	-	-	-	-		
Comments: None required.							



## B2: The Standards for the APZ as Established by the Guidelines (DPLH, v1.4)

Within the Guidelines (source: <https://www.wa.gov.au/government/document-collections/state-planning-policy-37-planning-bushfire-prone-areas>), the management Standards are established by:

- Schedule 1: Standards for Asset Protection Zones (see extract below) established by the Guidelines; and
- The associated explanatory notes (Guidelines E2) that address (a) managing an asset protection zone (APZ) to a low threat state (b) landscaping and design of an asset protection zone and (c) plant flammability.

Guidelines for  
Planning in  
Bushfire  
Prone Areas

71

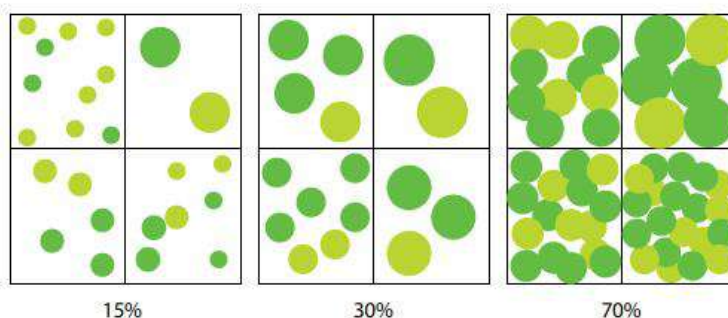


### ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

#### SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Fences within the APZ	<ul style="list-style-type: none"> <li>• Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).</li> </ul>
Fine-fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> <li>• Should be managed and removed on a regular basis to maintain a low threat state.</li> <li>• Should be maintained at &lt;2 tonnes per hectare (on average).</li> <li>• Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch &gt;6 millimetres in thickness.</li> </ul>
Trees* (>6 metres in height)	<ul style="list-style-type: none"> <li>• Trunks at maturity should be a minimum distance of six metres from all elevations of the building.</li> <li>• Branches at maturity should not touch or overhang a building or powerline.</li> <li>• Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation.</li> <li>• Canopy cover within the APZ should be &lt;15 per cent of the total APZ area.</li> <li>• Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ.</li> </ul>

Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity



Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	<ul style="list-style-type: none"> <li>• Should not be located under trees or within three metres of buildings.</li> <li>• Should not be planted in clumps &gt;5 square metres in area.</li> <li>• Clumps should be separated from each other and any exposed window or door by at least 10 metres.</li> </ul>
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul style="list-style-type: none"> <li>• Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above.</li> <li>• Can be located within two metres of a structure, but three metres from windows or doors if &gt;100 millimetres in height.</li> </ul>
Grass	<ul style="list-style-type: none"> <li>• Grass should be maintained at a height of 100 millimetres or less, at all times.</li> <li>• Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.</li> </ul>
Defendable space	<ul style="list-style-type: none"> <li>• Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.</li> </ul>
LP Gas Cylinders	<ul style="list-style-type: none"> <li>• Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building.</li> <li>• The pressure relief valve should point away from the house.</li> <li>• No flammable material within six metres from the front of the valve.</li> <li>• Must sit on a firm, level and non-combustible base and be secured to a solid structure.</li> </ul>

\* Plant flammability, landscaping design and maintenance should be considered – refer to explanatory notes

### **B3: The Standards for the APZ as Established by the Local Government**

Refer to the firebreak / hazard reduction notice issued annually (under s33 of the Bushfires Act 1954) by the relevant local government. It may state Standards that vary from those established by the Guidelines and that have been endorsed by the WAPC and DFES as per Section 4.5.3 of the Guidelines.

A copy of the relevant annual notice is not included here as they are subject to being reviewed and modified prior to issuing each year. Refer to ratepayers notices and/or the local government's website for the current version.



## **B4: Maintaining Low Threat and Non-Vegetated Areas Excluded from Classification**

AS 3959 establishes the methodology for determining a bushfire attack level (BAL). The methodology includes the classification of the subject site's surrounding vegetation according to their 'type' and the application of the corresponding bushfire behaviour models to determine the BAL. Certain vegetation can be considered as low threat and excluded from classification. Where this has occurred in assessing the site, the extract from AS3959:2018 below state the requirements (including the size of the vegetation area if relevant to the assessment) for maintenance of those areas of land.

15

AS 3959:2018

### **2.2.3.2 Exclusions—Low threat vegetation and non-vegetated areas**

The following vegetation shall be excluded from a BAL assessment:

- (a) Vegetation of any type that is more than 100 m from the site.
- (b) Single areas of vegetation less than 1 ha in area and not within 100 m of other areas of vegetation being classified vegetation.
- (c) Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other or of other areas of vegetation being classified vegetation.
- (d) Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified vegetation.
- (e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.
- (f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks.

#### **NOTES:**

- 1 Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm).
- 2 A windbreak is considered a single row of trees used as a screen or to reduce the effect of wind on the leeward side of the trees.

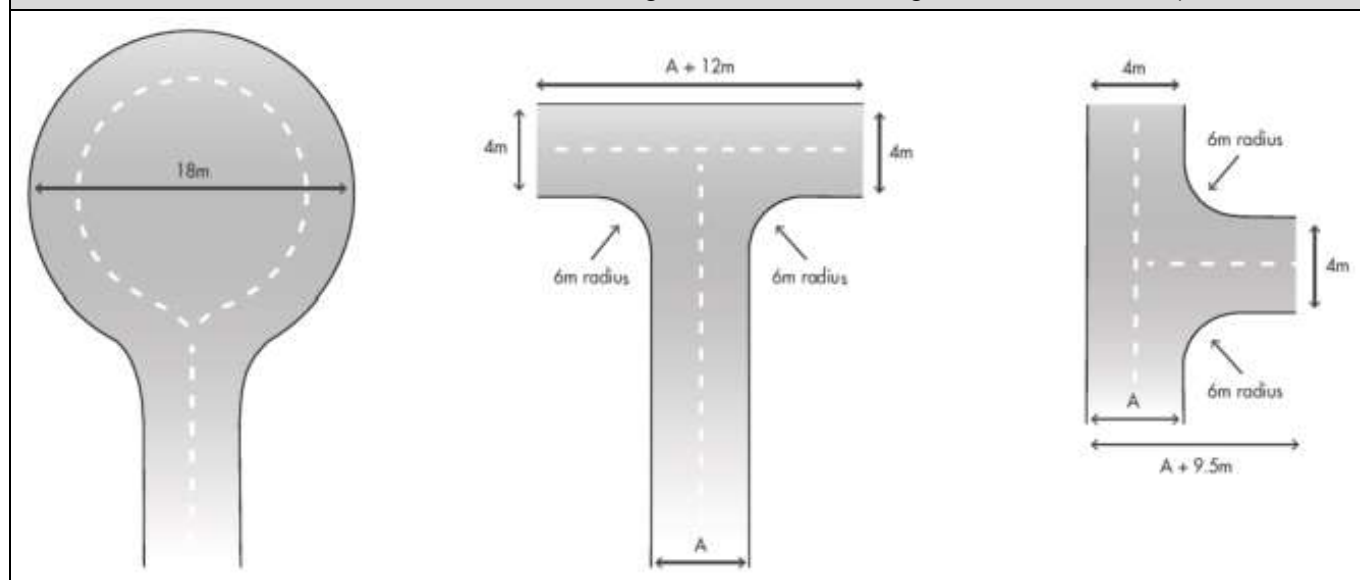
## APPENDIX C: ADVICE - TECHNICAL REQUIREMENTS FOR VEHICULAR ACCESS

The design/layout requirements for access are established by the acceptable solutions of the Guidelines (DPLH, 2021 v1.4) Element 3 and vary dependent on the access component, the land use and the presence of 'vulnerable' persons. Consequently, the best reference source are the Guidelines. The technical requirements that are fixed for all components and uses are presented in this appendix.

**GUIDELINES TABLE 6, EXPLANATORY NOTES E3.3 & E3.6 AND RELEVANT ACCEPTABLE SOLUTIONS**

Technical Component	Vehicular Access Types / Components			
	Public Roads	Emergency Access Way <sup>1</sup>	Fire Service Access Route <sup>1</sup>	Battle-axe and Private Driveways <sup>2</sup>
Minimum trafficable surface (m)	In accordance with A3.1	6	6	4
Minimum Horizontal clearance (m)	N/A	6	6	6
Minimum Vertical clearance (m)	4.5			
Minimum weight capacity (t)	15			
Maximum Grade Unsealed Road <sup>3</sup>	As outlined in the IPWEA Subdivision Guidelines	1:10 (10%)		
Maximum Grade Sealed Road <sup>3</sup>		1:7 (14.3%)		
Maximum Average Grade Sealed Road		1:10 (10%)		
Minimum Inner Radius of Road Curves (m)		8.5		

**Turnaround Area Dimensions for No-through Road, Battle-axe Legs and Private Driveways <sup>4</sup>**



**Passing Bay Requirements for Battle-axe leg and Private Driveway**

When the access component length is greater than the stated maximum, passing bays are required every 200m with a minimum length of 20m and a minimum additional trafficable width of 2m (i.e., the combined trafficable width of the passing bay and constructed private driveway to be a minimum 6m).

**Emergency Access Way – Additional Requirements**

Provide a through connection to a public road, be no more than 500m in length, must be signposted and if gated, gates must be open the whole trafficable width and remain unlocked.

<sup>1</sup> To have crossfalls between 3 and 6%.

<sup>2</sup> Where driveways and battle-axe legs are not required to comply with the widths in A3.5 or A3.6, they are to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision.

<sup>3</sup> Dips must have no more than a 1 in 8 (12.5% or 7.1 degree) entry and exit angle.

<sup>4</sup> The turnaround area should be within 30m of the main habitable building.



## APPENDIX E: ADVICE - BAL RATINGS – CORRESPONDING THREATS AND CONSTRUCTION REFERENCES

BAL <sup>1</sup>	DESCRIPTION OF PREDICTED BUSHFIRE DIRECT ATTACK MECHANISMS (THREATS) AND LEVELS OF EXPOSURE	REFERENCES FOR CONSTRUCTION REQUIREMENTS	
		AS 3959:2018 Construction of Buildings in Bushfire Prone Areas	The NASH Standard (2021) – Steel Framed Construction in Bushfire Areas
		Referenced by the Building Code of Australia for Building Classes 1, 2, 3 & 10a	Referenced by the Building Code of Australia for Building Classes 1 & 10a
<b>BAL – LOW</b>	There is insufficient risk to warrant specific construction requirements but there is still some risk. <i>(Note: DFES recommend that ember attack protection features be incorporated into the design where practicable).</i>	Section 4. No Requirements	No Requirements
<b>BAL – 12.5</b>	There is a risk of ember attack. Construction elements are expected to be exposed to heat flux not greater than 12.5 kW/m <sup>2</sup>	Sections 3 & 5.	All construction requirements for BAL-12.5 to BAL-40 are the same except for windows and external doors, which must comply with AS 3959.  The construction requirements are set out as essentially non-combustible construction systems for each of the following building elements:  Section 1.4: General Requirements Section 2: Roof and Ceiling System Section 3: External Wall System Section 4: Floor System Section 5: Carports Verandahs and Decks.
<b>BAL – 19</b>	There is a risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 19 kW/m <sup>2</sup> .	Sections 3 & 6	
<b>BAL – 29</b>	There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 29 kW/m <sup>2</sup> .	Sections 3 & 7.	
<b>BAL – 40</b>	There is a much increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux not greater than 40kW/m <sup>2</sup> .	Sections 3 & 8.	
<b>BAL – FZ (Flame Zone)</b>	There is an extremely high risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux greater than 40 kW/m <sup>2</sup> .	Sections 3 & 9.	The construction requirements are set out in Sections 1-5 and differ from the requirements for all other BAL ratings.

<sup>1</sup> AS 3959:2018 *Construction of buildings in bushfire prone areas*, defines a Bushfire Attack Level (BAL) as a “means of measuring the severity of a building’s potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat flux expressed in kW/m<sup>2</sup>, and is the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire.”

## ADDENDUM:

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- Email Correspondence – Vegetation Management Statement of Responsibility.

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Hi Sarina,

Apologies, the separation has been agreed at the 17m you advised previously.

It has been agreed between Stockland, WA Police and DFES that a separate MOU is sufficient to implement management and can be referenced in the BMP.

Kinds Regards,

Jacob Abbott  
Development Manager

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