Government of **Western Australia**
Development Assessment Panels

Metro Outer Joint Development Assessment Panel Agenda

Meeting Date and Time: Thursday, 4 August 2022; 9:00am
Meeting Number: MOJDAP/189
Meeting Venue: Electronic Means

To connect to the meeting via your computer - https://us06web.zoom.us/j/84635984832

To connect to the meeting via teleconference dial the following phone number - +61 8 7150 1149
Insert Meeting ID followed by the hash (#) key when prompted - 846 3598 4832

This DAP meeting will be conducted by electronic means (Zoom) open to the public rather than requiring attendance in person.

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Attendance

DAP Members

Mr Eugene Koltasz (Presiding Member)
Ms Karen Hyde (Deputy Presiding Member)
Ms Diana Goldswain (A/Third Specialist Member)

Item 8.1
Cr Vinh Nguyen (Local Government Member, City of Wanneroo)
Cr Frank Cvitan (Local Government Member, City of Wanneroo)

Item 8.2
Cr Lorna Buchan (Local Government Member, City of Rockingham)
Cr Mark Jones (Local Government Member, City of Rockingham)

Officers in attendance

Item 8.1
Mr Greg Bowering (City of Wanneroo)
Mr Nick Bertone (City of Wanneroo)

Item 8.2
Mr David Banovic (City of Rockingham)
Mr Chris Parlane (City of Rockingham)
Mr David Waller (City of Rockingham)

Minute Secretary

Mr Stephen Haimes (DAP Secretariat)
Ms Sarah-Rose Butler (DAP Secretariat)

Applicants and Submitters

Item 8.1
Mr Nathan Stewart (Rowe Group)
Mr Benham Bordbar (Trascore)
Mr Mohammad Rasouli (Transcore)
Mr Steve Hindley (Hindley & Associates)
Mr Michael Leen (Fresh Frontier)
Mr John Opferkuch (Fresh Frontier)

Item 8.2
Mr Gorki Bogdanich (Archetype Design Studio)
Ms Clare McLean (Peter Webb & Associates)
Mr Prashant Nallan (Jeey Ars Acharya Peett Am Australia Ltd)
Dr Satish Devata (Jeey Ars Acharya Peett Am Australia Ltd)
Dr Ravi Morrisetty (Jeey Ars Acharya Peett Am Australia Ltd)
Mr Vijay Dasari (Jeey Ars Acharya Peett Am Australia Ltd)
Mr Sreedhar Acharya (Jeey Ars Acharya Peett Am Australia Ltd)
Mr Brad Byrne
Ms Trudy Byrne
Ms Rosemary Coppen
Mr David Smith
Ms Glenda Cooper
Ms Julie Davey
Mr Bruce Davey
Ms Emma Davey
Ms Michelle Harvey
Mr Ken Johnson
Ms Debbie MacKenzie
Ms Deidre McCoy
Ms Peter McCoy
Ms Deborah Mills
Mr Ian Mills
Ms Cathy Paton
Mr Garry Raffaele
Ms Janice Raffaele
Mr Elvio Ruggiero
Ms Fiona Tassell
Mr Geoffrey Tomlinson
Ms Peta Sims
Ms Margaret Smith

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.

In response to the COVID-19 situation, 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

Mr Jason Hick (Third Specialist 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

The Presiding Member notes an addendum to the agenda was published to include details of a DAP request for further information and responsible authority response in relation to Item 8.2, received on 2 August 2022.

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

Member	Item	Nature of Interest
Cr Lorna Buchan	8.2	Impartiality Interest – Under clause 2.4.9 of the DAP Code of Conduct, Cr Buchan participated in the prior Council decision in accordance with her functions as a member of a local government. Cr Buchan undertakes to exercise judgment in relation to any DAP application before her, which she will consider on its planning merits
Cr Mark Jones	8.2	Impartiality Interest – Under clause 2.4.9 of the DAP Code of Conduct, Cr Jones participated in the prior Council decision in accordance with his functions as a member of a local government. Cr Jones undertakes to exercise judgment in relation to any DAP application before him, which he will consider on its planning merits

7. Deputations and Presentations

7.1 Mr Nathan Stewart (Rowe Group) presenting in support of the recommendation for the application at Item 8.1. The presentation will speak in support of the proposed development, while requesting that the City's proposed Condition 3 is replaced with a new Condition to address concerns relating to landscaping.

7.2 Mr Brad Byrne presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.3 Ms Trudy Byrne presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.4 Ms Rosemary Coppin & Mr David Smith presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.5 Ms Glenda Cooper presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.6 Ms Julie Davey presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.7 Mr Bruce Davey presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.8 Ms Emma Davey presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.9 Ms Michelle Harvey presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.10 Mr Ken Johnson presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.11 Ms Debbie MacKenzie presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.12 Ms Deidre & Mr Peter McCoy presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.13 Ms Deborah & Mr Ian Mills presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.14 Ms Cathy Paton presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.15 Ms Janice & Mr Garry Raffaele presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.16 Mr Elvio Ruggiero presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.17 Ms Peta Sims presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.18 Ms Margaret Smith presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.19 Ms Fiona Tassell presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.20 Mr Geoffrey Tomlinson presenting in support of the recommendation for the application at Item 8.2. The presentation will speak against the proposed development.

7.21 Mr Gorki Bogdanich (Archetype Design Studio) presenting against the recommendation for the application at Item 8.2. The presentation will address support of the proposed development and requesting an alternate recommendation from the panel.

7.22 Ms Clare McLean (Peter Webb & Associates) presenting against the recommendation for the application at Item 8.2. The presentation will address support of the proposed development and requesting an alternate recommendation from the panel.

7.23 WRITTEN SUBMISSION – Mr Brad Woolley in support of the recommendation for the application at Item 8.2.

7.24 WRITTEN SUBMISSION – Ms Caroline Meeusen in support of the recommendation for the application at Item 8.2.

7.25 WRITTEN SUBMISSION – Mr Peter Jacobs & Ms Kristy Harrison in support of the recommendation for the application at Item 8.2.

The City of Wanneroo and City of Rockingham 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 No. 359 (Lot 703) Gnangara Road, Wangara

Development Description:	Proposed Industrial Development
Applicant:	Mr Nathan Stewart (Rowe Group)
Owner:	JAO MDL Investments Pty Ltd
Responsible Authority:	City of Wanneroo
DAP File No:	DAP/21/02147

8.2 Lot 53 (No 67) Folly Road, Baldivis

Development Description:	Proposed place of worship (Hindu Temple)
Applicant:	Mr Gorki Bogdanich (Archetype Design Studio)
Owner:	Jeey Ars Acharya Peett Am Australia Ltd
Responsible Authority:	City of Rockingham
DAP File No:	DAP/21/02148

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

Nil.

10. State Administrative Tribunal Applications and Supreme Court Appeals

Current SAT Applications				
File No. & SAT DR No.	**LG Name**	**Property Location**	**Application Description**	**Date Lodged**
DAP/18/01543 DR 75/2022	City of Joondalup	Lot 649 (98) O'Mara Boulevard, Iluka	Commercial development	02/05/2022

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

Government of **Western Australia**
Development Assessment Panels

Direction for Further Services from the Responsible Authority

Regulation 13(1) and DAP Standing Orders 2020 cl. 3.3

Guidelines

A DAP Member who wishes to request further services (e.g. technical information or alternate recommendations) from the Responsible Authority must complete this form and submit to daps@dplh.wa.gov.au.

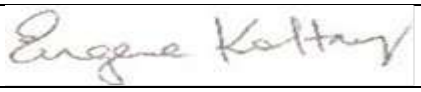
The request will be considered by the Presiding Member and if approved, the Responsible Authority will be directed to provide a response to DAP Secretariat within the form.

It is important to note that **the completed form containing the query, response and any accompanying documentation will be published on the DAP website** as an addendum to the meeting agenda.

DAP Application Details

DAP Name	MOJDAP/189
DAP Application Number	DAP/21/02148
Responsible Authority	City of Rockingham
Property Location	Lot 53 (No 67) Folly Road, Baldivis

Presiding Member Authorisation

Presiding Member Name	Mr Eugene Koltasz
Signature	
Date	29 July 2022
Response Due	**2 August 2022; 12:00 noon**

Nature of technical advice or information required*

1	**DAP query**	**Alternate recommendation for Approval with Conditions.**
	Response	See attached

* Any alternate recommendation sought does not infer a pre-determined position of the panel.

Regulation 13 Request - Alternative Recommendation

City of Rockingham Response

On 29th July 2022, the Presiding Member of the Metro Outer Joint Development Assessment Panel (MOJDAP) directed the City of Rockingham to provide a response to the following:

"Alternate recommendations for Approval with Conditions."

This alternate recommendation has only been provided in response to a request from the Presiding Member of the MOJDAP, in accordance with Regulation 13 of the *Planning and Development (Development Assessment Panels) Regulations 2011* and does not change this Refusal recommendation provided by the City of Rockingham.

The City's response is also based on the submitted Development Application.

That the Metro Outer Joint Development Assessment Panel resolves to:

Approve DAP Application reference DAP/21/02148 and the accompanying plans:

- Location Plan, Drawing No. 01, Revision 5, dated 10 June 2022;
- Site Plan: Total Lot, Drawing No. 02, Revision 5, dated 10 June 2022;
- Proposed Development East of Mid Tree Line, Drawing No.3, Revision 5, dated 10 June 2022;
- Temple Plan, Priests Quarters and Toilet Block, Drawing No.4, Revision 5, dated 10 June 2022;
- Elevations, Drawing No.5, Revision 5, dated 10 June 2022;
- Multi-Purpose Hall, Dining and Library Plan, Drawing No.6, Revision 5, dated 10 June 2022;
- Multi-Purpose Hall, Dining and Library Elevations, Drawing No.7, Revision 5, dated 10 June 2022;
- Guests Accommodation Plan and Elevations, Drawing No.8, Revision 5, dated 10 June 2022;
- Landscape Plan, Drawing No.9, Revision 5, dated 10 June 2022;
- Bushfire APZ Strategy, Drawing No. 10, Revision 5, dated 10 June 2022;
- Staging Diagram, Drawing No.11, Revision 5, dated 10 June 2022.

In accordance with Clause 68 of the Planning and Development (Local Planning Schemes) Regulations 2015 and the provisions of clause 68(2)(b) of the deemed provisions of the City of Rockingham Town Planning Scheme No. 2, subject to the following conditions:-

Conditions

1. This decision constitutes development approval only and is valid for a period of 4 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. All development must be carried out in accordance with the approved plans, save that, in the event of an inconsistency between the approved plans and a requirement of the conditions set out below, the requirements of the conditions shall prevail.

3. (a) Prior to a dwelling being constructed on Lot 923 (No.547) Young Road, attendance and times of operation shall be limited to the following:

Daily Prayer Sessions		
Monday-Friday	25-50 people (morning session)	7am – 1pm
	25-50 people (evening session)	5pm – 9pm
Weekday Yoga classes (2 per week)	20 people (evening session)	6pm – 7pm
Saturday/ Sunday	100 - 150 people (morning session)	7am – 1pm
	100 - 150 people (evening session)	5pm – 9pm
Saturday/Sunday Scripture Classes	50 – 75 people	3pm – 6pm
Special Hindu Festivals (occurring on average once per month)		
Mondays – Fridays	50 - 75 people (morning sessions)	7am – 1pm
	200 - 250 (evening sessions)	5pm - 9pm
Saturday & Sundays	200 people (morning session)	7am – 1pm
	200 – 250 people (Evening sessions)	5pm – 9pm
Hindu Weddings (occurring up to 6 times per year)		
Saturdays	300 – 400 people	9am – 11pm
Sundays and public holidays	300 – 400 people	9am – 11pm

(b) Upon the completion of a dwelling being constructed on Lot 923 (No.547) Young Road, attendance and times of operation related to the Special Hindu Festivals and Weddings shall be limited to the following:

Special Hindu Festivals (occurring on average once per month)		
Mondays – Fridays	50 - 75 people (morning sessions)	7am – 1pm
	200 - 250 (evening sessions)	5pm - 9pm
Saturdays	200 people (morning session)	7am – 1pm
	200 – 250 people (Evening sessions)	5pm – 9pm
Sundays/ Public holidays	200-250 people	9am-9pm
Hindu Weddings (occurring up to 6 times per year)		
Saturdays	300 – 400 people	9am – 7pm

Sundays and public holidays	Not permitted

4. Prior to commencement of development, a Construction Environmental Management Plan must be prepared and approved to the satisfaction of the City of Rockingham, to ensure appropriate management of construction related impacts including, but not limited to:

   - Construction traffic management;
   - Construction noise management;
   - Dust management;
   - Fauna management, including fauna relocation strategies;
   - Tree protection; and
   - Construction drainage management.

   The approved Construction Environmental Management Plan must be implemented for the duration of construction works, to the satisfaction of the City of Rockingham.

5. Prior to applying for a building permit a pre-works Geotechnical Report prepared by a suitably qualified person must be submitted to the City of Rockingham for approval and this report must address:

   (a) fill material composition and quality;
   (b) on-site drainage, and
   (c) establish the maximum groundwater levels beneath the site.

6. Prior to applying for a Building Permit, a Stormwater Management Plan must be prepared by a suitably qualified engineering showing how stormwater will be contained on-site and those plans must be submitted to the City of Rockingham for its approval. All stormwater generated by the development must be managed in accordance with Planning Policy 3.4.3 - Urban Water Management to the satisfaction of the City of Rockingham. The approved plans must be implemented and all works must be maintained for the duration of the development.

7. All vehicles are required to access/egress the site from Folly Road. No vehicles are permitted to access/egress the site from Young Road unless in an event of emergency.

8. Prior to the occupation of the development the existing crossover on Folly Road must be removed and the verge must be reinstated to the satisfaction of the City of Rockingham.

9. Prior to commencement of development, detailed civil engineering construction plans for the proposed left turn treatment (AUL(S)) within the Folly Road road reserve shall be submitted by a suitably qualified person to the City of Rockingham for approval, designed in accordance with Austroads' *Guide to Road Design Part 4A (Unsignalised and Signalised Intersections)*.

   These works must be constructed, in accordance with the approved plans, prior to the occupation of the development.

10. The carpark must:

    (i) provide a minimum of 103 car parking spaces;
    (ii) be designed, constructed, sealed, kerbed, drained and marked in accordance with User Class 2 of Australian/New Zealand Standard AS/NZS 2890.1:2004, Parking facilities, Part 1: Off-street car parking prior to applying for a Building Permit;

(iii) provide 2 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 the main 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;
(iv) be constructed, sealed, kerbed, drained and marked prior to the development being occupied and maintained thereafter; and
(v) comply with the above requirements for the duration of the development.

11. Prior to occupation of the development, the Asset Protection Zone (APZ), as depicted in the Bushfire Management Plan prepared by Envision Bushfire Protection dated 11th June 2022, must be installed and maintained in a good and safe condition for the duration of the development.

The Bushfire Management Plan shall be implemented thereafter for the duration of the development.

12. Prior to applying for a Building Permit, a Waste Management Plan must be prepared and include the following detail to the satisfaction of the City of Rockingham:

(i) The location of bin storage areas and bin collection areas;
(ii) The number, volume and type of bins, and the type of waste to be placed in the bins;
(iii) Management of the bins and the bin storage areas, including cleaning, rotation and moving bins to and from the bin collection areas; and
(iv) Frequency of bin collections.

All works must be carried out in accordance with the Waste Management Plan and maintained at all times, for the duration of development.

13. Prior to applying for a Building Permit, an Acoustic Report prepared by a suitably qualified acoustic consultant and demonstrating compliance with the Environmental Protection (Noise) Regulations 1997, must be submitted to and approved by the City of Rockingham. The Acoustic report shall, at a minimum but not limited to, address the following:

- Clearly outline the final specification and construction methods, including any materials and treatments, for all building components of the development;
- Detail mechanical plant elements including any bore pumps and any attenuation measures required;
- Detail any mitigations or management controls for car parking areas;
- Detail the parameters used for the modelling which considers the adjoining future development to achieve compliance.

Any further works must be carried out in accordance with the Acoustic Report and implemented as such for the duration of the development.

14. The Building Permit application must be accompanied by written confirmation from a suitably qualified Acoustic Consultant that the plans have been reviewed and confirmed they incorporate the requirements of the relevant acoustic report as required by condition 13.

15. Prior to occupation of the development, written confirmation from the builder to be provided that all requirements indicated in the relevant acoustic report have been incorporated into the development.

16. Prior to occupation of the development, an Operational Noise Management Plan (ONMP) shall be provided to the satisfaction of the City of Rockingham, demonstrating how noise will be managed to ensure the development complies with the Environmental Protection (Noise) Regulations 1997. The development must operate in accordance with the approved ONMP for the duration of the land use.

17. Prior to the occupation of the development, an illumination report must be prepared which demonstrates to the satisfaction of the City of Rockingham, that the completed development complies with the requirements of Australian Standard AS 4282—1997, Control of the obtrusive effects of outdoor lighting.

18. Prior to applying for a Building Permit, a schedule of the colours and textures of the building materials, must be provided to the satisfaction of the City of Rockingham. The development must be finished in accordance with the schedule provided and approved by the City of Rockingham, prior to occupation of the development and maintained for the duration of the use.

19. The applicant must implement a complaints resolution procedure, by:

    (i) Maintaining a telephone number (or numbers) and an email address (or email addresses) through which a complaint concerning the development may be made at any time.

    (ii) Advising the owners of Lot 923 (No.547) Young Road; Lot 33 (No.574) Young Road; Lot 52 Young Road; Lot 103 (No. 151) Folly Road; Lot 202 (No.154) Folly Road; Lot 55 (No.66) Folly Road in writing of the telephone number (or numbers) and the email address (or addresses) through which a complaint may be made, prior to the use commencing.

    (iii) Maintaining a complaints log in which the following is to be recorded:

        (a) the date and time of each complaint made and received;

        (b) the means (telephone or email) by which the complaint was made;

        (c) any personal details of the complainant that were provided or, if no details were provided a note to that effect;

        (d) the nature of the complaint;

        (e) the steps or actions taken in response to each complaint (and when those steps or actions were taken), including any follow-up contact with the complainant; and

        (f) if no actions or steps were taken in relation to the complaint or enquiry, the reasons why no action or steps were taken.

    (iv) Respond to every complaint received as soon as possible, but in any event, within three (3) working days after receipt of the complaint.

    (v) Provide the complaints log to the City of Rockingham within one (1) working day after receipt of a request from the City that it be provided.

20. Prior to occupation of the development, the development must be supplied with a potable drinking water supply that meets the Australian Drinking Water Guidelines. Written confirmation of compliance with the Australian Drinking Water Guidelines is to be provided to the satisfaction of the City of Rockingham.

Advice Notes

1. The development must comply with the Food Act 2008, the Food Safety Standards and Chapter 3 of the Australian New Zealand Food Standards Code (Australia Only); the applicant and owner should liaise with the City's Health Services in this regard.

2. The development must comply with the Health (Public Building) Regulations 1992; the applicant and owner should liaise with the City's Health Services in this regard.

3. The proposed development will require a Lodging House Registration; the applicant and owner should liaise with the City's Health Services in this regard.

4. The Stormwater Management Plan must detail the stormwater drainage design, including the location and sizing of all drainage infrastructure and required storage including finished floor level separation requirements for all events.

5. An application will need to be made to the City of Rockingham Health Services for installation of the secondary treatment system.

6. Regarding Condition No.16, it is recommended that the Operational Noise Management Plan is developed in consultation with a suitably qualified acoustic consultant.

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Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

Presentation Request Guidelines

Persons interested in presenting to a DAP must first consider whether their concern has been adequately addressed in the responsible authority report or other submissions. Your request will be determined by the Presiding Member based on individual merit and likely contribution to assist the DAP's consideration and determination of the application.

Presentations are not to exceed **5 minutes**. It is important to note that the presentation content will be **published on the DAP website** as part of the meeting agenda.

Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Nathan Stewart (Rowe Group), Behnam Bordbar and Mohammad Rasouli (Transcore), Steve Hindley (Hindley & Associates) and Michael Leen and John Opferkuch (Fresh Frontier)
Company (if applicable)	Rowe Group, Transcore, Hindley & Associates and Fresh Frontier
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	4 August 2022
DAP Application Number	DAP/21/02147
Property Location	Lot 703 (No. 359) Gnangara Road, Wangara
Agenda Item Number	8.1

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☒ **AGAINST** ☐

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Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

Presentation Content*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Mr Nathan Stewart (Rowe Group) will give a brief presentation in support of the proposed development. We are generally supportive of the recommendation contained within the City of Wanneroo (the City) Responsible Authority Report. However, we request that the City's proposed Condition 3 is replaced with a new Condition to address concerns relating to landscaping.

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

Refer attached information.

METRO OUTER JOINT DEVELOPMENT ASSESSMENT PANEL

9:00AM THURSDAY 4 AUGUST 2022

ITEM 8.1 – SERVICE INDUSTRIAL DEVELOPMENT AT LOT 703 (NO. 359) GNANGARA ROAD, WANGARA

Summary

Rowe Group acts on behalf of the landowner of Lot 703 (No. 359) Gnangara Road, Wangara (**the subject site**). We lodged a Development Application with the City of Wanneroo in December 2021 which seeks Development Approval for a service industrial development at the subject site. The Development Application is required to be determined by the Metro Outer Joint Development Assessment Panel (**JDAP**).

Mr Nathan Stewart (Rowe Group) will give a brief presentation in support of the proposed development. We are generally supportive of the recommendation contained within the City of Wanneroo (**the City**) Responsible Authority Report. However, we request that the City's proposed Condition 3 is replaced with a new Condition to address concerns relating to landscaping. We request the JDAP to approve the proposed development in accordance with our proposed alternative recommendation, including the replacement of Condition 3 with a new condition.

The following members of the Project Team will be in attendance at the JDAP meeting and will be available to respond to any questions from the JDAP. The Project Team includes:

- Mr Behnam Bordbar and Mr Mohammad Rasouli (Transcore).
- Mr Steve Hindley (Hindley & Associates).
- Mr Michael Leen and Mr John Opferkuch (Fresh Frontier).

Condition 3

Condition 3 of the City's recommendation reads:

> 3. *The attached Landscape Plans - 01-03, 02-02 and 03-02 shall be modified to the satisfaction of the City prior to a Building Permit being submitted to address the following:*
>
> - *Increase the verge landscaping to the satisfaction of the City, in areas where the verge is not likely to be impacted by future upgrades to Gnangara Road.*
>
> *Planting and landscaping shall be carried out in accordance with the modified Landscaping Plan prior to occupation of the development and maintained thereafter at the expense of the landowner/occupier to the satisfaction of the City.*

A condition on a Development Approval is required to provide certainty. As it is currently worded, Condition 3 does not provide sufficient certainty to the developer as to the extent of landscaping required within the verge areas.

There are no plans of the future design of Gnangara Road (south) and what this will look like (other than it being a four-lane dual carriageway). As a result, the extent of the verge required to be landscaped is uncertain.

Notwithstanding this, we have undertaken an analysis of the extent of landscaping that may be required should this Development Application be approved with the City's proposed Condition 3. To do this analysis, we have investigated the following:

- An analysis of the size of the verge area that would need to be landscaped by the City's proposed Condition 3.
- An analysis of the approximate cost to landscape and mulch this area.
- This analysis would be based on the City's requirements set out in Attachment 12 of the City's RAR, including a requirement for three (3) plants per 1m^2 within the verge, mulch to a depth of 75mm and verge trees to be spaced at a minimum of one (1) tree for every 15m (or 10m preferred).

As there is no plan of the future design of Gnangara Road (south), we have made some assumptions around what this may look like. Please refer **Attachment 1 – Verge Landscaping Analysis**.

The verge area around the subject site is approximately 7,660m^2 (excluding the footpath). This is the area that would need to be landscaped in accordance with the City's requirements (outlined in Attachment 12 of the City's RAR). At a minimum rate of three (3) plants per square metre, this equates to approximately 22,980 plants within the verge area. The verge area would then have to be mulched and trees spaced at intervals of 10m to 15m along all street verges. This Application proposes trees planted at a spacing of 10m intervals. We have undertaken an estimated calculation of cost for the landscaping of the verge area, and this comes to approximately $450,000 (excluding any allowance for reticulation or bore and traffic management which would substantially increase this cost). Please note that these costings do not account for any inflation.

In our view, the extent of the landscaped area within the verge is extremely excessive for this type of development. We have formed this view for the following reasons:

- For comparison, the proposed development already includes 3,192m^2 of on-site landscaping, equivalent to 14.9% of the site area, nearly twice the required minimum landscaped area of 8%.
- The extent of landscaping required on-site and within the adjoining verges (excluding the footpath) is a combined 1.0852ha, for a site that is 2.1376ha in site area. The proportion of landscaping being required is extremely excessive.
- The verge area around the subject site is unusually large. The reason for this is due to the land area that has been taken for road widening and future upgrades of Gnangara Road (south) and Gnangara Road (east). There is no plan of the future design of Gnangara Road (south) and Gnangara Road (east) and it is uncertain what the future design will look like. If the developer is required to landscape the verge to the City's standards (contained in Attachment 12 of the City's RAR), the vegetation planted by the developer will likely be removed at some point in the future. This is an unreasonable outcome.
- The area required for the future Gnangara Road (south) and Gnangara Road (east) upgrades has not been confirmed.

Therefore, we request the JDAP to resolve to approve this Development Application as recommended by the City, but with a new Condition 3 which reads:

3. *The landscaping of the site and within the adjoining road verges shall be completed in accordance with the approved Landscape Plans 01 and 02 (Revision D), unless otherwise agreed with the City of Wanneroo.*

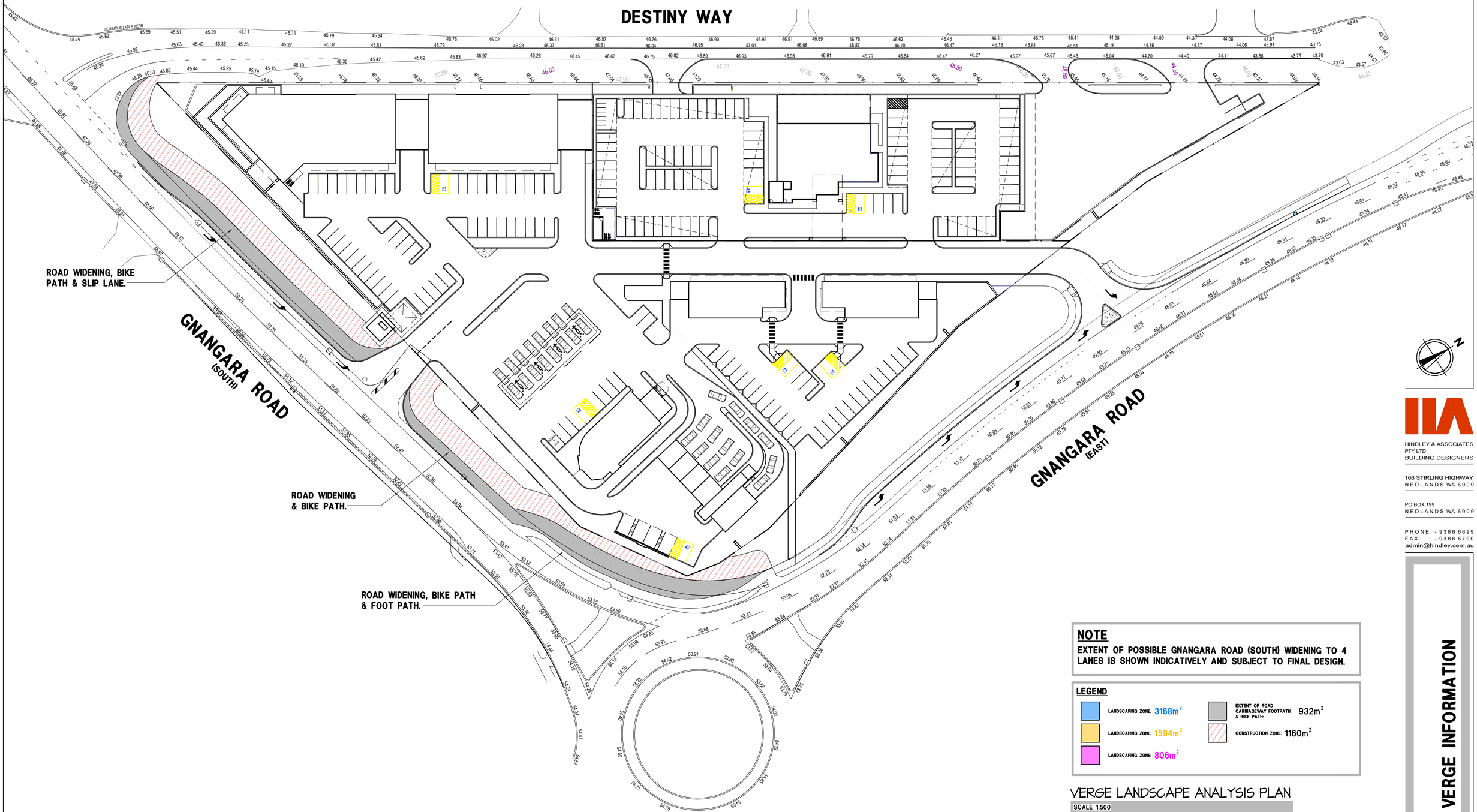
The proposed Landscape Plans 01 and 02 (Revision D) is the proposed landscaping across the subject site and within the adjoining verge area. We are requesting the JDAP to approve this Application, including the landscaping shown on Landscape Plans 01 and 02 (Revision D). Refer **Attachment 2 – Landscape Plans 01 and 02 (Revision D)**.

The proposed Landscape Plans 01 and 02 (Revision D) show trees planted at intervals of 10m (exceeding the minimum required by the City). The remainder of the verge will be mulched. In the context of the surrounding area, the proposed landscaping is a significant improvement for the site, the adjoining verges and the surrounding area – being the Gnangara Road (east) central median and the verge to the east of Gnangara Road (east) as well as the verge to the south of Gnangara Road (south).

Conclusion

We generally support the City's recommendation, subject to the replacement of Condition 3 with a new condition. We request the JDAP to approve the proposed development in accordance with our proposed Alternative Recommendation (Refer **Attachment 3 – Alternate Recommendation** – modifications shown in bold).

ATTACHMENT 1 – LANDSCAPING ANALYSIS



NOTE

EXTENT OF POSSIBLE GNANGARA ROAD (SOUTH) WIDENING TO 4 LANES IS SHOWN INDICATIVELY AND SUBJECT TO FINAL DESIGN.

LEGEND

- LANDSCAPING ZONE: 3168m²
- LANDSCAPING ZONE: 1594m²
- LANDSCAPING ZONE: 806m²
- EXTENT OF ROAD CARRIAGEWAY FOOTPATH & BIKE PATH: 932m²
- CONSTRUCTION ZONE: 1160m²

VERGE LANDSCAPE ANALYSIS PLAN

SCALE 1:500

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

PHONE - 9386 6699
FAX - 9386 6700
admin@hindley.com.au

VERGE INFORMATION

THIS DRAWING IS COPYRIGHT AND MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE AUTHORITY OF HINDLEY & ASSOCIATES PTY LTD.

DO NOT SCALE FROM THIS DRAWING.

THE CONTRACTOR AND HIS SUBCONTRACTORS ARE TO VERIFY ALL DIMENSIONS ON SITE BEFORE MAKING SHOP DRAWINGS OR COMMENCING MANUFACTURE.

THIS IS A COMPUTER GENERATED DRAWING AND SHALL NOT BE ALTERED BY HAND.

HINDLEY & ASSOCIATES P/L AS TRUSTEE FOR HINDLEY TRUST
ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
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A1 SHEET

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

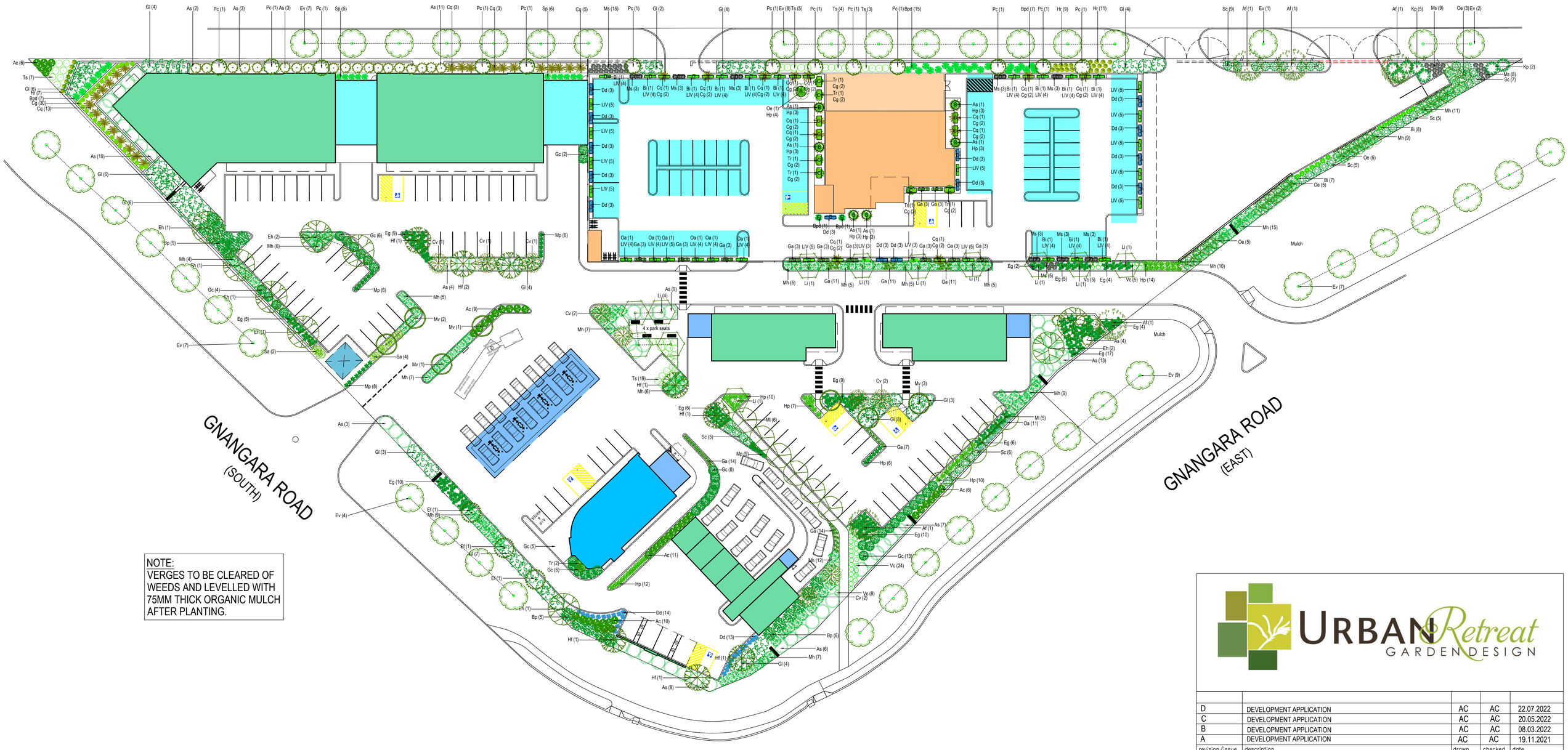
Date	-	29.07.22
Design	-	SJH
Drawn	-	MDB
Checked	-	SJH
Scale	-	1:500
Job No.	-	0556
Dwg	-	INF01
Rev	-	-

ATTACHMENT 2 – LANDSCAPE PLANS 01 AND 02 (REVISION D)

LANDSCAPE PLAN DRAWING INDEX

DRAWING NO.	TITLE
21170_01	LANDSCAPE PLAN
21170_02	PLANT AND MATERIAL SCHEDULE, PLANTING SPECIFICATIONS AND TYPICAL DRAWINGS

DESTINY WAY



NOTE:
VERGES TO BE CLEARED OF WEEDS AND LEVELLED WITH 75MM THICK ORGANIC MULCH AFTER PLANTING.

URBAN Retreat GARDEN DESIGN

revision/issue	description	drawn	checked	date
D	DEVELOPMENT APPLICATION	AC	AC	22.07.2022
C	DEVELOPMENT APPLICATION	AC	AC	20.05.2022
B	DEVELOPMENT APPLICATION	AC	AC	08.03.2022
A	DEVELOPMENT APPLICATION	AC	AC	19.11.2021

project
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
location
NO. 359 LOT 703 GNANGARA ROAD, WANGARA

drawn AC
checked AC
description LANDSCAPE PLAN

URBAN RETREAT GARDEN DESIGN
COMMERCIAL AND RESIDENTIAL LANDSCAPE DESIGN SERVICES
www.urbanretreatgardens.com.au
E:amelia@urbanretreatgardens.com.au
M:0438 926 313

scale 1:400 @ A1
date 19.11.2021
project no 21170
dwg no 01
rev D

PLANT SCHEDULE

SYMBOL	CODE	BOTANIC NAME	MATURE HEIGHT X WIDTH	MINIMUM INSTALLATION SIZE	NUMBER
TREES					
	Af	Agonis flexuosa	8m x 6m	75 Litre	5
	Cv	Callistemon viminalis 'Prolific Weeping Bottlebrush'	6m x 4m	75 Litre	9
	Ef	Eucalyptus forrestiana 'Fuchsia Gum'	6m x 4m	75 Litre	3
	Eh	Eucalyptus hybrid 'Torwood'	5m x 6m	75 Litre	9
	Ev	Eucalyptus victrix	7m x 6m	75 Litre	45
	Hf	Hymenosporum flavum	8m x 5m	75 Litre	8
	Li	Lagerstroemia indica 'Natchez'	7m x 5m	75 Litre	12
	Ml	Melaleuca lanceolata	7m x 5m	30 Litre	11
	Mv	Melaleuca viridiflora	8m x 4m	75 Litre	7
	Oe	Olea eurpoaea 'Swan Hill' (non fruiting)	6m x 3m	30 Litre	23
	Pc	Pyrus calleryana 'Capital'	9m x 3m	75 Litre	13
SHRUBS					
	As	Adenanthos sericeus 'Silver Streak'	3m x 2.5m	14cm	29
	Bi	Banksia integrifolia 'Sentinel'	2.5m x 1m	30cm	28
	Bp	Banksia petiolaris	60cm x 3m	13cm	20
	Bpd	Banksia prionotes dwarf	1.5m x 1.5m	13cm	31
	Cq	Calothamnus quadrifidus	2.5m x 2.5m	13cm	37
	Dd	Damperia diversifolia	50cm x 1m	13cm	69
	Hr	Hypocalymma robustum	1m x 1m	13cm	27
	Ms	Maireana sedi 'Silver Ghost'	1m x 1m	13cm	61
	Sc	Scaevola crassifolia prostrate	50cm x 2m	13cm	37
	Sp	Syzygium paniculata 'Backyard Bliss'	4m x 1.2m	5 Litre	11
	Tr	Templetonia retusa	2m x 2m	14cm	8
	Ts	Thryptomene saxicola 'Supernova'	80cm x 1.5m	13cm	39
	Vc	Verticordia chrysanthella	50cm x 1m	13cm	42
GRASSES					
	LIV	Lomandra longifolia 'Verday'	80cm x 70cm	14cm	140
GROUND COVER					
	AsS	Acacia saligna 'Springtime Casacde'	30cm x 3m	13cm	60
	Ac	Adenanthos cuneatus 'Coral Carpet'	30cm x 1.5m	13cm	42
	Cg	Casuarina glauca 'Cousin It'	10cm x 1m	13cm	68
	Eg	Eremophila glabra 'Kalbarri Carpet'	20cm x 2m	13cm	87
	Ga	Grevillea alpina x rosmarinifolia 'Firecracker'	40cm x 80cm	13cm	101
	Gc	Grevillea crithmifolia 'Green Carpet'	20cm x 2m	13cm	39
	Gl	Grevillea laurifolia x willsii 'Royal Mantle'	50cm x 3m	13cm	61
	Hp	Hemiandra pungens alba	30cm x 1.5m	13cm	73
	Kp	Kennedia prostrata	10cm x 3m	13cm	7
	Mh	Melaleuca huegelii prostrate	20cm x 2m	13cm	137
	Mp	Myoporium parvifolium	10cm x 1m	13cm	35
	Oa	Olearia axillaris 'Beach Ball'	40m x 80m	13cm	19
	Sa	Scaevola albida 'Super Cluster'	10cm x 2m	13cm	6
TOTAL PLANTS					**1459**

TREE VARIETIES

Agonis flexuosa

Callistemon viminalis 'Prolific Weeping Bottlebrush'

Eucalyptus forrestiana 'Fuchsia Gum'

Eucalyptus hybrid 'Torwood'

Eucalyptus victrix

Hymenosporum flavum

Lagerstroemia indica 'Natchez'

Melaleuca lanceolata

Melaleuca viridiflora

Olea eurpoaea 'Swan Hill'

Pyrus calleryana 'Capital'

SHRUB VARIETIES

Adenanthos sericeus 'Silver Streak'

Banksia integrifolia 'Sentinel'

Banksia petiolaris

Banksia prionotes dwarf

Calothamnus quadrifidus

Damperia diversifolia

Hypocalymma robustum

Maireana sedi 'Silver Ghost'

Scaevola crassifolia prostrata

Syzygium paniculata 'Backyard Bliss'

Templetonia retusa

Thryptomene saxicola 'Supernova'

Verticordia chrysanthella

GRASS VARIETY

Lomandra longifolia 'Verday'

GROUND COVER VARIETIES

Acacia saligna 'Springtime Cascde'

Adenanthos cuneatus 'Coral Carpet'

Casuarina glauca 'Cousin It'

Eremophila glabra 'Kalbarri Carpet'

Grevillea alpina x rosmarinifolia 'Firecracker'

Grevillea crithmifolia 'Green Carpet'

Grevillea laurifolia x willsii 'Royal Mantle'

Hemiandra pungens alba

Kennedia prostrata

Melaleuca huegelii prostrate

Myoporium parvifolium

Olearia axillaris 'Beach Ball'

Scaevola abida 'Super Cluster'

HOW TO READ PLANTING NOTATIONS AND SYMBOLS ON THE LANDSCAPE PLAN

SYMBOLS

PLANT SYMBOLS ON THIS DRAWING DENOTE SPECIES AND THEIR PLACEMENT. THE PLANT SYMBOL KEY IS PROVIDED ON THE PLANT SCHEDULE. PLAN SECTIONS SHOULD BE PRINTED ON A1 AT HIGHEST QUALITY. IT IS IMPERATIVE FOR CORRECT PLANT PLACEMENT THAT SYMBOLS ARE LEGIBLE BY THE LANDSCAPE INSTALLER. IF SMALLER SECTIONS ARE REQUIRED THAT THOSE PROVIDED, CONTACT THE DESIGNER.

SYMBOLS INDICATE THE MASS OF THE SPECIES IN THE AREA ONLY. ACTUAL PLANT NUMBERS ARE PROVIDED IN NOTATIONS. THESE PLANTS SHOULD BE EVENLY SPACED WITHIN THE AREA INDICATED. ROWS SHOULD BE STAGGERED.

PLANTING SPECIFICATIONS

ALL PLANTING AREAS ARE TO BE PREPARED AND PLANTED IN ACCORDANCE WITH INDUSTRY BEST PRACTICE AND THE INSTRUCTIONS BELOW.

A. PREPARATION OF SOIL IN GARDEN BED AREAS:
I. REMOVE ALL TRACES OF BUILDERS' MATERIAL FROM PLANTING AREAS INCLUDING RUBBLE, SAND, MORTAR AND ALL OTHER EXTRANEOUS MATERIAL.
II. REMOVE ALL WEEDS IN GARDEN BED AREAS AND VERGE BY SPRAYING WEEDS WITH A STANDARD INDUSTRY HERBICIDE FOLLOWING MANUFACTURER'S SPECIFICATIONS AND LEAVE FOR RECOMMENDED TIME.
III. REMOVE DEAD PLANT MATTER AFTER TIME SPECIFIED ON HERBICIDE PRODUCT.
IV. UNDERTAKE SOIL IMPROVEMENT SUITABLE FOR NATIVE PLANTS IN GARDEN BEDS WITHIN THE SITE.

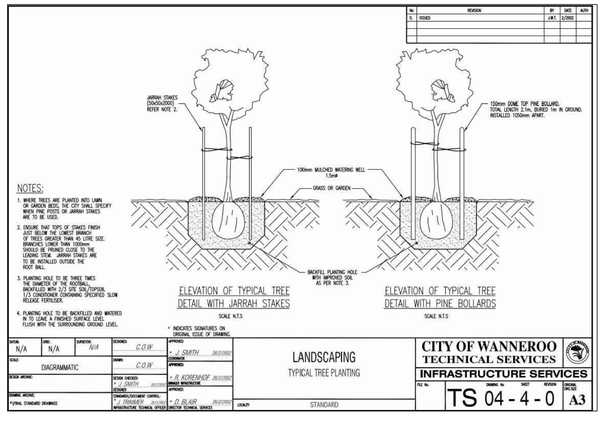
B. IN-GROUND PLANTING
I. PLANT TREES IN ACCORDANCE WITH STANDARD DRAWING 'TYPICAL TREE PLANTING' IN THIS PLAN SET. INSTALL ROOT BARRIERS TO ALL TREES IN CARPARK AREAS. CLEAR LOWER TREE BRANCHES SO 75% OF TRUNK IS CLEAR.
II. PLANT SHRUBS, GRASSES AND GROUND COVERS IN ACCORDANCE WITH 'SHRUB PLANTING DETAIL' IN THIS PLAN SET AND WATER IN THOROUGHLY.

C. TUB AND TROUGH PLANTING
I. SELF WATERING SYSTEMS TO BE INSTALLED IN ALL PLANTERS.
II. FILL PLANTERS WITH MIX OF HIGH QUALITY POTTING MIX AND SAND.
III. TREE TO BE STAKED AND GUYED.
IV. WATER IN WELL.

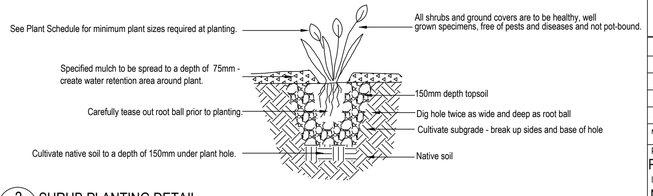
D. MULCH
I. AFTER PLANTING, APPLY CHUNKY (25-50MM) PINE BARK WOOD CHIPS TO A MINIMUM DEPTH OF 75MM (MAXIMUM 100MM) TO ALL PLANTING BEDS, PLANTERS AND VERGE, KEEPING MULCH CLEAR OF PLANT STEMS.
II. TIDY AND GRADE MULCH AFTER APPLICATION.

IRRIGATION SPECIFICATIONS

1. ALL GARDEN BEDS TO BE IRRIGATED. WATER SUPPLY IS SCHEME WATER.
2. IRRIGATION LAYOUT BY OTHERS.



1 21170_2 TREE PLANTING DETAIL
Typical Section
Not to scale



2 21170_2 SHRUB PLANTING DETAIL
Typical Section
Not to scale

SEAT AND PLANTER DETAILS

SYMBOL	ELEMENT	PRODUCT DETAILS
A	2200Ø x 750H COMMERCIAL GRADE GRC PLANTER U BOWL	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
B	1800Ø x 700H COMMERCIAL GRADE GRC U BOWL	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
C	2200 x 1000 x 800H GRC RECTANGLE PLANTER	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
D	2400 x 600 x 600H GRC RECTANGLE PLANTER	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
E	1800 x 600 x 600H GRC RECTANGLE PLANTER	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
F	800 x 800 x 800H GRC RECTANGLE PLANTER	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
	HEAVY DUTY SLATTED PARK SEAT WITH ARMS	STAINLESS STEEL, IN GROUND MOUNTED SEAT FROM DRAFFIN OR SIMILAR

URBAN Retreat GARDEN DESIGN

D	DEVELOPMENT APPLICATION	AC	AC	22.7.2022
C	DEVELOPMENT APPLICATION	AC	AC	20.5.2022
B	DEVELOPMENT APPLICATION	AC	AC	08.03.2022
A	DEVELOPMENT APPLICATION	AC	AC	19.11.2021
revision/issue	description	drawn	checked	date

project
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
location
NO. 359 LOT 703 GNANGARA ROAD, WANGARA

drawn AC
checked AC
description PLANT AND MATERIAL SCHEDULE, PLANTING SPECIFICATIONS AND TYPICAL DRAWINGS
scale
date
project no 21170
dwg no 02
rev. D

URBAN RETREAT GARDEN DESIGN
COMMERCIAL AND RESIDENTIAL LANDSCAPE DESIGN SERVICES
www.urbanretreatgardens.com.au
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M:0438 926 313

ATTACHMENT 3 – ALTERNATE RECOMMENDATION

Alternative Recommendation

That the Metro Outer JDAP resolves to:

1. Approve DAP Application reference DAP/21/02147 and accompanying plans Development Plans - DA01-D, DA02-D, DA03-C, DA04-C, Landscape Plans - 01-03, 02-02, 03-02 and Engineering Plans t21.166.sk19 and t21.166.sk20 in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Wanneroo's District Planning Scheme No. 2, subject to the following conditions:

Conditions

1. Pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme.
2. The use of the premises is approved for Showroom, Service Station, Car Wash, Motor Vehicle Repair and Industry-Light in accordance with the areas identified on the attached plans, as defined in the City of Wanneroo's District Planning Scheme No. 2 as follows:

   "Showroom: means premises wherein goods are displayed and may be offered for sale or hire excluding the sale of foodstuffs, liquor or beverages, items of clothing or apparel (except as hereinafter stipulated in this definition) or personal adornment, magazines, books, newspapers or paper products, and medicinal or pharmaceutical products unless assembled or manufactured on the premises. The term includes the sale of secondhand clothing or apparel by welfare and charitable agencies with the approval of Council."

   "Service Station: means premises other than premises used for a transport depot, panel beating, spray painting, major repairs or wrecking, that are used for

   (a) the retail sale of petroleum products, motor vehicle accessories and goods of an incidental or convenience nature; or
   (b) the carrying out of greasing, tyre repairs and minor mechanical repairs to motor vehicles."

   "Car Wash: means any land or buildings used for mechanical vehicle washing. Such uses may or may not be associated with a service station and may include such other uses considered by Council to be ancillary to the predominant use of the land."

   "Motor Vehicle Repairs: means any land or buildings used for or in connection with electrical and mechanical repairs and overhauls to motor vehicles. The term includes repairs to tyres but does not include recapping or retreading of tyres, panel beating, spray painting or chassis reshaping."

   "Industry – Light: means an industry:

   (a) in which the processes carried on, the machinery used, and the goods and commodities carried to and from the premises, will not cause any injury to, or will not adversely affect the amenity of the locality by reason of the emission of light, noise, electrical interference, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water or other waste products; and
   (b) the establishment of which will not, or the conduct of which does not, impose an undue load on any existing or proposed service for the supply or provision of water, gas, electricity, sewerage facilities, or any other like services."

   A change of use from that outlined above may require the approval of the City.

3. **The landscaping of the site and within the adjoining road verges shall be completed in accordance with the approved Landscape Plans 01 and 02 (Revision D), unless otherwise agreed with the City of Wanneroo.**
4. Detailed civil engineering drawings and specifications for works within the public road reserve (earthworks, roads, pathways and drainage) shall be lodged for approval to the City prior to commencement of construction works. Construction works are to be undertaken in accordance with the approved development application, engineering drawings and specifications to the satisfaction of the City.
5. Lighting shall be installed to pathways and car parking areas, be designed in accordance with the Australian Standards for the Control of Obtrusive Effects of Outdoor Lighting (AS4282) and shall be internally directed to prevent overspill into nearby lots. All floodlights shall be oriented and hooded to eliminate disturbance to occupants of the surrounding properties.
6. All illuminated signage shall have any boxing or casing in which it is enclosed constructed of incombustible materials, shall not comprise of flashing, pulsating, chasing or running lights and shall not have such intensity as to cause annoyance to the public or illuminate beyond the extent of the lot boundaries.
7. Parking areas, driveways and points of ingress and egress shall be designed and constructed in accordance with the Australian Standard for Offstreet Carparking (AS2890) and shall be drained, sealed and marked prior to occupation of the development and maintained thereafter to the satisfaction of the City.
8. The parking areas and associated access indicated on the approved plans shall not be used for the purpose of storage or obstructed in any way at any time, without the prior approval of the City.
9. All waste shall be stored within the designated bin enclosure and collected from site by a private contractor at the cost of the owner/operator.
10. Storage areas, plant and equipment shall be screened from view from streets, public places and adjacent properties.
11. The applicant shall undertake adequate measures to minimise any impacts of dust and sand drift from the site to the satisfaction of the City.
12. A Construction Management Plan shall be submitted outlining how the construction of the development will be managed in order to limit the impact on the surrounding area. The plan will need to ensure that:
    - Adequate space is provided within the development site for the parking of construction vehicles and for the storage of building materials so as to minimise the need to utilise the surrounding road network;
    - Adequate provision is made for the parking of workers' vehicles;
    - Pedestrian and vehicular access around the site is maintained;
    - The hours of construction are limited to ensure that there is no adverse impact on the amenity of the surrounding properties; and
    - The impacts caused by sand drift and dust from the site are minimised.

    The Construction Management Plan is to be submitted to and approved by the City prior to the commencement of any development.
13. The proposed crossover on Gnangara Road (east) is to be designed and constructed as per Engineering Drawing t21.166.sk19 (Attachment 11), to the satisfaction of the City.

14. The proposed crossover on Gnangara Road (south) is to be designed and constructed as per Engineering Drawing t21.166.sk20 (Attachment 11), to the satisfaction of the City.
15. The landowner/applicant contributing towards development infrastructure provisions pursuant to the Agreed Structure Plan No. 10 – East Wanneroo Cell 8.
16. Any graffiti applied to the external surfaces of the building shall be removed within seven days of it being applied, to the satisfaction of the City.

Advice Notes

17. In regards to the dust and sand drift condition, adequate measures to minimise any impacts of dust and sand drift from the site include all requirements as stipulated within the Department of Water and Environmental Regulation's 'A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities'.
18. With regards to any management plans to be submitted to the City as required in any of the conditions set out within this development approval, these are to be submitted to the assessing officer or in their absence addressed to Planning Approvals. An assessment of the acceptability of these plans by the City will not be undertaken if these plans are submitted within a building permit application.
19. With regards to stormwater retention, an onsite stormwater drainage system, sufficient to contain a 1:100 year storm event (over 24 hours) must be provided. Plans illustrating the system proposed shall be submitted for approval when application is made for a building licence and the system shall be installed during the construction of the development.
20. The full movement crossover via Gnangara Road (south) is likely to become restricted in the future when Gnangara Road (south) is upgraded to dual carriageway. At which point, the access may become left-in and left-out only, subject to the final design outcome.
21. The owner/applicant is to submit the "Certification of Compliance with Development Approval Conditions" form certifying that all of the conditions specified in the approval by the Council for the development of the land have been completed in accordance with the approved plans, and the certification is to be lodged with the Council within 14 days from the date of practical completion, and applies to all of the conditions, except for those conditions relating to ongoing compliance.

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

Presentation Request Guidelines

Persons interested in presenting to a DAP must first consider whether their concern has been adequately addressed in the responsible authority report or other submissions. Your request will be determined by the Presiding Member based on individual merit and likely contribution to assist the DAP's consideration and determination of the application.

Presentations are not to exceed **5 minutes**. It is important to note that the presentation content will be **published on the DAP website** as part of the meeting agenda.

Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Brad Byrne
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursdays 4th August
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	*The presentation will address:* AGAINST THE HINDU TEMPLE DEVELOPMENT AND SUPPORT THE RECOMMENDATION FOR THE REFUSAL

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

This temple is NOT wanted in our area. This is rural Baldivis where families have land for animals and to live in peace NOT to have neighbours who are loud and have many festivals during the week and weekends. This development has no benefit for the current community that are in the area, they bring nothing that we need or want. This is NOT the lifestyle I or my family signed up for when I bought in the area. I am strongly against this development

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

Presentation Request Guidelines

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Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Trudy Byrne
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursdays 4th August
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* AGAINST THE HINDU TEMPLE DEVELOPMENT AND SUPPORT THE RECOMMENDATION FOR THE REFUSAL

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

To whomever, this may concern,

This Hindu Temple is not wanted in our rural area this is where families live as we enjoy the land and nature but are still close to shops etc. We bought in this area because we love the quiet area; we have so many families in the area that are also like-minded like us. We love the rural lifestyle we have and having this development will ruin it. We don't need this temple in our area there is no need for it nor will the current community benefit from it whatsoever. This development will bring unwanted traffic to the area and not to mention the noise that would come from the number of holidays and festivals that they would be having. This sort of development should be in an industrial area not rural where families live.

Government of **Western Australia**
Development Assessment Panels

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Presenter Details

Name	Rosemary Coppen and David Smith
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	METRO OUTER JOINT DEVELOPMENT ASSESMENT PANEL
Meeting Date	THURSDAY ,4 AUGUST 2022 @ 9AM
DAP Application Number	DAP/21/02148
Property Location	LOT 53 ,67 FOLLY ROAD, BALDIVIS, WA 6171
Agenda Item Number	8.2

Presentation Details

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Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* The negative impact a Hindu Temple will have on the rural environment.

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

We do not support the proposed Hindu Temple in its current planning format. The impact the development will have on the local flora and fauna is not beneficial to the area. The lack a reliable and adequate water supply for bush fire mitigation is of great concern. The Hindu Temple will be accommodating a large congregation and events and yet the proposed sewage system is not connected to a main sewer, this will have enormous impact on the Folly Drain area. Noise pollution and increase of traffic flow on Folly and St Albans Road is unacceptable.

The application does not adhere to the City of Rockingham's Rural Land Strategy Plan.

Government of **Western Australia**
Development Assessment Panels

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Presenter Details

Name	Glenda Cooper
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES ☐** **NO ☒** If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday 4th August
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road Baldivis
Agenda Item Number	8.2

Presentation Details

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Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT ☒** **AGAINST ☐**
Is the presentation in support of or against the proposed development?	**SUPPORT ☐** **AGAINST ☒**
Will the presentation require power-point facilities?	**YES ☐** **NO ☒** **If yes, please attach**

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Development Assessment Panels

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* AGAINST THE HINDU TEMPLE DEVELOPMENT AND SUPPOERT THE RECOMMENDATION FOR THE REFUSAL

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

My name is GLENDA COOPER

[redacted] Baldivis WA 6171: Mobile [redacted]

I am NOT in favour of the Hindu Temple, Outbuildings, Residential Housing and Multi-Purpose Hall on the corner of Folly Road and Young Road namely 67 Folly Road Baldivis, my reasons are as follows

The Hindu Temple is not going to aesthetically fit into the rolling meadows of farm life or the typically Australian farmhouse structures in the area.

103 Car parking spaces are defiantly not adequate for a capacity of 450 patrons attending a festival at the temple so the overflow will be parked outside the temple grounds on the verges of the already narrow roads Folly Road and Young Road not to mention that both these road curve into an arc and visibility is already a hazard without worshipers walking up the road in a dim lit area to get to their vehicles, plus the extra traffic that will be travelling up St Albans road late at night (also a dimly light road)up to Mundijong Road as an exit from the area.

Festivals of which there is approximately 12-19 Hindu festivals per year this will incur noise from traffic, attendees and most of all loud music including drums whistles and bells, chanting and general talking and laughing from 450 people after all this is what a festival is. This is a farming area and most farmer 's retire early to their beds as an early rise is required to attend to farming duties 24 hours a day. This does not include weddings and the hire of the hall by other private attendees.

Sewage is going to be a problem as in winter the proposed sight is governed by the water table in winter (water laying on the surface from rising water table)and once the sewer tanks are full from festivals and 3 prayer meetings a day 7 days a week, live in guests etc the water level rises and fills those tanks the effluent will seep into the ground and leach into the natural occurring creek/river and Folly pond and drain back into the Maramanup Pool via the Peel Main Drain(all of which are managed by the Urban Bushland Council WA and cause irreversible damage to the wetland eco structure of this area from Folly Road to Mundijong Road that is the Alcoa Wetlands and may over time reach the Tamworth Wetlands on 60 Road Baldivis, These sites are precious to our future and need our utmost protection by all reasonable and practicable means.

Hall Hired for yoga and other community uses where a fee is paid for its hire, I would in my humble opinion believe that this would fall into the area of a business for hire and profit NOT a NON-PROFIT religious Temple of which I find to be unacceptable in a strictly Rural and Agricultural area.

My family (4 x sons and husband and I) moved to Baldivis Rural to encapsulate the serenity, peace and tranquillity of the area which I and my family and my long-term neighbours have cherished and enjoyed over the past 30 years so you can image the impact this will cause on our peaceful, tranquil lifestyle. We all moved here to leave the city, noise and pollution behind to raise our children in a better place.

DON'T DISTROY OUR GARDEN of EDEN

THIS LETTER IS OF MY OWN OPINION AND SHOULD BE DULY NOTED AS A SUBMISSION RESPONSE TO THE PROPOSSED PLACE OF WORSHIP (HINDO TEMPLE) 67 FOLLY ROAD BALDIVIS

Kind regards

Glenda Cooper

30th July 2022

30/07/2022

Government of **Western Australia**
Development Assessment Panels

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Presenter Details

Name	Bruce and Julie Davey
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES ☐** **NO x☐** If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday 4th August 2022
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road Baldivis
Agenda Item Number	8.2

Presentation Details

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Is the presentation in support of or against the <u>report recommendation</u>)? *(contained within the Agenda)*	**SUPPORT X☐ AGAINST ☐**
Is the presentation in support of or against the <u>proposed development</u>?	**SUPPORT ☐ AGAINST X☐**
Will the presentation require power-point facilities?	**YES ☐** **NO ☐** **If yes, please attach**

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Development Assessment Panels

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* AGAINST the Hindu Temple development and SUPPORT the recommendation for the REFUSAL

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Please attach detailed content of presentation or provide below:

Click or tap here to enter text.

As a resident and rate payer in the Rockingham City Council for over 20 years we believe a complex such as the proposed Hindu temple will visually impact the rural amenity.

Its not consistent with the City's Town Planning Scheme (clause 4.11.1) which is to preserve the land for farming and foster semi-rural development.

Nor will it enhance or protect the visual character that is RURAL life.

We have been wondering how the application has got as far as it has, given the City's Town Planning Scheme prohibits "grouped dwellings". It definitely has grouped dwellings as well as a massive space carpark, commercial buildings and residence buildings to name a few.

There are way too many buildings over the scope that makes up rural life out in East Baldivis. The visual impact it would make would be detrimental for our area. We all chose rural living for a reason, one being to get away from the noise and close proximity of neighbours, yet here is a proposed development encroaching on those very values we hold dear.

Then there's the devastating effect it would have on our waterways. As a direct neighbour (66 Folly Rd Baldivis) we know the land intimately and the amount of effluent caused from the volume of people attending throughout the year with our high water table would be tremendous! We worry about our only water source (from the ground as there's no scheme water out in rural Baldivis) and the impact of the contaminates for us, our animals and the native flora and fauna.

There are so many reasons why this development should **NOT** *be approved and I implore you to read every one of the residents statements who would be impacted by a complex such as this.*

There is a reason why the Rockingham Council vote was a unanimous vote of 12-0 objecting to the development and we hope you vote against it too.

Thank you for your time,
Bruce and Julie Davey
[redacted]

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Development Assessment Panels

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Presenter Details

Name	Bruce Davey
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES ☐** **NO x☐** If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday 4th August 2022
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road Baldivis
Agenda Item Number	8.2

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Will the presentation require power-point facilities?	**YES ☐** **NO ☐** **If yes, please attach**

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I'd like to start with the fact we live directly opposite the proposed Temple site at 66 Folly Road Baldivis and we've been here over 20 years.

Now I could talk forever about lifestyle choices and serenity and rural v's suburbia but you're all Planning people so look at the logistics side of things.

So how an earth has this development even got this far??

I implore you to physically come and see the site itself and tell us that it's a good fit to build such a complex there.

We don't have water or deep sewerage running past our properties and the electricity is subpar at best with frequent outages. Case in point ours, and many others in Rural Baldivis, were without power for 3 days Christmas Eve, Christmas day and Boxing Day. and if you recall those days reached 40 degrees. It wasn't pleasant. I have no idea how the proposed development, which will be drawing huge amounts of electricity, will not be a massive burden to our already fragile system!

Then look at our roads out rural way. As short as Folly Road is, there's already been a death at the bend at Young Road unfortunately. Wonder why that wasn't mentioned in their report?? There is one street light in the whole street, no verges only drains either side, very narrow with blind bends and expected to withstand the amount of traffic the Temple is going to bring in? I don't think so. According to Main Roads it's not earmarked for any upgrades until at least 2050 as well !

We have a very high water table and obviously leach drains are our only option but as we all rely on ground water for our main source of water, how is it not going to be contaminated through chucking fill on top of the soil to appease the powers that be??

Please think long and hard whether this is the right site for such a development. Our own City of Rockingham voted a unanimous NO and I'm backing them 100%.

Thank you for your time,
Bruce and Julie Davey
[redacted]

Government of **Western Australia**
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Presenter Details

Name	Emma Davey
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES ☐** **NO x☐** If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday 4th August 2022
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road Baldivis
Agenda Item Number	8.2

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Will the presentation require power-point facilities?	**YES ☐** **NO ☐** **If yes, please attach**

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Development Assessment Panels

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I have lived in rural Baldivis for my whole life. My parents live directly opposite the proposed Temple site and its where I was raised.

To say this development doesn't belong in Rural Baldivis is an understatement!

People who live in urban Baldivis know exactly what they are getting into when they choose to live there. People who live in Rural Baldivis thought they knew what they were getting into too.

It takes a lot of sacrifices over many years to be able to purchase a piece of paradise away from the traffic and noise and general disruption that suburbia creates. That will all be taken away from us and our idyllic lifestyle will be lost forever.

There will be no reprieve if given the green light to go ahead with this proposal. 24/7 there will be people from early in the morning til late at night 7 days a week 365 days a year! How is that fair ? If we wanted all that disruption we would've stayed town side and not spent our life savings to enjoy the serenity that rural life brings.

I love the lifestyle so much I purchased a property around the corner on Young Road Baldivis.

Had I known about the Temple wanting to be built a stone's throw away it would've made me think long and hard about wanting to be so close to the development. Which makes me worry about the depreciation this will have on not only my parents house directly opposite but my property too!

Are we going to get any assurance that our properties won't plummet in price because let's face it, who in their right mind would want to live close to that intensive commune development?

And that's not even getting into the logistics of sewerage with that amount of people attending throughout the year on a very wet block with no deep sewer going past. We all rely on ground water as it's our only source, besides rain water and if you think that much wastage won't pollute our precious waterways then you're sadly mistaken.

Please think long and hard whether this is the right site for such a development. Our own City of Rockingham voted a unanimous NO and I'm backing them 100%.

Thank you for your time,
Emma Davey
[redacted] *Baldivis 6171*

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Development Assessment Panels

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Presenter Details

Name	Michelle Harvey
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☐ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday 4th August
DAP Application Number	DAP/21/02148
Property Location	67 Folly Rd
Agenda Item Number	8.2

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Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☐ **If yes, please attach**

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Please attach detailed content of presentation or provide below:

I am lodging my opposition to the proposed Hindu Temple being situated in Baldivis East.

My family and I recently moved to rural Baldivis over 1 year ago after 18 years in residential Baldivis. We absolutely love the peace and quiet that we have achieved.

We have worked so hard to achieve our "happy place". My job is quite stressful at times, working in the community but my mental health sighs in relief when I come HOME to my own peaceful retreat. My children have embraced everything RURAL and are loving our little spot too.

We have sheep, goats, chickens, all grazing free range on our land. The thought of our land eventually becoming poisoned and spoiled, our bore being ruined for our children's future is shockingly possible.

The facts speak for themselves no matter how much they 'glitter' them up. Do not let money be the influential part of approving this multi dwelling NON RURAL project.

I am so shocked and saddened that the Hindu temple is even being proposed to be built there! This is a RURAL area with many RURAL rules that we as a family have had to adhere to when moving here.

Why are the rules so very different for other people? Unless there is obviously major financial gain to be made by someone??! My parents are in the process of building a granny flat, they are looking forward to embracing the peace and quiet in the retirement. There have been so many RURAL rules and regulations that we have had to follow to please council and we have done that, enthusiastically to have them here with us.

If this venture goes ahead, the council will be inundated with requests to have the local

residents RURAL rules reviewed and changed too, for example, applications to have multiple dwellings on their property? If the Hindu temple can have such numbers of dwellings approved on RURAL land then surely WE as residents can also have them on our RURAL land?

The fact that there will be such a dramatic environmental impact is horrendous in itself! The nearest temple is literally just minutes away? In a much more well suited spot.

It makes NO sense at all.

As a registered nurse, working providing Covid vaccinations to our community and state, I beg you to reconsider this proposal.

As a nurse working in a diverse multicultural society for the last 31 years, I have no problem at all with the Hindu religion or any religion or belief but please don't build it there! It makes no sense whatsoever. We are FULLY SUPPORTING THE REFUSAL OF THIS HINDU TEMPLE.

Kindest Regards

Michelle Harvey and family

[redacted] Baldivis
[redacted]
[redacted]

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Presenter Details

Name	Ken Johnson
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday 4th August 2022
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road Baldivis
Agenda Item Number	8.2

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Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

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Please attach detailed content of presentation or provide below:

My name is KEN Johnson [redacted] Baldivis 6171 Tel [redacted]

I am NOT in favour of the proposed Hindu Temple and surrounding outbuildings as they will be aesthetically at odds with surrounding rural landscape and completely destroy the ambience of the area.

The proposed parking area for 105 vehicles would seem to be totally inadequate to cater for the expected 450 people at festivals etc. The roads east of the freeway are totally unsuitable to take any overflow parking as any breakdowns etc with the present traffic levels cause disruption. This effect is exacerbated by any parking near the intersection of Folly and Young roads due to the bend in Folly Road at that intersection and poor visibility due to foliage along Folly Road.

The noise and lighting at night to be expected with festivals extending beyond sunset will destroy the quiet and darkness which is so much a part of the area now and is a major component of the way of life here. This tranquillity is a large part of why we have been here for 30 years and what keeps us here.

Yours Sincerely

Ken Johnson

31 July 2022

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

Presentation Request Guidelines

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Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Debbie MacKenzie
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES ☐** **NO ☒** If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel Hindu Temple
Meeting Date	Thursday 4th August 2022
DAP Application Number	DAP/21/02148 Hindu Temple Complex
Property Location	67 Folly Road Baldivis
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES ☒**
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT ☒** **AGAINST ☐**
Is the presentation in support of or against the proposed development?	**SUPPORT ☐** **AGAINST ☒**
Will the presentation require power-point facilities?	**YES ☐** **NO ☒** **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Against the Hindu Temple Development on Folly Road Baldivis and support Rockingham City Council's recommendation for the refusal

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

Hindu Temple and complex on Folly Road in Baldivis and support the recommendation for REFUSAL.

As a resident of 18 years within the Baldivis area and 9 years, within the east Baldivis rural estates, I have seen a number of changes to the local area. When we first moved to Baldivis (from the country), it was a quiet semi rural area with large open sways of bush which was inhabited by native animals, The need for housing has seen this area grow into a vast urban development with limited green space. In looking to live in an area that was quieter, peaceful with more natural living, I researched and discovered that Baldivis East was identified and classified within the South Metropolitan Sub –Regional Framework and recognised as such by Rockingham City in the Rural Land Strategy for its environmental significance and visual amenity. The *clause 4.11.1* stated '*to preserve land for farming and foster semi- rural development which is sympathetic to the particular characteristics of the area in which it is located or will protect and enhance the visual character and amenity of the locality'.* This is what we were looking for - this understanding and acceptance by Rockingham City Planning that this area of land was to be *'preserved and protected for semi rural lifestyles'* and would not to be sold off to large developers or corporations that did not meet the planning rules and guidelines.

As such I am now writing to AGAIN support the Rockingham City Council's decision to **oppose** the building of the Hindu Temple Complex , located at Lot 53, No 67 Folly Road Baldivis.
First and foremost, I want it to be stated that I am not against any community / religious group having a place to congregate or worship – my opposition is based on the location, size of development, environmental concerns – wetlands / noise, as well as logistics with roads and traffic congestion.
This multi-faceted complex / development is in total contraction of the 'rural ' lifestyle that is identified and classified the Rural Land Strategy. As such, I question how the proposed Hindu Temple and Cultural Centre , which is an exceptionally large complex having a temple, multipurpose hall, library, dining hall (seating 108), 6 fully functioning kitchens (2 at commercial level), large living accommodations for priest families and guests (who can stay for 5 days at a time for 52 weeks a year) and includes 47 toilet facilities – let alone the multiple furniture storage rooms / chariot hall , playgrounds, water features and 103 parking bays can possibly fall under the category of rural or semi rural.

The visual impact of the temple and buildings is at total odds with the rural amenities of Baldivis East. I call into question the authenticity of the architectural design that states this entire complex will " sit comfortably within the natural landscape and align with locality builds". In looking at the temple - length at 46m and width at 23m – with the Goporam being approximately 18 m high and illuminated at night , as well the number of the other buildings,

it is very apparent that this complex will not blend and maintain the visual amenity of the landscape as it significantly exceeds the size and scale of buildings within the area. This development is NOT consistent with the SSP 7.0 - Design Principal 1 – Context or Character or Design Principal 3 – Built Form and Scale and the entire complex will adversely impact the rural characteristics of this environment.
Based on these concerns alone, I applaud Rockingham City Council in their decision to refuse the proposal - not once but twice.

On the 9 May 2022, the DAP committee asked for a deferment to address some of the issues. The amended plans have again been submitted and have now raised further concerns.

1. Times of use

   It now appears that the length of times for all activities have been *extended.* The festivals are now stated and can be up to 19 possible events a year, with no set date but based on Lunar calendar! Then there are the expected bi-monthly weddings. I ask the question, how is this in keeping with the rural serenity of the area? It is stated that the use is from 7 am – however we are all aware that this will mean people will arrive to set up and organize for the day or event many hours before hand. The closing time states most days as 9pm again at least an hour after is needed for cleaning and lock up. These times and the daily use of a facility this big, which can have up to 100 people per day and on festival or event days up to 400+, is NOT acceptable in a rural setting.
2. Festival / Wedding Noise Concerns

   It was stated that all events would be held inside and this would limit the noise concerns. Marshal Day Acoustics report tried to support the development with cautiously crafted wording, however some of their statements such as ‘ carefully managed’, ‘door and windows closed’ and ‘once building materials are determined should be able to sufficiently contain noise’ does not give me hope that the noise level will be contained or to a level that will not affect the quiet serenity of this area. Acoustic reports are based on looking at noise emissions and must be free of annoying characteristics such as: impulsiveness, modulation and tonality. I have researched and listened to Carnatic music and Vedic chanting of this religion. I ask the question does this level of music using drums, guitars, 100s of people chanting especially on festival that will last all weekend from 9 am til 11 pm add to the rural ambience? The residual noise from the Kwinana Freeway which is less than 2 kms from my residence can be clearly heard at night as the surrounding area is silent. Any music played within the surrounding area can be heard many kilometers away as there is no urban build up to absorb the sounds. I ask how this level of noise will be contained and who will monitor it? Marshal Day Acoustic report actually states that there is a ‘potential to exceed’ the limits. This does not inspire confidence in the ability to ensure that the ongoing music and noise level will be sensitive to the rural environment.
   An issue that arises from this is that the application states that the multipurpose hall in which the weddings, receptions, chanting and dancing will take place will be built in 6 – 10 years. This then begs the question – where will all the weddings and festivals take place until then? The Acoustic report states that windows and doors need to be closed to contain the sounds. This is not possible if the building is not there.
3. Traffic issues / Length of build

   Beyond the actual size and use of the property, thus the impact on the quiet and peaceful rural lifestyle that residents enjoy – it also then raises a number of questions about the traffic use on rural roads. Folly Road and the adjoining St Albans Road are narrow, have no shoulder, the current road edges crumbling, have no pedestrian or cycle paths, very poor and limited road lighting and most importantly have two extremely unsafe and dangerous turns in the road. The bend between Folly and St Albans has had numerous incidents with minor car accidents, run offs into the bush or onto private

property due to in misjudgment of speed and sharpness of the turn. The unfortunate death on the corner of Young and Folly is point in case for the poor road design. An increase in traffic and people unfamiliar with the roads will be extremely dangerous to all who live within the area.

Another concern is that the updated report reduces the number of car spaces to 103 to comply with legislation, however I ask where are the other members of the Hindu community going to park? It has been communicated that there could be up to 450 people on site at various times of day and night, throughout the month. Once again this has not been clearly communicated or thought out by the applicant. This appears fraught with issues and the Council agrees as they state that "that the noise from car movements accessing the carparks and on Folly Road may cause a nuisance for nearby properties, from cars attending and leaving the site, particularly in the evening and night for the weddings (where all guests' cars (i.e. 100+) arrive and depart at a similar time), or in the mornings if vehicles arrive prior to the commencement of 7am prayer sessions" . They also state that "the associated traffic movements are considered out of context for the area, and will have an adverse impact on the amenity of the immediate area".

As a final point and an issue that has not been considered in any of the discussions so far, the actual proposed development and building of the Hindu Temple Complex is now to be to be spread over 10 years in various stages: -
1. 0-12 months from approval: · Earthworks, slabs, drainage; · Major tree plantings.
2. 12-24 months: · Main Temple, Ablution and Kitchen buildings; Vehicle access, main carpark;
3. 2-5 years: · Dining hall; · Library building; · Priest residence.
4. 6-10 years: · Multi-purpose hall; · Guest accommodation; · Additional car parking.

My question is how does a **10 year** development fit into a rural setting?

This has not been answered or explained in any of the discussions. As the applicant has still not actually purchased the property and with the extended timelines in passing development permissions and current issues with building supplies, builders and equipment the build will be at least 15 years. This imposition to our quiet and peaceful lifestyles, the total disruption and added danger on the only road to our property for over 10 years is not acceptable. Having both an increase in traffic and noise involving construction vehicles, trucks delivering sand for the site, earth moving equipment, diggers etc and then the actual physical people on site to construct and build such a large temple and development project for over ten years will negatively impact all within the area – both human and animal.

Lastly, as stated by Kristi Clarke Manager, Office of the Director General on behalf of the Hon Rita Saffioti MLA, Minister for Planning, the role of the JDAP is to make decisions 'standing in the shoes' of the responsible authority, in this case the City of Rockingham. I then ask the members presiding today to consider this application based on planning merit and relevant planning legislation, applying the relevant region and local planning scheme and policies into which this application clearly does not fit. The Council have been our voice and have twice stated that this is not within the rules and regulations. It is now up to the JDAP members to back Rockingham Council who are tasked with and have made decisions for the good of our community.
JDAP members need to also take into consideration the actual residents and 'stand in our shoes' as we as rate payers all work extremely hard to be able to afford this rural lifestyle. We have chosen to live here - to be away from the urban sprawl , the traffic noise, neighbourhood noise, living quietly in a rural setting. I urge you to consider how you would personally feel if a development this large was proposed near your home if you lived in a quiet, serene and environmentally sensitive area. This development will detrimentally impact the lives of the residents of Baldivis East now and in the future.

For the above concerns I am delighted that the Rockingham City Councilors (12 to 0) have TWICE OBJECTED to this proposal and recommend that MOJDAP resolve to REFUSE the application.
I and my partner are OPPOSED to the building of the Hindu Temple and Cultural Centre in the proposed location Folly Road , Baldivis East.
Regards
Debbie MacKenzie and John Emmerson

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

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Presenter Details

Name	Deirdre & Peter McCoy, 42 Makin Road
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday 4 August 2022
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road, Baldivis
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒

Will the presentation require power-point facilities?	**YES ☐ NO ☐** **If yes, please attach**

Presentation Content*

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Against the Hindu Temple development and support the recommendation for refusal

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

We strongly oppose and do not support the application for this Hindu Temple. Please respect the people who actually live here and consider our rural lifestyle and amenity which we have enjoyed for many years.
Major concerns are in relation to environmental issues, quality of water table, excessive noise, increased traffic and visual impact on size of the buildings height in a semi-rural residential part of Baldivis.

Environment:

Concern over these matters:

1. Waste water discharge affecting groundwater and into a sensitive wetland area
2. Loss of native flora and fauna – specially the black cockatoos who nest there

Noise emanating from the site

1. The noise levels from amplified music from the speakers calling to prayer and from the wedding bands until 2200 - unacceptable. Rural living is a quiet, peaceful and tranquil, which is why people moved here.
2. The noise levels would be continuous day and night from vehicles arriving well before 6am for prayers, 7 days per week - unacceptable.
3. Festivals and weddings will generate carpark noise and voices which will disturb anyone who lives in close proximity. The activities might be scheduled to finish at 2100 or 2200 hours but there will be catering, photographers, bands and hospitality staff leaving after that time.
4. Plant equipment vibration – constant.
5. Sound travels in this area as we are semi-rural. Although we live around 1.5 km from the freeway we can hear the traffic. We also hear the freight train and that is approx. 5km from our residence.

Traffic Impact

1. Increased vehicles on a quiet road - Is Foley Road going to be realigned on the bend which is near the proposed main entrance to the site? It is a dangerous bend where a young girl lost her life a few years ago.
2. Not all traffic will be via the freeway and Safety Bay Road. You have not mentioned or allowed for traffic that will also be generated from the EAST inwards and outwards which means travelling along Mundijong Road, St Albans Road to Foley Road.
3. There are cycling events early on weekends that travel down St Albans Road safely and will be impacted by increased traffic.
4. Traffic congestion during arrivals and departures for approx. 225 vehicles will cause a huge impact on local traffic.

Building

This proposal will not blend into the rural setting and make it an eyesore with also the possibility of causing traffic accidents, due to inattention of drivers looking at such a massive structure in the middle of a rural living setting.

The height of the towers will be a visual eyesore for such a peaceful rural setting.

Bushfire threat

Concern that during summer months when the fire danger is extreme – evacuation of premises with a huge volume of traffic exiting. In the last few years there have been fires close to this location.

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Development Assessment Panels

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Presenter Details

Name	Ian and Deborah Mills
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	METRO OUTER JOINT DEVELOPMENT ASSESMENT PANEL
Meeting Date	THURSDAY ,4 AUGUST 2022 @ 9AM
DAP Application Number	DAP/21/02148
Property Location	LOT 53 (67) FOLLY ROAD – BALDIVIS EAST PRECINCT
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒

Government of **Western Australia**
Development Assessment Panels

Will the presentation require power-point facilities?	**YES ☐ NO ☒** **If yes, please attach**

Presentation Content*

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* The negative impact a Hindu Temple will have on the rural environment.

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

As rural residents of Baldivis since 1989 we strongly believe this development does not comply with the City of Rockingham's rural strategy for the area.

While we are not adverse to the building of a place of worship, we strongly believe that the proposed development exceeds the City of Rockingham's current planning parameters and is likened to a development of a small community infrastructure, rather than a place of worship and should be located in a light commercial area and not a rural area.

The approval of the plans in the current format would have an adverse effect on the area and rural community as a whole. The application is NOT sympathetic to the current rural practices and homes in the area and the development is a huge bushfire risk. The possibility of contamination to the local flora and fauna with inadequate sewage treatment is of great concern, as is the lack of a reliable water supply and the increase of traffic flow and noise in the area.

The traffic flow along Folly and St Albans Roads has substantially increased over the last few years. It is used daily as an alternative route to Mundijong Road and access to the Kwinana Freeway via Mundijong Road. The speeding of vehicles and trucks is at times frightening, especially at night, where there is inadequate street lighting. The additional traffic flow encouraged by the building of a place of worship in this area would only exacerbate an already existing problem.

While we appreciate that Baldivis is no longer the 'sleepy, rural retreat' it was over 30 years ago, there are aspects of the rural environment that should be retained and enhanced for future generations to enjoy and protect.

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

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Presenter Details

Name	Cathy Paton
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Lot 5 (No67) Folly Road Baldivis Place of Worship
Meeting Date	4-08-2022 (0900)
DAP Application Number	DAP/21/02148
Property Location	Lot 5 (No67) Folly Road Baldivis
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Concerns from the residents of Rural Baldivis

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

I have been a resident of rural Baldivis for 26 years and my property is directly to the north of the proposed development, where I have full view and will be able to hear all the noise that will be generated from this complex.

I will read out information that I received from the Minister for Planning of WA
Ms Rita Saffioti.

The role of the JDAP is to make decisions 'standing in the shoes' of the responsible Authority, in this case the City of Rockingham. The JDAP is an independent decision-Making body that considers applications based on planning merit and relevant planning legislation, applying the relevant region and local planning schemes.

In accordance with Clause 68 of the Planning and Development (Local Planning Schemes) Regulations 2015 and the provisions of clause 68(2)(c) of the deemed provisions of the City of Rockingham Town Planning Scheme No. 2, for the reasons stated this development should be refused as it goes against the councils planning scheme for this rural area.

The proposed development is not consistent with the city's town planning scheme No.2 objective of the Rural Zone (clause 4.11.1) which is to preserve land for farming and foster semi- rural development which is sympathetic to the rural character of the area.
This part of rural Baldivis and the surrounding area is farming.
We might not live off the land anymore but nevertheless we are farmers.(Hobby).

There is over 20 horses property's alone.
There is property's that have Cattle, sheep, goats and Alpacas.
There is property's that grown and sell hay.
There is a macadamia farm.
There is a chicken farm.
There is a lime orchard.
There is several nurseries.
This is why along with the council the community is fighting so hard to achieve keeping this area rural.

Zoning "X" that allows for ' a Place of Worship' to be built in a rural location.
Does not also mean a business.
This is a business , maybe a non-profit business but it's still a business in a rural setting that will be open 7 days a week, 365 days of the year.
Operating hours during the week for prayers and other activities start at 7am and finish at 9pm or 10pm. Which is constantly changing.
Weddings are going to be held six times a year given the frequency of the festivals it could be possible to have two festivals and a wedding in the same month.

weddings will be held between 9am and 11pm Saturdays and Sundays this is unrealistic for a rural community.

You have to purchase tickets to attend the festivals, you have to pay for hire of the hall for anniversary and Birthday parties. You have to pay for hire of weddings being held there. You have to pay for meals after prayers, yoga and other activities.

Under the zoning clause that allows 'place of worship' to be in a rural area is to be
Just that a ' place of worship' not operating as a business and build a huge complex of this size.
This is clearly outside the guide lines of the "X" zoning "Place of Worship".

PARKING
Again the number of car bays has changed now to 103.
We are to understand that there can be up to 400 people at any one time attending Festivals and weddings.
103 car bays X 400 people that means that there will have to be 4 people in every car .
Which seems unrealistic to me.
Where are the other cars going to park. Can't park on Folly rd, too narrow and too dangerous. Can't park on Young rd north again too narrow and a single side lane.
So where do the extra cars park.
Another concern.

FESTIVALS
Again I have to refer to the last JDAP meeting. When asked about the noise that the festivals and weddings will generate and the instruments used such as drums, bell etc we were advised by the applicant that there is many different Hindu religionsb and that (JET) was of the teaching and learning of their faith only and that no such instruments are played .
I have listen to all the music played at these festivals from the list that the applicant has supplied and the majority all play Carnatic music which is extremely loud music with all the instruments we mentioned.
You have to understand why we have concerns .
Can this be explained in all its transparency please
Another concern.

We are aware of the circumnavigation of the chariot around the Temple held twice a year and that this is to be the only festival held outdoors.
The multipurpose hall that is to cater for the festivals and wedding has been pushed back to 6-10 years are we now to understand that there will be NO outdoor activities until this building is built as stated at the last JDAP meeting. (no outdoor activities).
Another Concern

The applicant also stated that they will modify times of the festivals and weddings when a dwelling is built at 923 young rd.
Why can't these times be modified now as there is other residents in this immediate area that these cars are going to annoy with the comings and goings ,people chatting when leaving, opening and closing of car doors, car light.
Another Concern

TRAFFIC
Last JDAP meeting we were told that there will be no disruption to the local residents as the majority of the traffic will be coming from the west.
A bold statement for someone who doesn't live in this area.
If you live North or East Rockingham you are not going to drive all the way to safety bay exit.
Same if you live in Perth you will exit Mundijong rd, get off the freeway a nicer drive. Same

as when leaving it's quicker and your not waiting for 2 sets of lights and a very slow turn right signal at safety bay exit.
I live here and these are the routes the locals travel so I can be bold and say the residents do have a concern of the amount of extra traffic that this development will generate with the coming and going all times of the day and late nights.
Another Concern

The Councillors and Town Planners have taken a lot of time and research into this decision making and both times it has come back the same that a development of this size is not right for this location and does not fit in with councils planning schemes.

A Meeting I had with Environmental Minister Mr. Reese Whitby was also of the concern along with the Water Bird and Wildlife conservation group that this size development was also not right for this location.
Surely all this people can't be wrong.

The applicants reports are inconsistent and a cause for concern. There Is still too many unanswered questions.

How will this complex be policed in the years to come as its going to take 6-10 years to be built. The amount of people that will live in the priests accommodation and the accommodation for international guest only, how long and how often and how can we be assured that it won't be booked out for wedding and festivals guests. There are no dates on the festivals, we are told it is due to the lunar moon. The festivals have changed from 12 to 19 how can we be assured that more won't be added also the amount of weddings could change.
The dates for prayer times during the week are constantly changing from 9pm to10pm back to 9pm seven days a week.
The car bays are not enough to accommodate the numbers.
The noise of instruments that are played or not played.
The development has doubled in time to be built.
The lighting around the Temple is to be turned off when not in use.

These are all valid concerns that need addressing at this meeting because if this development is approved I have no idea how it will be policed .
The last concern is on the noise . The applicant stated on their report on noise from the festivals and weddings that the immediate residents would be given a phone number for a ground keeper that will be at these events to call if the noise gets too loud. But if they can't be reached we could call the police.
HOW ARE WE TO HAVE ANY FAITH IN ANYTHING WE HAVE BEEN TOLD
It is worth noting that this property is still under contact depending on approval .The applicant still has the opportunity to consider a more suited location.

I am asking that JDAP panel agree with the Rockingham Councillors and Town Planners on their decision on refusal of this development as it does not fit in with the councils planning schemes for this rural area.

Cathy Paton

[redacted]
Baldivis

Government of **Western Australia**
Development Assessment Panels

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Presenter Details

Name	Janice & Garry Raffaele
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday 4th August
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒

Government of **Western Australia**
Development Assessment Panels

Will the presentation require power-point facilities?	**YES ☐ NO ☒** **If yes, please attach**

Presentation Content*

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* **Against the Hindu Temple Development and Support the recommendation for the refusal.**

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

Baldivis is a farming community and needs to be saved, the environment is a very important part of rural Baldivis and we take it seriously when development try and take this away. The council and town planners take a lot of time and research into making this decision and what is right for the rural area as to why they are refusing this again.

The proposed development is not consistent with the city's town planning scheme No2 objective of the Rural Zone (clause 4.11.1) which is to preserve land for farming and foster semi-rural development which is sympathetic to the rural character of the area.

Janice and Garry Raffaele

[redacted] Baldivis

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

Presentation Request Guidelines

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Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Elvio Ruggiero
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES ☐** **NO ☒** If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Lot 5 (No67) Folly Road Baldivis Place of Worship
Meeting Date	4-08-2022 (0900)
DAP Application Number	DAP/21/02148
Property Location	Lot 5 (No67) Folly Road Baldivis
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES ☒**
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT ☒** **AGAINST ☐**
Is the presentation in support of or against the proposed development?	**SUPPORT ☐** **AGAINST ☒**
Will the presentation require power-point facilities?	**YES ☐** **NO ☒** **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Concerns from the residents of Rural Baldivis

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation. *Please attach detailed content of presentation or provide below:*

Dear MOJDAP members

Preamble

A large, unsympathetic built form imposed on the existing quiet, rural zoned environment ***masquerading as a Place of Worship but really a Community Centre when the Land Use is assessed on a secular basis*** and whose functions the Hindu Community can access at existing nearby locations should be rejected.

As summary of my submission is below followed by more detailed analysis.

Summary

1. ***There is no community support within the City of Rockingham for this Temple and in agreeing discretion under the relevant Town Planning Scheme decision makers must acknowledge this.***

   The religious requirements of the small Hindu community within the City and those proponents who live outside it are met by existing Hindu Temples within a 20 minute drive of the proposed location.

In the original Notification to residents by the City of Rockingham, only **38** Hindus within the City of Rockingham responded for the proposed Temple. All of these are located west of Kwinana Freeway. 145 submissions were from outside the City of Rockingham.

Subsequent submissions by proponents were from diverse areas such as Byford, Wellard, Willletton (who all have access to existing Hindu Temples).

All **72** respondents to the Notification to residents that are against this proposal are those East of the Kwinana Freeway and are in close proximity to the proposed Temple

It is clear that this Temple is intended to serve a large number of Hindu's from outside the City of Rockingham and be located within what is a sparsely populated, low density, low traffic, low noise, quiet rural setting.

However for the small number of Hindus responding positively to the proposal that are within the City of Rockingham their religious needs are adequately provided for at nearby Hindu Temples in Mandogolup and Canningvale (a 20 minute drive from the proposed site).

This is the same for those Hindus from outside the City of Rockingham.

It is vitally important that a decision maker take into account the community response when making a decision based on discretion.

2. Is this proposal a Place of Worship or is it really a Community Centre

What really is the dominant land use of this proposal?

Do all the ancillary uses dilute the notion of a Place of Worship when considered in a ***secular context*** and within the Land Use characteristics of existing infrastructure in the City of Rockingham?

i) a construction timeframe of **10 years**
ii) wedding reception facilities
ii) a dining hall
iv) kitchen facilities
v) a library
vi) car parking all for more than 400 peoples with toilet facilties off the WaterCorp sewer network.

All of the ancillary activities above clearly show the Place of Worship (as meant in TPS 2) is **diluted** and that the **dominant land use** is really a Civic Use and or Community Purpose under the Table No.1 Zoning Table.

All of these existing ancillary land uses are currently provided for in the City of Rockingham **at the Garry Holland Community Centre which can hold 350 people, host weddings, has kitchen facilities, toilets and parking) and the May Davies Library.**

The Garry Holland Community Centre and May Davies Library demonstrate that the correct land use of this proposal is a Civic Use Centre or Community Purpose Centre and note;

- The Garry Holland community centre is available for use by the Hindu community and
- Nearby Hindu Temples are a 20 minute drive away and can adequately service the religious beliefs of the Hindu residents of the City of Rockingham and those outside of the City.

The proposal cannot be approved where the Land Use is properly characterised as Civic Use or Community Purpose under TPS 2.

Conclusion

With due **(secular)** regard to the actual Land Use (Civic Use or Community Purpose) this proposal is incapable of being approved under TPS 2. Alternatively,

- Per TPS 2 cl 3.2.4 (c), *'where the land use cannot be reasonably determined as falling within the interpretation of one of the Use Classes a decision maker must assess the application in line with the objectives and purposes of the particular zone'.*

I submit that MOJDAP must consider the TPS 2 Objectives of Land Zoned for Rural uses and this is to preserve and foster it.
The Responsible Authority Report (on two occasions and also by the elected Council) outlines why this proposal does not meet the TPS 2 and should simply be accepted.
A large, unsympathetic built form imposed on the existing rural environment masquerading as a Place of Worship but really a Community Centre whose functions the Hindu Community can access at existing nearby locations should be rejected.

1. Community support

There is no local community support in the City of Rockingham for this proposal.

MOJDAP should note that of the 255 written submissions received by Rockingham Council, 183 were in favour **but** 145 of these supporters were **outside** the municipality of the City of Rockingham **(Source: *Council Minutes 28 April 2022, page 93)***

Therefore:

- Only 38 **supporters** were within the City of Rockingham **and** all of these were located to the west of the Kwinana Freeway in ***residential zoned land (i.e. in 'suburbia' and unaffected by its location').***
  (Source: *Council Minutes 28 April 2022, page 93)* *and*

- Of the 72 community submissions received that were **against** this proposal, all of these were from residents on the eastern side of the Kwinana Freeway in rural zoned land close to the proposed site **(i.e. all the residents close to this proposal want this proposal rejected).**
  (Source: *Council Minutes 28 April 2022, page 94).*

- Of the "Schedule of Submissions' PD-027/22 - Attachment 6 (**Source: *City of Rockingham Report Attachments July 2022 Ordinary Council)*** it is clear that all the favourable responses are:

  (i) from outside of the City of Rockingham (e.g. from Wellard, Byford etc) and

  (ii) all of these are from areas **where these respondents can access EXISTING Hindu temples such as those in (i) Mandogalup, (ii) Canningvale and (iii) Bennett Springs where (i) and (ii) are a 20 minute drive away from the proposed location.**

It is easily concluded that this proposal is not intended for the community of Baldivis but is rather for a far greater Hindu population from outside the City of Rockingham.

Therefore, there is no community support for this proposal in the City of Rockingham. This is acknowledged by the elected Councillors of the City of Rockingham that represent all residents of Rockingham voting against this proposal twice.

It is vital that MOJDAP understand there is no rural zoned community support for this proposal in order for MOJDAP to make an informed decision.

2. **Uncertainty regarding the correct characterisation of proposed 'Land Use' under City of Rockingham Town Planning Scheme 2 (TPS 2)**

I submit that the land use for the proposed Hindu temple in Baldivis is **not** for a Place of Worship but that there is great uncertainty as to what the real or actual land use of this proposal will be given all the incidental uses of this proposal.

The issue is at what point does a decision maker 'draw the line' over all the incidental land uses to conclude the proposed land use is uncertain.

This must be considered within a secular context not a religious context.

The applicants wish to construct this development over a **10 year period**. This is far greater than a reasonable timeframe for a simple place of worship.

I submit the proposal is more correctly classified as a land use associated with a

- **Civic Use or a**
- **Community Use (as defined in TPS 2).**

Land use – characteristics

Currently, existing places of Hindu Worship (Temples) are located at;

(i) Bala Murugan Temple in Mandogalup WA,
(ii) Perth Hindu Temple in Canningvale WA and
(iii) Bennett Springs

None of these Hindu places of worship have a;

- A yoga centre
- a library
- a dining hall
- a wedding reception centre along with
- 'industrial scale' and non WaterCorp connected toilet facilities **to accommodate MORE than 400 HUNDRED** people which the Baldivis proposal has.

Given the above activities, it is clear that the above proposed activities are much more than those offered by the existing above noted Hindu Temples and have the effect of:

- **diluting** the Place of Worship concept of TPS 2 and
- **correctly** classifying the proposed application as having a Land Use which is **characteristic** of something that is exclusively a (Hindu) Community Centre or Civic Centre Use.

Civic Use (within TPS 2 'Table No.1 Zoning Table')

An example of a Civic Use which meets the definition in TPS 2 is the '**Garry Holland Community Centre'**, 19 Kent Street Rockingham ***which is operated (and or funded) by the City of Rockingham.***

The Garry Holland Community Centre has the following facilities and capabilities;

- Wedding facilities

- Toilets
- Kitchen
- Seating for 350 people. ***(Source: City of Rockingham)***

I submit that the toilet facilities, the wedding facilities, the seating and kitchen facilities of the Garry Holland Community Centre show that the City of Rockingham (and indeed the community) considers these elements as indicative of something that is correctly described as a civic land use (and or Community Centre) rather than a Place of Worship.

In fact, the Garry Holland Community Centre is all inclusive and Hindus can celebrate wedding functions, have access to kitchen facilities have seating for 350 people in this Community Centre which is located closer to where the proponents of this application live (i.e. on the western side of Kwinana Freeway).

I submit that the Hindu Temple application;

(i) seeks approval under an incorrect land use within TPS 2 as the applicant has sought approval under a 'Place of Worship' rather than what it actually is and that is a 'Civic Use' under TPS 2 and therefore should be rejected as the applicant is incapable of lodging an application for a Civic Use as it is not a government body nor funded by the government

Community Purpose within TPS 2 'Table No.1 Zoning Table'

Alternatively and in addition:

I submit that:

(ii) the Land Use of the proposal should be correctly considered a Community Purpose under TPS 2 'Table No.1 Zoning Table', being a Hindu Community Centre.

The reason the land use should be considered a Community Centre is that the Baldivis proposal offers Hindus more activities than those offered by Hindu places of worship at (i) Mandogalup, (ii) Canningvale and (iii) Bennett Springs such that these additional activities dilute the Place of Worship concept and align the proposal to a 'Community Centre' where the Baldivis Hindu Temple Proposal has more similarities of Land Use with the Garry Holland Community Centre.

(iii) Given the correct characterisation of the land use as 'Community Purpose', it is obvious that the proposal cannot meet the TPS 2 definition of Community Purpose as it seeks to actively exclude members of the community based on religion.

Per TPS 2 cl 3.2.4 (c), ***'where the land use cannot be reasonably determined as falling within the interpretation of one of the Use Classes a decision maker must assess the application in line with the objectives and purposes of the particular zone'.***

In this Hindu Temple proposal, the relevant 'particular' zone is Rural Land Use under TPS 2.
Rural Land Use as defined in TPS 2 excludes a Place of Worship, Community Purpose or a Civic Use

I submit that the proposal should be rejected on the basis that;

i) There is real uncertainty as to whether the proposed Land Use meets the Place of Worship requirements of TPS 2 and that the land use is actually for Civic Use or alternatively Community Purposes where neither can be approved as the proposal excludes the wider non Hindu community and is not a local government apparatus.

ii) That the majority of Land uses in the application (such as wedding, seating, kitchen, dining and toilet facilities) are already available to the Hindu Community at the Garry Holland Community Centre.

iii) Hindu Religious requirements can easily be accommodated at the Mandogalup and Canningvale Hindu Temples which are a 20 minute drive from the proposed location.
This is relevant as the City of Rockingham received only 38 favourable community responses in relation to this proposal and Hindus make up only 0.8% of the population of the City of Rockingham.

iv) Is not consistent with the City's Town Planning Scheme No.2 Objective of the Rural Zone (Clause 4.11.1), which is to preserve land for farming and foster semi-rural development which is sympathetic to the rural character of the area***.***
The idea that a Hindu Temple whose design philosophy is foreign sourced in any way shape or form is sympathetic to the rural character of the local area is plainly absurd.

v) The proposed development is not consistent with the strategic intent for Planning Precinct 2A under the City of Rockingham Planning Policy 3.3.1 – Rural Land Strategy, as it has not been sufficiently demonstrated that the development will protect and enhance the visual character of the rural area and

vi) The intensity of the proposed development exceeds what could reasonably be expected
within this rural area, based on the number of people likely to attend the site and the scale and size of the built form.

As a result, I submit refusal is the only outcome.

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

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Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Peta Sims
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday the 4th of August at 9am
DAP Application Number	DAP/21/02148
Property Location	Lot 53 (No 67 Folly Road Baldivis)
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Against the Hindu Temple and Support the Recommendation for REFUSAL.

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

I have been living in this rural area of Baldivis for 5.5 years. My husband and I have worked extremely hard and made sacrifices in order to obtain our dream of living rural. The word I would like to emphasise here is **RURAL**.

The residents of Baldivis East will have this choice of **RURAL** life taken away to accommodate a Hindu Temple that clearly will not fit and blend into the Rural setting of our chosen life. The proposed development is not consistent with the strategic intent for Planning Precinct 2A under the City of Rockingham Planning Policy and it has not been sufficiently demonstrated that the development will protect and enhance the visual character of the rural area.

I would like to applaud and thank the Rockingham City Council and all of the Councillors for listening to their community and all of our concerns. All 12 out of 12 Councillors voted for the **REFUSAL** of the Hindu Temple to go ahead in this location. The shear intensity of this proposed development exceeds what could be reasonably expected within this rural area.

The average population of Hindu in the Rockingham area is 577 according to the 2016 census report. In the 2020 report, it states that the population in Rockingham grew by 1.8% in this 4-year period, meaning that the population of people who practice Hindu in the Rockingham area would average out to 587 people. Exceedingly small in comparison to Catholic or Christion religions which is around 62,000 in the Rockingham area. Is a 5-million-dollar development necessary?

The meaning of “Place of Worship” is - “A building where believers

can practise their faith". Not go to the library, go out to the eating hall, go to a concert, play on the playground, stay for a week or attend a yoga class. The report states that the multiple of other buildings fit into the category "Place of Worship" – Multi-purpose hall, which includes green rooms, meeting rooms, audio rooms, a stage, yoga classes, library, storage rooms, a dining hall, 3 kitchens, a two-storey accommodation– the list goes on… The proposed development also states that the short-term accommodation on site (which can accommodate people 5 days at a time) is provided for occasional guests that will stay for 1 week. – My question is – who is going to govern this? Guests can stay for up to a week, but who is going to govern that the accommodation is not going to used 52 weeks of the year? This has the capability of turning into a motel if ungoverned. (Group Dwellings are prohibited in the Rural Zone under the cities Town Planning Scheme No 2) The proposal states that the proposed Temple is being built to maximise its connection with the surrounding natural environment to ensure a positive environmental, social and economic outcome. This certainly is not the case here.

In the first updated report that became available on the 14th od April, the applicant stated on page 83 (and I quote) "no noise will be generated other than that of vehicle and worshippers accessing the temple" end quote. Yet on page 86 it states that the temple will have a management committee who will be responsible for a noise management plan for the Multipurpose Hall, including hours of operation and hours that the amplified/loud music must be turned off. They also state that they will make available the phone numbers of the people on site so they can be contacted if there are noise issues, they are also putting in place a process for managing and registering the noise complaints and also state that the local police can be contacted……YET……no noise will be generated…….very contradictory!

In the new amended report submitted by the applicant, the number of car bays have been reduced to 105, yet the amount of people to attend festivals, weddings can still be as high as 450. My question is – Where to these people park their cars? There is no allocated "Overflow" parking area and during the wet months, the low-lying

parts of the block will be waterlogged, so no parking on the grassed areas. Will the cars spill out onto the street? Onto an already narrow piece of road with no shoulders and on a tight bend? None of this has been addressed and which also again raises the issues we have of traffic.

Also in the new amended report, the start and finish times of events and prayer sessions have been lengthened. In the attendances noted, we could see up to 1700 people in a single week come and go from this facility…..this is all after extending the build time out to 10 years!!

The applicant has highlighted the surrounding properties and pointed out the buildings on them, sheds etc. These are in keeping with the rural amenity and do not have up to 1700 people visiting them in a week, nor do they have tall lighting blasting their properties at night, festivals that run into the late hours of the night up to 19 time a year, do not hire their premises out to third parties and have chariots doing laps. A very unrealistic comparison.

With the land that the proposed application is being sort for not yet purchased, surely there is a better location with no neighbouring properties, more parking to cater for the large numbers and with sufficient grounds for sewerage.

The applicant has chopped and changed their proposal many times adding bits here and taking out bit there, to make the Council happy, but the one thing they have failed to do is put the local community at ease……the community to which they are wanting to build in the middle of.

I ask for the panel to put yourselves in our shoes……. Please consider our many pleas, please consider the 12 Rockingham City Councillors who have already considered this proposal – twice – and recommended it for refusal in this location, please listen to the Baldivis East Rural Community – it's on our doorsteps, we are rate payers and we can't escape this.

I would like to again mention that I am in favour **FOR THE REFUSAL** of the Hindu Temple Complex being developed on Folly Road Baldivis

lease attach detailed content of presentation or provide below:

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

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Presenter Details

Name	Margaret Smith
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	Thursday 4th August 2022
DAP Application Number	DAP/21/02148
Property Location	67 Folly Road, Baldivis
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* AGAINST THE HINDU TEMPLE DEVELOPMENT AND SUPPORT THE RECOMMENDATION FOR THE REFUSAL

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

My Name is Margaret Smith, our property is [redacted], Baldivis.

My husband and I purchased our land 35 years ago to enjoy a Rural lifestyle and to set the property up for our retirement.

This property is to be kept in our family for generations.

The proposed Hindu Temple is right next to us. We share the same fence line. We are the closest neighbours.

Due to the State Planning Policy 3.7 – Planning Bushfire Areas. No trees can be planted on the developers North Boundary. This is the shared fence line.

None of this large development can be hidden from our view. It will be visible from any position on our property.

Our proposed dwelling location will be severely impacted. Our home will be 10metres from the fence line, due to the building envelope.

Our Rural view will be multiple buildings, a large carpark, a service road and over 2000 people a month, approximately 154,700 yearly, visiting day and night, all 365 days of the year.

If this goes ahead our 35 years of our dream retirement will be gone.

How does this development fit in with the existing City of Rockingham Town Planning Scheme, Clause 4.11.1 – to preserve land for Farming and foster semi Rural development, sympathetic to Rural Character and the City of Rockingham Planning Policy – to protect and enhance the visual character and amenity of the area.

I am greatly concerned for the noise levels.

In the proposed Hindu Temples first proposal there was no noise level given for our property.

There was for other properties around me who have a dwelling on them.

In the report from Marshall Day Acoustics it stated windows and doors would be closed to prevent noise travel.

That is not a practical solution to noise control.

It also does not account for all the outside activity- noise from cars coming and going, hundreds of people coming and going for prayers, yoga, festivals and weddings. This was not acceptable to the City Council.

The second proposal was to erect an 89 metre long noise barrier between the car park and our fence line, the north boundary. Again no trees can be planted due to bushfire regulations. My view would be a compound, a carpark, a service road and an 89metre long barrier. This was not acceptable to the City Council.

Now the third proposal by the developers is to do away with the 89 metre long noise barrier and to just modify the proposed Hindu Temples operating times for Weddings and Festivals, no modification to daily activities, the day to day

activities.

Modifying times does not stop noise, it is still there, less a few hours a day. This is NOT noise control.

The developers of the Hindu Temple say they will modify operating times ONLY when we build a dwelling on the property.

I do not accept or understand this, does the noise just disappear until we build our retirement home?

We use and enjoy our property, we call it the second, as it is our second home. We all spend days during the week out there, our sons use the shed, we spend family weekends we take the caravan for the grandchildren to have sleepovers. We use our property. The property is 20 minutes from our home in Rockingham, it is a large part of our life.

The noise level will affect us NOW.

I do not believe the proposed Hindu Temple has a sound, proven solution to noise control especially for our property.

My question is

Can anyone tell us how anyone can enjoy the quiet Rural Amenity of our property.

When the first proposal for noise control, was to close windows and doors. The second proposal was to build an 89 metre long noise barrier, now it is to scrap that and NOT build the 89 metre barrier. Now it is to modify hours whilst they have increased hours and that noise just disappears and only occurs if I have a

dwelling on the property. All whilst 2300 plus people a month, 154 plus thousand people a year, day and night 365 days of the year coming and going and now they have revealed the 12 festivals a year is now 19 Festivals.

All of this occurring metres from my fence line.

What is or where is there any proven noise control for our property.

What happened to the truthful implementation of the Environmental Protection Noise Regulation 1997.

How does this proposal meet with the City of Rockingham Town Planning Scheme Clause 4.11.1 or the City of Rockingham Planning Policy.

If this goes ahead our 35 years of planning our retirement will be shattered. Any enjoyment of our property is gone.

I hope you vote against this development and allow Rural Baldivis to remain the tranquil Community that it is.

Regards

Margaret Smith

Government of **Western Australia**
Development Assessment Panels

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Presenter Details

Name	Fiona Tassell
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer Joint Development Assessment Panel
Meeting Date	4th August 2022
DAP Application Number	DAP/21/02148
Property Location	Lot 53 (No 67 Folly Road, Baldivis)
Agenda Item Number	8.2

Presentation Details

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Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Hindu Temple – Support for REFUSAL

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

Hindu Temple on Folly Road in Baldivis and support the recommendation for REFUSAL.

As residents of 8 years within this Baldivis east rural area my husband and I would like to show our support for the Rockingham Council's decision to AGAIN recommend refusal of this proposed Hindu temple complex development.

This region of Baldivis is a rural area and as such we fail to see how a complex / community center of this size would "sit comfortably within the natural landscape and align with locality builds". The development itself is far more than just a "Place of Worship" which by definition is "a building for religious worship". Therefore the temple is a place of worship but a multipurpose hall with amenities, 2 commercial kitchens, a dining hall, 2 double story residence, guest residences, a library and numerous toilet facilities is not.
Might I also add that the numerous dwellings and toilet facilities proposed within this development are prohibited for all other land owners within this rural area.

The development application suggests that "The design sensitively addresses and visually connects with the surrounding natural environment through the proposed use of traditional building materials and colours for the buildings and the clustering of the built form. The design of the buildings with sweeping verandas and pitched roofs further connects the development to the semi-rural character of this location." We fail to see how the use of limestone, timber and colourbond is going to make the 20m and 18.5m Goparums as well as the 14.5m roof parapets and chariot entrances blend in to the rural setting.

Within the Accousitc Report that was submitted with the development application, there is no mention in this report of any outside noise created when open air areas are in use. On page 6 of the report it states "In addition to the above, Hindu weddings are proposed to be held on occasion. We understand these would be held within the hall on weekends, with an average of six events per year. The maximum number of attendees at weddings is 400. Further detailed consideration of these proposed events will be required so that potential noise impacts can be managed."
We find it hard to believe that a celebration with 400 people would be completely contained within a hall for the entire day/night. People would use the outdoor areas during this time and there has been no reporting made on the noise impact this would have.

The applicant has now submitted 2 reports to appease the council and both have been rejected. "Due to the intensity and scale proposed, the development is considered likely to adversely impact the rural character and amenity of the locality, which is in direct conflict with the City's RLS, and the objective for the Rural zone outlined in TPS2"

It has not gone unnoticed that within the reports submitted, the applicant has reduced car park bays, yet numbers for weddings in particular and also festivals have not decreased. So where will these people park….along the already dangerous stretch of road on Folly Road?

The hours of operation and number of festivals per year have increased in this new report along with an extended build time of 10 YEARS!

My husband and I have worked extremely hard for many years to be able to purchase our land and build our semi-rural life to raise our children. We want a peaceful, **rural** lifestyle and the Hindu temple construction would be an incursion on our amenities. **We firmly voice our support of the Rockingham Council's decision to <u>again</u> recommend refusal for this development.**

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

Presentation Request Guidelines

Persons interested in presenting to a DAP must first consider whether their concern has been adequately addressed in the responsible authority report or other submissions. Your request will be determined by the Presiding Member based on individual merit and likely contribution to assist the DAP's consideration and determination of the application.

Presentations are not to exceed **5 minutes**. It is important to note that the presentation content will be **published on the DAP website** as part of the meeting agenda.

Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Geoffrey Tomlinson
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES ☐** **NO ☒** If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	MOJDAP/189
Meeting Date	4 August 2022
DAP Application Number	DAP/21/02148
Property Location	Lot 53 Folly Road Baldivis
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES ☒**
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT ☒** **AGAINST ☐**
Is the presentation in support of or against the proposed development?	**SUPPORT ☐** **AGAINST ☒**
Will the presentation require power-point facilities?	**YES ☐** **NO ☒** **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Agist the Hindu Temple Development and Support the Recommendation for the REFUSAL

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

Click or tap here to enter text.

From:	Geoffrey Tomlinson
To:	Development Assessment Panels
Subject:	The rejection of the Hindu Temple development being built on a Rural wetlands block at lot 53 Folly Rd Baldivis East Precinct Zoned Rural !!
Date:	Friday, 29 July 2022 9:48:27 PM

Ministers Saffiotil.....

Once again your idea of the ratepayers and residents of Baldivis East Precinct zoned Rural .Is for us to send our thoughts and local knowledge regarding this Developers right to build his religious place of Worship in our chosen RURAL communities front yard as too put it !! Why would you after being rejected twice come back with a half baked remedy to fix all concerns by
1.extending the hours of operations to ending at 11pm at night, every night of the week ,52 weeks of the year till what century ? Try fitting in with your rural community when your night Worshipers exit at this time every day of the working week !!

What do they think , we have to fit in with there religious groups hours of dedication!! No bloody way zoned Rural mate !!
His request has been totally rejected twice by our Councilors and communities Vote.
Your panel gave him 2 months breathing space to address all our concerns !!
His response to this request was to reduce the footprint , move the toxic Sewerage system to the highest point of the building envelope to the NW corner. Just before the down slope into Folly Pool drain wetlands ecosystem study groups area!! Brilliant move !! Another environmental decision made on run !! No thought other than hiding the leach drains in the back corner out of site. ....
This area was chosen due the fact it only required a land fill of 1 metre to attain the required leaching drains to water table separation requirement of 1.5 metres
Plus the leaching drains mound of soil would be less visible from View on Folly Rd! out of site ..

Once again my greatest concerns are the total lack of interest and concerns shown by those who should know the documented resulting Environmental effects this sites Waste water will do to this sites surrounding environment in the years to come ..
Not only is this Waste water discharged into the surrounding topsoils naturally high water table here but the 1metre of land fill still places the leach drains below the natural ground level here 1 metre on ground level minus the 1.5 metre separation requirement plus leach drain covering soil required tells me the drains are at this point at least 1 metre below the natural ground level in this area ?? Right or wrong assumption !!
Moving on !!
Because the wastewater exiting into the surrounding area in the NW corner is discribed as Double chlorinated nutrient rich salty effluent once it infiltrates the natural groundwater resources the groundwater resources is deemed Toxic .. and as such it is !! Useless to all from then on !!

As Documented in the Developers Site and Soil Evaluation Report the wastewater exiting IS
... unfriendly to all that it comes into contact with.
Will eventually destroy any natural vegetation types due to its highly nutrient rich "salty" effluent discharged from the leaching drains placements!!
Area of leach drains to be fenced off as to prevent people walking on the soil and and signage to describe the area as keep out !!

Locals in the area once it enters their ground water resources ie, shallow bore water resources are not to use it for any domestic use/ vegetation watering and cannot even be used for Firefighting purposes useless water resource once the Temples wastewater infiltrates the natural ground water table and exits into the surrounding areas topsoil and water table !!
Our most valued water resource rendered useless for any use !! Bloody beautiful!! $$$$$ all water must be trucked in guy's , at whose expense Minister Saffioti
.. sounds like RAAF PEARCE AIR BASE BULLSBROOK WEST WEST all over again , but it wouldn't be allowed to occur here surely ...

Unless we get a Government Guarantee that if this occurs here the water needed as we now enjoy will be paid for by the Government Departments responsible if this eventually happens on their watch !!called Accountability guy's as we all are held to especially when our decisions effect the we
Near the leach drains is the natural tree line boundary forming the western end of the Hindu envelopes proposed build !
As documented in the CSRIO'S REPORT and the Government Sewerage report on this type of Effluents toxins the will find the least line of resistance to enter the environment which here is the root systems incorporated in the surrounding areas larger trees and shrubs eventually working its way to the surface which here as we know is just out of the 1/100 year flood plain mapped area and all down hill into the Folly Pool wetlands ecosystem study groups area into the drains exiting into the Serpentine River Peel Harvey Collie catchments basins , algae Blooms
Well thought out to say the least people , Stuff OUR natural environment and deal with it after the Developer gets his Temple development passed !! Leave the Toxic unfriendly Wastewater alone to discuss later !!
Noise emitting from the Temple !!
We're a Rural lifestyle community orientated type of hard-working individuals trying to mind our own business and do little that upsets the others reasons for enjoying their personal space,.
The Developers attitude towards the Communities thoughts on this passing through to approval are to say the least of his worries as he changes his plans if knocked back like one changes their undies "daily"!!
Regards his hours of operation as acceptable in a RURAL Environment??

Who in the right mind would be expected too welcome a neighbour into their spare block next door who intends to build a City like complex next door !!
Have a documented visitors list of at least of 154700 people yearly
Run a Hindu Wedding ceremonies of groups each of up to 450 Worshipers at least a minimum of 6 Weddings yearly !! Over 3 to 4 days duration depending !! Work in with that one for starters locals , traffic chaos !!

Have numerous Special festivities throughout the entire year , one virtually every month with a possibility of doubling up in some months if none some months or they could overlap where necessary!!
The Hindu Temple's yearly calender is full of festivals and weddings and special events carried out throughout the entire year!! As documented in their submissions!!
As well as Scripture reading and Yoga classes and meals are available in the dinning Hall!!?
Don't need to erect the required 89 metre acoustic barrier proposed parallel to the north eastern boundary as we'll plant some tree's and worry about the required acoustic barrier later when the adjoining owner decides to build their was going to be their retirement home but looking like the new neighbours , well rethinking our building here plans
Noise emitting!!

Well imagine living next door do this temples hours of operation from 7 a.m. to 11 pm. 7 days a week or can amend these hours as see's fit 2 to please the the locals and panel members , just need to get the approval guy's don't create waves !! Once we're here !!!

Nobody can live with this Temple's hours of operations and live a life as we do now , absolutely ridiculous placement of the Hindu Temple development in total disregard for any bodies Rural lifestyle and sanity for this developments religious lifestyle being looking like rammed down everybody's throats regardless of the effect on our good people's suffering and wellbeing having too put up with this rubbish or sell up and move due a decision made out of our control , more as a divide and conquer attitude towards the Community living here !!?? Total bullshit !!

None of the worshipers live within eye sight of Temple and are able to drive home to their chosen lifestyles, deep sewerage scheme water and walking distance to the shops, peacefully happy in their chosen living lifestyles undisturbed by animal feeding lots being passed to be built next door by a uptown Panel because it'll fit in like it or not ,, god forbid this on their lifestyle!! Oh no !!

Anyways Ministers if this is passed and goes pear shaped I feel that I've gone through the wringer to share my local knowledge regarding the total unsuitability of this Rural wet lands site in a Highwater table Sewerage Sensitive Mapped wetlands area, surrounded by a peacefully tranquil RURAL COMMUNITY enjoying their expensive chosen lifestyle and happily as of up till now paying for the right for their privilege of being able enjoy their hard worked for families lifestyle

For the families living in the surrounding area of the proposed Hindu Temple development as of within eyesight and hearing distance they will be living a 24/7 continuous nightmare !!
All thanks if passed to a non for profit Charitable Organisation contributing nil money wise to our communities rural infrastructure in the way of rates and will have a great time at our expense for the privilege too do so !! Please do your thing where you'll be appreciated Mr Developer , because sorry it's not her in our rural community!

No worries locals the 154,700 yearly congregational worshipers thank you for having too accept us as a much needed but not wanted in any way diversification to our Rural Community !!

And the yearly 5.6 million litres of Double chlorinated nutrient rich salty effluent produced by us is as discribed in the developers Site and Soil Evaluation Report deemed toxic unfriendly Wastewater and will eventually due to it being deposited on your wetland Sewerage Sensitive area of a extremely high water table area will turn the area of your Hindu Temple development Complex firstly into smelly toxic effluent Wastewater cesspit for the you the daily 425 residents and worshipers to live in !!

All data I have found and emailed too all about this Waste water discharged into the surrounding areas topsoil will eventually leach into the surrounding areas water ways and , too late guy's !!
It's a RURAL block in a Sewerage Sensitive wetland area with a high water table and sewerage is released on to a landfill area to obtain the necessary groundwater separation requirement of 1.5 metres !!
Na scene ot recommended for a Sewerage Sensitive wetland area in a high water table level by any Government Departments , seeping from beneath the leach drain mounds , exiting toxic microorganisms pathogens into the surrounding topsoil and water table here for ever more !!! ..

Traffic will create absolute chaos in the area 365 days of the year with this amount of cummings and going into and out of the temples gates from 7 am till 11 p.m. daily Already a scene waiting for a accident to happen death

Hopefully we will not experience a bushfire here as in the passed as exiting safely for all will be a logistical nightmare !! Good luck with that one
Have worked a Dairy farm here in the early 1960's and lived and enjoyed my 18 acres of land brought in 1996/7 and my local knowledge of the whole area's capabilities of handling the wet year's is second to none, especially in regards to your little home septic systems let alone a estimated yearly amount of 5.6 million litres of double chlorinated nutrient rich salty effluent produced yearly, every year for years to come , unbelievable arrogance with NO respect to our precious rural Wetlands!! FINI

Hopefully you can understand my Concerns Minister Saffiotil...

Yours sincerely Geoffrey Tomlinson resident full time of 25 years ...
Many thanks !

From:	Geoffrey Tomlinson
To:	Development Assessment Panels
Subject:	A Refusal Vote NO.. for The Hindu Temple development on Lot 53 Folly Rd Baldivis East Precinct zoned Rural to be even considered as suitable for this Rural 18 acre wetlands block!!
Date:	Saturday, 30 July 2022 12:29:12 AM

Minister Saffioti
This Report focuses on the Applicant's amended application received on 13 June 2022; addresses the previous concerns raised by the City (where relevant), and responds to the reasons for deferral
by the MOJDAP.
The amended application seeks Development Approval for buildings to be constructed and used for a Place of Worship, Reception Centre, Single Dwelling and Ancillary Accommodation.
Key elements include:
Ÿ A Hindu Temple building, with ancillary Chariot Store, Kitchen and Ablution buildings;
Ÿ A Priest's residence;
Ÿ A Multi-Purpose Hall;
Ÿ A Dining Hall;
Ÿ A Library building;
Ÿ Ancillary Guests Accommodation Dwelling;
Ÿ A total of 105 on-site car parking bays; and
Ÿ 'Strategic' landscape plantings to screen the development from the public domain.
The Temple (and the ancillary buildings) are proposed to be used for daily prayer sessions.
Following the prayer sessions, people in attendance move to the Multi-Purpose Hall to further develop and engage in the various practises of Hinduism.
The Dining Hall is proposed to operate during lunch and dinner on Fridays and the weekend to serve those wishing to stay for a meal after attending prayer sessions at the Temple.
The Multi-Purpose Hall and the Dining Hall are also proposed to be used for cultural functions, including use during festival days. Weddings will also be held in the Multi-Purpose Hall.
Prayer sessions are proposed to occur between 7am - 1pm and 5pm - 9pm daily.
The Library will hold a collection of religious texts and resources available for loan; be used for
cultural learnings, the teaching of Sanskrit language, yoga classes (between 6pm - 7pm) and
scripture classes (between 3pm - 6pm).
Hindu Festival days are proposed once a month, on average, between 7am - 1pm and 5pm - 9pm.
Weddings are proposed to occur six (6) times per year on average, on Saturdays and Sundays
between 9am - 11pm (although the Architectural and Visual Landscape Report states Fridays as well). It is "understood" that weddings will not be held on that same days as Hindu festivals.
In order to maintain compliance with the Environmental Protection (Noise) Regulations 1997 (Noise Regulations) when a dwelling is constructed in the future on the adjoining land at Lot 923 Young
Road, the Applicant proposes to modify operating times of the Hindu festivals and weddings as follows:
Hindu festivals: If held on Sundays and Public Holidays, will occur between 9am - 9pm.
Weddings: To be held between 9am - 7pm on Saturdays only. No weddings are proposed on Sundays or public holidays.

Try living your rural chosen communities lifestyle 365 days of the year if are able to fit in your dreams of buying your Rural Zoned dream block next to this Temples yearly Agenda !!

And remain sane , you will just have to fit into their schedule of a Communities treatment of there newly adopted neighbours guy's , unless the panels common sense regarding this unwanted Hindu Temples complex is refused for what it is , wrong wetlands rural location not zoned for this location!! Nightmare truly not appropriate or appreciated by any local Rural ratepayers within the Baldivis East Precinct Zoned Rural !!
Yours sincerely Geoffrey Tomlinson resident it's a NO ...

From:	Geoffrey Tomlinson
To:	Development Assessment Panels
Subject:	The Proposed Hindu Temple development on Lot 53 Folly Rd Baldivis East Precinct zoned Rural. Against the Proposal
Date:	Sunday, 31 July 2022 9:48:15 PM

Presenter details
Name Geoffrey Tomlinson

Company ////no

Please identify if you
have
any special requirements:
YES NO

Meeting Details
DAP Name Metro Outer Joint Development
Panel .
Meeting Date Thursday 4 , August 22

DAP Application Number DAP /21/02148
Property Location Lot 53 Folly Rd Baldivis East Precinct (67Folly Rd)
Agenda Item Number 8.2
Presentation Details
I have read the contents of the report contained in the
Agenda and note that my presentation content will be
published as part of the Agenda: .
YES
Is the presentation in support of or against the report
recommendation)? (contained within the Agenda) SUPPORT AGAINST
Is the presentation in support of or against the proposed
development? SUPPORT AGAINST
Will the presentation require power-point facilities?YES NO

Presentation Content *
Brief sentence summary
for inclusion on the
Agenda.... .> > Against the Hindu Temple Development and
Support the Recommendation for the
REFUSAL..

Minister Saffioti

Hi , Having lived in and farmed the area surrounding the proposed development of the Hindu Temple development for 50 + years, Over the years I have witnessed what the Baldivis east Rural land is capable of dealing with. And what our lovable mud is capable of doing when saturation point is reached with a influx of a wet year !!I
Let alone the yearly estimated additional 5.6 million litres of sewerage wastewater release in this Sewerage Sensitive wetland area. The leaching drains placements have now been relocated to the NW corner of the building envelope..It has been relocated here due to the

fact it only requires 1metre of land fill in the area to obtain the necessary 1.5 metres of separation between the water table and the base of the leach drains ..
It will still require the base of the leaching drains too be approximately metre below the natural ground level here as the leaching drains will require X amount of soil over the top , of which data on this is unavailable right now !!
The leach drain placements are right on the NW envelopes boundary which is where the North South natural gum trees grow !! This area is where the ground slopes off down hill into The highly sensitive Folly Pool wetlands ecosystem study groups area of 40 plus years has been established !! This is where the proposed developments approximately 5.6 million litres of double chlorinated highly salty rich effluent deemed toxic is too released into for ever more !!
Problem here is because of the high water table here and effluent produced is never to pool above the ground and as discribed the toxins (microorganisms pathogens) easiest ways exiting the soil are to follow any vegetations root systems to the surfaces!!
This area is also just metres out of the area as mapped the 1/100 Flood plain zone also in an area mapped as a Sewage Sensitive wetland Rural block!! Also it's effluent produced will regardless of any guarantees given will eventually work it way into The highly sensitive Folly Pool ecosystem study area . Into the drains and along the line in Serpentine River Peel Harvey Collie catchment basins ?!!

Site and Soil Investigation Report provided by the Developer by Waterinsite consulting services stated that the sewerage treatment to provide services to this proposal was too Provide for a daily system too handle a figure of
Daily 425 + worshipers !
Weekly 2,975 worshipers!
Yearly. 154,700 worshipers!!!!!!

Effluent produced
Daily 15,300 litres
Weekly 107,100 litres
Yearly 5,569,200 million litres of double chlorinated nutrient rich salty effluent wastewater!!!! TOXIC

Firstly we're a Rural lifestyle community orientated type of hard-working individuals trying to mind our own business and do little that upsets the others reasons for enjoying their personal space,.
The Developers attitude towards the Communities thoughts on this passing through to approval are the least of his worries as he changes his plans if knocked back like one changes their undies "daily"!!
Regards his hours of operation as acceptable in a RURAL Environment?? Joking insanity!!
Even Baldivis Central shops shut at the latest 9pm
Won't put a required 89 metre acoustic barrier on the northern boundary till a house is built on that property !!
Moves the sewerage treatment system to the north western corner of the building envelope, as only requires 1metre of land fill to attain the required 1.5 metres from the base of the leach drains to the natural ground water table level in this area !!
Plus here it will be out of site if view from Folly Rd Baldivis !!
He is dictating his terms not fitting in the slightest bit!! Arrogance!!

ALERT #####
The Waste water discharged from the Temple's sewerage system is as discribed "Toxic" unfriendly to all our valued groundwater resources/shallow bore water resources/ unusable for any domestic use/ must not pool above ground under any circumstances as full of

toxins!! (Micro-organisms pathogens)
Even though it has been treated by a Double Chlorination method effluent treatment is regarded as double chlorinated nutrient rich salty effluent waste water!! Toxic toxic Environmentally unfriendly to the surrounding topsoil/water resources animals humans and Natural vegetation types!! Cannot even be used by locals to fight fires with useless!! Being at the highest point of the western complex's envelope the waste water as discribed by the ..,
Water Department Sewerage 19 results ,
When a Sewerage system is placed on a area that has too have fill on it to attain the required 1.5 metre ground separation requirement it has resulted in the waste water seeping from the base of the leaching mound causing an Environmental and personal health hazard to all in the area eventually will enter the ground water table and spread out over the surrounding topsoils . resulting in a foul smelling environmental responsibility caused by a Developer being allowed to swap and change his ways to suit the means to his Temple !! totally wrong ..
Is in a Sewerage Sensitive wetland area also But !!!

Noise emitting!!
Well imagine living next door do this temples hours of operation from 7 a.m. to 11 pm. 7 days a week 52 weeks every year on ....live with those neighbours city stickers or /we can amend these hours as see's fit 2 to please the the locals and panel members..as they have before to suit , agree don't make waves just get it passed people then we're !! Nobody can live with this Temple's hours of operations and live a life as we do now , absolutely ridiculous placement of the Hindu Temple development in total disregard for any bodies lifestyle and sanity for this developments lifestyle!!?? Total bullshit..

None of the worshipers live within eye sight of Temple and are able to drive home to their chosen lifestyles, deep sewerage scheme water and walking distance to the shops, peacefully happy in their chosen living lifestyles undisturbed by animal feeding lots being passed to be built next door , god forbid this on their lifestyle!! Oh no !! ,

Anyways Ministers if this is passed and goes pear shaped I feel that I've gone through the wringer to share my local knowledge regarding the total unsuitability of this Rural wet lands site in a Highwater table Sewerage Sensitive Mapped wetlands area, surrounded by a peacefully tranquil RURAL COMMUNITY enjoying their expensive chosen lifestyle and happily as of up till now paying for the right for their privilege of being able enjoy their hard worked for families lifestyles,
disgusting to believe this has been allowed to proceed this far , absolute disregard for the Environment and Rural local residence

For the families living in the surrounding area of the proposed Hindu Temple development as of within eyesight and hearing distance they will be living a 24/7 continuous nightmare !! All thanks if passed to a non for profit Charitable Organisation contributing nil money wise to our communities rural infrastructure in the way of rates and will have a great time at our expense for the privilege too do so !! Don't deserve this in a Rural lifestyle!!

No worries locals the 154,700 yearly congregational worshipers thank you for having too accept us as a much needed but not wanted in any way diversification to your Rural Community !!

And the yearly 5.6 million litres of Double chlorinated nutrient rich salty effluent produced by us is as discribed in the developers Site and Soil Evaluation Report deemed toxic unfriendly Wastewater and will eventually due to it being deposited on your wetland Sewerage Sensitive area of a extremely high water table area will turn the area of your

Hindu Temple development Complex firstly into smelly toxic effluent Wastewater cesspit for the you the daily 425 residents and worshipers to live in !!
All data I have found and emailed too all about this Waste water discharged into the surrounding areas topsoil will eventually leach into the surrounding areas water ways and , too late guy's !!
It's a RURAL block in a Sewerage Sensitive wetland area with a high water table and sewerage is released on to a landfill area to obtain the necessary groundwater separation requirement of 1.5 metres !!won't work never has !!

Have worked a Dairy farm here in the early 1960's and lived and enjoyed my 18 acres of land brought in 1996/7 and my local knowledge of the whole area's capabilities of handling the wet year's is second to none, especially in regards to your little home septic systems let alone a estimated yearly amount of 5.6 million litres of double chlorinated nutrient rich salty effluent produced yearly, every year for years to come , unbelievable arrogance with NO respect to our precious rural Wetlands!! FINI and our precious groundwater resource which will be no more if. this allowed to happen !!

Hopefully you can understand my Concerns Minister Saffioti

Yours sincerely Geoffrey Tomlinson resident full time of 25 years ...
Many thanks

From:	Geoffrey Tomlinson
To:	Development Assessment Panels
Subject:	A no vote for the Hindu Temple development on Lot 53 Folly Rd Baldivis East Precinct zoned Rural to be refused permission to build their Temple here !!
Date:	Saturday, 30 July 2022 12:59:33 AM

Minister Saffioti,

Below is the amended Temples yearly building program now over a 10 year building period !!?

1. Major tree plantings.

2. 12-24 months:
Main Temple, Ablution and Kitchen buildings;
Vehicle access, main carpark..

3. 2-5 years:
Dining hall;
Library building;
Priest residence.

4. 6-10 years:
Multi-purpose hall;
Guest accommodation;
Additional car parking.

The main changes (compared to the original application) are as follows, and for clarity are shown on the amended Site Plan in Figure 4:

The 89m acoustic barrier proposed parallel to the eastern end of the northern boundary for noise mitigation is no longer proposed. Instead, the Applicant intends to modify operating hours of the Hindu festivals and weddings to achieve acoustic compliance. ??

Operating hours have increased for daily prayer sessions, Hindu festivals and weddings;

The two Priest dwellings have been amalgamated into a single two (2) storey dwelling;

The guest accommodation dwelling has been reduced in size;

On-site car parking has reduced in bay numbers, with car bays shifted away from the northern boundary, and relocated to a new carpark adjacent to the Multi-Purpose Hall,..

An effluent disposal field is proposed west of the Temple building;

Additional landscape plantings are proposed outside of a designated 21m wide Asset Protection Zone (APZ) for bushfire mitigation, including along the northern boundary interface (refer to Figure 6); and

The staging timeframe for constructing the Multi-Purpose Hall has been pushed back from 3-4 years to 6-10 years.

The Applicant submitted the following revised reports and plans in support of the amended
application:

Architectural Plans (Archetype Design Studio, Rev 5, 10 June 2022);

Architectural and Visual Landscape Report (Archetype Design Studio, Version 4, dated 13
June 2022);

Transport Impact Assessment (Shawmac, Rev D, dated 10 June 2022);

Acoustic Report (Marshall Day Acoustics, Revision 5, dated 28 June 2022;

Site and Soil Investigation Report
(Waterinsight; Rev 4, June 2022);

Bushfire Management Plan (Envision, Version 5, dated 11 June 2022); and

Development Application Report (Peter Webb Associates, Version 11, dated 13 June 2021)
All there but clear as mud and no real concerns shown to any local residents once again, sorry arrogance at its worst and a not needed neighbour !!
Hopefully common sense prevails in the Panel decision in refusing this temples build on Lot 53 Folly Rd Baldivis East Precinct zoned Rural..
10 years of continuous tradespeople entering and leaving this site ?? Stretching the neighbours love !!
Bloody nightmare on elm St / Folly Rd !!

yours sincerely Geoffrey Tomlinson
Last one !! Mrs Saffioti ..

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

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Presentations are not to exceed **5 minutes**. It is important to note that the presentation content will be **published on the DAP website** as part of the meeting agenda.

Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	GORKI BOGDANICH
Company (if applicable)	ARCHETYPE DESIGN STUDIO
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	METRO OUTER JDAP
Meeting Date	4 AUGUST 2022
DAP Application Number	DAP/189
Property Location	LOT 53 (NO. 67) FOLLY ROAD, BALDIVIS
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☐ **AGAINST** ☒
Is the presentation in support of or against the proposed development?	**SUPPORT** ☒ **AGAINST** ☐
Will the presentation require power-point facilities?	**YES** ☒ **NO** ☐ **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	*The presentation will address:* THE FOUR (4) ITEMS LISTED IN THE RESOLUTION OF THE MOJDAP MEETING HELD ON 9 MAY 2022.

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

PLEASE REFER TO THE ATTACHED DETAILED VERSION OF MY VERBAL DEPUTATION. THE ATTACHED DEPUTATION WILL BE SUMMARISED IN PRESENTING TO THE MOJDAP MEETING ON 4 AUGUST 2022 TO COMPLY WITH THE FIVE (5) MINUTE TIME LIMIT.

archetype

| design studio |

Mr Gene Koltasz
Presiding Member
Metro Outer Joint Development Assessment Panel
email: daps@dplh.wa.gov.au

Attention: DAP Secretariat

Dear Sir

Re: Presentation to Metro Outer JDAP (Meeting No: MOJDAP/189) Lot 53 (No. 67) Folly Road, Baldivis

1. I refer to the Metro Outer Joint Development Assessment Panel (JDAP) Meeting scheduled to be held on Monday, 04 August 2022.

2. Archetype Design Studio continue to act for Jeeyars Achayra Peettam Australia Limited (JAPA) in relation to the proposed Place of Worship development on Lot 53 (No. 67) Folly Road, Baldivis. (Ref: DAP/21/02148)

3. This written submission and my deputation to JDAP relates to Item 8.2 of the Meeting Agenda (No. MOJDAP/189).

4. The purpose of this submission is to respond to the main design issues contained in the Responsible Authority Report (RAR) for recommending refusal of this Application.

5. This submission is to be considered in association with the written submission and deputation by our consultant Town Planner, Ms Clare McLean of Peter Webb and Associates, which discusses the Intensity of the Development

6. The submission below provides the detail of my presentation.

1. Background:

The City's first Responsible Authority Report, (RAR) Published on 14 April 20122 on the City's Agenda and minutes website page, highlighted a minor number of resolvable non - compliance issues within the proposed design, most not previously raised with the applicant.

At the MOJDAP hearing of 9th May 2022, Archetype presented a number of design changes to address the issues of non -compliance.

MOJDAP resolved to defer the hearing until 8th August 2022 in order to enable additional time for the consideration of the proposed design changes and clarification of four issues being contested by the City's Planners, being:

1. The landfill requirement for stormwater management and effluent disposal;
2. The hours of operation as it affects environmental noise measures;
3. Bushfire management requirements as it affects landscaping and screening; and
4. The proposed housing accommodation on the land.

Archetype Design Studio organized for additional design, consultation with specialist consultants and information to be prepared and submitted to the City for further consideration. A summary of the amendments and clarifications are listed herewith:

Design Responses to City of Rockingham Comments:

1. **Landfill and effluent Disposal** - Clarification regarding landfill and effluent disposal - Consultation was held with Water Insights the Environmental Consultant regarding this issue. Location of ATU and Flatbed Leach Drain have been confirmed in size and location, and compliance with environmental requirements.

2. **Hours of operation** as it affects environmental noise measures - The Temple hours of operation have been adjusted (shortened) to ensure compliance with Noise Regulations both before and after a house may be constructed on the adjoining vacant north lot.

3. **Bushfire management requirements** - Following a meeting with Council Planners and Senior staff on 16 May 2022, and subsequent discussions with the Mr Anthony Rowe BAL Assessor, it was agreed to amend the APZ strategy to form a 21m APZ zone from each habitable building, so that areas outside this can be landscaped to screen the buildings further.

5. **Re-location of Priest's Residence** - The Priests' Residence has been relocated further from the northern boundary to allow additional setback for a denser planting pattern.

6. **Landscaping Plan** - The Landscaping Plan has been amended to demonstrate compliance with APZ. Additional and unrestricted planting outside the Zone, has been added to strategically screen buildings at the higher level, Additional detail of shrubs has been added to the plan to demonstrate adequate screening of cars, car headlights, and people at the lower levels.

7. **Perspectives and Viewsheds** - The Viewsheds and Perspectives have been updated to reflect the new Landscaping layout and demonstrate effective screening of the proposed development, particularly from Young Road to the north of the development and from the property immediately to the North.

8. **Priest's Housing** - The design and drawings have been amended to show a single priest's residence only (reduced from two separate dwellings) with a maximum of 6 bedrooms.

9. **Guest Accommodation** - The design and drawings have been amended to show an ancillary dwelling reduced in size to a maximum of 100m2.

10. **Right Hand turn treatment at entry. -** At the Council's technical department suggestion, the road widening to accommodate a Right Hand Turn entry into the main car park from Folly Road has been removed, as it was deemed unnecessary.

2. Design Review Panel

The City organized a Design Review Panel held on 30th May 2022, to evaluate the proposed design against five principles being :

- Context
- Landscape
- Form and Scale
- Amenity
- Aesthetics

The DRP Supported the design without need for changes, despite which the applicants took on board all of the DRP's suggestions for improvement and amended the design accordingly as follows.

Design Responses to Design Review Panel comments:

1. More trees added to the car parking area for shading (within constraints of an APZ)

2. Re-location of all car parking bays previously along the north boundary, to the south (away from the adjoining currently vacant property) and replacement with further landscaping and screening.

3. In keeping with the ethos of our client's organisation, the proposal included rehabilitation and restoration of the environmentally sensitive flood plain and Folly Pool areas to the west of the development site.

4. Submission of Amended Development Application

Archetype Design Studio submitted with Council on 13 June 2022 updated submission comprising of:

1. Architectural Drawings,
2. Visual Landscape Report
3. Traffic Impact Statement
4. Acoustic Report
5. Environmental Assessment Report
6. BAL Assessment

5. City's amended Responsible Authority Report (RAR)

The City issued an updated Responsible Authority Report on 14th July 2022.
With respect to the issues raised by MOJDAP, Council's revised RAR states the following:

JDAP Item 1.	*Landfill requirements for stormwater management and effluent disposal;*
Council revised RAR:	**The City confirms the matter of fill is considered to be adequately resolved.**
JDAP Item 2.	*Hours of operation as it affects environmental noise measures;*
Council revised RAR:	**The City has accepted that the Noise Regulations can be met by the adjustment of operating Hours proposal**
JDAP Item 3.	*Bushfire management requirements as they affect landscaping and screening;*
Council revised RAR:	**The City confirms that The revised application complies with SPP3.7.**
JDAP Item 4.	*Housing accommodation proposed on site.*
Council revised RAR:	**The City confirms they have no objections to the revised proposal**

6. RAR comments we would like to address:

1. Council Comment at RAR Page 44

Notwithstanding, the City is concerned that even with the screening provided by the existing trees and proposed landscaping, the buildings will still be visible, as:

Despite the landscape plantings proposed (as shown on the revised Landscape Plan along the northern property interface with Lot 923 Young Road), the proposed development setbacks limit the amount, and therefore the effectiveness of screening the development from views from the north, which is from where the impact is considered to be greatest. When a dwelling is built on Lot 923 Young Road in the future, it could potentially be constructed 10m from the common boundary,

Applicant Response:

- The proposed screening landscaping on the north boundary varies in depth but averages 10-15m of planting, and is comprised of a mixture of tall and medium trees and shrubs. The View shed perspectives presented on Drawing A16 illustrate clearly that the density of planting will effectively screen the Temple Building (which **will be 120m away** from the owner's stated preferred location for a residence) and mostly screen the Dining Multi Function Hall (**which will be 40m away**).

- Further all the proposed buildings on the site not only comply fully with the required setbacks, but are also at an angle from the boundary, and are therefore setback much further than required, allowing for additional space for landscaping.

- It is worth noting that any residence being built on Lot 923 will logically be facing predominantly north away from the development in order to capture solar north orientation and views of its own property, and views of the Temple development from the existing residence at Lot 33 (**210m away from the Temple**) are non existent from the residence itself due to the heavy planting on that property.

2. Council Comment at RAR Page 48:

Despite the proposed screening, activity and built form on the site will be clearly discernible from this location:

- *Proposed tree plantings will need to reach a height of at least 15m for the Temple 'Goporams' to be screened, which would take some time. Until then, the Goporams will be visible above the tree line.*
- *The eastern (main) Gopuram will be illuminated at night. The extent of illumination is not what would typically be expected on a Rural context, and as such, is considered to impact the visual character of the surrounding area.*
- *In the event that the established trees are removed due to health or safety, it will take time for the screening effect they provided to be replaced. Furthermore, it would be difficult to enforce suitable replacement tree plantings in such a scenario.*

Applicant Response:

- We disagree with the above comments: There is no requirement for any buildings to be completely hidden from view from every point on the adjoining lot, as the Council is implying, regardless the function.

- There has never been a residence on the adjoining lot, and should the owner decide to build on the lot, they would have a choice for the placement of the new residence, and are not compelled to locate it in a specific position.

- The Main entry structure although lit in the evenings will be well hidden from view by dense landscaping.

- Further the lighting will be sensitively designed to be incorporated into the façade as strip LED lighting hidden behind the fascade ornamentation, which will give the façade a soft even glow. It will NOT be illuminated with harsh spotlights from a distance.

- The proposed staging of the development will ensure that Landscaping using fast growing species will be the first activity undertaken on the site, ensuring that visual privacy and screening is achieved as quickly as possible.

3. Council Comment at RAR Page 49

Rural Character: *Despite the location of the subject land on the fringe of the Rural zone, the existing character of the locality is distinctly rural. The physical characteristics of the locality engender a sense of rural serenity, which is not unduly compromised by traffic noise from the freeway or by vehicles using Folly Road.*

Applicant Response:

- The Subject Lot is not only on the fringe of the rural area, it immediately adjoins the Freeway, and anyone who has stood on the lot, at almost any time of the day will appreciate the constant background drone of the Freeway traffic noise which makes this a far from **'serene'** rural Lot.

- Further this site adjoins the Folly Road / Freeway entry which is the principle gateway for hundreds of residences and businesses to the east of the Freeway, and accommodates on average 2,592 traffic movements per weekday. This development would add on average a further 100 – 120 vehicle movements per day.

4. Council Comment at RAR Page 49

- ***Traffic Noise:*** *It is considered that the noise from car movements accessing the carparks (Noting the entrance, driveway and carpark areas would be deemed a 'road' under the Noise Regulations) and on Folly Road may cause a nuisance for nearby properties, from cars attending and leaving the site, particularly in the evening and night for the weddings (where all guests' cars (i.e. 100+) arrive and depart at a similar time), or in the mornings if vehicles arrive prior to the commencement of 7am prayer sessions.*

Applicant Response:

- The Acoustic Report confirms that the noise generated on site by both traffic and activity will, with appropriate management, be in compliance with relevant Noise regulations.

- The position of the Temple main entry in close proximity to the Freeway minimizes potential disturbance to this semi-rural and fringe area.

- We highlight that all activities on site are religious in nature, and all attendees are respectful of the neighbours. no alcohol is permitted to be served on the site, and there will be no anti-social behaviour

5. Council Comment at RAR Page 50

- ***Scale:*** *The application proposes a number of buildings of a significant scale, which gives rise to concerns about the intensity of the development, which is linked to the total number of persons residing on the site and visiting the site on a daily basis. The proposal exceeds the scale that can be expected of traditional and permissible uses in the 'Rural' zone. The application involves nine buildings that will be used for the predominant use (Place of Worship) and the various incidental uses (Reception Centre, Residential Building, and Ancillary Accommodation). The Applicant has attempted to justify the scale of proposed development on the basis of the scale of the existing rural buildings on Lot 55 Folly Road. It is noted that (contrary to what the Applicant's density plan shows) the scale of the proposed development on the subject* ***site significantly*** *exceeds the scale of the built form on Lot 55 Folly Road (refer to Figure 11 below). The issue of scale needs to account for the 'character' of the uses being compared - in this case comparing a rural business land use to what effectively amounts to a Hindu temple and cultural centre.*

Applicant Response:

- The Design Review Panel has supported the Built Form and Scale of the proposal as being appropriate for the area, and stated specifically:
    - The scale is commensurate with other buildings.
    - Clustering of buildings is consistent with surrounding land.
    - Size and scale is of no real concern.
    - Temple form and scale is ameliorated by retained trees.
    - The secular buildings are appropriate to local context.
    - The buildings fit the surrounding context.
    - The spaces between buildings work well.
    - Two storey house scale works well with the Temple.
    -
- The City's depiction of the density of the adjoining lot 55 is insignificantly different to that provided in the Development Application.

- The City's claim that the scale of the development at the subject site "*significantly exceeds the scale of the built form on Lot 55*" is simply not accurate. A simple visual examination of the illustration provided by the City itself shows that the scales are , if anything similar.

- The scale of the buildings is not dependent on the character of the uses, as claimed by the City.

- Other Permissible uses in a rural area include an Abattoir, a Winery, a Veterinary Hospital, and Restaurant/Café. These uses are all listed as capable of approval in the Rural zone as they are considered appropriate land uses in rural areas, and some would have similar or even greater scale.

6. Council Comment at RAR Page 51

Intensity *:The intensity of the proposed use involves an overall level of activity on the site that is considerably beyond what can reasonably be expected in a Rural zone.*

Applicant Response:

- The activities and numbers of people are well spread during the course of the day, being split into morning and evening sessions, and for the overwhelming majority of the year being 352 days of the year, the intensity of use is low.

- The position of the site, with the main entry to the Temple being only 140m from the Freeway entry/exit ramps, and only passing by one adjoining neighbour is ideal, in that the additional traffic has insignificant impact on this semi- rural area as a whole.

- The dense Landscaping proposed will effectively screen both the car parking and any people movement within the development.

- The Architectural clustering of the development, is intentionally designed with a main central courtyard specifically for people to gather in, prior to attending the Multi function hall, dining room or library, such that they are hidden from street view and all other boundaries. Once inside the Car Park, no activity will be visible from outside the development.

7. Concluding Comments:

- Updated Specialist Consultants Reports have been submitted demonstrating that all relevant technical issues have been resolved and all relevant standards have been met, including Traffic issues, Acoustic regulations, Environmental regulations and Bushfire design compliance.

- The proposed design has been reviewed by other Government Agencies including MRWA, DFES, DPLH, DWER, DoH, and Water Corporation, and no agency has any outstanding issues or objections to the proposal.

- The proposed Temple design has been reviewed by the City's appointed Design Review Panel, comprised of expert independent professionals, and the Panel has supported the design without changes, with respect Context and Character, Landscape Quality, Built Form and Scale, Amenity and Aesthetics. All suggestions by the Panel have been taken on board by the Developer and design amended.

- We conclude by re-iterating that the proposed design ensures through the use of:

    - clustered form,
    - natural materials
    - neutral colour selections
    - extensive retained and new native landscaping treatment that will screen the development from adjoining sites,
    - rural architectural expression for the secular buildings

  that the use within its setting will not adversely impact on the rural character and amenity of this location, and

- the site's location immediately adjacent the freeway will ensure that the intensity of use has negligible impact on the semi-rural area as a whole.

- We conclude that the proposed development and use are compliant with the Planning Framework and respectfully seek the support of MOJDAP in approving this Application, with reasonable conditions attached if required.

Gorki Bogdanich B.Arch. Grad.Dip.Bus
29 July 2022
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SRI BALAJI TEMPLE 67 FOLLY ROAD BALDIVIS

BACKGROUND

- DEVELOPMENT APPLICATION SUBMITTED 9TH DECEMBER 2022
- RESPONSIBLE AUTHORITY REPORT ISSUED ARIL 2022
- 1ST MOJDAP HEARING 9TH MAY 2022. (CONSIDERATION DEFERRED)
- APPLICANT'S AMENDMENTS TO DESIGN + UPDATE OF REPORTS - 13 JUNE 2022
- RESPONSIBLE AUTHORITY REPORT RE-ISSUED 18 JULY 2022
- 2ND MOJDAP HEARING 4TH AUGUST 2022

REASONS FOR MOJDAP DEFERAL:

ADDITIONAL TIME FOR THE CONSIDERATION OF THE PROPOSED DESIGN CHANGES AND CLARIFICATION OF FOUR ISSUES BEING CONTESTED BY THE CITY PLANNERS, BEING

1. THE LANDFILL REQUIREMENT FOR EFFLUENT DISPOSAL
2. THE HOURS OF OPERATION AS IT AFFECTS ENVIRONMENTAL NOISE MEASURES
3. BUSHFIRE MANAGEMENT REQUIREMENTS AS IT AFFECTS LANDSCAPING AND SCREENING
4. THE PROPOSED HOUSING ACCOMMODATION OF THE LAND

DESIGN RESPONSE TO 4 POINTS RAISED

1. EFLUENT DISPOSAL - LANDFILL LOCATION, AREA AND HEIGHT WERE CONFIRMED –

   CITY CONFIRMS THE MATTER OF FILL IS ADEQUATELY RESOLVED

2. THE HOURS OF OPERATION AS THEY AFFECT ENVIRONMENTAL NOISE MEASURES WERE CONFIRMED

   CITY ACCEPTS THE NOISE REGULATIONS CAN BE MET BY THE ADJUSTMENT OF OPERATING HOURS

3. BUSHFIRE MANAGEMENT PHILOSOPHICAL APPROACH WAS AMENDED

   CITY CONFIRMS THE REVISED APPLICATION COMPLIES WITH SPP3.7

5. THE PROPOSED HOUSING ACCOMMODATION OF THE LAND WAS ADJUSTED

   CITY CONFIRMS THE REVISED APPLICATION COMPLIES WITH SPP3.7

DESIGN REVIEW PANEL

THE CITY ORGANISED A DRP MADE UP OF INDEPENDENT EXPERTS TO ASSESS THE PROPOSED DESIGN AGAINST 5 PRINCIPLES BEING: CONTEXT, LANDSCAPE, FORM AND SCALE, AMENITY, AND AESTHETICS.

THE DESIGN REVIEW PANEL UNANIMOUSLY SUPPORTED THE DESIGN WITHOUT NEED FOR CHANGES.

NOTWITHSTANDING THE SUPPORT, WE TOOK ON BOARD ALL THEIR SUGGESTIONS FOR IMPROVEMENT.

SOME DRP COMMENTS WERE:

1. THE SCALE IS COMMENSURATE WITH OTHER BUILDINGS
2. CLUSTERING OF THE BUILDINGS IS CONSISTENT WITH SURROUNDING LAND
3. THE SPACES BETWEEN BUILDINGS WORK WELL
4. SIZE AND SCALE IS OF NO REAL CONCERN
5. TEMPLE FORM AND SCALE IS AMELIORATED BY RETAINED TREES
6. THE SECULAR BUILDINGS ARE APPROPRIATE TO LOCAL CONTEXT
7. THE BUILDINGS FIT THE SURROUNDING CONTEXT
8. THE TWO STOREY HOUSE SCALE WORKS WELL

- RAR COMMENTS WE WOULD LIKE TO RESPOND TO:
- RAR PAGE 44
- *'THE CITY IS CONCERNED THAT EVEN WITH THE SCREENING PROVIDED BY THE EXISTING TREES AND PROPOSED LANDSCAPING THE BUILDINGS WILL STILL BE VISIBLE'*

- PERSPECTIVES PROVIDED ON DRAWING A16, DEMONSTRATE THAT THE DENSITY OF PROPOSED AND RETAINED LANDSCAPING WILL EFFECTIVELY SCREEN THE TEMPLE BUILDING
- THE DEPTH OF LANDSCAPING ON THE NORTH BOUNDARY WILL BE ON AVERAGE 10 -15M WIDE, WITH A COMBINATION OF TALL TREES AND LOW SHRUBS
- THE ADJOINING LOTS PREFERRED RESIDENCE POSITION IS 120m AWAY FROM THE TEMPLE
- THE PROPOSED RESIDENCE AT LOT 923 WILL LOGICALLY BE FACING AWAY FROM THE TEMPLE DEVELOPMENT FACING NORTH ACROSS ITS OWN PROPERTY.
- THE EXISTING RESIDENCE ON LOT 33 IS 210m AWAY FROM THE TEMPLE, AND WILL HAVE NO VIEWS OF THE DEVELOPMENT DUE TO EXISTING TREES ON THEIR PROPERTY

- RAR PAGE 48
- *' DESPITE THE PROPOSED SCREENING, ACTIVITY AND BUILT FORM ON THE SITE WILL BE CLEARLY DISCERNABLE FROM THIS LOCATION ' (BEING LOT 923)*

- THERE IS NO PLANNING REQUIREMENT FOR ANY BUILDINGS TO BE COMPLETELY HIDDEN FROM VIEW, FROM EVERY POINT ON THE ADJOINING LOT.
- THE MAIN ENTRY STRUCTURE WILL BE SOFTLY AND TASTEFULLY ILLUMINATED, AND NOT VISIBLE FROM THE NORTH PROPERTY.
- THE PROPOSED STAGING OF THE DEVELOPMENT WILL SPECIFY THAT LANDSCAPING USING FAST GROWING NATIVE SPECIES IS PLANTED AS A PRIORITY, ENSURING THAT PRIVACY AND SCREENING IS ACHIEVED AS QUICKLY AS POSSIBLE.

- RAR PAGE 49
- *'DESPITE THE LOCATION OF THE LAND ON THE FRINGE OF THE RURAL ZONE, THE EXISTING CHARACTER OF THE LOCALITY IS DISTINCTLY RURAL. THE PHYSICAL CHARACTERISTICS OF THE LOCALITY ENGENDER A SENSE OF RURAL SERENITY, WHICH IS NOT UNDULY COMPROMISED BY TRAFFIC NOISE FROM THE FREEWAY OR BY VEHICLES USING FOLLY ROAD"*

- THE SUBJECT LOT IMMEDIATELY ADJOINS THE FREEWAY, AND THE CONSTANT DRONE OF THE FREEWAY NOISE MAKES THIS FAR FROM A "SERENE" RURAL LOT
- THE SUBJECT LOT ADJOINS FOLLY ROAD WHICH IS THE PRINCIPAL GATEWAY FOR HUNDREDS OF RESIDENCES AND BUSINESSES TO THE EAST OF THE FREEWAY, AND ACCOMMODATES ON AVERAGE 2592 TRAFFIC MOVEMENTS PER WEEKDAY. THIS DEVELOPMENT WOULD ONLY ADD ON AVERAGE A FURTHER 100-120 VEHICLE MOVEMENTS PER WEEKDAY.

- RAR PAGE 49
- *'IT IS CONSIDERED THAT THE NOISE FROM CAR MOVEMENTS ACCESSING THE CAR PARKS AND ON FOLLY ROAD MAY CAUSE A NUISANCE FOR NEARBY PROPERTIES, FROM CARS ATTENDING AND LEAVING THE SITE, PARTICULARLY IN THE EVENING AND NIGHT FOR THE WEDDINGS, OR IN THE MORNINGS IF VEHICLES ARRIVE PRIOR TO THE COMMENCEMEN OF 7.00AM PRAYER SESSIONS "*

- THE ACOUSTIC REPORT CONFIRMS THAT THE NOISE GENERATED ON SITE BY BOTH TRAFFIC AND ACTIVITY, WILL WITH APPROPRIATE MANAGEMENT, BE IN COMPLIANCE WITH RELEVANT NOISE REGULATIONS.
- THE LOCATION OF THE TEMPLE GROUNDS MAIN ENTRY IN CLOSE PROXIMITY TO THE FREEWAY ENTRY / EXIT RAMPS MINIMISES POTENTIAL DISTURBANCE TO THE SEMI-RURAL AREA.
- THE MAIN ENTRY GATES WILL BE LOCKED UNTIL 7.00AM, AND THE PRAYERS WILL COMMENCE AT 7.15AM ENSURING THAT THERE ARE NO EARLY ARRIVALS.
- ALL ACTIVITIES ON SITE ARE RELIGIOUS IN NATURE, INCLUDING WEDDINGS AND RECEPTIONS AND THERE IS NO ALCOHOL PERMITTED.

- RAR PAGE 50
- *' THE PROPOSAL EXCEEDS THE SCALE THAT CAN BE EXPECTED OF TRADITIONAL AND ACCEPTABLE USES IN THE RURAL ZONE."*
- *IT IS NOTED THE SCALE OF THE PROPOSED DEVELOPMENT ON THE SUBJECT SITE SIGNIFICANTLY EXCEEDS THE SCALE OF THE BUILT FORM ON LOT 55 FOLLY ROAD.*

- THE DESIGN REVIEW PANEL HAS SUPPORTED THE BUILT FORM AND SCALE OF THE PROPOSAL AS BEING APPROPRIATE FOR THE AREA, AND STATED SPECIFICALLY:
  - THE SCALE IS COMMENSURATE WITH OTHER BUILDINGS
  - THE SIZE AND SCALE IS OF NO REAL CONCERN
  - TEMPLE FORM AND SCALE IS AMELIORATED BY RETAINED TREES

- OTHER PERMISSIBLE USES IN A RURAL AREA INCLUDE AN ABATTOIR, WINERY, VETERINARY HOSPITAL AND CAFÉ /RESTAURANT, AND SOME OF THESE COULD HAVE SIMILAR OR GREATER SCALE .

- THE CITY'S CLAIM THAT THE SCALE OF THE DEVELOPMENT AT THE SUBJECT SITE "*SIGNIFICANTLY EXCEEDS THE SCALE OF THE BUILT FORM ON LOT 55*" IS SIMPLY NOT ACCURATE. A VISUAL EXAMINATION OF THE ILLUSTRATION PROVIDED BY THE CITY (BELOW) SHOW THAT THE SCALES ARE IF ANYTHING SIMILAR.

- RAR PAGE 51
- *' THE INTENSITY OF THE PROPOSED USE INVOLVES AN OVERALL LEVEL OF ACTIVITY ON THE SITE THAT IS CONSIDERABLY BEYOND WHAT CAN REASONABLY BE XPECTED IN A RURAL ZONE"*

- THE NUMBERS OF PEOPLE ATTENDING THE SITE ARE WELL SPREAD OUT DURING THE COURSE OF THE DAY, AND FOR THE OVERWHELMING MAJORITY OF THE YEAR, THE INTENSITY OF USE IS LOW.
- THE POSITION OF THE SITE WITH THE MAIN ENTRY BEING ONLY 140M FROM THE FREEWAY ENTRY/EXIT RAMPS AND ONLY PASSING BY ONE ADJOINING PROPERTY IS IDEAL, IN THAT THE ADDITIONAL TRAFFIC HAS INSIGNIFICANT IMPACT ON THIS SEMI-RURAL AREA AS A WHOLE.
- THE DENSE LANDCSAPING PROPOSED WILL EFFECTIVELY SCREEN BOTH CAR PARKING AND PEOPLE MOVEMENT WITHIN THE DEVELOPMENT.
- THE ARCHITECTURAL CLUSTERING OF THE DEVELOPMENT IS INTENTIONALLY DESIGNED TO HIDE ANY GROUPING OF PEOPLE IN FRONT OF THE MAIN AND DINING HALLS, AND ONCE INSIDE THE CAR PAPRK, NO ACTIVITY WILL BE VISIBLE FROM OUTSIDE THE DEVELOPMENT

CONCLUDING COMMENTS

- UPDATED SPECIALIST CONSULTANT REPORTS DEMONSTARTE THAT ALL TECHNICAL ISSUES HAVE BEEN RESOLVED AND COMPLIED WITH, INCLUDING TRAFFIC ISSUES, ACOUSTIC REGULATIONS, ENVIRONMENTAL REGULATIONS, AND BUSHFIRE DESIGN COMPLIANCE

- THE PROPOSED DESIGN HAS BEEN REVIEWED BY OTHER GOVERNMENT AGENCIES INCLUDING MRWA, DFES, DPLH, DWER , DOH, AND WATER CORPORATION, AND NO AGENCY HAS ANY OUTSTANDING ISSUES OR OBJECTIONS TO THE PROPOSAL.

- THE PROPOSED DESIGN HAS BEEN REVIEWED BY A DESIGN REVIEW PANEL COMPRISED OF EXPERT INDEPENDENT PROFESSIONALS, AND THE PANEL HAS FULLY SUPPORTED THE DESIGN WITHOUT CHANGES WITH RESPECT CONTEXT AND CHARACTER, LANDSACPE QUALITY, BUILT FORM AND SCALE, AMENITY AND AESTHETICS.

CONCLUDING COMMENTS

- THE SITE'S LOCATION, BEING IMMEDIATELY ADJACENT THE FREEWAY WILL ENSURE THAT THE INTENSITY OF USE HAS NEGLIGABLE IMPACT ON THE SEMI-RURAL AREA AS A WHOLE
- WE CONCLUDE BY RE-ITERATING THAT THE PROPOSED DESIGN ENSURES THROUGH THE USE OF CLUSTERED FORM, NATURAL MATERIALS, NEUTRAL COLOUR SELECTIONS AND EXTENSIVE LANDSCAPING TREATMENT, AND RURAL ARCHITECTURAL EXPRESSION FOR THE SECULAR BUILDINGS, THAT THE USE WITHIN ITS SETTING WILL NOT ADVERSLY IMPACT ON THE RURAL CHARACTER AND VISUAL AMENITY OF THIS LOCATION.
- WE CONCLUDE THAT THE PROPOSED DEVELOPMENT AND USE ARE COMPLIANT WITH THE PLANNING FRAMEWORK, AND RESPECTFULLY SEEK THE SUPPORT OF MOJDAP IN APPROVING THIS APPLICATION, WITH REASONABLE CONDITIONS ATTACHED IF REQUIRED.

Government of **Western Australia**
Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

Presentation Request Guidelines

Persons interested in presenting to a DAP must first consider whether their concern has been adequately addressed in the responsible authority report or other submissions. Your request will be determined by the Presiding Member based on individual merit and likely contribution to assist the DAP's consideration and determination of the application.

Presentations are not to exceed **5 minutes**. It is important to note that the presentation content will be **published on the DAP website** as part of the meeting agenda.

Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	CLARE McLEAN
Company (if applicable)	SENIOR PLANNING CONSULTANT, PWA
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	METRO OUTER JDAP
Meeting Date	4 AUGUST 2022
DAP Application Number	DAP/189
Property Location	LOT 53 (NO. 67) FOLLY ROAD, BALDIVIS
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES** ☒
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☐ **AGAINST** ☒
Is the presentation in support of or against the proposed development?	**SUPPORT** ☒ **AGAINST** ☐
Will the presentation require power-point facilities?	**YES** ☒ **NO** ☐ **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	*The presentation will address:* THE REASONS FOR REFUSAL CONTAINED IN THE ADDITIONAL RAR.

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

PLEASE REFER TO THE ATTACHED DETAILED VERSION OF MY VERBAL DEPUTATION. THE ATTACHED DEPUTATION WILL BE SUMMARISED IN PRESENTING TO THE MOJDAP MEETING ON 4 AUGUST 2022 TO COMPLY WITH THE FIVE (5) MINUTE TIME LIMIT.

P E T E R D W E B B A N D A S S O C I A T E S

C O N S U L T A N T S I N T O W N P L A N N I N G A N D U R B A N D E S I G N

29 July 2022 Our Ref: C2457-02

Mr G Koltaz
Presiding Member
Metro Outer Joint Development Assessment Panel
email: daps@dplh.wa.gov.au
Attention: DAP Secretariat

Dear Sir

Re: Further Written and Verbal Presentation to MOJDAP (Meeting No: MOJDAP/189) Place of Worship - Lot 53 (No. 67) Folly Road, Baldivis

1. *Peter Webb and Associates* (**PWA**) continues to act for *Jeeyars Achayra Peettam Australia Ltd* (**JAPA**) in relation to the proposed Place of Worship development on Lot 53 (No. 67) Folly Road, Baldivis. (Ref: **DAP/21/02148**)

2. This written and verbal deputation relates to **Item 8.2** of the Meeting Agenda (**MOJDAP/189**).

3. This written submission provides the extended detail of my verbal presentation. I will only summarise the main points of this deputation when presenting to MOJDAP on 4 August 2022.

4. I firstly refer to the resolution of the MOJDAP Meeting held on 9 May 2022 to defer determination of the Application until a further meeting.

5. The Application was deferred for the following reason:

   - To allow for further discussion with the City regarding the late information presented by the Applicant at the last MOJDAP Meeting, and to allow further clarification to be provided to JDAP in regard to:
     - the landfill requirement for stormwater management and effluent disposal;
     - the hours of operation as it affects environmental noise measures;
     - bushfire management requirements as it affects landscaping and screening; and
     - the proposed housing accommodation on the land.

6. The purpose of this written deputation is to firstly provide a summary of the discussions held at the MOJDAP Meeting on 9 May 2022. This is a necessary component of my written deputation as all three (3) Specialist Members have only recently been appointed to the MOJDAP and therefore may not be aware of the deliberations of the last Panel Members, which led to the deferral.

7. My verbal deputation will focus on responding to the reasons contained in the current *Responsible Authority Report* (**RAR**).

8. My deputation is presented alongside the written and verbal deputation of Mr Gorki Bogdanich and Project Architect - *Archetype* (**Applicant**). Mr Bogdanich will address the four (4) items confirmed in the RAR as now being resolved to the City's satisfaction as well as the further discussions held with the City on this Application.

9. I also attach a copy of my earlier written deputation presented to MOJDAP on 9 May 2022. The content of this submission remains relevant to the consideration of this Application, given both the original RAR and the additional RAR which collectively provide the Members with the complete planning assessment undertaken by the City.

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10. The additional RAR is really an addendum to the original RAR. It responds to the suggestion of the Specialist Members that the City explain in the RAR its justification behind the recommendation for refusal, if it was to continue to recommend in that manner. The assessment detail in the original RAR confirmed the overall compliance of the development with the Planning Framework and the City's support for the development. The content of the assessment therefore did not correlate to the recommendations for refusal, which caused confusion at the previous MOJDAP Meeting.

SUMMARY OF THE OUTCOME OF THE MOJDAP ON 9 MAY 2022:

11. The Applicant presented MOJDAP with late information at the meeting held on May 9.
12. These revisions were presented directly to MOJDAP as the City had indicated to the Applicant that the updated information (which resulted in an entirely compliant development for this site), would not change its recommendation of refusal.
13. The inclusion of this late information was necessary to ensure MOJDAP understood the willingness of the Applicant to revise the design by addressing the minor issues of non-compliance identified in the previous RAR.
14. This late information was submitted with the written deputation of the Applicant.
15. The information included:
    - 15.1 an updated Landscaping Plan to achieve compliance with bushfire management requirements;
    - 15.2 further acoustic modelling and advice provided by the Acoustic Consultant to address a future situation whereby the vacant land to the north might be developed with a residential dwelling;
    - 15.3 a reduced number of car bays to provide only the minimum number of bays required being shown on the drawings;
    - 15.4 the removal of the right-hand turn entry lane at Folly Road from the drawings;
    - 15.5 the removal of one (1) of the Priest's dwellings, so that only a single residence is proposed for the Priest and family together with one (1) ancillary dwelling being proposed to accommodate occasional guests of the Temple; and
    - 15.6 responding to the issue raised in the RAR over the concern for a small amount of fill (no more than 1.0m) being required over a small part of the land to support the effluent disposal system.
16. As the revisions were minor in nature and given the advice of the City that it would not support the Application regardless of these matters being resolved, we requested that MOJDAP consider the option of applying each as conditions of development approval.

SUMMARY OF THE DISCUSSIONS OF THE SPECIALIST MEMBERS AT MOJDAP ON MAY 9:

17. The Specialist Members considered the Application, including the late information provided by the Applicant.
18. Further, the Specialist Members acknowledged that a range of uses are capable of being approved in the Rural zone.
19. That the proposed land use of a Place of Worship and the ancillary uses included in the Application are capable of being contemplated in the Rural zone, in accordance with the Zoning Table of TPS 2.
20. The Presiding Member queried and the City confirmed that there is only a single objective for the Rural zone in TPS 2. The objective states that land is to be preserved for farming use, and to foster semi-rural development having due regard to the Rural Lands Strategy. It was highlighted by the Member that this land is not suitable for farming purposes. This is because there is an overarching fundamental environmental need to protect the sensitive ecological values of this land. The issues associated with nutrient loading created by agricultural land uses makes farming unsuitable. Therefore, an alternative land use should be considered.

21. It was generally agreed amongst the Specialist Members that it was difficult to ascertain the reasons of the City for recommending refusal in the RAR, given the detailed assessment in the report confirmed that the proposed development and use is compliant with the Planning Framework.
22. It was noted by the Specialist Members that the clustering of buildings on the land were similar to other rural sites, in terms of layout.
23. The architectural design of the buildings was deemed not to be offensive. The clustered arrangement and traditional rural building forms and materials responded well to the rural setting. This led to queries of the Specialist Members as to the reason for the City considering it necessary for these buildings to be completely hidden from view.
24. The Applicant confirmed that the limestone building material was to comprise of natural colour tones and it was agreed that a condition be included to ensure that the colour range consisted of a neutral palate, to assist in the blending of the built form with the surrounding environment.
25. The Specialist Members did not view the landscaping plan to be an issue. This led to queries of the Specialist Members as to why the City was concerned about the time involved with these trees growing to full height. It was noted that fast growing native trees are easily sourced and capable of providing a suitable level of softening of the built form within an appropriate timeframe.
26. The Specialist Members noted that the regular daily activities of the Temple were modest and therefore considered appropriate for the setting.
27. The traffic movements being contained to Folly Road was deemed to be acceptable.
28. The acoustic report was appropriate. The acoustic wall option included in the acoustic report was presented as a possible option to address any exceedance of noise in the evening (during a wedding event) should a future residence be constructed in an assumed location on the currently vacant northern property. The wall was not proposed as part of the Application. The Specialist Members recognised that there are other ways to address noise mitigation in the future, which can be effectively managed by restricting the hours of operation through a Noise Management Plan.
29. The Applicant further explained to the Specialist Members that the peaceful quiet nature of this deity of Hinduism, was different to other practices, such as the Hare Krishna. This Hindu community does not engage in any form of bell ringing, chanting, or singing. For example, the annual circumnavigation of the Temple is undertaken in bare foot, and is a quiet and peaceful movement on the land. It is a community connected to nature. Revegetation and rehabilitation of the damaged environment is part of their regular community service activities.
30. The option of granting approval of the Application at the meeting on May 9 was discussed by the Specialist Members, subject to conditions being included to address the late information. It was however decided that the determination be deferred to a further meeting to allow for the Applicant and the City to discuss the late information presented to MOJDAP and to provide further clarification on the four (4) items listed in the procedural motion.
31. The actions undertaken to address the items requiring resolution and the need to engage in further discussions with the City will be explained by the Applicant in the following presentation.
32. My verbal presentation will primarily focus on the conclusions reached in the current RAR, which is an addendum to the earlier RAR, and respond to the City's reasons for refusal.

ADDITIONAL RESPONSIBLE AUTHORITY REPORT (RAR):

33. The additional RAR recommends that the Application be refused as it considers the intensity of the activities proposed for the Place of Worship to be inconsistent with the objective of the Rural Zone.
34. Further, that the development does not sufficiently demonstrate that it will protect and enhance the visual character and amenity of the locality. It is therefore stated that the Application is inconsistent with the desired character and strategic intent of Precinct 2A of the Rural Lands Strategy.

35. It is understood that the City considers the rural character and amenity to possibly be impacted because of the scale and intensity of the activities of the use of the land as a Place of Worship, in regard to potential noise nuisance from vehicles in the evening and the visual impact of the range of activities occurring on the land.

Intensity and scale of the range of activities of the use

36. To firstly respond to the City's perceived '**intensity of the activities of the use**' of this development.

37. The activities proposed as part of the Place of Worship are not excessive in anyway. They are entirely appropriate and necessary accompanying activities of the Place of Worship.

38. The additional RAR states that the visual impact of nine (9) buildings on the land represents a scale which is too intensive for this location.

39. Whereas the original RAR confirms that the proposed clustering of buildings on the land are sensitively designed to comfortably fit within and complement the existing rural amenity and character of this location. The design of the development has not changed.

40. The clustering of buildings proposed on the land does not correlate to an intensity of use which goes beyond that which might be considered reasonable or typically associated with the activities of a Place of Worship.

41. The design of the development proposes the physical separation of the individual uses on the land so that the overall built form layout visually presents to the area as a clustering of buildings which is a common feature of development on land in rural areas.

42. The range of ancillary uses proposed for this Place of Worship are those typically required to support the religious activities associated with this use. It is incorrect of the City to state that the range of uses go beyond what could reasonably be expected for a Place of Worship.

43. The development includes a main building for worship, an onsite car park, a residence for the priest and family, accommodation from a visiting priest, space for dining and use for community gatherings and volunteer work, and an area for a library offering educational religious texts for loan to its community. This range of activity is not unusual for a Place of Worship.

44. The separation of the uses into individual structural forms has allowed for the maximum retention of the open grassland fields between and around the buildings and avoids the unnecessary removal of existing remnant vegetation. It also facilitates the development to be constructed in stages. This approach to the development is intentional. The clustering of the built form is therefore not a consequence of the scale and intensity being beyond what is typically expected of a Place of Worship. It is simply that the architectural design and layout is appropriately responsive to the area within which it is proposed to be developed, so as to protect the visual amenity of the location.

45. In regard to the City's comments on traffic noise in the evening, the RAR does not reflect the continued advice of the Applicant in regard to the uses on the site, the traffic movements and the average number of people attending the site on a daily basis.

46. The RAR states that the traffic movements are out of context with the area. This is incorrect. All of the traffic movements are contained to Folly Road, which forms part of the regional road network and is directly accessible from the Safety Bay Road exit ramp of the Kwinana Freeway.

47. The number of vehicles accessing the site on a daily basis will be minimal.

48. The description contained in the RAR referring to a 'continuous massing of people' on the site is simply incorrect.

49. The references in the RAR to the daily numbers of people attending the site for prayer sessions and the Hindu festivals is grossly exaggerated.

50. There will be no continuous massing of people.

51. As previously explained, people attending the site for daily morning prayer sessions is estimated to involve around 12 cars carrying on average no more than 25 people. These 12 vehicles

enter and exit the site at different times over a five (5) hour period. Another 25 people will typically visit the Temple for evening prayers, with the arrival and departure times being staggered over a three (3) hour period between the hours of 5:00pm and 9:00pm. Further detail on the operational hours of the Temple is contained in the Planning Application Report on page 38.

52. The people attending the festivals on the land are also staggered throughout the day (and the activities are to be held inside the buildings on the land). The numbers of people attending the site will not result in a scale of activity on the land which might cause any adverse or noticeable impact on the surrounding rural area.

53. My previous written deputation presented at the May MOJDAP Meeting was comprehensive and explained the activities proposed to occur on the land, a copy of which is attached.

54. The various technical assessments supporting the Application apply a maximum number of 400 people to ensure the land, the road network and the development to confirm the use is capable of being supported at that amount. The assessments confirm that the land is suitable to cater for this capacity, even in the unlikely event that the maximum total of 400 people will ever attend the site at one time.

55. In response to the statements in the additional RAR regarding the perceived visual impact, we continue to advise the Members that the proposed development and use is compliant with the Planning Framework and is sensitively designed to complement the rural setting and absorb into the site.

56. The appropriateness of this development and the compatibility of the use has more recently been further confirmed by the City's own *Design Review Panel* (**DRP**). As part of the City's further consideration of the Application, it arranged for the DRP to consider the proposal and provide expert advice as to whether it met the selected five (5) principles of achieving a good design outcome for the site, in accordance with *SPP 7.0 – Design of the Built Environment*.

57. The principles considered included: Principle 1 – Context and Character; Principle 2 – Landscape Quality; Principle 3 – Built Form and Scale; Principle 6 – Amenity; and Principle 10 - Aesthetics.

58. The outcome being that the DRP recommended to the City that the development be supported.

59. The only suggestion of the DRP being that the design be further refined to consolidate the car parking area and include additional landscaping to ensure that the issues raised by the City regarding the northern interface of the property were sufficiently addressed. The design has been further refined to address these recommendations. A copy of the Minutes of the DRP Meeting are attached to the RAR.

60. We also note to the Members that the built form layout has been carefully arranged and orientated on the land in its clustered format to ensure vehicles entering the land and the movement of people from their cars to the Temple and the Hall are screened from view to an appropriate level from the adjoining northern land and surrounding road network. Therefore, the activities on the land (although modest in intensity) will not have an adverse impact on the character and amenity of the location.

Visual amenity and rural character

61. In regard to the landscaping of the site, the RAR states that the vegetation proposed as screening along the northern boundary of the site now meets the policy requirements and therefore satisfies its earlier raised concerns.

62. The RAR also confirms that the buildings are setback from the northern boundary to comply with the City's policy requirements.

63. The additional RAR however continues to raise concern regarding the northern interface.

64. The additional RAR includes 3D perspectives of the development prepared by the Applicant, which illustrate the view of the development from the northern property.

65. The City includes its own photographs of the site in the RAR, taken from the same viewpoint.

66. These photographic comparisons are provided by the City to illustrate the existing view from the northern property as being the visual character it seeks to protect.

67. The photographs of the land show a vacant cleared site, apart from the existing rural shed structures. It is a site which is currently almost entirely devoid of vegetation.

68. All this photographic comparison demonstrates is that any built form proposed to be constructed on the subject land will result in a change to the existing rural landscape.

69. Whether the built form outcome for this site be a clustering of rural sheds with a residential dwelling or a clustering of the rural designed buildings of the proposed Temple and ancillary uses as proposed in this Application, the visual impact will be the same. I do not see how this sensitively designed development can be viewed as anything but sympathetic with the rural character of this location. It is a development which will protect the natural environment and enhance the visual character and amenity of the area.

70. What is most evident when comparing the photographs supplied by the City and the 3D perspectives of the development proposal is that the most dominant visual element of the development when viewed from the northern boundary is the substantial vegetation proposed to be introduced to the site to protect and enhance the rural setting.

71. Notwithstanding that the perspectives demonstrate the significant natural screening and overall improvements to the rural character and amenity of this location, the RAR still deems there to be an issue with the development at the northern interface.

72. The reason stated in the RAR is that the buildings on the land are partially visible from the northern property.

73. As the Specialist Members raised at the previous MOJDAP Meeting, why is it that these buildings need to be completely hidden? What is so offensive about these buildings? The answer being, there is no reason. There is no reason or requirement in the Planning Framework which states that the built form or the typical activities associated with a Place of Worship must be made invisible to the human eye.

74. It is however important that the design responds to the surroundings and ensures sufficient vegetation is provided to soften and absorb the built form into the rural landscape in order to protect the amenity of the area. This is achieved.

Objective of the Rural Zone, TPS 2 and Precinct 2A of the Rural Lands Strategy

75. The City's position is that the intensity and scale of the activities of the Place of Worship constitutes a development is inconsistent with the objective of the Rural zone in TPS 2 and the strategic objective and intent of the Rural Lands Strategy is incorrect.

76. The single objective of the Rural zone stated in TPS 2 is to preserve land for farming, and to foster semi-rural development giving due regard to the Rural Lands Strategy.

77. The development and use proposed in this Application is primarily focused on improving, preserving, and nurturing the sensitive environmental values of the site and ensuring the visual character and amenity of the site is protected and enhanced.

78. The preservation of these remaining sensitive ecological areas is defined as being the key objective of the Rural Lands Strategy. It is this goal which essentially defines the 'desired future character' and 'strategic intent' for Precinct 2A. The development meets with the objective and intent of Precinct 2A.

79. In regard to the objective of the Rural zone in TPS 2, it states that land is to be preserved for farming use and to foster semi-rural development which is sympathetic to the area.

80. This land is not suitable for farming use.

81. Agricultural practices and the resultant nutrient loading caused by farming use threaten the protection of the ecological values of Folly Pool on this land.

82. This land therefore must be protected FROM farming practices to ensure that the environmental attributes of the land are not in any way endangered or comprised.

83. A suitable alternative land use cable of being approved in the Rural zone is therefore the most appropriate for this land.

84. What is more appropriate than a Place of Worship proposed by a Hindu community which religious practice requires as a fundamental condition of following its faith, a need to nurture and respect the natural environment into perpetuity?

85. In conclusion, the City's grounds for refusal are based on an unfounded opinion that the activities of the use is too intensive for the land, with reference being made to the number of the clustered building forms and an incorrect interpretation of the numbers of people attending the site at any one time.

86. The City's position is not supported by its own DRP, which recommended that the development be supported. It is also not supported by the technical assessments and the supportive referral responses of the relevant government agencies. All of which confirm that this use at the intensity and scale proposed is compliant and entirely capable of being developed on this land.

87. The RAR offers no reasonable planning justification to support the recommendation for refusal of this Application. This is because the development and range of uses are entirely compliant with the Planning Framework.

88. It is based on all these reasons that we continue to respectfully seek the support of MOJDAP in approving this Application, with reasonable conditions attached.

Yours faithfully

CLARE McLEAN
Senior Planning Consultant

cc: *Archetype*
JAPA

THE LAYOUT RETAINS THE OPEN GRASSLAND FIELDS AND PROTECTS THE SCATTERED REMNANT VEGETATION ON THE LAND.

THE DEVELOPMENT AND LAND USES ARE COMPLIANT WITH THE PLANNING FRAMEWORK.

THE TECHNICAL ASSESSMENTS CONFIRM THE LAND IS CAPABLE OF SUPPORTING THE DEVELOPMENT.

THE ACTIVITIES OF THE USES ON THE LAND WILL NOT HAVE AN ADVERSE IMPACT ON THE RURAL CHARACTER AND AMENITY OF THIS AREA.

THE NUMBERS OF PEOPLE VISITING THE SITE ON A REGULAR BASIS WILL BE MINIMAL AND STAGGERED.

THERE WILL BE NO CONTINUAL MASSING OF PEOPLE ON THE LAND.

THE DEVELOPMENT INCLUDES A RANGE OF USES WHICH ARE TYPICALLY ASSOCIATED WITH A PLACE OF WORSHIP.

THE ARCHITECTURAL DESIGN IS PRESENTED AS A CLUSTERING OF BUILDINGS TO BE CONSTRUCTED USING TRADITIONAL RURAL BUILDING MATERIALS, WHICH ENSURES THE DEVELOPMENT FITS WITHIN AND COMPLEMENTS THE RURAL CHARACTER OF THE AREA AND IN DOING SO, WILL NOT HAVE AN ADVERSE IMPACT ON IT.

VIEW POST-DEVELOPMENT
(new landscaping at maturity)

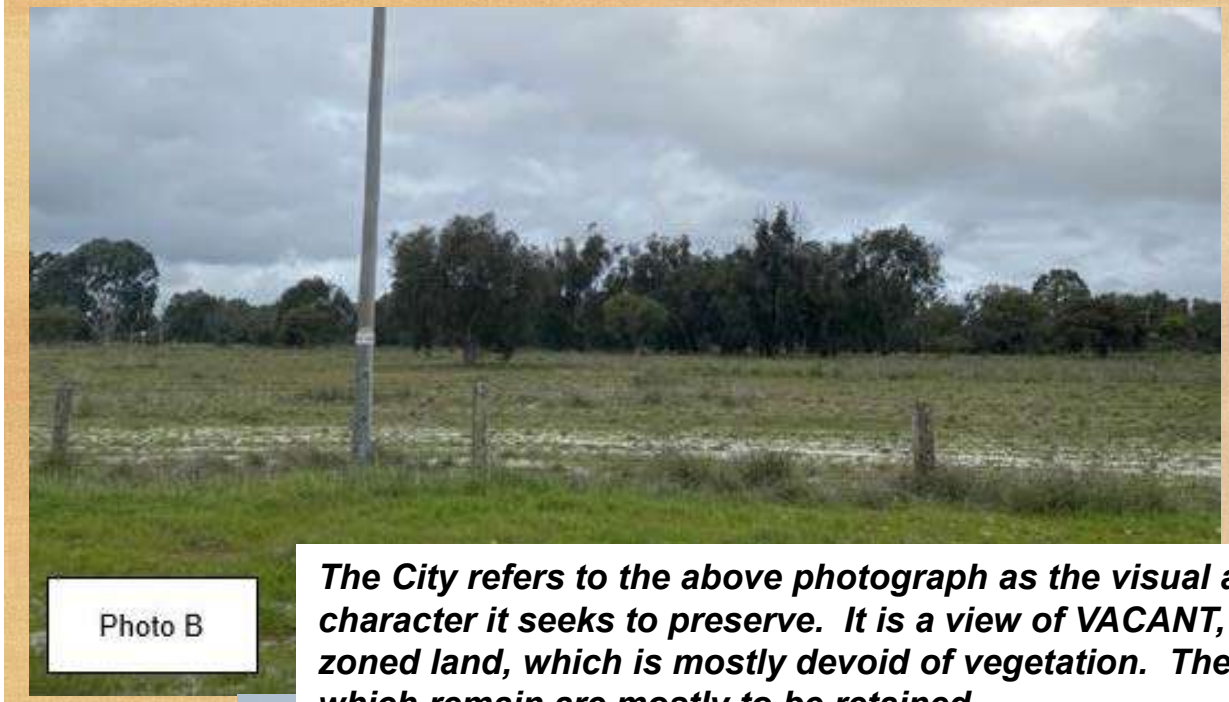
POST-DEVELOPMENT WITH LANDSCAPE STRATEGY
(new landscaping at maturity)

RAR COMPARISON OF EXISTING VIEW LOOKING EAST TOWARDS THE SUBJECT SITE, FROM THE ADJOINING NORTHERN PROPERTY.

The City refers to the above photograph as the visual amenity and rural character it seeks to preserve. It is a view of VACANT, CLEARED rural zoned land, which is mostly devoid of vegetation.

The Architect's perspective of the completed development from the same viewpoint. It presents to the northern land as a view dominated by native vegetation, with a rural style post and rail common boundary fence and the partial view of a section of the dining hall – which presents as a single storey traditional rural building form with a pitched roof and a verandah with timber framing and posts.

RAR COMPARISON OF EXISTING VIEW LOOKING SOUTH TOWARDS THE SUBJECT SITE, FROM THE ADJOINING NORTHERN PROPERTY.

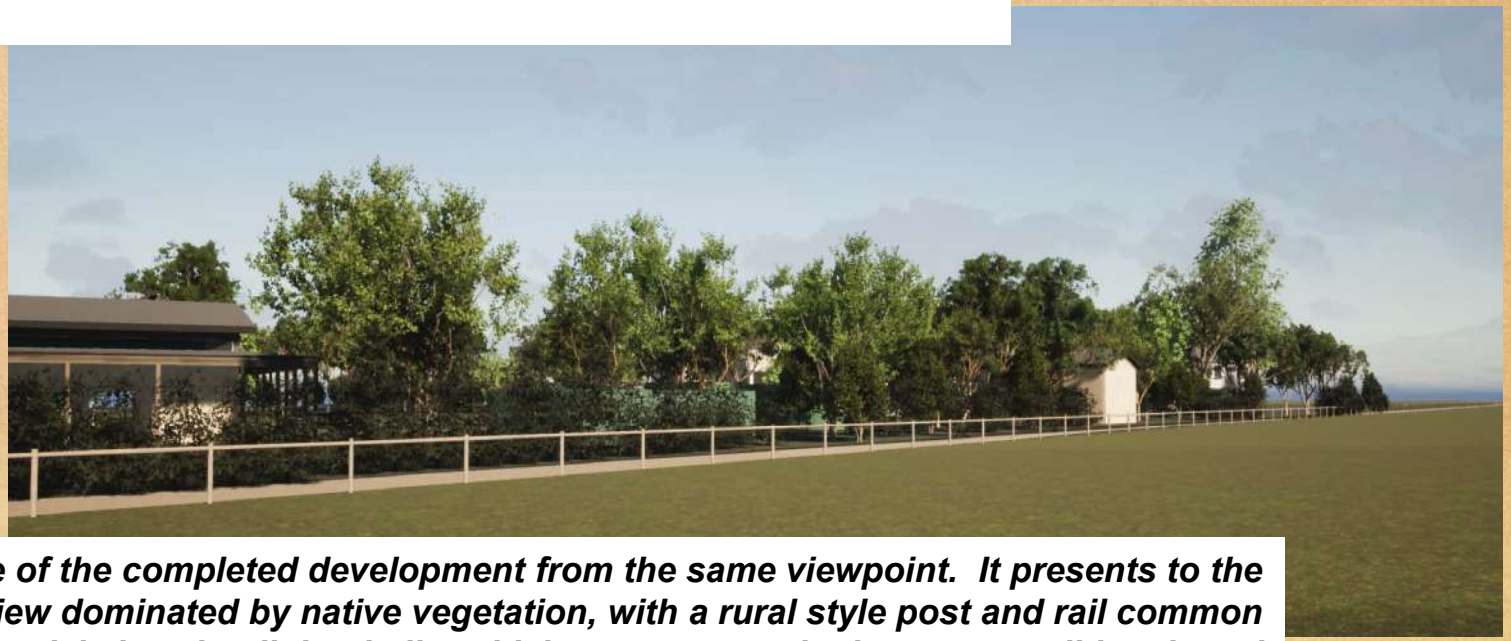


The City refers to the above photograph as the visual amenity and rural character it seeks to preserve. It is a view of VACANT, CLEARED rural zoned land, which is mostly devoid of vegetation. The scattered trees which remain are mostly to be retained.

The Architect's perspective of the completed development from the same viewpoint. It presents to the northern land as a view dominated by native vegetation, with a rural style post and rail common boundary fence and the partial view of the dining and multi purpose halls – which present as single storey traditional rural building forms, with pitched roofing and verandahs with timber framing and posts.

RAR COMPARISON OF EXISTING VIEW LOOKING SOUTH WEST TOWARDS THE SUBJECT SITE, FROM THE ADJOINING NORTHERN PROPERTY.

The City refers to the above photograph as the visual amenity and rural character it seeks to preserve. It is a view of VACANT, CLEARED rural zoned land with an existing shed (to be retained). The land is mostly devoid of vegetation. The scattered trees which remain are mostly to be retained.



The Architect's perspective of the completed development from the same viewpoint. It presents to the northern land as a view dominated by native vegetation, with a rural style post and rail common boundary fence and the partial view the dining hall – which presents as single storey traditional rural building form, with pitched roofing and a verandah with timber framing and posts. The temple and priest residence is almost entirely absorbed into the site.

THE OBJECTIVE OF THE RURAL ZONE IS TO PRESERVE LAND FOR FARMING AND TO SUPPORT SEMI-RURAL DEVELOPMENT WITH DUE REGARD TO THE RURAL LANDS STRATEGY.

THE PRESERVATION OF THE REMAINING SENSITIVE ECOLOGICAL AREAS IS THE KEY OBJECTIVE OF THE RURAL LANDS STRATEGY FOR PRECINCT 2A.

THIS LAND IS NOT SUITABLE FOR FARMING USE AS THE INEVITABLE NUTRIENT LOADING CAUSED BY SUCH LAND PRACTICES THREATENS THE PROTECTION OF THE ECOLOGICAL VALUES OF THIS LAND.

A SUITABLE ALTERNATIVE LAND USE CAPABLE OF BEING APPROVED IN THE RURAL ZONE IS THEREFORE THE MOST APPROPRIATE FOR THIS LAND.

WHAT IS MORE APPROPRIATE THAN A PLACE OF WORSHIP PROPOSED BY A HINDU COMMUNITY WHICH RELIGIOUS PRACTICE IS PRIMARILY FOCUSED ON NURTURING AND RESPECTING THE NATURAL ENVIRONMENT INTO PERPETUITY?

Government of Western Australia
Development Assessment Panels

attachment - copy of written deputation to MOJDAP held on 9 May 2022

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

Presentation Request Guidelines

Persons interested in presenting to a DAP must first consider whether their concern has been adequately addressed in the responsible authority report or other submissions. Your request will be determined by the Presiding Member based on individual merit and likely contribution to assist the DAP's consideration and determination of the application.

Presentations are not to exceed **5 minutes**. It is important to note that the presentation content will be **published on the DAP website** as part of the meeting agenda.

Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Clare McLean
Company (if applicable)	Peter Webb and Associates
Please identify if you have any special requirements:	**YES ☐** **NO ☒** If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro Outer JDAP
Meeting Date	9 May 2022
DAP Application Number	DAP/21/02148
Property Location	Lot 53, (67) Folly Road BALDIVIS
Agenda Item Number	8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES ☒**
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT ☐** **AGAINST ☒**
Is the presentation in support of or against the proposed development?	**SUPPORT ☒** **AGAINST ☐**
Will the presentation require power-point facilities?	**YES ☒** **NO ☐** **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Please refer to attached letter.

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

Please refer to the attached written submission.

P E T E R D W E B B A N D A S S O C I A T E S

C O N S U L T A N T S I N T O W N P L A N N I N G A N D U R B A N D E S I G N

May 3, 2022 Our Ref: C2457-01

Mr I Birch
Presiding Member
Metro Outer Joint Development Assessment Panel
email: daps@dplh.wa.gov.au
Attention: DAP Secretariat

Dear Sir

Re: Presentation to Metro Outer JDAP (Meeting No: MOJDAP/171)
Lot 53 (No. 67) Folly Road, Baldivis

1. I refer to the Metro Outer *Joint Development Assessment Panel* (**JDAP**) Meeting scheduled to be held on Monday, 9 May 2022.

2. *Peter Webb and Associates* (**PWA**) acts for *Jeeyars Achayra Peettam Australia Ltd* (**JAPA**) in relation to the proposed Place of Worship development on Lot 53 (No. 67) Folly Road, Baldivis. (Ref: **DAP/21/02148**)

3. This written submission and my deputation to JDAP relates to **Item 8.2** of the Meeting Agenda (No. **MOJDAP/171**).

4. The purpose of this submission is to respond to the main reason contained in the *Responsible Authority Report* (**RAR**) for recommending refusal of this Application, which is described in the RAR and in subsequent communications with the *City of Rockingham* (**City**) as being primarily based on a concern regarding the overall intensity of the development.

5. This submission is to be considered in association with the written submission and deputation by the *Project Architects - Archetype* (**Applicant**), which explains the specific design measures applied to the development to ensure it complements and fits within the established amenity and character of this semi-rural environment.

6. The submission below provides the detail of my presentation.

Background:

7. To explain the site, in the context of the rural amenity and character of the surrounding environs, the land comprises of Floodplain which extends over the western half of the property and is to be protected from development. The eastern part of the land is cleared grassland, having been used historically for farming purposes. This eastern area of the site is proposed for the development of the subject of this Application.

8. The land shares its south western side boundary with the Kwinana Freeway.

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Trading for NL Hidding Pty Ltd ACN 610 081 724

9. The land is directly accessible from Kwinana Freeway via the Safety Bay Road Exit.

10. Its primary frontage is to Folly Road, which is classified as an Other Regional Road Reservation in the *Metropolitan Region Scheme* (**MRS**).

11. The proposed development is designed to maintain vehicle access to Folly Road, with the existing crossover being relocated 35.0 metres to the east. There will be no traffic associated with the development which accesses the local road network.

12. The existing substantial sized sheds on the land and the adjoining property to the north are visible from Folly and Young Roads. The proposed Temple and its ancillary buildings are designed to be located in this area of the site, with the built form maintaining a similar level of visibility from the road into the site.

13. The following **photographs 1 and 2** show the view of the site, looking in a north eastern and north western direction from Folly Road.

***Photograph 1**: Looking north east from Folly Road towards the existing large rural shed structures visible from the road.*

***Photograph 2**: Looking in a north west direction from Folly Road towards the existing large rural shed structures visible from the road and a section of the floodplain portion of the land which is to be protected from development and maintained in its current state.*

14. **Photograph 3** below is taken from Folly Road looking in a south eastern direction towards the property located directly opposite the subject site. The large rural shed clusters of built form and silo bins are clearly visible from Folly Road. The height of these buildings are the same height as proposed for the development and are noted as not being screened by vegetation from views of the street.

Photograph 3: *Looking south east towards the rural sheds clustered forms located directly opposite the land on Folly Road.*

15. **Photograph 4** below shows the view of the land, looking in a south eastern direction along the secondary frontage to Young Road. This area of the site will mostly remain in its grassland state, with some scattered trees proposed to be planted to enhance the rural amenity of the location. The only building proposed to be located adjacent to this frontage is the guest accommodation, which is designed as a single storey residential built form to complement the residential properties on the opposite (eastern) side of Young Road. This single storey residential accommodation is set back from Young Road at a distance of 31.0m.

Photograph 4: *Looking south east along the secondary frontage of the property to Young Road.*

16. **Photograph 5** below is a view of the land taken from the corner of Young Road, looking south west towards the rural buildings on the subject site and the adjacent landholding to the north west.

Photograph 5: *Looking south west along the common boundary shared between the subject land and 547 Young Road. This adjoining property comprises of large rural sheds.*

17. **Photograph 6** is a view taken from Young Road looking south east at the substantially sized rural sheds which are visible on the neighbouring property to the north west and those on the subject site. The design of the built from proposed in this Application is consistent with the scale of the built form which is currently visible on the land.

Photograph 6*: Standing on Young Road and looking in a south easterly direction towards the visible built form on the neighbouring lot to the north and the subject lot.*

Responsible Authority Report (RAR):

18. The formal assessment contained in the RAR overwhelmingly concludes that the development and use is compliant with the Planning Framework.

19. The RAR concludes that the development is sensitively designed to ensure it will be developed on this land to comfortably fit within and complement the existing rural amenity and character of this location.

20. The RAR prepared for JDAP however states that it is still not satisfied that the development and the use will meet the 'community expectation' as to what it views to be an appropriate 'intensity of the use' for a Place of Worship on Rural zoned land in this location.

21. The RAR states that: *'while a Place of Worship may be allowed in the Rural zone, the scale and intensity associated with this development is significant when compared to other Places of Worship in the City.'*

22. We disagree with this statement. The scale and intensity of a 'Place of Worship' for the Hindu community is no different in terms of the scale and intensity of the uses which occur at other Places of Worship in the City. The total congregation/worshipers at existing Places of Worship (the same as this proposed Place of Worship) will most likely comprise of similar numbers (i.e. 400 people). The use of the proposed Place of Worship will not involve the total number of the congregation/worshipers visiting the site on the same day at the same time, in the same way that all the congregation of say, a Catholic Church will not attend mass every Sunday or every wedding or community gathering event held. The total numbers given in this Application are based on a **maximum** capacity in order to confirm through the various technical investigations that the land can support the scale and intensity of this development, which capability is confirmed. This statement in the RAR is therefore simply inaccurate.

23. The City has advised the Applicant that regardless of whether RAR Reasons Nos. 4 to 6 of the recommendation to JDAP are able to be resolved through minor revisions to the plans, the City considers RAR Reason Nos. 1 to 3 as the main justification to JDAP for recommending refusal of this development.

24. It is therefore understood that the reason of the City for not supporting the development is based on a 'perception' of the intensity of use, rather than basing the recommendation on conclusions reached through the technical assessments and the supportive referral responses of the relevant government agencies, which all confirm the use is compliant and capable of being developed on this land, as proposed.

25. It is this perception of the intensity of the use which has driven the City to recommending to JDAP in the RAR that the Application should not be supported, stating that the Application does not satisfactorily address the following requirements of the Planning Framework.

25.1 Clause 4.11.1 - Objective of the Rural Zone of the *City of Rockingham* (**City**) *Town Planning Scheme No. 2* (**TPS 2**) stating that the development is required *'...to preserve land for farming and foster semi-rural development which is **sympathetic to the rural character** of the area.'*

25.2 The strategic intent for *Planning Precinct 2A* of *Planning Policy 3.3.1 – Rural Land Strategy* (**RLS**), stating that *'.it has not been sufficiently demonstrated that the development will **protect and enhance the visual character** of the rural area.'*

25.3 The third reason for refusal states: *'the **intensity** of the proposed development **exceeds what could reasonably be expected** within the rural area, **based on the number of people** likely to attend the site.'*

26. It is our view that the formal assessment detailed in the RAR contradicts this recommendation and position of the City as there is no evidence to support the opinion that the development is too intensive for this land.

27. I note the following conclusions reached in the RAR in support of the development and use, in accordance with the Planning Framework, which conflict with the stated opinion regarding the intensity of use being not suitable for this location.

27.1 The proposed land use of Place of Worship, together with the ancillary uses, are capable of approval in the Rural Zone, pursuant to TPS 2.

27.2 The development is confirmed in the RAR as unlikely to have an adverse impact on the ecological values of the site or locality, in accordance with the Strategic Intent for Planning Precinct 2A of the RLS. The only matter that requires further consideration is the landscaping plan to ensure it can be developed in a way which balances the bushfire risk whilst implementing rural landscaping improvements through strategic tree planting on the site. The necessary minor revisions required to address this concern have been incorporated into a revised landscaping plan, which is discussed by the Applicant in a separate submission and deputation.

27.3 The proposed strategic landscaping of the site will further improve and enhance the visual rural amenity of the area.

27.4 The proposed layout of the clustered building forms, which allows for the open fields to be maintained, together with sensitively designed buildings which complement the rural built form characteristics of this location, are consistent with the existing rural amenity and character of this location.

27.5 The car parking is compliant with *Town Planning Scheme No. 2* (**TPS 2**).

27.6 The regional road network of Folly Road can accommodate the predicted traffic volumes generated by the proposed use, with access to the site being located only 550 metres from the Freeway exit ramp. It is anticipated that the majority of traffic

will travel to the site from this direction. No traffic generated by this development will utilise the local road network.

27.7 The proposed development and use of the site achieves compliance with the *Environmental Protection (Noise) Regulations 1997* (**Noise Regulations**).

27.8 The proposed development of the site meets the requirements of *State Planning Policy 3.7 – Planning in Bushfire Prone Areas* (**SPP 3.7**).

27.9 The *Emergency Evacuation Plan* (**EEP**) is confirmed to be satisfactory.

27.10 The *Department of Health* (**DoH**) has no objection with the proposed use in regard to the *Government Sewerage Policy* (**GSP**) requirements.

27.11 The City considers the proposed development to be compliant with the GSP.

27.12 The *Department of Water and Environmental Regulation* (**DEWR**) has no objection to the development.

27.13 *Main Road WA* (**MRWA**) has no objection to the development.

27.14 The *Department of Planning Lands and Heritage* (**DPLH**) has no objection regarding the upgrading and relocation of the crossover or the predicated volumes of traffic which will access the site via Folly Road.

27.15 The *Water Corporation* has no objection to the proposed servicing of the development.

28. The development and use is confirmed in the RAR as being overwhelmingly compliant with the standards and requirements of the relevant Planning Framework.

29. As the development is compliant with the Planning Framework and noting that the RAR still considers that the Application should be refused on the grounds of the intensity of its use, the remaining section of this submission and the primary focus of my deputation to JDAP is to respond to the City's opinion that the intensity of the proposed development is considered to exceed what can reasonably be expected in the rural area, based on the numbers of people likely to attend the site.

Intensity of use: numbers of people likely to attend the site

30. The RAR comments that the range of activities are **perceived** by the community to be too intensive for the location in terms of the maximum capacity which the development is designed to accommodate. The development is specifically designed to complement the rural character of this location as well as to ensure that the development will have no adverse impact on the amenity in terms of traffic, car parking and noise. This is confirmed by the technical investigations lodged with the Application which confirm that the site can support this development and use as proposed.

31. The development is designed for use by an absolute **maximum** of 400 people and on only up to 18 days of the calendar year. It is however not anticipated that all 400 people will attend the site at the same time, or the same wedding event, nor will all 400 people attend every festival on the land. (It should also be noted that the occasional wedding held on the property will typically occur during the day time and over a period of four (4) hours.)

32. The average number of people attending the site for these purposes will be far fewer. It is anticipated that around 50 people on average are expected to attend the site for personal worship on any given day. This equates to 25 people on the land in the morning and 25 people on the land in the evening, with the possibility of up to 100 people over a single day visiting the Temple on a weekend, with approximately 25 people visiting the site in the morning and 75 visitors during the evening.

    The TIA applies a conservative average of two (2) people visiting the site in a single vehicle. (It is more likely that 3-4 people on average will visit the site in a single vehicle, as families usually visit the Temple together.) Therefore, the number of cars arriving and departing the site over the five (5) hour morning prayer session will be around half the number of people on the site (i.e. 25 people visiting the Temple in the morning, will result in say 12 cars (at the most) on the land, which vehicles will visit at different times over the five (5) hour period).

    The arrival and departure times of the visitors are staggered throughout the day, as Hindus are not called for prayer at specific times of the day (there is no formal mass service, so the Temple use is significantly less intensive in terms of use when compared to congregations which attend weekly services at set times at an existing Catholic Church in the City). As the numbers of vehicles and people visiting the site on a regular basis are not substantial in volume, there will be no adverse impact on the rural amenity in terms of numbers of people that the development is designed to accommodate.

33. The visitors travelling to the site by vehicle will enter from Folly Road, which forms part of the regional road network.

34. The site sits immediately adjacent to the Kwinana Freeway and is directly accessible via the Safety Bay Road exit ramp, which provides direct access to the land from the relocated crossover on Folly Road.

35. Folly Road is a higher order road (Other Regional Road) of the regional road network. It is ultimately designed to cater for and to be upgraded over time to allow for the efficient movement of regional traffic through this part of the state.

36. Access to the site via Folly Road ensures there will be no impact on the existing and future amenity of this area in terms of the volume of traffic predicted to enter the site, as access is contained on a road which is designed for regional traffic.

37. There will be no vehicles entering the site from the local access road network.

38. Further, the overall design of the buildings, the carpark and the vehicle access to the site is purposefully arranged to ensure that the physical presence of people on the land will not be noticeably visible from the neighbouring or nearby properties.

39. We welcome the opportunity to respond to any queries of JDAP in order to further address the operational characteristics of the use on the land in order to assure the Panel that the intensity of the use will not impact on the existing amenity of this location.

Place of Worship as a land use suitable in the Rural zone, at the intensity proposed

40. The RAR states that the rural amenity will change with the introduction of the non-traditional land uses proposed. I disagree with the statement that the development is a 'non-traditional' use in a Rural zoned area. A Place of Worship is in fact one of the earliest uses developed in Rural zoned locations throughout Western Australia, since European settlement. It is therefore a traditional development and use of a Rural area.

41. A Place of Worship is a land use which can be approved on this land zoned Rural, pursuant to Table 1 – Zoning Table of TPS 2. It is a use able to be considered in the Rural zone as it is a use which is considered compatible as it will not result in a land use conflict with the other land uses identified as able to be approved in this zone.

42. The RAR states that the number of people using the site will be greater than the people using the nearby rural properties. It is therefore concluded that the development should not be supported as the rural amenity will change as a result of the proposed development on this land in a way which does not meet community expectation.

43. Table 1 of the City's TPS 2 lists an extensive range of land uses able to be considered for approval in the Rural zone. All these uses will result in an increased number of people attending the site. Such land uses include (but are not limited to): an Abattoir, a Winery, a Veterinary Hospital, and Restaurant/Café. These uses are all listed as capable of approval in the Rural zone as they are considered appropriate land uses in rural areas.

44. In consideration of the wide variety of land uses able to be approved in the Rural zone, it is recognised that this rural zoned area is not preserved just for the range of land uses which exist on the surrounding properties, nor is the Rural zone intended for only agricultural type farming and residential use.

45. It is relevant to note that the Environmental Report submitted with the Application states that the land is **not** suitable for agricultural purposes due to its proximity to Folly Pool. It is however suitable for one of the other land uses listed in the City's Zoning Table as appropriate within the Rural zone, including the proposed Place of Worship.

46. It is ultimately the overall design of the development and the technical assessments undertaken to address the capability of the subject land to support the development and land use at the intensity proposed, which determines whether the proposal is suitable for the site.

47. The Visual Impact Assessment and the 3D Perspectives demonstrate that the built form and use of the development is designed in a way which will not adversely impact on the rural amenity and character of this location.

48. The remaining technical assessments collectively combine to confirm that the site-specific characteristics of this landholding can support the proposed maximum capacity of people that the development is designed to accommodate, therefore reaching a conclusion that the land use is suitable in this rural location.

Concluding Comments:

49. The technical investigations accompanying the Application and the formal assessment of the proposal in the RAR confirms that the development and use is capable of being managed on the land to achieve compliance with the Planning Framework.

50. The buildings are proposed in a clustered form which is confirmed in the RAR as appropriately responding to the existing rural amenity.

51. The parking area is designed to avoid the mature trees within the site and is set back from Folly and Young Roads and surrounded by the clustered building forms to ensure the car parking is screened from public view and the visual amenity of the area is not in any way adversely impacted as a result of this development.

52. Additional landscaping is to be provided for screening of this area from the street and surrounding properties, which will further enhance the rural appeal of the site and location.

53. The RAR concludes that the built form of the development complements the rural character and amenity of the area. The design does not rely heavily on the trees to achieve this level of compliance. The trees are however important in providing further opportunities to soften and enhance the existing rural amenity and character of the land and this location, when viewed from the surrounding road network. The planting of trees is identified in Stage 1 of the development to ensure the trees reach maturity as soon as possible.

54. The tree planting is strategically designed to ensure the APZ requirements can be achieved at tree maturity.

55. The site coverage of the development is consistent with the existing site coverage of buildings on the nearby lots. The Applicant has prepared a plan to demonstrate the proposed site coverage of the land and clustering of buildings in comparison to the site coverage and clustered formation of existing buildings on nearby land. The total site coverage of the built form comprises only 3.8% of the land area, which is similar to or less than the site coverage of buildings on adjacent lands. Refer to Figure 1 attached.

56. The cars and people visiting the site and activities held, will not adversely affect the amenity and semi-rural character of nearby properties, as vehicles arriving and departing will access the

Freeway without disturbing nearby properties, people on site will not be visible from the street, and all activities will be held inside buildings within reasonable hours.

It is based on all these reasons that we respectfully seek the support of JDAP in approving this Application, with reasonable conditions attached.

Yours faithfully

CLARE McLEAN
Senior Planning Consultant

cc: *Archetype*
JAPA

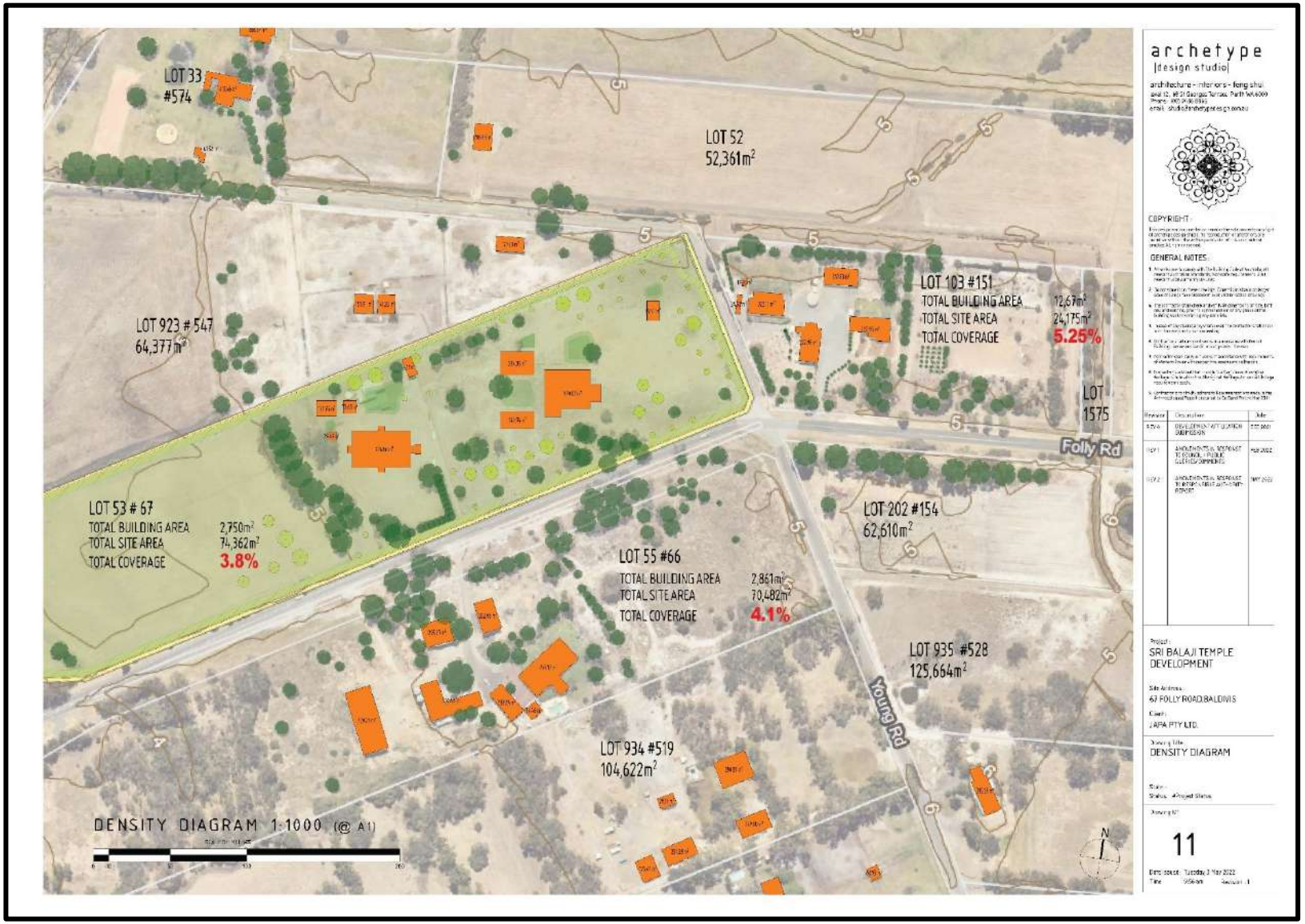

***Figure 1**: Site Coverage Comparison*

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Development Assessment Panels

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 2020 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

Presentation Request Guidelines

Persons interested in presenting to a DAP must first consider whether their concern has been adequately addressed in the responsible authority report or other submissions. Your request will be determined by the Presiding Member based on individual merit and likely contribution to assist the DAP's consideration and determination of the application.

Presentations are not to exceed **5 minutes**. It is important to note that the presentation content will be **published on the DAP website** as part of the meeting agenda.

Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Brad Woolley
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES ☐** **NO ☒** If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro outer joint development assessment panel
Meeting Date	Thursday August 4th 2022
DAP Application Number	DAP/21/02148
Property Location	Lot 53 (No 67) Folly Road, Baldivis
Agenda Item Number	No. 8.2

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES ☒**
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT ☒** **AGAINST ☐**
Is the presentation in support of or against the proposed development?	**SUPPORT ☐** **AGAINST ☒**
Will the presentation require power-point facilities?	**YES ☐** **NO ☒** **If yes, please attach**

Government of **Western Australia**
Development Assessment Panels

Presentation Content*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Click or tap here to enter text.

In accordance with Clause 3.5.2 of the *DAP Standing Orders*, your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

Temple on Folly Road in Baldivis and support the recommendation for refusal of temple.

I am totally AGAINST this proposed development in such a rural setting & in particular the current chosen location.

The development will be an eye-sore & aesthetically will not fit into such a quiet rural area. How this proposal has gotten this far is beyond me.

The location will also be dangerous to vehicles & pedestrians.
There is already a dangerous blind corner which has resulted in at least 1 fatality that I am aware of. Add to this the pedestrian traffic walking to the proposed Hindu centre & a new turn in lane & you have a recipe for disaster.
According to the documents that I have read, the traffic will be substantial at all times of the day.

There will also be a lot of delivery trucks constantly arriving due to the catering aspect of this development.

The development also is more of a 24/7 accommodation & activity centre, instead of just a simple place of worship.

The impact of the septic system on the surrounding wetlands will be horrendous & damaging to local wildlife.

The noise & light pollution is also of great concern to me & the impact has not been properly assessed in the development proposal.

I am dead set AGAINST this development & cannot understand how it even got this far through the system.
It seems to me that the entire thing was deliberately kept quiet so people would not have a chance to be against it.
I am thankful that some of my neighbours brought my attention to this & brought the community together to discuss.

Government of **Western Australia**
Development Assessment Panels

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Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Name	Caroline Meeusen
Company (if applicable)	Click or tap here to enter text.
Please identify if you have any special requirements:	**YES** ☐ **NO** ☒ If yes, please state any accessibility or special requirements: Click or tap here to enter text.

Meeting Details

DAP Name	Metro outer joint development assessment panel
Meeting Date	Thursday August 4th 2022
DAP Application Number	DAP/21/02148
Property Location	Lot 53 (No 67) Folly Road, Baldivis
Agenda Item Number	No. 8.2

Presentation Details

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Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** ☒ **AGAINST** ☐
Is the presentation in support of or against the proposed development?	**SUPPORT** ☐ **AGAINST** ☒
Will the presentation require power-point facilities?	**YES** ☐ **NO** ☒ **If yes, please attach**

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Development Assessment Panels

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Brief sentence summary for inclusion on the Agenda	*The presentation will address:* Click or tap here to enter text.

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Please attach detailed content of presentation or provide below:

Temple on Folly Road in Baldivis and support the recommendation for refusal of set temple.

As a resident of the area since 2013 I am shocked this is even a suggestion. This is a quiet Rural area, the reason myself and my neighbours moved into this area was to get away from the hustle and bustle of the town and to live peacefully in nature. The proposed temple will certainly disrupt this quiet lifestyle. The proposed Temple isn't just a place of worship as they are trying to sell it to us, it's a full village on its own. Multi-purpose hall, green rooms, meeting rooms, audio rooms, yoga classes, dining hall, kitchens, library, storage rooms, 2x 2-story houses plus another dwelling for visiting families (up to 4 at a time)…. the amount of people they cater for is enormous. They cater for more people and visitors than live in the immediate surrounding are. How does that not impact existing residents or wildlife for that matter. The number of proposed dwellings alone caters for 6x more families to live on this block at the same time than it would if it was just developed as a normal rural property. And no matter how good of a landscape architect they hire, you will always see that top of the temple above the trees. The building does not suit the landscape, plus the whole project is enormous, too big to suit the area. The years of building alone is going to disrupt lives of residents and wildlife around. In addition to the normal temple hours, the festivals possibly being held at this location 19 times per year for a full weekend is going to wreak havoc to traffic in the area and will severely disrupt our peace and quiet since they will go all weekend from early in the morning till late at night.

The issue isn't that I'm against the temple, it's the location. There is another temple 15km from this one, why are they not looking to locate closer to Mandurah to reach a broader audience, why can't they put their temple where there is no surrounding housing yet. If people choose to build near the temple that's their choice but we chose to live away from the busy-ness, now it's being forced upon us.

The other problem with this location is the Wetlands that run right behind this block, with no town water or sewerage this is a disaster in the making for the environment and the local wildlife of which some is endangered.

And if it isn't that, there's the increase in traffic of a road that is already dangerous if you're unfamiliar with it.

Other concerns I have with this development is the noise pollution, light pollution at night from flood lights in the carparks or around the temple area and buildings, excess cars parked on the side of the road when they have big celebrations (111 carparks, what if they are full) which will not only impact the traffic safety issue but also bushfire safety, also how do they run this as a not-for-profit venue with all those facilities. Inconsistencies in their application, lack of communications with the local wildlife preservation services.

The council has voted this development down twice now, your panel states that it "stands in the shoes" of the responsible authorities, two NO's from the council and a lot of protest from the local residents, isn't that clear enough?

I would like you to reconsider this Temple development, it does not suit this location at all, the impact it will have on the residents near the proposed structure, the impact on the carefully conserved wetlands and their wildlife, the rural lifestyle we all worked so hard for. I would like you all to vote against the Hindu Temple proposal as the Rockingham Council did unanimously. I am in favour of Refusing the Hindu Temple at this location.

Presentation Request Form

Regulation 40(3) and DAP Standing Orders 20 HYPERLINK "https://www.dplh.wa.gov.au/getmedia/7b2de614-2f2b-41d6-aff3-f149ba8a093d/Standing-Orders-(website-published)" HYPERLINK "https://www.dplh.wa.gov.au/getmedia/7b2de614-2f2b-41d6-aff3-f149ba8a093d/Standing-Orders-(website-published)" HYPERLINK "https://www.dplh.wa.gov.au/getmedia/7b2de614-2f2b-41d6-aff3-f149ba8a093d/Standing-Orders-(website-published)"20 cl. 3.5

Must be submitted at least 72 hours (3 ordinary days) before the meeting

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Please complete a separate form for each presenter and submit to daps@dplh.wa.gov.au

Presenter Details

Peter Jacobs and Kristy Harrison Company (if applicable) Please identify if you have any special requirements:	**NO** If yes, please state any accessibility or special requirements:

Meeting Details

Metro Outer Joint Development Assessment Panel	
4 August 2022	
DAP Application Number	DAP/21/02148
67 Folly Rd	
8.2	

Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	**YES**

Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT**
Is the presentation in support of or against the proposed development?	**AGAINST**
Will the presentation require power-point facilities?	**NO** **If yes, please attach**

Presentation Content*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	Support recommendation for the refusal of the proposed Hindu Temple Development

In accordance with Clause 3.5.2 of the *DAP Standing Orders* HYPERLINK "https://www.dplh.wa.gov.au/getmedia/7b2de614-2f2b-41d6-aff3-f149ba8a093d/Standing-Orders-(website-published)" HYPERLINK "https://www.dplh.wa.gov.au/getmedia/7b2de614-2f2b-41d6-aff3-f149ba8a093d/Standing-Orders-(website-published)" HYPERLINK "https://www.dplh.wa.gov.au/getmedia/7b2de614-2f2b-41d6-aff3-f149ba8a093d/Standing-Orders-(website-published)", your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

We moved to a rural area to enjoy the quiet, peaceful lifestyle this type of zoning provides. If a development of this size and intensity is approved the lifestyle we have enjoyed will be irreversibly changed for the worse. Also of great concern is if this development is approved, a precedence will be set for further large scale development in our rural setting which would drive out so many long term local residents, ourselves included. Please put the local rural community ahead of large development which would be better located in a more populated area. Thank you.

Government of **Western Australia**
Development Assessment Panels

GNANGARA ROAD, NO. 359 (LOT 703) WANGARA - PROPOSED INDUSTRIAL DEVELOPMENT

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer JDAP	
Local Government Area:	City of Wanneroo	
Applicant:	Mr Nathan Stewart, Rowe Group	
Owner:	JAO & MDL Investments Pty Ltd	
Value of Development:	$15.3 million ☒ Mandatory (Regulation 5) ☐ Opt In (Regulation 6)	
Responsible Authority:	City of Wanneroo	
Authorising Officer:	Greg Bowering, Manager Approval Services	
LG Reference:	DA2021/2030	
DAP File No:	DAP/21/02147	
Application Received Date:	15/12/2021	
Report Due Date:	26/07/2022	
Application Statutory Process Timeframe:	90 days	
Attachment(s):	1. Development Plans 2. Location Plan 3. Landscape Plan 4. ASP 10 Map 5. Schedule of Submissions 6. DPLH Comments 7. MRWA Comments 8. Development Plans presented to the DRP 9. DRP Minutes and Applicants Response 10. Traffic Impact Assessment 11. Access Arrangement Plans 12. City of Wanneroo Landscape Requirements 13. Environmental Noise Review	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	☐ Yes ☒ N/A	Complete Responsible Authority Recommendation section
	☐ No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Metro Outer JDAP resolves to:

1. **Approve** DAP Application reference DAP/21/02147 and accompanying plans Development Plans - DA01-D, DA02-D, DA03-C, DA04-C, Landscape Plans - 01-03, 02-02, 03-02 and Engineering Plans t21.166.sk19 and t21.166.sk20 in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Wanneroo's District Planning Scheme No. 2, subject to the following conditions:

Conditions

1. Pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme.

2. The use of the premises is approved for Showroom, Service Station, Car Wash, Motor Vehicle Repair and Industry-Light in accordance with the areas identified on the attached plans, as defined in the City of Wanneroo's District Planning Scheme No. 2 as follows:

   ***"Showroom:** means premises wherein goods are displayed and may be offered for sale or hire excluding the sale of foodstuffs, liquor or beverages, items of clothing or apparel (except as hereinafter stipulated in this definition) or personal adornment, magazines, books, newspapers or paper products, and medicinal or pharmaceutical products unless assembled or manufactured on the premises. The term includes the sale of secondhand clothing or apparel by welfare and charitable agencies with the approval of Council."*

   ***"Service Station:** means premises other than premises used for a transport depot, panel beating, spray painting, major repairs or wrecking, that are used for*

   (a) the retail sale of petroleum products, motor vehicle accessories and goods of an incidental or convenience nature; or

   (b) the carrying out of greasing, tyre repairs and minor mechanical repairs to motor vehicles."

   ***"Car Wash:** means any land or buildings used for mechanical vehicle washing. Such uses may or may not be associated with a service station and may include such other uses considered by Council to be ancillary to the predominant use of the land."*

   ***"Motor Vehicle Repairs:** means any land or buildings used for or in connection with electrical and mechanical repairs and overhauls to motor vehicles. The term includes repairs to tyres but does not include recapping or retreading of tyres, panel beating, spray painting or chassis reshaping."*

"Industry – Light: *means an industry:*

(a) in which the processes carried on, the machinery used, and the goods and commodities carried to and from the premises, will not cause any injury to, or will not adversely affect the amenity of the locality by reason of the emission of light, noise, electrical interference, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water or other waste products; and

(b) the establishment of which will not, or the conduct of which does not, impose an undue load on any existing or proposed service for the supply or provision of water, gas, electricity, sewerage facilities, or any other like services."

A change of use from that outlined above may require the approval of the City.

3. The attached **Landscape Plans - 01-03, 02-02 and 03-02** shall be modified to the satisfaction of the City prior to a Building Permit being submitted to address the following:

   - Increase the verge landscaping to the satisfaction of the City, in areas where the verge is not likely to be impacted by future upgrades to Gnangara Road.

   Planting and landscaping shall be carried out in accordance with the modified **Landscaping Plan** prior to occupation of the development and maintained thereafter at the expense of the landowner/occupier to the satisfaction of the City.

4. Detailed civil engineering drawings and specifications for works within the public road reserve (earthworks, roads, pathways and drainage) shall be lodged for approval to the City prior to commencement of construction works. Construction works are to be undertaken in accordance with the approved development application, engineering drawings and specifications to the satisfaction of the City.

5. Lighting shall be installed to pathways and car parking areas, be designed in accordance with the Australian Standards for the Control of Obtrusive Effects of Outdoor Lighting (AS4282) and shall be internally directed to prevent overspill into nearby lots. All floodlights shall be oriented and hooded to eliminate disturbance to occupants of the surrounding properties.

6. All illuminated signage shall have any boxing or casing in which it is enclosed constructed of incombustible materials, shall not comprise of flashing, pulsating, chasing or running lights and shall not have such intensity as to cause annoyance to the public or illuminate beyond the extent of the lot boundaries.

7. Parking areas, driveways and points of ingress and egress shall be designed and constructed in accordance with the Australian Standard for Offstreet Carparking (AS2890) and shall be drained, sealed and marked prior to occupation of the development and maintained thereafter to the satisfaction of the City.

8. The parking areas and associated access indicated on the approved plans shall not be used for the purpose of storage or obstructed in any way at any time, without the prior approval of the City.

9. All waste shall be stored within the designated bin enclosure and collected from site by a private contractor at the cost of the owner/operator.

10. Storage areas, plant and equipment shall be screened from view from streets, public places and adjacent properties.

11. The applicant shall undertake adequate measures to minimise any impacts of dust and sand drift from the site to the satisfaction of the City.

12. A Construction Management Plan shall be submitted outlining how the construction of the development will be managed in order to limit the impact on the surrounding area. The plan will need to ensure that:

    - Adequate space is provided within the development site for the parking of construction vehicles and for the storage of building materials so as to minimise the need to utilise the surrounding road network;
    - Adequate provision is made for the parking of workers' vehicles;
    - Pedestrian and vehicular access around the site is maintained;
    - The hours of construction are limited to ensure that there is no adverse impact on the amenity of the surrounding properties; and
    - The impacts caused by sand drift and dust from the site are minimised.

    The Construction Management Plan is to be submitted to and approved by the City prior to the commencement of any development.

13. The proposed crossover on Gnangara Road (east) is to be designed and constructed as per Engineering Drawing t21.166.sk19 **(Attachment 11)**, to the satisfaction of the City.

14. The proposed crossover on Gnangara Road (south) is to be designed and constructed as per Engineering Drawing t21.166.sk20 **(Attachment 11)**, to the satisfaction of the City.

15. The landowner/applicant contributing towards development infrastructure provisions pursuant to the Agreed Structure Plan No. 10 – East Wanneroo Cell 8.

16. Any graffiti applied to the external surfaces of the building shall be removed within seven days of it being applied, to the satisfaction of the City.

Advice Notes

1. In regards to the dust and sand drift condition, adequate measures to minimise any impacts of dust and sand drift from the site include all requirements as stipulated within the Department of Water and Environmental Regulation's 'A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities'.

2. With regards to any management plans to be submitted to the City as required in any of the conditions set out within this development approval, these are to be submitted to the assessing officer or in their absence addressed to Planning

Approvals. An assessment of the acceptability of these plans by the City will not be undertaken if these plans are submitted within a building permit application.

3. With regards to stormwater retention, an onsite stormwater drainage system, sufficient to contain a 1:100 year storm event (over 24 hours) must be provided. Plans illustrating the system proposed shall be submitted for approval when application is made for a building licence and the system shall be installed during the construction of the development.

4. The full movement crossover via Gnangara Road (south) is likely to become restricted in the future when Gnangara Road (south) is upgraded to dual carriageway. At which point, the access may become left-in and left-out only, subject to the final design outcome.

5. The owner/applicant is to submit the "Certification of Compliance with Development Approval Conditions" form certifying that all of the conditions specified in the approval by the Council for the development of the land have been completed in accordance with the approved plans, and the certification is to be lodged with the Council within 14 days from the date of practical completion, and applies to all of the conditions, except for those conditions relating to on-going compliance.

Details: outline of development application

Region Scheme	Metropolitan Region Scheme
Region Scheme Zone	Industrial
Local Planning Scheme	District Planning Scheme No. 2
Local Planning Scheme Zone	Industrial Development
Structure Plan	Agreed Structure Plan No. 10 - East Wanneroo Cell 8 (ASP 10)
Structure Plan Land Use Designation	Undefined
Use Class and permissibility:	Showroom (x2) Motor Vehicle Repair (x2) Service Station (x1) Car Wash (x1) Industry-Light (x1) *Note: The permissibility of these uses is currently undefined.*
Lot Size:	2.1376 hectares
Existing Land Use:	Vacant land
State Heritage Register	No
Local Heritage	☒ N/A
Design Review	☒ Local Design Review Panel
Bushfire Prone Area	No
Swan River Trust Area	No

Proposal:

The application proposes to build a number of land uses, which are listed as follows:

- One Showroom tenancy with approximately 670m^2 gross floor area (GFA), and associated service yard;
- One Showroom tenancy with approximately 830m^2 GFA, and associated service yard;
- Two Motor Vehicle Repair tenancies with approximately 245m^2 GFA each, and associated service yards;
- A Service Station with approximately 260m^2 GFA, an associated canopy and eight fuel bowsers, and 24/7 operating hours;
- A Carwash and associated facilities with approximately 248m^2 GFA and 24/7 operating hours;
- One Production Facility (Industry-Light) with approximately 4,517m^2 GFA, office facilitates with approximately 500m^2 GFA, and associated loading areas;
- An open car parking area inclusive of 210 bays;
- The modification of an existing crossover along Gnangara Road at the southern end of the site (noted as Gnangara Road south access), to provide full access movement to and from the site;
- A new crossover with a slip lane along Gnangara Road at the eastern end of the site (noted as Gnangara Road east access), to provide left in/ left out access movement to and from the site;
- Three new crossovers via Destiny Way, to provide full access movement to and from the site;
- Associated landscaping; and
- Associated pylon signage (Note: the application is not seeking approval for any other signage)

The subject site slopes approximately 10m from the highest point at the southern end of the site, being 53.60 in AHD, to the lowest point at the northern end of the site, being 44.00 in AHD. Due to the slope, the floor area of the Industry-Light facility falls over two levels. Office facilities associated with the Industry-Light facility are level with the remainder of the development, and are located on the top floor. Access to the office facilities is via Gnangara Road.

Due to the slope, Industry-Light is located on the ground floor and sits below the remainder of the development. Access to the Industry-Light is via Destiny Way only. Refer to **Attachment 1** for further details.

Background:

Locality

Lot 703 (359) Gnangara Road, Wangara (subject site) is currently vacant and is bound by Destiny Way to the northern and western boundaries, and Gnangara Road to the southern and eastern boundaries. More broadly, all land north, east and south of the site includes developed General Industrial zoned land, and all land to the east is zoned and developed as residential. A Location Plan is included as **Attachment 2**.

A copy of the proposed plans subject to this proposal are included as **Attachment 2.** A copy of the proposed Landscape Plan is included as **Attachment 3.**

Zoning and Permissibility

The subject site is included within ASP 10 which incorporates all industrial land bound by Gnangara Road, Hartman Drive, and Ocean Reef Road. A map of the ASP 10 area is included in **Attachment 4**. All of the lots included under ASP 10 are zoned General Industrial under DPS 2, with the exception of the subject lot, which is zoned Industrial Development under DPS 2. Development of land within the Industrial Development zone is permitted under Clause 3.15.3 of DPS 2, which states:

> *"Subject to Clause 27 of the deemed provisions, no subdivision (including strata or survey strata subdivision) or other development should be commenced or carried out in an Industrial Development Zone until an Agreed Structure Plan has been prepared and adopted under the provisions of Part 4 of the deemed provisions of the Scheme. No subdivision (including strata or survey strata subdivision) should be commenced or carried out and no other development shall be commenced or carried out otherwise than in conformity with the Structure Plan which is in existence at the time the application for approval of the subdivision or other development is received by the responsible authority" (emphasis added)*

Noting the above, given the subject site has been included within the ASP 10 area, development is able to be carried out. However, there is currently no guidance within ASP 10 on land use permissibility for the subject site. Therefore, in order to provide guidance on appropriate development, the assessment of the land use permissibility reverts to the objectives of the Industrial Development Zone set out in DPS 2.

The appropriateness of the development and an assessment against the objectives of the Industrial Development Zone, is discussed in further detail in the Comment section below.

Legislation

Metropolitan Region Scheme (MRS)
District Planning Scheme No. 2 (DPS 2)
Notice of Delegation 2022/03 Powers of Local Government and DoT (DEL2022/03)
Environmental Protection (Noise) Regulations 1997

State Government Policies

State Planning Policy 7.0: Design of the Built Environment (SPP 7.0)
Development Control Policy 5.1 Regional Roads (Vehicular Access) (DC 5.1)
WAPC Transport Impact Assessment Guidelines Volume 4 Individual Developments

Structure Plans

Agreed Structure Plan No. 10 - East Wanneroo Cell 8 (ASP 10)

Local Policies

Local Planning Policy 2.9 – Service Stations and Roadhouses (LPP 2.9)
Local Planning Policy 4.6 – Signs (LPP 4.6)
Local Planning Policy 4.23: Design Review Panel (LPP 4.23)

Consultation:

Public Consultation

The application was advertised for a period of 21 days in accordance with Clause 3A and 64(4) of DPS 2 and the Deemed Provisions (14 days plus an additional seven days due to the Easter Holiday period), commencing on 7 April 2022 and concluding on 28 April 2022.

Advertising was undertaken by way of a notice in the local newspaper and writing to landowners/occupiers within approximately 200 metres of the proposed development. The development plans and all supporting documentation were also published on the City's website, and a sign installed on site.

A total of seven submissions were received, with two submissions supporting the proposal, three providing general comments, and two objecting to the proposal.

The main issues raised in the objections were:

- Concerns with an increase in traffic and noise on Gnangara Road;
- The proposed 24/7 operation of the Service Station and Car Wash;
- Health concerns due to the Service Station being in close proximity to residential development;
- Increased light spill from the overall development; and
- An oversupply of Service Stations in the surrounding area.

A summary of the submissions received and a response provided by the City is included as **Attachment 5**.

Consultation with Government Agencies

Department of Planning, Lands and Heritage

In accordance with the Notice of Delegation 2022/03, the application was referred to the Department of Planning, Lands and Heritage (DPLH) for comment as the subject site abuts Gnangara Road, which is a Category 3 Other Regional Road. In its correspondence DPLH advised they had no objection to the proposal subject to the following reviews being undertaken:

- The submitted swept path plans be verified City's Traffic Services for compliance;
- An assessment of the Gnangara Road south access point against Main Roads WA (MRWA) intersection warrants, to determine if a left-turn slip lane is required. The MRWA intersection warrants is an assessment tool used to determine if additional turn treatments are required, through assessing a variety of different factors within the road network and access points; and
- The proposed Gnangara Road east access being referred to MRWA for comments, as it is classified as an 'Other Regional Road under MRWA control' within WAPC Plan No SP 694/5.

The comments provided from DPLH have been addressed in the summary of submissions and are discussed in further detail in the Access and Traffic Generation section of this report. Regarding Point 1, the City's Traffic Services concluded that the

submitted swept path plans were compliant, and therefore this has not been discussed further. A copy of the DPLH correspondence is included in **Attachment 6**.

Main Roads WA

Following the advice from the DPLH, the application was referred to the MRWA for comment. In its correspondence MRWA advised they had no objection to the proposal, but did advise the following:

- Gnangara Road (east) does not form part of the state road network controlled by MRWA. As such, it is not MRWA's responsibility;
- All vehicular access should be removed from Gnangara Road (east) given the long term plans for this area, which include upgrades to the Ocean Reef Road, Gnangara Road and Sydney Road intersection
- Further consideration should be given to the Gnangara Road (south) access due to the potential for safety and queuing issues occurring at times of high traffic demand.

The comments provided from MRWA have been addressed in the summary of submissions and in further detail below. A copy of MRWA's correspondence is included in **Attachment 7**.

Further Comments from DPLH

Following the MRWA comments stating that Gnangara Road (east) does not form part of the state road network controlled by MRWA, the City requested that the DPLH complete their own review of the proposed access arrangement. Following their review and discussions with the City's Traffic Services, the DPLH advised that they did not object to the access arrangement. This is discussed in further detail within the Access and Traffic Generation section of this report.

In addition and following further discussions with the City's Traffic Services, the DPLH also advised that they did not object to the a full movement access along Gnangara Road (south), subject to appropriate turning lanes being provided. A copy of DPLH's further correspondence is also included in **Attachment 6**.

Design Review Panel Advice

The application was considered at the City's Design Review Panel (DRP) meetings on 3 February 2022. The key recommendations from the DRP and the applicant's response are summarised below:

- Consider consolidation of the landscape into a larger central pocket park that includes seating, shade canopies and shade trees.
- Develop an east west link throughout the side, including pedestrian footpaths and linkages to public transport
- Consider ways in which the eastern intersection of Gnangara Road at the roundabout could present more coherently and provide a legible and attractive form of address for the precinct.
- Consider further articulation to the showroom walls facing Destiny Way
- Consider additional tree canopy including providing shade trees to be provided at 1 per 4 bays in car parking area

A copy of the plans submitted to the DRP are included as **Attachment 8**.

The applicant made minor modifications to the plans, which were submitted as part of the subject development application. The main modifications in the final proposal include:

- The incorporation of a pocket park inclusive of low level landscaping, shade trees and street furniture centrally within the site;
- An east west link has been provided via a new footpath from the proposed relocated bus stop on Gnangara Road, providing access to the proposed uses via a network of footpaths, all linking to the pocket park;
- Awnings provided to the Motor Vehicle Repair tenancies, to increase the pedestrian amenity through the subject site;
- An upgraded elevation treatment of the eastern intersection of Gnangara Road at the roundabout including feature screening and shade sails; and
- Additional trees have been provided within the car parking areas where those bays are not rooved or directly fronting buildings.

The comments provided by the DRP and a response from the applicant is included as **Attachment 9**.

The design changes have been incorporated into the final set of plans subject of this report (refer **Attachments 1**). Overall, the modified plans address the majority of the suggestions made by the DRP and improve the design with respect to pedestrian access and landscaping.

Planning Assessment:

The proposal has been assessed against the relevant provisions of DPS 2, State and Local Planning Policies and ASP 10, as detailed in the Legislation and Policy section of this report. The following matters have been identified as key considerations for the determination of this application:

- Compatibility of the Proposed Land Uses;
- Access and Traffic;
- Landscaping;
- Noise;
- Odour and Health Concerns;
- Impacts of Outdoor Lighting; and
- Compliance with relevant LPP's.

<u>Compatibility of the Proposed Land Uses</u>

As ASP 10 fails to include specific land use permissibility for the subject lot, the appropriateness of the proposed land uses was considered against the objectives of the Industrial Development zone, which as stated under Clause 3.15.2 are to:

a. *designate land for future industrial development;*
b. *provide for the orderly and comprehensive planning and development of large areas of industrial land for industrial and employment purposes; and*
c. *enable planning to be flexible and responsive to changing circumstances throughout the development stages of the area.*

The proposal is considered to be consistent with these objectives, as it includes industrial development over a large undeveloped industrial landholding, which would allow for the carrying out of industrial activities, and would create employment opportunities in the area.

Whilst no land use permissibility has been identified, the City's view is that the most suitable zone for the site is the Service Industrial zone, as the development could serve as a buffer between the existing General Industrial zone and existing Residential zone. Under Clause 3.12.1 of DPS 2, the purpose of the Service Industrial zone is to:

> *"provide for a wide range of business, industrial and recreational developments which the Council may consider would be inappropriate in Commercial, Business and General Industrial Zones and which are capable of being conducted in a manner which will prevent them being obtrusive, or detrimental to the local amenity".*

Considering the proposed uses are generally service and retail based, and do not include intense industrial practices, by their nature they would not cause adverse impacts on the surrounding locality. The proposed land uses are also all capable of approval in the Service Industrial zone, as noted in the table below:

Use	**Service Industrial**
Car Wash	P
Industry – Light	P
Motor Vehicle Repair	D
Service Station	D
Showroom	P

Whilst it is acknowledged that land use permissibility ought to be addressed ordinarily through an amendment to ASP 10, it would not change the intended built form outcome, which is to facilitate the development of industrial land. Furthermore, the subject lot is the only lot within the Industrial Development Zone, and one of the only undeveloped industrial lots in the surrounding area. As such, an amendment to ASP 10 would be an unnecessary planning exercise that would not fundamentally change the built form outcome from what is currently being proposed. As such, it is considered that the application can be determined under the current planning framework given its compatibility with the surrounding zones and development.

The proposed range of land uses are therefore considered acceptable for the reasons outlined above.

Access and Traffic Generation

A number of concerns were raised in the submissions, and as a result of consultation from MRWA and DPLH with regard to the access arrangements and future generation of traffic volumes within the area. These concerns have been discussed below.

Access via Gnangara Road (east)

The application proposes a new left-in access with a slip lane, and a left-out access via Gnangara Road, on the eastern side of the subject site. In support of this arrangement, a Traffic Impact Assessment (TIA) prepared by Transcore was submitted with the application, which indicated that the access would be suitable within the

existing road network. A copy of the TIA is provided in **Attachment 10** and an initial design for the proposed access arrangement is provided in **Attachment 11**. Whilst the City's Traffic Services supported these findings, a further review and comments of the access arrangement was requested from MRWA, as per the recommendation from the DPLH. In its comments, MRWA advised that:

- Access should be removed from Gnangara Road (east) and relocated to Destiny Way due to the long term plans in the area which includes upgrades of Gnangara Road, Ocean Reef Road and Sydney Road intersection to an express way standard;
- The proposed access would result in a lack of land required for the upgrade; and
- The access may put additional strain on traffic volumes in the future.

When asked to comment on the response from MRWA, the applicant reiterated that the TIA concludes that the access is suitable based on current traffic modelling, and added that:

- Without the proposed access in this location, all traffic pressure would be redirected to the Gnangara Road south access point, which cannot accommodate the proposed traffic generation; and
- The functionality of the site, including the circulation for fuel tankers and service vehicles is required from this proposed access.

The City also questioned MRWA on the timing of road upgrades and queried what land would be required for the upgrade, however MRWA was unable to provide a response as no plans have been prepared at this time.

Whilst the MRWA comments have been considered, the City's maintains the view that the access point is acceptable, primarily due to the fact that the current traffic modelling does not show any strain on the transport network, and given the access point is proposed over 200 metres away from the Gnangara Road, Ocean Reef Road and Sydney Road intersection, which would create a sufficient buffer between the development and any future works.

The City does not agree that access should be via Destiny Way as it is not feasible due to the topography of the site, which slopes over 10 metres from the high point at the roundabout, to the low point in the northern corner of the site. This would result in a lack of functionality for the site and if it were proposed, may cause additional traffic issues at the T-junction of Destiny Way and Gnangara Road (south).

Furthermore, any additional traffic concerns would be addressed through the eventual City lead road upgrades within the area, which is discussed further in this report, and will support increased traffic generation in the area in the future. Therefore, given the uncertainty around the upgrades, there is no nexus established by MRWA to request the removal of the access. The City therefore supports the proposed arrangement. This position was also supported as detailed within the additional comments provided from the DPLH. It is recommended that a condition be imposed requiring the new left-in access with a slip lane, and a left-out access via Gnangara Road (east) to be constructed in accordance with **Attachment 11.**

Access via Gnangara Road (south)

The applicant is proposing to utilise the existing southern crossover along Gnangara Road, for full vehicle access to the site. In support of this arrangement, the applicant's TIA indicated that this crossover would operate satisfactorily within the existing road network, however the City raised concerns relating to congestion, safety and the creation of potential hazards in the design. Within its comments, the DPLH recommended that this crossover be assessed against MRWA intersection Warrants to ensure it meets the relevant standards. In order to address this recommendation, both the City's Traffic Services and MRWA reviewed the access point, and provided the following comments:

- The proposed full movement crossover may be problematic as vehicles turning right into the development from Gnangara Road must give way to east bound traffic travelling at 70 km/h. During peak traffic periods, this may create an unsafe environment. There is currently no channelisation for this movement, which increases the chance of rear end crashes;
- The full movement crossover may cause excessive queueing for vehicles traveling westbound along Gnangara Road. Vehicles waiting for a gap when turning right into the development from Gnangara Road may block vehicles travelling west bound (as this is a single lane) causing a queue back towards the Mirrabooka Avenue roundabout; and
- Vehicles traveling east would also be at risk as no deceleration lane is proposed to accommodate vehicles turning into the site. The speed of the vehicles and lack of a deceleration lane will increase the risk of rear end collisions.

In considering the congestion and traffic hazard impacts raised, the City's Traffic Services recommendation is for an auxiliary left turn lane and protected right turn pocket to be provided at this location. These requirements are in accordance with MRWA turn lane warrants, and would provide safer access to the property by reducing congestion through channelising the movement for vehicles turning into the site, while allowing the flow of traffic traveling east and westbound to continue.

The City's Traffic Services have reviewed the capacity for the auxiliary left turn lane and protected right turn pocket, and confirmed that a deceleration lane ranging from 55m-75m would adequately fit within the existing road reserve, which would comply with the requirements under *Austroads Guide to Road Design Part 4A.* Further to this, the applicant also provided an initial design for the auxiliary left turn lane and protected right turn pocket as per **Attachment 11**, which is supported by the City.

In light of the above, the proposed access point via Gnangara Road (south) is supported subject to a condition requiring that an auxiliary left turn lane and protected right turn pocket be constructed in accordance with **Attachment 11**, to the satisfaction of the City.

Future Gnangara Road Extension

Gnangara Road is currently identified as a District Distributor A road comprising of a two-lane single carriageway, and only permits full access movement to all properties between Hartman Drive and Mirrabooka Avenue. As part of the City's capital works program, Gnangara Road has been identified for future upgrading to a four-lane dual carriageway, with a raised central median island. Whilst the purpose of the upgrade is

to accommodate the projected increased traffic volumes in the area, the four-lane dual carriageway is not forecast to be required until 2041 east of Hartman Drive, where it would impact the subject site. However, the need for the upgrade is reviewed on an annual basis. Therefore an upgrade could be pushed back or brought forward, depending on the annual assessments.

As part of this application, the existing crossover along the southern section of the site is intended to be utilised for full movement access to and from Gnangara Road. However, due to the inclusion of the future median as part of the four-lane dual carriageway upgrade, future vehicle movements to the subject site may be restricted to left in and left out access only, once the road is fully upgraded. It is therefore recommended that an advice note be included to advise that full movement access may be removed in the future, once the four-lane dual carriageway is constructed

Traffic Generation

Concerns were raised in regard to increased vehicular traffic in the area and along Gnangara Road as a result of this proposal. As part of the application, a TIA and was provided which identified the following:

- The proposal would generate approximately 1,864 vehicle trips per weekday (both inbound and outbound);
- The proposal would generate approximately 200 vehicle trips during the AM and PM peak hours at the ultimate design;
- The proposed development will not increase traffic flows near the quoted WAPC threshold to warrant further detailed analysis; and
- The proposal would not generate any queuing of traffic back from the nearby intersections to the development crossovers.

The findings ultimately demonstrate that even with the increased traffic the road network will operate well within the design capacity of current road network. Furthermore, as Gnangara Road is planned to be upgraded to a four-lane dual carriage way in the future, this would further increase the capacity of the road network and accommodate future development in the surrounding area.

The City's Traffic Services have also reviewed the TIA and agree with the findings and the predicted traffic volumes, with the exception of the comments regarding traffic queuing as addressed above. As such, the City considers that the traffic volumes generated and impacts on the surrounding road network are acceptable.

Landscaping

Clause 4.17.1 of DPS 2 prescribes landscaping requirements for non-rural and non-residential development as follows:

DPS 2	Required	Provided
A minimum of 8% of the area of a development site shall be set aside, developed and maintained as landscaping to a standard satisfactory to the Council	1710m^2 (8%) of the site is required to be landscaped	3192m^2 (14.9%) of the site will be landscaped

In addition to the above, and as required by Clause 4.17.1 of DPS 2, the road verge adjacent to the lot shall be landscaped and maintained to the satisfaction of the City. Full details of the City's Landscaping Requirements are included in **Attachment 12.**

The original application did not include any verge landscaping, however following consultation with the applicant regarding the City's Landscaping Requirements, the Landscaping Plan was amended to include mature trees with a diameter of six metres planted along all verges, spaced at 10 metre intervals, with all remaining groundcover to be mulch. The applicant's justification for this approach is as follows:

- The proposed development includes 3,192m^2 of on-site landscaping. This equates to approximately 17.9% of the site, which is in excess of the minimum required 8%;
- The amount of the proposed landscaping is well above the standard provided at other industrial sites in the surrounding area;
- The proposed development and landscaping will greatly improve the amenity of the surrounding area; and
- The estimated cost of landscaping to the City's standard will be just under $1 million.

Whilst the proposal has delivered additional landscaping within the internal boundaries of the lot and would improve the amenity of the area, the City maintains the view that that more opportunities remain to further increase verge landscaping, particularly to ensure consistency with all current and future non-residential development.

It is however acknowledged that Gnangara Road is intended to be upgraded to a four-lane dual carriage way in the future, which would utilise land within the existing verge. As such, it is accepted that the verge area subject to future road upgrades could be landscaped to a lesser standard, however the area unaffected by the road upgrade can still be fully landscaped to the City's Standards.

A condition has therefore been recommended requiring an updated detailed Landscaping Plan, demonstrating further revisions to the verge landscaping, as noted above.

Noise

As concerns were raised regarding noise, the applicant provided an Environmental Noise Review to address noise generated from the subject site on existing residential development. A copy of the Environmental Noise Review is provided in **Attachment 13**. To assess compliance, the development was measured against the prescribed standards of the *Environmental Protection (Noise) Regulations 1997* and concluded that the development would comply with the assigned noise levels at all times.

The City Health's Services have reviewed the Environmental Noise Review and confirmed that, noise generated from the site could be appropriately managed and would not have a detrimental impact on surrounding landowners. Therefore, the noise generation from the site is considered to be acceptable.

Odour & Pollution

A number of submitters raised concern about potential risk and odour impacts associated with the proposed Service Station due to the proximity of the subject site to surrounding residential properties.

As part of the operational requirements for the Service Station, the proponent will be required to obtain a Dangerous Goods Site Licence from the Department of Mines, Industry Regulation and Safety (DMIRS) in order to store and sell fuel from the subject site. The following considerations are assessed as part of issuing this licence:

- Spill or leak containment;
- Segregation of dangerous goods;
- Control of ignition sources in hazardous areas;
- Control of hazardous substances that includes any gas, vapour, mist, fume or dust;
- Design, construction, maintenance and location of storage or handling systems, including location and separation distances so that as far as reasonably practicable they can be operated with minimal risk to people, property and the environment; and
- Underground storage or handling systems for petroleum products designed, installed, operated and maintained so that they do not leak.

As such, it is unlikely that the neighbouring properties will be affected due to the strict requirements imposed on the operator through the Dangerous Goods Site Licence process. The City is unable to impose this as a planning condition. Instead, the City recommends including an advice note advising that it is the proponent's responsibility to comply with all other applicable (non-planning) legislation and to obtain all required approvals, licences and permits prior to commencement of the development.

The City considers that the concerns regarding risk and odour impacts associated with the proximity of the Service Station to residential properties will be sufficiently managed through the Dangerous Goods Site Licence licencing process.

Lighting

Concerns were raised through the submissions with regard to the potential for light spill on the adjacent residential properties, due to the Service Station and Carwash operating 24/7.

As part of the operational requirements for the Service Station and Carwash, the proponent will be required to control lighting in accordance with the *Australian Standards for the Control of Obtrusive Effects of Outdoor Lighting (AS4282),* which sets out guidelines for control of the obtrusive effects of outdoor lighting, and gives recommended limits for relevant lighting levels to contain these effects within tolerable levels. As such, it is unlikely that the neighbouring properties will be adversely affected due to the requirement to comply with.

In order to ensure these standards are adhered to, it is recommended that a condition be imposed requiring lighting to be installed in accordance with AS4282 is imposed.

Developer Contributions

Under ASP 10 and Part 9 of DPS 2, the subject site is identified within Cell 8 of the East Wanneroo Planning and Developer Contribution Arrangements. The arrangements require contributions to be made by an owner within a specific cell area for the implementation of the works, when development is proposed. As the subject site is currently vacant, the City has identified that contributions are yet to be paid. Therefore, a condition is required to be imposed for the contribution fees to be paid, as part of the works on the subject site.

Local Planning Policy 2.9 - Service Stations and Roadhouses

Local Planning Policy 2.9 - Service Stations and Roadhouses (LPP 2.9) provides guidance for development of Service Stations, with particular regard to locations adjacent to and in the proximity of sensitive land uses such as residential properties. An assessment against the objectives of LPP 2.9 is outlined below.

LPP 2.9 – Objectives

Objective	**Comment**
Ensure that service stations and roadhouses are developed to a high standard of architectural design that complements the expected standard of design in the locality.	The proposed Service Station been designed to an appropriate architectural standard, and is consistent with the surrounding Industrial area
Ensure that service stations and roadhouses are located and designed such that traffic volumes and flow generated does not unduly impact the amenity of the locality.	As noted in the Access and Traffic section above, the traffic generation throughout the site is considered to be acceptable.
Ensure that traffic generated does not adversely impact on road safety and efficiency of the road network.	As noted in the Access and Traffic section above, the City requires an auxiliary left turn lane and protected right turn pocket to be provided to improve the safety of vehicle movements to and from the site.
Ensure a safe interface between vehicle and pedestrian movements on and off site.	
Ensure that service stations and roadhouses make a positive contribution to the streetscape.	As outlined in point 1 above, the Service Station is considered to be appropriately designed and in keeping with the surrounding streetscape.
Protect the amenity of sensitive land uses by ensuring they are located and designed in a way that reduces the impact of noise, light, odour and other emissions.	The proposal is not considered to have any impacts on amenity due to its location within an existing Industrial area. The overall design and orientation of the structures on site is considered to be acceptable and will not adversely impact the amenity of the surrounding area.

The City considers that the proposal is appropriately designed as per the objectives and standards set out in LPP 2.9 and is recommended to be supported on this basis.

Local Planning Policy 4.6 – Advertising Signs

The proposal has been considered against the provisions set out within the City's Local Planning Policy 4.6 – Advertising Signs (LPP 4.6) as the proposal includes six pylon signs across the site. As detailed below, all of the proposed signs meet the requirements of LPP 4.6.

Pylon Sign

Provisions	Proposal
Be limited to a maximum of 1 per street frontage or one for every 40 metres of linear street frontage.	Six proposed, all with a minimum 40m separation
Not exceed 6 metres in height by 2.5 metres in width (single-tenancy) Not exceed 8 metres in height by 2.5 metres in width (multi-tenancy)	All signage at 6m (H) x 2.5m (W), with the exception of the showroom signage, which is proposed at 8m (H) x 2.5m (W) and will include signage for two tenancies (multi-tenancy)
Be located centrally within the lot and no closer than 3 metres to a side boundary.	Suitably located away from all side boundaries
Individual pylon signs will not be supported for individual tenancies where multiple units exist or are proposed to exist on a lot. In this instance, a pylon sign shall be designed to provide one infill panel for each unity on the lot and may be increased in height to 8 metres.	Signage to reference individual tenancies

As noted, all of the proposed signs meet the requirements of LPP 4.6, and are therefore supported.

MRWA Comments

In addition to a number of traffic conditions, MRWA has also outlined a number of recommended conditions in relation. These include:

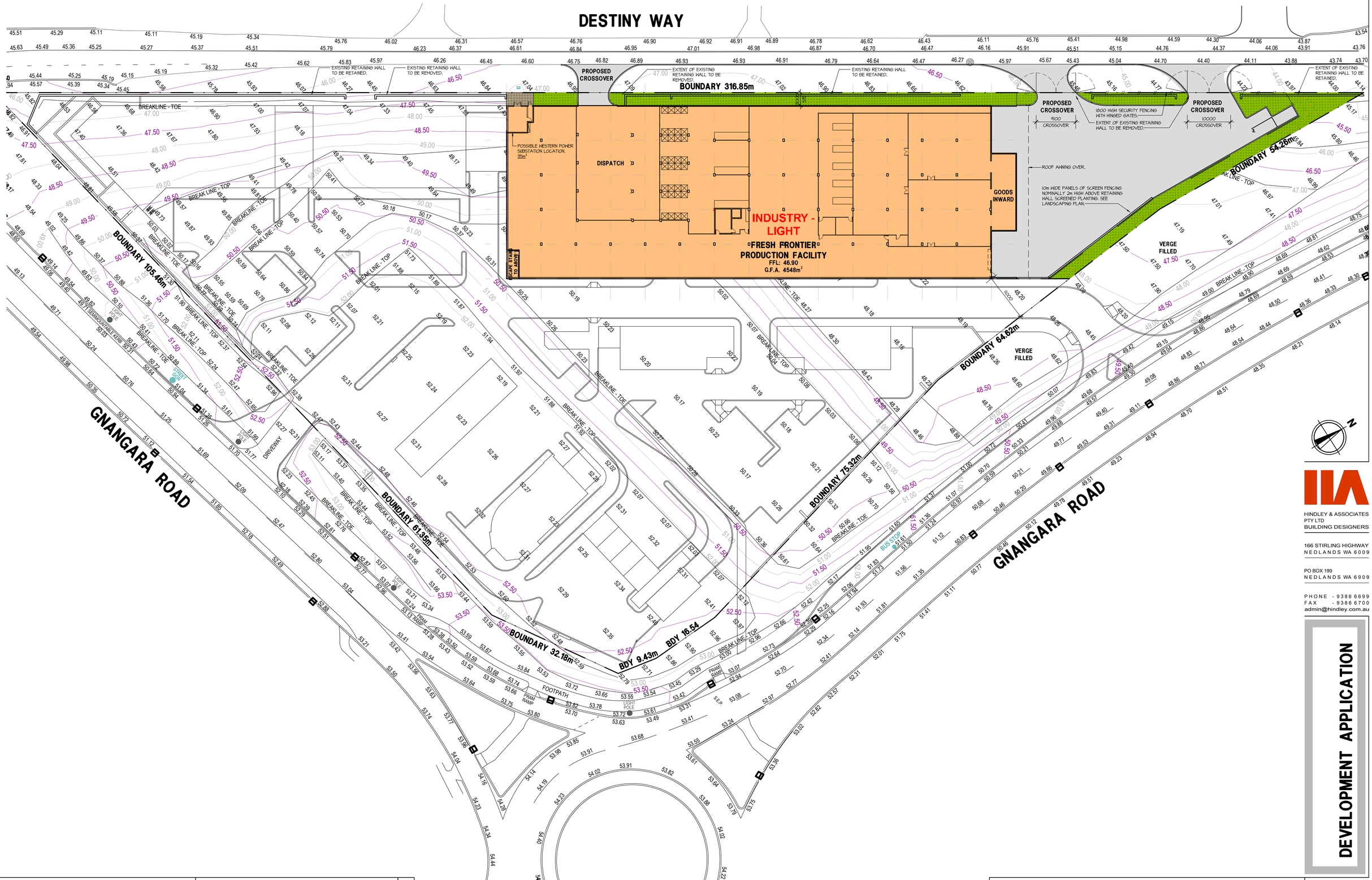
1. The type of sign, size, content and location must comply with all relevant by-lays and planning schemes made by Council
2. The sign and sign structure are to be placed on private property and shall not overhand or encroach upon the road reserve
3. If the sign is illuminated, it must be of a low-level not exceeding 300cd/m2 during the hours of the night, and not flash, pulsate or chase during all hours.
4. The sign shall not be in electronic/ digital format
5. The sign shall not contain florescent, reflective or retro-reflective colours or materials

The above recommended conditions are consistent with the City's signage expectations and standard conditions. As such, the City has not included the above conditions in its recommendation.

Conclusion

The development application for Showrooms, Service Station, Car Wash, Motor Vehicle Repair and Industry-Light at No. 359 Gnangara Road, Wangara has been assessed against the relevant legislation and the City's Planning framework. The proposed development is considered suitable in delivering land uses that are compatible with the exiting area, and will provide a number of ongoing local employment opportunities. Whilst the application raised a number of concerns with regard to the access arrangements, these have been considered in detail by the City and external agencies, and have ultimately been resolved to the satisfaction of the City, or are able to be addressed through conditions of approval. Therefore, for the reasons outlined in this report it is recommended that the proposal be approved, subject to the recommended conditions.

ATTACHMENT 1



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DEVELOPMENT APPLICATION

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ACN No. 088 989 904

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C	08.03.22	AMMENDED FOLLOWING DRP	MDB	SJH
D	10.05.22	CROSSOVER WIDTH ADJUSTED	MDB	SJH
-				
-				
-				
-				

A1 SHEET

PROPOSED SITE PLAN LOWER GROUND LEVEL

SCALE 1:400

PROPOSED KFC RESTAURANT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date	-	10.05.22
Design	-	SJH
Drawn	-	MDB
Checked	-	SJH
Scale	-	1:400
Job No.	-	556
Dwg	-	DA02
Rev	-	D

DESTINY WAY

BOUNDARY 316.85m

GNANGARA ROAD

BOUNDARY 105.46m

BOUNDARY 54.26m

BOUNDARY 64.82m

BOUNDARY 75.32m

BOUNDARY 61.35m

BDY 16.54

BDY 9.43m

BOUNDARY 32.18m

LOT 703
21374m²

SHOW ROOM 1
G.F.A. 830m²
FFL: 52.00

SHOW ROOM 2
G.F.A. 670m²
FFL: 52.00

SERVICE YARD

SERVICE YARD

SERVICE YARD

SERVICE YARD

OPEN PLANT ROOM
200m²
VERTICAL LOUVERED SCREEN FENCE.

INDUSTRY - LIGHT
FRESH FRONTIER OFFICES
FFL: 52.30
G.F.A. 490m²

MOTOR VEHICLE REPAIR

~~AUTO TYRE WORKSHOP 1~~
G.F.A. 245m²
FFL: 51.80
4 WORK BAYS

~~AUTO SERVICE WORKSHOP 2~~
G.F.A. 245m²
FFL: 51.80
4 WORK BAYS

SERVICE STATION

FORECOURT
8 BAYS

CONVENIENCE STORE
G.F.A. 183m²
FFL: 52.50

DRIVE THRU

BIN STORE

CAR WASH
G.F.A. 250m²

VACUUM BAYS

6m HIGH x 2.5 WIDE CARWASH PYLON SIGN.

PLANT
FFL: 52.40

AUTO WASH

BINS

MW1

MW2

MW3

MW4

POCKET PARK

PROPOSED CROSSOVER

PROPOSED CROSSOVER

PROPOSED CROSSOVER

EXISTING CROSSOVER TO BE WIDENED.

EXISTING CROSSOVER TO BE RETAINED.

LIGHT POLE TO BE RELOCATED.

EXISTING RETAINING WALL (T.O.W. 47.27)

EXISTING RETAINING WALL (T.O.W. 46.18)

NEW RETAINING WALL (T.O.W. 48.40)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 47.28)

EXISTING RETAINING WALL (T.O.W. 47.64)

NEW RETAINING WALL (T.O.W. 51.80)

NEW RETAINING WALL (T.O.W. 49.40)

NEW RETAINING WALL (T.O.W. 52.10)

NEW RETAINING WALL (T.O.W. 51.60)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 47.64)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 44.98)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 45.12)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 46.04)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 45.36)

8m HIGH x 2.5 WIDE MULTI TENANT PYLON SIGN.

6m HIGH x 2.5 WIDE "FRESH FRONTIER" PYLON SIGN.

6m HIGH x 2.5 WIDE WORKSHOP 2 PYLON SIGN.

6m HIGH x 2.5 WIDE CONVENIENCE STORE PYLON SIGN.

6m HIGH x 2.5 WIDE WORKSHOP PYLON SIGN.

10m WIDE PANELS OF SCREEN FENCING NOMINALLY 2m HIGH ABOVE RETAINING WALL SCREENED PLANTING, SEE LANDSCAPING PLAN.

10m WIDE PANELS OF SCREEN FENCING.

REFER TO DA02 FOR LOWER GROUND FLOOR & CARPARKING LAYOUT

PROPOSED LEFT TURN SLIP LANE.

PROPOSED LEFT TURN SLIP LANE.

RELOCATED BUS STOP TO PTA APPROVAL.

BUS STOP SETBACK

EXISTING BUS STOP

PROPOSED BUS STOP

EXTENT OF STEPPED RETAINING WALL, DETERMINED BY FINAL CIVIL DESIGN.

EXISTING FOOTPATH TO BE EXTENDED.

NEW FOOTPATH AS PART OF SLIP LANE WORKS.

ROOF CANOPY BELOW.

ROOF OVER.

ROOF STRUCTURE WITH SOLAR PANELS OVER CARPARKING BAYS.

MOTORCYCLE PARKING 2500 x 1200 BAYS WITH 3.0m DRIVEWAY.

SERVICE BAY.

SCAPE STAIR FROM BELOW

PARKING
5400 x 2600 BAYS

DDA BAY

4 BIKE RACKS

6.5m WIDE BITUMEN PAVED DRIVEWAY

7.4m WIDE DRIVEWAY

6.6m WIDE DRIVEWAY

6m WIDE BITUMEN PAVED DRIVEWAY

6.2m WIDE BITUMEN PAVED DRIVEWAY

7m WIDE BITUMEN PAVED DRIVEWAY

ROLL OVER KERB.

TANKER REFUELING POINT.

POSSIBLE TRANSFORMER LOCATION.

3m WIDE LANDSCAPING STRIP, REFER TO LANDSCAPING PLAN FOR DETAILS.

3m WIDE LANDSCAPING STRIP, REFER TO LANDSCAPING PLAN FOR DETAILS.

FEATURE ENTRY SCREEN.

PROPOSED LOCATION OF CROSSOVER TO DISPATCH AREA BELOW.

STEP IN T.O.W.

SEPARATION CABLE WORK

BREAK LINE - TOP

BREAK LINE - TOE

FOOTPATH

PRAM RAMP

LIGHT POLE

S.C.P.

BUS STOP

6000 SETBACK

10000 SETBACK

1000

1500

2000

3000

4000

6000

10000

SITE LOCATION PLAN
NOT TO SCALE

NOTE

- FFL ARE INDICATIVE AND TO BE CONFIRMED AT BUILDING LICENCE STAGE FOLLOWING FINAL CIVIL DESIGN.
- SOLAR PV CELLS ARE RECOMMENDED FOR USE BY BOTH LANDOWNERS & TENANTS

LEGEND

- BITUMEN SEALED PAVEMENT.
- LANDSCAPING AREA TO SUSPENDED SLAB AREA : 334m² REFER TO LANDSCAPING PLAN.
- SOFT LANDSCAPING AREA: 312m² REFER TO LANDSCAPING PLAN.
- BLACK CONCRETE.
- SELECTED PAVED FOOTPATH.

F.F.L. (00.00) PROPOSED NEW DESIGN LEVELS, LEVELS ARE TO BE USED AS A GUIDE ONLY. FINAL LAYOUT BY SUITABLY QUALIFIED CONSULTANTS AS PART OF BUILDING PERMIT APPLICATION.

CARPARKING SUMMARY

FRESH FRONTIER

MARKED BAYS -	94
DISABLED BAYS -	2
MOTORCYCLE BAYS -	7
LOWER GROUND PARKING - AS PER DA02 (C)	3
TOTAL -	106

SERVICE INDUSTRIAL

MARKED BAYS -	91
DISABLED BAYS -	5
REFUELING BAYS -	8
TOTAL -	104
TOTAL PARKING BAYS	210

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DEVELOPMENT APPLICATION

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A1 SHEET

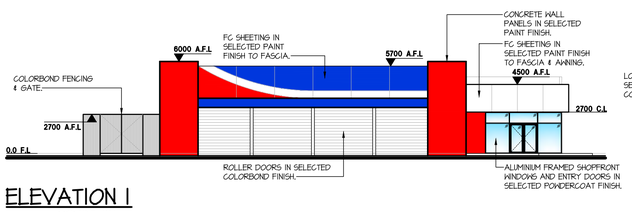
PROPOSED SITE PLAN (UPPER GROUND LEVEL)

SCALE 1:400

PROPOSED KFC RESTAURANT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date -	10.05.22
Design -	SJH
Drawn -	MDB
Checked -	SJH
Scale -	1:400
Job No. -	556
Dwg -	DA01
Rev -	D

WORKSHOP 1
SCALE 1:200



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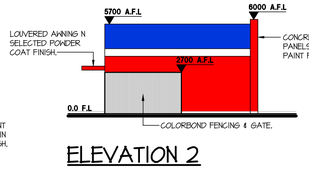

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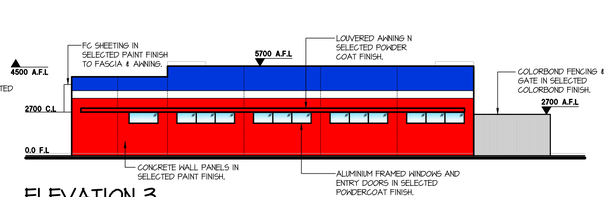

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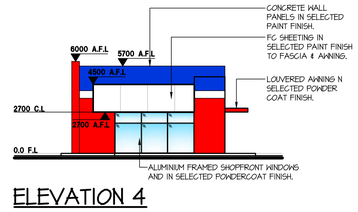

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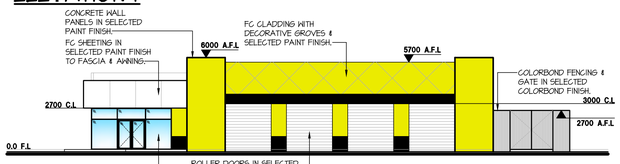

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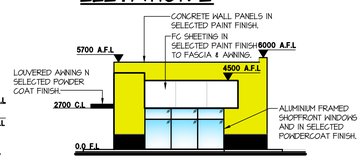

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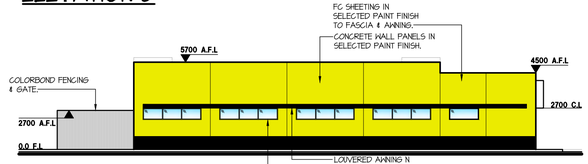

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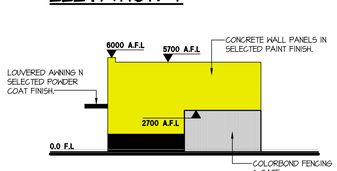
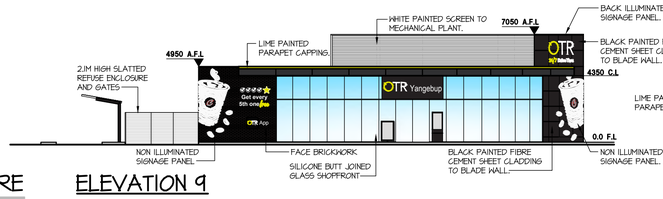


ELEVATION 8

CONVENIENCE STORE
SCALE 1:200



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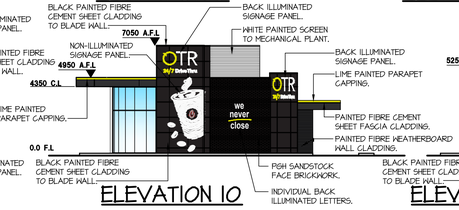

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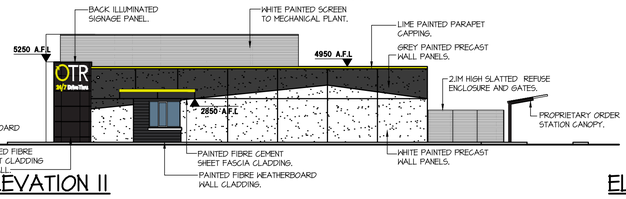

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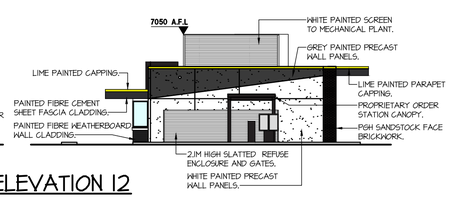

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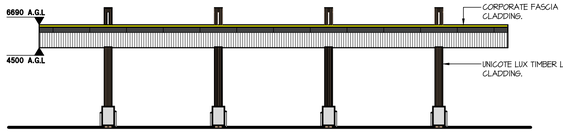

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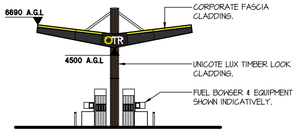

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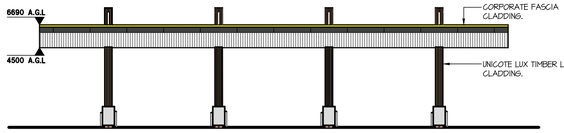

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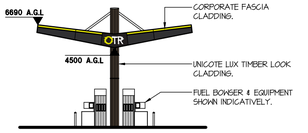
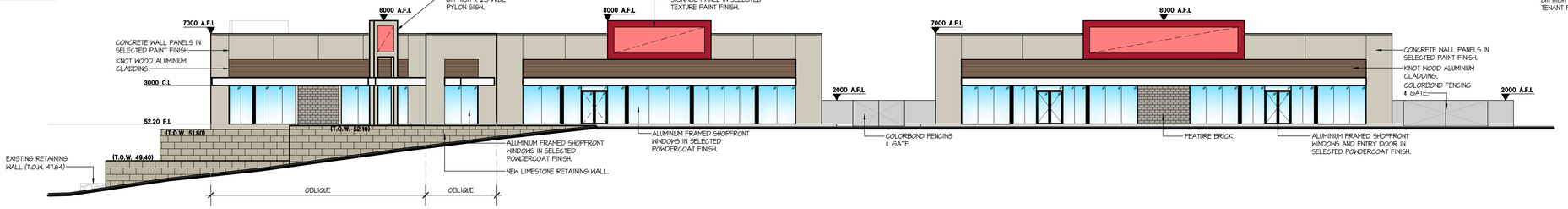
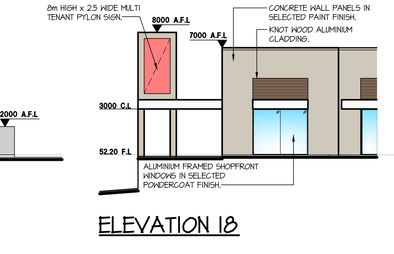


ELEVATION 16

FUEL CANOPY
SCALE 1:200

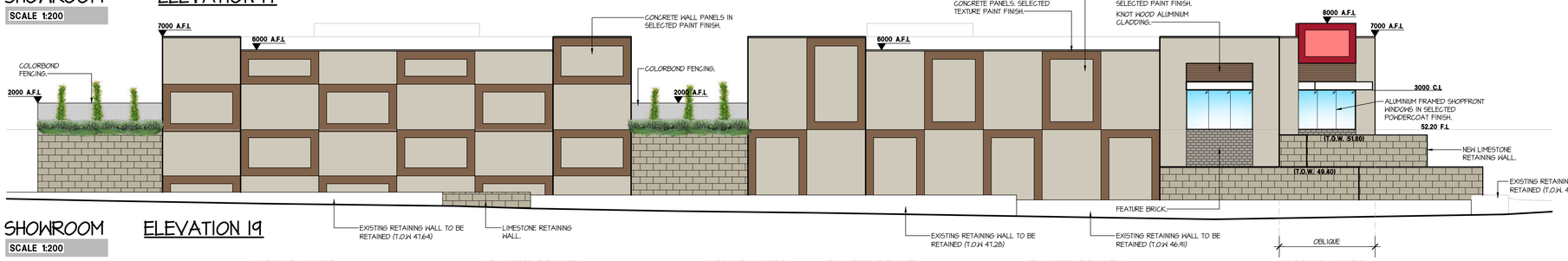


ELEVATION 17

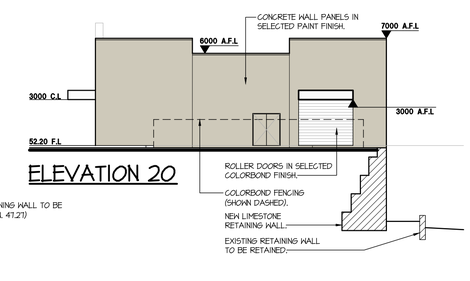


ELEVATION 18

SHOWROOM
SCALE 1:200

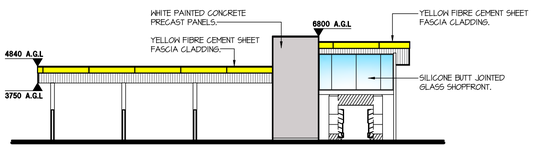


ELEVATION 19

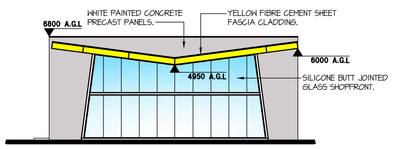


ELEVATION 20

CAR WASH
SCALE 1:200



ELEVATION 21



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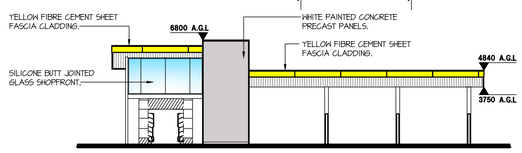

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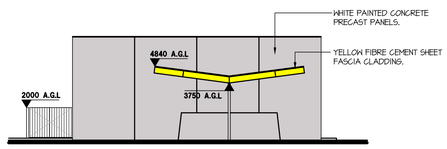
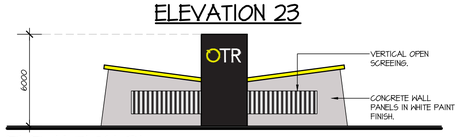


ELEVATION 24

PROPOSED ELEVATIONS
SCALE 1:200



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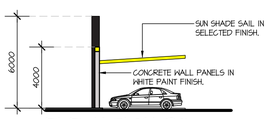

ELEVATION 32

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HINDLEY & ASSOCIATES P/L
AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	11.11.21	SUB CONSULTANT ISSUE	MDB	SJH
B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
C	08.03.22	AMMENDED FOLLOWING DRP	MDB	SJH

A1 SHEET

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

PHONE - 9386 6699
FAX - 9386 6700
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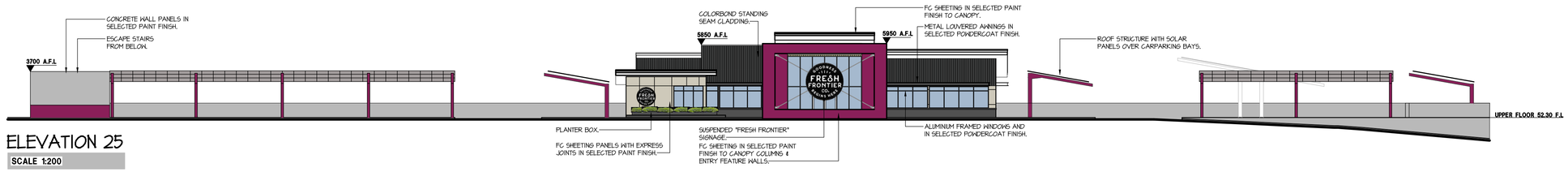
DEVELOPMENT APPLICATION

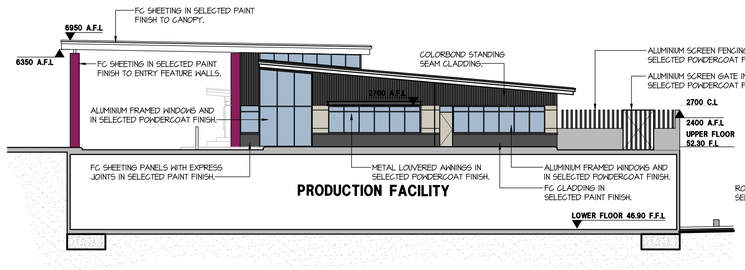
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date	-	08.03.22
Design	-	SJH
Drawn	-	MDB
Checked	-	SJH
Scale	-	1:200
Job No.		556
Dwg -		DA03
Rev -		C



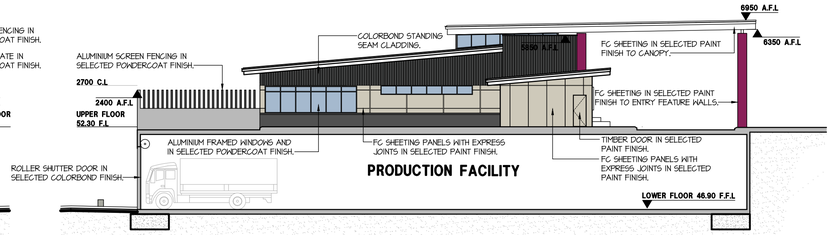
ELEVATION 25

SCALE 1:200



SECTION / ELEVATION 26

SCALE 1:200



SECTION / ELEVATION 28

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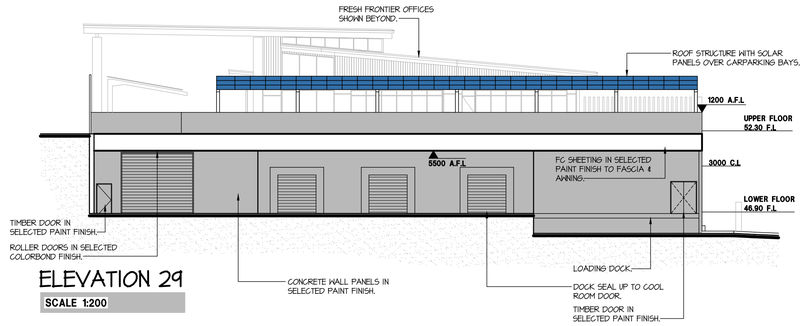
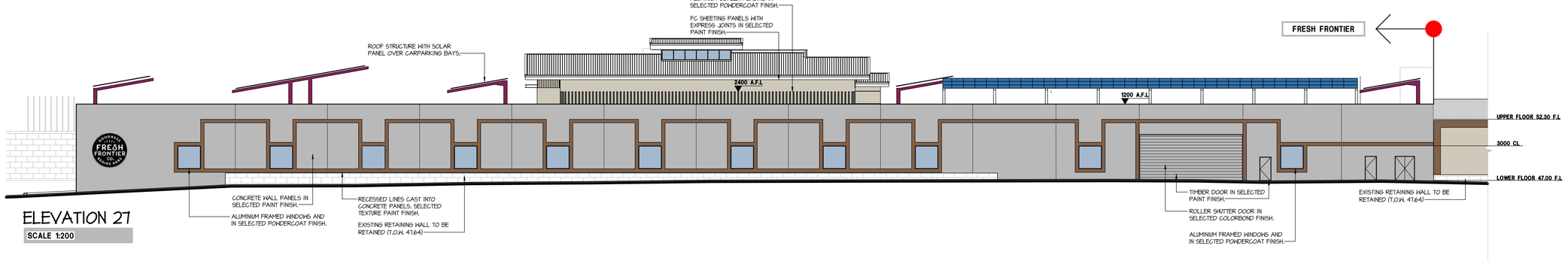


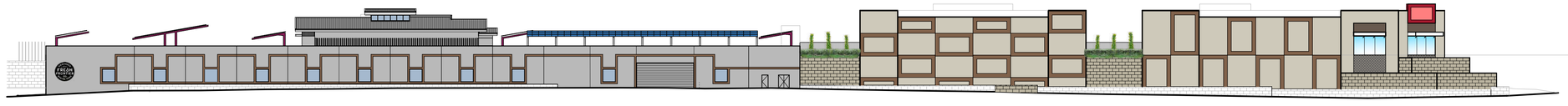
ELEVATION 29

SCALE 1:200



ELEVATION 27

SCALE 1:200



ELEVATION 30 (DESTINY WAY)

NOT TO SCALE

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

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DEVELOPMENT APPLICATION

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HINDLEY & ASSOCIATES P/L
AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	11.11.21	SUB CONSULTANT ISSUE	MDB	SJH
B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
C	08.03.22	AMMENDED FOLLOWING DRP	MDB	SJH
-				
-				
-				
-				
-				

A1 SHEET

PROPOSED ELEVATIONS

NOT TO SCALE

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date	08.03.22
Design	SJH
Drawn	MDB
Checked	SJH
Scale	1:200
Job No.	556
Dwg	DA04
Rev	C

ATTACHMENT 2

City of Wanneroo

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Date: 7/07/2022

Printed by Bertone, Nick

Scale = 1:4000

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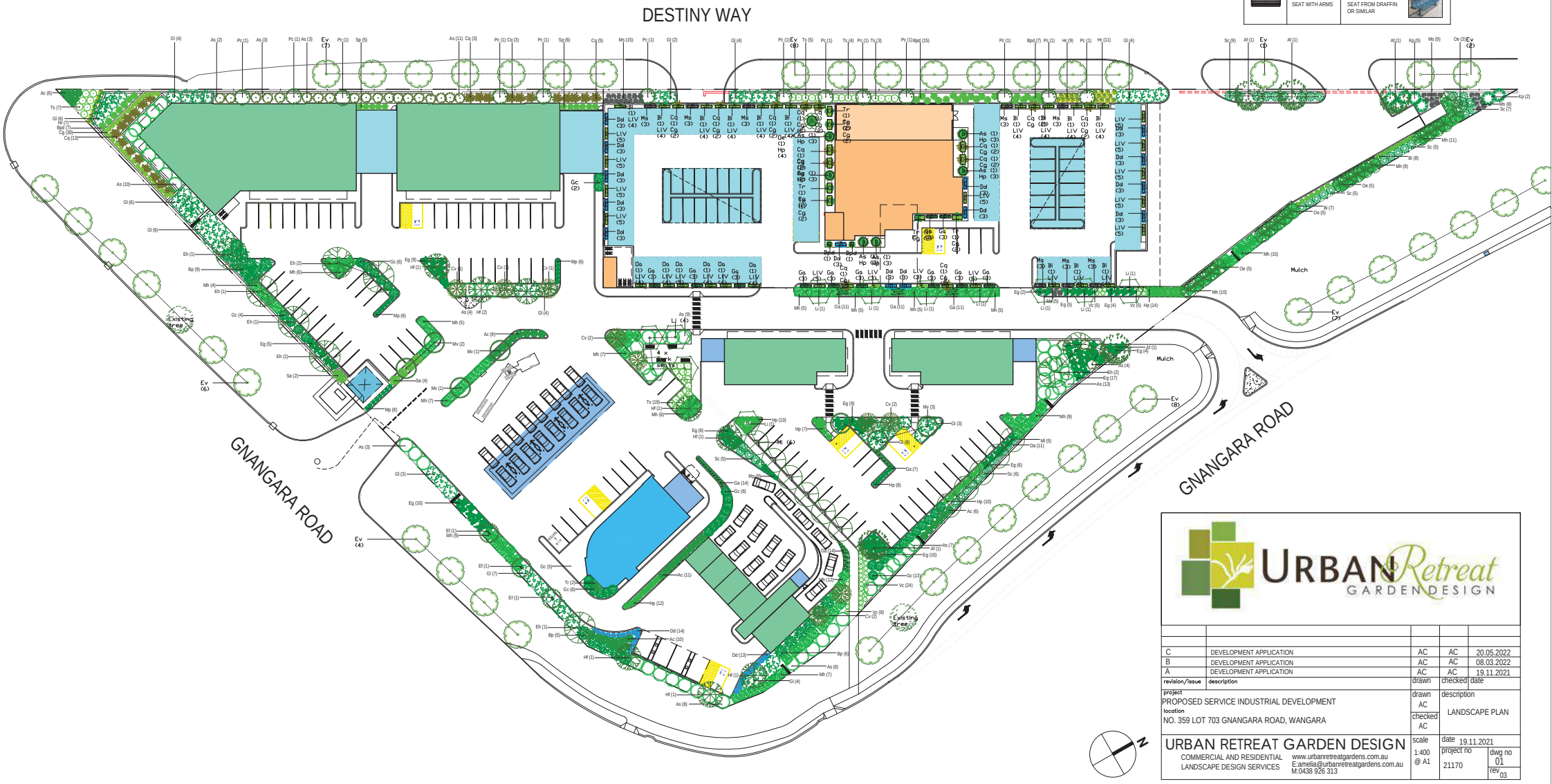
ATTACHMENT 3

LANDSCAPE PLAN DRAWING INDEX

DRAWING NO.	TITLE
21170_01	LANDSCAPE PLAN
21170_02	PLANT SCHEDULE, PLANTING SPECIFICATIONS AND TYPICAL DRAWINGS

SEAT AND PLANTER DETAILS		
SYMBOL	ELEMENT	PRODUCT DETAILS
A	2200Ø x 750H COMMERCIAL GRADE GRC PLANTER U BOWL	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
B	1800Ø x 700H COMMERCIAL GRADE GRC U BOWL	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
C	2200 x 1000 x 800H GRC RECTANGLE PLANTER	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
D	2400 x 600 x 600H GRC RECTANGLE PLANTER	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
E	1900 x 600 x 600H GRC RECTANGLE PLANTER	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
F	800 x 800 x 800H GRC RECTANGLE PLANTER	CITY SCAPE PLANTER IN CONCRETE FINISH FROM SATU BUMI OR SIMILAR
	HEAVY DUTY SLATTED PARK SEAT WITH ARMS	STAINLESS STEEL, IN GROUND MOUNTED SEAT FROM DRAFFIN OR SIMILAR



URBAN Retreat GARDEN DESIGN

revision/issue	description	drawn	checked	date
C	DEVELOPMENT APPLICATION	AC	AC	20.05.2022
B	DEVELOPMENT APPLICATION	AC	AC	08.03.2022
A	DEVELOPMENT APPLICATION	AC	AC	19.11.2021

project
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
location
NO. 359 LOT 703 GNANGARA ROAD, WANGARA

drawn AC
checked AC
description LANDSCAPE PLAN

URBAN RETREAT GARDEN DESIGN
COMMERCIAL AND RESIDENTIAL LANDSCAPE DESIGN SERVICES
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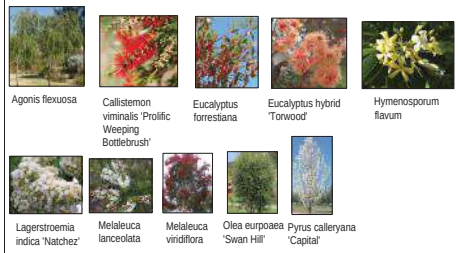
E:amelia@urbanretreatgardens.com.au
M:0438 926 313

scale 1:400 @ A1
date 19.11.2021
project no 21170
dwg no 01
rev 03

PLANT SCHEDULE

SYMBOL	CODE	BOTANIC NAME	MATURE HEIGHT X WIDTH	MINIMUM INSTALLATION SIZE	NUMBER
TREES					
	Af	Agonis flexuosa	8m x 6m	75 Litre	5
	Cv	Callistemon viminalis 'Prolific Weeping Bottlebrush'	6m x 4m	75 Litre	9
	Ef	Eucalyptus forrestiana 'Fuchsia Gum'	6m x 4m	75 Litre	3
	Et	Eucalyptus hybrid 'Torwood'	5m x 6m	75 Litre	9
	Hf	Hymenosporum flavum	8m x 5m	75 Litre	8
	Li	Lagerstroemia indica 'Natchez'	7m x 5m	75 Litre	12
	Ml	Melaleuca lanceolata	7m x 5m	30 Litre	11
	Mv	Melaleuca viridiflora	8m x 4m	75 Litre	7
	Oe	Olea eurpoaea 'Swan Hill' (non fruiting)	6m x 3m	30 Litre	18
	Pc	Pyrus calleryana 'Capital'	9m x 3m	75 Litre	18
SHRUBS					
	As	Adenanthos sericeus 'Silver Streak'	3m x 2.5m	14cm	26
	Bi	Banksia integrifolia 'Sentinel'	2.5m x 1m	30cm	28
	Bp	Banksia petiolaris	60cm x 3m	13cm	20
	Bpd	Banksia prionotes dwarf	1.5m x 1.5m	13cm	29
	Cq	Calothamnus quadrifidus	2.5m x 2.5m	13cm	37
	Dd	Damperia diversifolia	50cm x 1m	13cm	69
	Hr	Hypocalymma robustum	1m x 1m	13cm	27
	Ms	Maireana sedi 'Silver Ghost'	1m x 1m	13cm	61
	Sc	Scaevola crassifolia prostrate	50cm x 2m	13cm	37
	Sp	Syzygium paniculata 'Backyard Bliss'	4m x 1.2m	5 Litre	11
	Tr	Templetonia retusa	2m x 2m	14cm	8
	Ts	Thryptomene saxicola 'Supernova'	80cm x 1.5m	13cm	39
	Vc	Verticordia chrysanthella	50cm x 1m	13cm	42
GRASSES					
	LlV	Lomandra longifolia 'Verday'	80cm x 70cm	14cm	140
GROUND COVER					
	AsS	Acacia saligna 'Springtime Casacde'	30cm x 3m	13cm	60
	Ac	Adenanthos cuneatus 'Coral Carpet'	30cm x 1.5m	13cm	42
	Cg	Casuarina glauca 'Cousin It'	10cm x 1m	13cm	68
	Eg	Eremophila glabra 'Kalbarri Carpet'	20cm x 2m	13cm	87
	Ga	Grevillea alpina x rosmarinifolia Firecracker'	40cm x 80cm	13cm	101
	Gc	Grevillea crithmifolia 'Green Carpet'	20cm x 2m	13cm	39
	Gl	Grevillea laurifolia x willsii 'Royal Mantle'	50cm x 3m	13cm	61
	Hp	Hemiandra pungens alba	30cm x 1.5m	13cm	73
	Kp	Kennedia prostrata	10cm x 3m	13cm	7
	Mh	Melaleuca huegelii prostrate	20cm x 2m	13cm	137
	Mp	Myoporium parvifolium	10cm x 1m	13cm	35
	Oa	Olearia axillaris 'Beach Ball'	40m x 80m	13cm	19
	Sa	Scaevola albida 'Super Cluster'	10cm x 2m	13cm	6
TOTAL PLANTS					1409

TREE VARIETIES



Agonis flexuosa | Callistemon viminalis 'Prolific Weeping Bottlebrush' | Eucalyptus forrestiana | Eucalyptus hybrid 'Torwood' | Hymenosporum flavum

Lagerstroemia indica 'Natchez' | Melaleuca lanceolata | Melaleuca viridiflora | Olea eurpoaea 'Swan Hill' | Pyrus calleryana 'Capital'

SHRUB VARIETIES

Adenanthos sericeus 'Silver Streak' | Banksia integrifolia 'Sentinel' | Banksia petiolaris | Banksia prionotes dwarf | Calothamnus quadrifidus

Damperia diversifolia | Hypocalymma robustum | Maireana sedi 'Silver Ghost' | Scaevola crassifolia prostrata | Syzygium paniculata 'Backyard Bliss' | Templetonia retusa

Thryptomene saxicola 'Supernova' | Verticordia chrysanthella

GRASS VARIETIES

Lomandra longifolia 'Verday'

GROUND COVER VARIETIES

Acacia saligna 'Springtime Cascde' | Adenanthos cuneatus 'Coral Carpet' | Casuarina glauca 'Cousin It' | Eremophila glabra 'Kalbarri Carpet' | Grevillea alpina x rosmarinifolia 'Firecracker'

Grevillea crithmifolia 'Green Carpet' | Grevillea laurifolia x willsii 'Royal Mantle' | Hemiandra pungens alba | Kennedia prostrata

Melaleuca huegelii prostrate | Myoporium parvifolium | Olearia axillaris 'Beach Ball' | Scaevola abida 'Super Cluster'

HOW TO READ PLANTING NOTATIONS AND SYMBOLS ON THE LANDSCAPE PLAN

SYMBOLS

PLANT SYMBOLS ON THIS DRAWING DENOTE SPECIES AND THEIR PLACEMENT. THE PLANT SYMBOL KEY IS PROVIDED ON THE PLANT SCHEDULE. PLAN SECTIONS SHOULD BE PRINTED ON A1 AT HIGHEST QUALITY. IT IS IMPERATIVE FOR CORRECT PLANT PLACEMENT THAT SYMBOLS ARE LEGIBLE BY THE LANDSCAPE INSTALLER. IF SMALLER SECTIONS ARE REQUIRED THAT THOSE PROVIDED, CONTACT THE DESIGNER.

SYMBOLS INDICATE THE MASS OF THE SPECIES IN THE AREA ONLY. ACTUAL PLANT NUMBERS ARE PROVIDED IN NOTATIONS. THESE PLANTS SHOULD BE EVENLY SPACED WITHIN THE AREA INDICATED. ROWS SHOULD BE STAGGERED.

PLANTING SPECIFICATIONS

ALL PLANTING AREAS ARE TO BE PREPARED AND PLANTED IN ACCORDANCE WITH INDUSTRY BEST PRACTICE AND THE INSTRUCTIONS BELOW.

A. PREPARATION OF SOIL IN GARDEN BED AREAS:
I. REMOVE ALL TRACES OF BUILDERS' MATERIAL FROM PLANTING AREAS INCLUDING RUBBLE, SAND, MORTAR AND ALL OTHER EXTRANEOUS MATERIAL.
II. REMOVE ALL WEEDS IN GARDEN BED AREAS BY SPRAYING WEEDS WITH A STANDARD INDUSTRY HERBICIDE FOLLOWING MANUFACTURER'S SPECIFICATIONS AND LEAVE FOR RECOMMENDED TIME.
III. REMOVE DEAD PLANT MATTER AFTER TIME SPECIFIED ON HERBICIDE PRODUCT.
IV. UNDERTAKE SOIL IMPROVEMENT SUITABLE FOR NATIVE PLANTS.

B. IN-GROUND PLANTING
I. PLANT TREES IN ACCORDANCE WITH STANDARD DRAWING 'TYPICAL TREE PLANTING' IN THIS PLAN SET. INSTALL ROOT BARRIERS TO ALL TREES IN CARPARK AREAS. CLEAR LOWER TREE BRANCHES SO 75% OF TRUNK IS CLEAR.
II. PLANT SHRUBS, GRASSES AND GROUND COVERS IN ACCORDANCE WITH 'SHRUB PLANTING DETAIL' IN THIS PLAN SET AND WATER IN THOROUGHLY.

C. TUB AND TROUGH PLANTING
I. SELF WATERING SYSTEMS TO BE INSTALLED IN ALL PLANTERS.
II. FILL PLANTERS WITH MIX OF HIGH QUALITY POTTING MIX AND SAND.
III. TREE TO BE STAKED AND GUYED.
IV. WATER IN WELL.

D. MULCH
I. AFTER PLANTING, APPLY CHUNKY (25-50MM) PINE BARK WOOD CHIPS TO A MINIMUM DEPTH OF 75MM (MAXIMUM 100MM) TO ALL PLANTING BEDS AND PLANTERS, KEEPING MULCH CLEAR OF PLANT STEMS.
II. TIDY AND GRADE MULCH AFTER APPLICATION.

IRRIGATION SPECIFICATIONS

1. ALL GARDEN BEDS TO BE IRRIGATED. WATER SUPPLY IS SCHEME WATER.
2. IRRIGATION LAYOUT BY OTHERS.

URBAN Retreat GARDEN DESIGN

revision/issue	description	drawn	checked	date
B	DEVELOPMENT APPLICATION	AC	AC	03.03.2022
A	DEVELOPMENT APPLICATION	AC	AC	19.11.2021

project: PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
location: NO. 359 LOT 703 GNANGARA ROAD, WANGARA

drawn: AC
checked: AC
description: PLANT SCHEDULE AND PLANTING SPECIFICATIONS
scale:
date:
project no: 21170
dwg no: 02
rev: 02

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COMMERCIAL AND RESIDENTIAL LANDSCAPE DESIGN SERVICES
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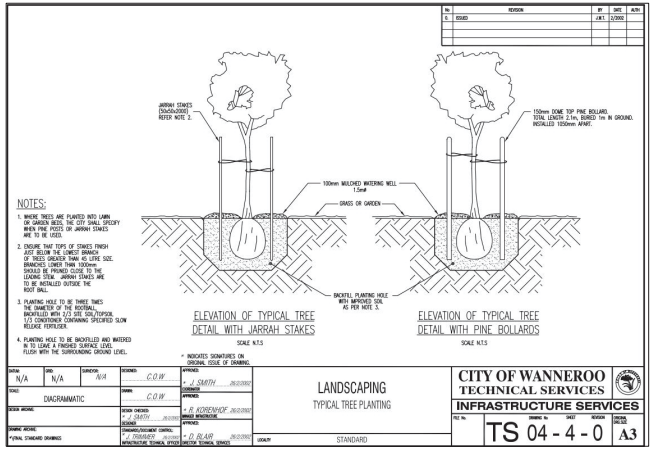
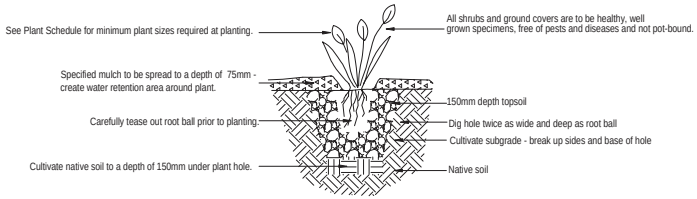
M:0438 926 313



1 TREE PLANTING DETAIL
21170_3 Typical Section

Not to scale



2 SHRUB PLANTING DETAIL
21170_3 Typical Section

Not to scale

URBAN Retreat GARDEN DESIGN

revision/issue	description	drawn	checked	date
B	DEVELOPMENT APPLICATION	AC	AC	03.03.2022
A	DEVELOPMENT APPLICATION	AC	AC	19.11.2021

project
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
location
NO. 359 LOT 703 GNANGARA ROAD, WANGARA

drawn AC
checked AC
description TYPICAL DRAWINGS
scale
date 19.11.2021
project no 21170
dwg no 03
rev 02

URBAN RETREAT GARDEN DESIGN
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ATTACHMENT 4

EAST WANNEROO CELL 8 - AGREED STRUCTURE PLAN No.10

Includes Amendments 1-3

OCEAN REEF ROAD

HARTMAN DRIVE

MOTIVATION DRIVE

PRESTIGE PARADE

DESTINY WAY

INSPIRATION DRIVE

GNANGARA ROAD

Legend

- 25m ROAD RESERVE
- CELL BOUNDARY
- SUMP

N

GDA

0 100 200 400 600 800 Metres

City of Wanneroo

Produced by planning & Sustainability

ATTACHMENT 5

CITY OF WANNEROO
DA2021/2030 JDAP - Industrial - Commercial Development
SCHEDULE OF SUBMISSIONS FOLLOWING ADVERTISING

(Advertising Closed 28 April 2022)

No.	Summary of Submission	Number of Submitters	Comment
1.	**Overall Position on the proposal**		
1.1	Objects to the proposed development	2	Noted.
1.2	Supports to the proposed development	2	Noted.
1.3	Made comment on the proposal, but did not state overall position.	3	Noted.
2.	**Comments objecting to the proposal**		
2.1	Concerns with increase traffic and noise on an already busy road. This would be further exacerbated due to the 24/7 operation	3	As part of the application, the applicant has provided a Traffic Impact Assessment and Environmental Noise Review to address Traffic and Noise respectively. Regarding traffic, The TIA provided ultimately demonstrates that the increased traffic will operate well within the design capacity of current road network. The City's Traffic Engineers have also reviewed the TIA and agree with the findings and the predicted traffic volumes. This is discussed in further detail within the report. As such, the increased traffic is considered to be acceptable. Regarding noise, the City Health's Services have reviewed the Environmental Noise Review and confirmed that, noise generated from the site could be appropriately managed and would not have a detrimental impact on surrounding landowners. A condition is included to ensure noise generated from the development complies with the *Environmental Protection (Noise) Regulations 1997* and

No.	Summary of Submission	Number of Submitters	Comment
			the Environmental Noise Review.
2.2	Concerns with the smell of hydrocarbons during fuel deliveries and potential health risks	2	As part of the operational requirements for the Service Station, the proponent will be required to obtain a Dangerous Goods Site Licence from the Department of Mines, Industry Regulation and Safety (DMIRS) in order to store and sell fuel from the subject site. The City considers that the concerns regarding risk and odour impacts associated with the proximity of the Service Station to residential properties will be sufficiently managed through the Dangerous Goods Site Licence licencing process.
2.3	Too many Service Stations in the surrounding area	2	There is currently no planning framework which restricts the number of Service Stations in any one locality.
2.4	Increased light spill	1	As part of the operational requirements for the Service Station and Carwash, the proponent will be required to control lighting in accordance with the *Australian Standards for the Control of Obtrusive Effects of Outdoor Lighting (AS4282),* which sets out guidelines for control of the obtrusive effects of outdoor lighting, and gives recommended limits for relevant lighting levels to contain these effects within tolerable levels In order to ensure these standards are adhered to, it is recommended that a condition recommended for lighting to be installed in accordance with AS4282 is imposed.
2.5	An independent traffic report needs to be completed by the City to ensure accurate and unbiased information is provided. Traffic reports provided by the developer is not going to be unbiased. It is likely any issues have been omitted or the impact watered down to meet the city's needs.	1	The City's Traffic Services have completed a review of the TIA provided, and agree with the findings. A further assessment was therefore not deemed to be necessary.
2.6	Additional research should also be	1	See Response 2.2

No.	Summary of Submission	Number of Submitters	Comment
	undertaken in relation to petrol stations and any impacts on child development, health and Wellbeing, as well as the impact to adults, unborn babies and children/adolescents to identify possible health impacts and long term effects.		
3.	**Comments in support of the proposal**		
3.1	Supportive of all development	1	Noted.
3.2	Great addition and use of vacant land	1	Noted.
3.3	Support where it does not cause any air or noise pollution	1	See Response 2.2.
3.4	Given Wangara is surrounded by family oriented suburbs, it's worth investing in ventures that would attract locals and beyond (i.e Eat Street in Brisbane)	1	Noted.
	Consideration should be given to road access locations to reduce pressure points on traffic	1	See Response 2.1.

Agency Referrals		
Summary of Submission		**Administration Comment**
Department of Planning, Lands and Heritage		
1.	The north-south portion of Gnangara Road is classified as an 'Other Regional Road under Main Roads WA control' within WAPC Plan No SP 694/5. As such it is recommended that comments be sought from Main Roads regarding the proposed left in/left out crossover (referred to as C2) at the eastern boundary	Noted. The application was referred to Main Roads WA.
2.	ITE Trip Generation Manual (11th Edition) indicates 92 daily trips for a 5,020m2 processing facility warehouse (165 provided), 1,376 trips for a convenience store with 8 fuelling positions (1,232 provided), 100 trips for a 1,500m2 showroom (371 provided), 125 trips for 490m2 auto workshop(s) (81 provided) and 540 trips for a car wash with 5 stalls (180 provided). This equates to a total of 2,233 daily trips without cross trade discount applied. 2,029 daily trips has been estimated in the supporting Transport Impact Assessment (ITE broadly in accordance with methodology provided by Transcore)	Noted.
3.	It is unclear if a left-turning slip lane is required based on proposed traffic volumes at the C1 access point. It is recommended that the proposal be assessed against Main Roads WA intersection warrants if required;	Noted. An assessment is detailed below.
4.	SIDRA intersection analysis shows satisfactory performance for crossovers servicing the site. It is recommended that the submitted swept path plans be verified/checked to the satisfaction of the City's Technical Services Directorate	This was reviewed by the City's Traffic Services and deemed acceptable.
5.	The Department has no objection to access arrangements as depicted in the submitted plan 'Proposed Service Industrial Development' dated 8 March 2022 subject to the City's	Noted. Recommendations have been included in the report to include appropriate turning lanes

	endorsement. This includes a full movement access point (east-west portion of Gnangara Road) and a left in / left out access point (north-south portion of Gnangara Road) with appropriate turning lanes to be provided.	
Main Roads WA		
6.	The proposed full movment (C1) on the southern side of the site may be problematic. Vehicles turning right into the development from Gnangara Rd must give way to east bound traffic travelling at 70 km/h. At times of heavy traffic demand this may pose an unsafe situation. There is no proposed channelisation for this movement, increasing the chance of rear end crashes.	In considering the congestion and traffic hazard impacts raised, the City's Traffic Services recommendation is for an auxiliary left turn lane and protected right turn pocket to be provided at this location. These requirements are in accordance with MRWA turn lane warrants, and would provide safer access to the property by reducing congestion by channelising the movement for vehicles turning into the site, while allowing the flow of traffic traveling east and westbound to continue. In light of the above, the proposed access point is supported subject to a condition requiring that an auxiliary left turn lane and protected right turn pocket will need to be provided at this location.
7.	The full movement crossover (C1) may cause excessive queueing. Vehicles waiting for a gap when turning right into the development from Gnangara Rd may block vehicles travelling west bound (as this is a single lane) causing a queue back towards the Mirrabooka Avenue roundabout. The modelling is only showing 4 vehicles turning right into this crossover. This seems very low. The City should consider what impact this crossover will have on the Mirrabooka Avenue Roundabout	
8.	The TIA mentions a 2% annual traffic growth rate on Gnangara Road but does not include a methodology as to how this value was achieved	This was reviewed and considered acceptable by the City.
9.	The SIDRA model does not include a base model for the location prior to the inclusion of this development on the subject site	This was reviewed and considered acceptable by the City.
10.	Access should be from Destiny Way. All vehicular access should be removed from eastern boundary at Gnangara Road given the long term plans for this area.	The City also questioned MRWA on the timing of road upgrades and queried what land would be required for the upgrade, however MRWA was unable to provide a response as no plans have been prepared at this time. Whilst the MRWA comments have been considered, the City's maintains the view that the access point is acceptable, primarily due to the fact that the current traffic modelling does not show any strain
11.	There is limited land for upgrades to the Ocean Reef / Gnangara / Gnangara / Sydney Road intersection	
12.	Sydney Road to the north will access the East Wanneroo District Structure Plan area and carry increasing traffic volumes. This may put more pressure on this intersection	

		on the transport network, and given the access point is proposed over 200 metres away from the intersection, which would create a sufficient buffer between the development and any future works. The City does not agree that access should be via Destiny Way as it is not feasible due to the topography of the site, which slopes over 10 metres from the high point at the roundabout, to the low point in the northern corner of the site. This would result in a lack of functionality for the site and if it were proposed, may cause additional traffic issues at the T-junction of Destiny Way and Gnangara Road (south). Furthermore, any additional traffic concerns would also be addressed through eventual City lead road upgrades within the area, which is discussed further in this report, which will support the future increased traffic generation in the area. Therefore, given the uncertainty around the upgrades, the City considers there to be no nexus to request the removal of the access, and supports the arrangement. This position was also supported within the additional comments provided from the DPLH

ATTACHMENT 6

Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

City of Wanneroo
Locked Bag 1
Wanneroo WA 6946

Your ref: DA2021/2030
Our ref: DP/10/00710
Enquiries: Simon Luscombe (Ph: 6551 9307)

31 March 2022

Attention: Nick Bertone

Dear Nick,

Re: Lot 703 (359) Gnangara Road, Wangara

Further to your correspondence dated 28 March 2022, in accordance with the Western Australian Planning Commission's (WAPC) Instrument of Delegation dated 18 January 2022, the following comments are provided. The application seeks approval for a service industrial development. The site is subject to a subdivision determination, approved on 29 March 2017 (WAPC Reference: 154020). Condition No. 8 precludes vehicular access to a portion of Gnangara Road.

Land Requirements

The site abuts Gnangara Road, which is classified as an Other Regional Road (ORR) in the Metropolitan Region Scheme (MRS), also reserved as Category 2 per Plan Number SP 694/4. The site is affected by a small portion of ORR reservation at the south-western corner.

Transport Impact Assessment

The above report by Transcore (November 2021) states that the development will generate 1,864 trips per weekday and 200 trips during peak hour periods with a cross-trade discount of 25% applied.

Recommendation

The Department of Planning, Lands and Heritage has no objection to the proposal on ORR planning grounds and provides the following comments:

- The north-south portion of Gnangara Road is classified as an 'Other Regional Road under Main Roads WA control' within WAPC Plan No SP 694/5. As such it is recommended that comments be sought from Main Roads regarding the proposed left in/left out crossover (referred to as C2) at the eastern boundary;

- ITE Trip Generation Manual (11th Edition) indicates 92 daily trips for a 5,020m^2 processing facility warehouse (165 provided), 1,376 trips for a convenience store with 8 fuelling positions (1,232 provided), 100 trips for a 1,500m^2 showroom (371 provided), 125 trips for 490m^2 auto workshop(s) (81 provided) and 540 trips for a car wash with 5 stalls (180 provided). This equates to a total of 2,233 daily trips without cross trade discount applied. 2,029 daily trips has been estimated in the supporting Transport Impact Assessment (ITE broadly in accordance with methodology provided by Transcore);

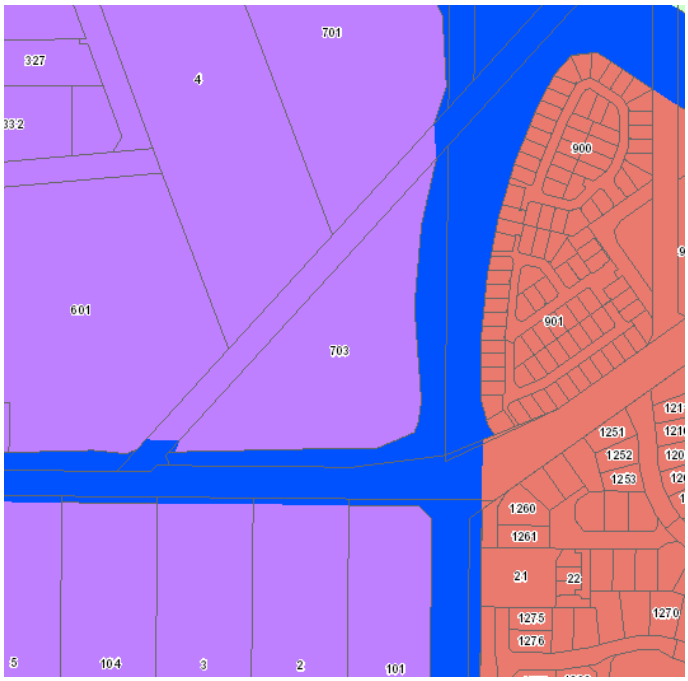
- It is unclear if a left-turning slip lane is required based on proposed traffic volumes at the C1 access point. It is recommended that the proposal be assessed against Main Roads WA intersection warrants if required;

- SIDRA intersection analysis shows satisfactory performance for crossovers servicing the site. It is recommended that the submitted swept path plans be verified/checked to the satisfaction of the City's Technical Services Directorate.

Thank you for your correspondence. Should you have any queries regarding this matter, please contact me on 6551 9307 or via email: *simon.luscombe@dplh.wa.gov.au*.

Yours sincerely

Simon Luscombe
Principal Planning Officer
Strategy and Engagement



Bertone, Nick

From: Simon Luscombe <Simon.Luscombe@dplh.wa.gov.au>
Sent: Tuesday, 5 July 2022 2:01 PM
To: Bertone, Nick
Cc: Alvira Navarro
Subject: Lot 703 (359) Gnangara Road
Attachments: 20220330 IPP Comments Lot 703 (359) Gnangara Road, Wangara.pdf

[EXTERNAL EMAIL] This email was received from outside the City of Wanneroo. Please do not click on links or open attachments unless you recognise the sender and know the content is safe.

Hi Nick,

Many thanks for organising the meeting today with the City's planning and engineering staff. It was a wide ranging discussion outlining a number of elements including:

- Past subdivision approvals over the site, including the access restriction reflected in Condition No. 8 of WAPC Reference 154020, approved on 29 March 2017;
- Mapping anomalies within DPLH and Main Roads WA road network plans, creating uncertainty regarding which State agency has input regarding access;
- Past comments from DPLH (31 March 2022) and Main Roads WA (14 June) regarding traffic modelling, turning lanes and access;
- Previous approaches to access within the Department's records, e.g. access distance from roundabout (Objective);
- February 2017 report from Move Consultants regarding relocating the east-west access closer to the roundabout along Gnangara Road;
- The City's position regarding access to the site (including email from Timothy Dawson, 2017);
- The need for good circulation within the site, post-development for commercial viability;
- Potential access arrangements following the duplication of Gnangara Road.

As a result of today's discussions, the Department has no objection to access arrangements as depicted in the submitted plan 'Proposed Service Industrial Development' dated 8 March 2022 subject to the City's endorsement. This includes a full movement access point (east-west portion of Gnangara Road) and a left in / left out access point (north-south portion of Gnangara Road) with appropriate turning lanes to be provided.

Regards

Simon Luscombe | Principal Planning Officer | Strategy and Engagement
140 William Street, Perth WA 6000
6551 9307 |
www.dplh.wa.gov.au

We're on a Roll, WA

Keep doing 3 simple things
Wear a mask when necessary | Update your vaccinations | Wash hands regularly.

The Department acknowledges the Aboriginal people of Western Australia as the traditional custodians of this land and we pay our respects to their Elders, past and present.

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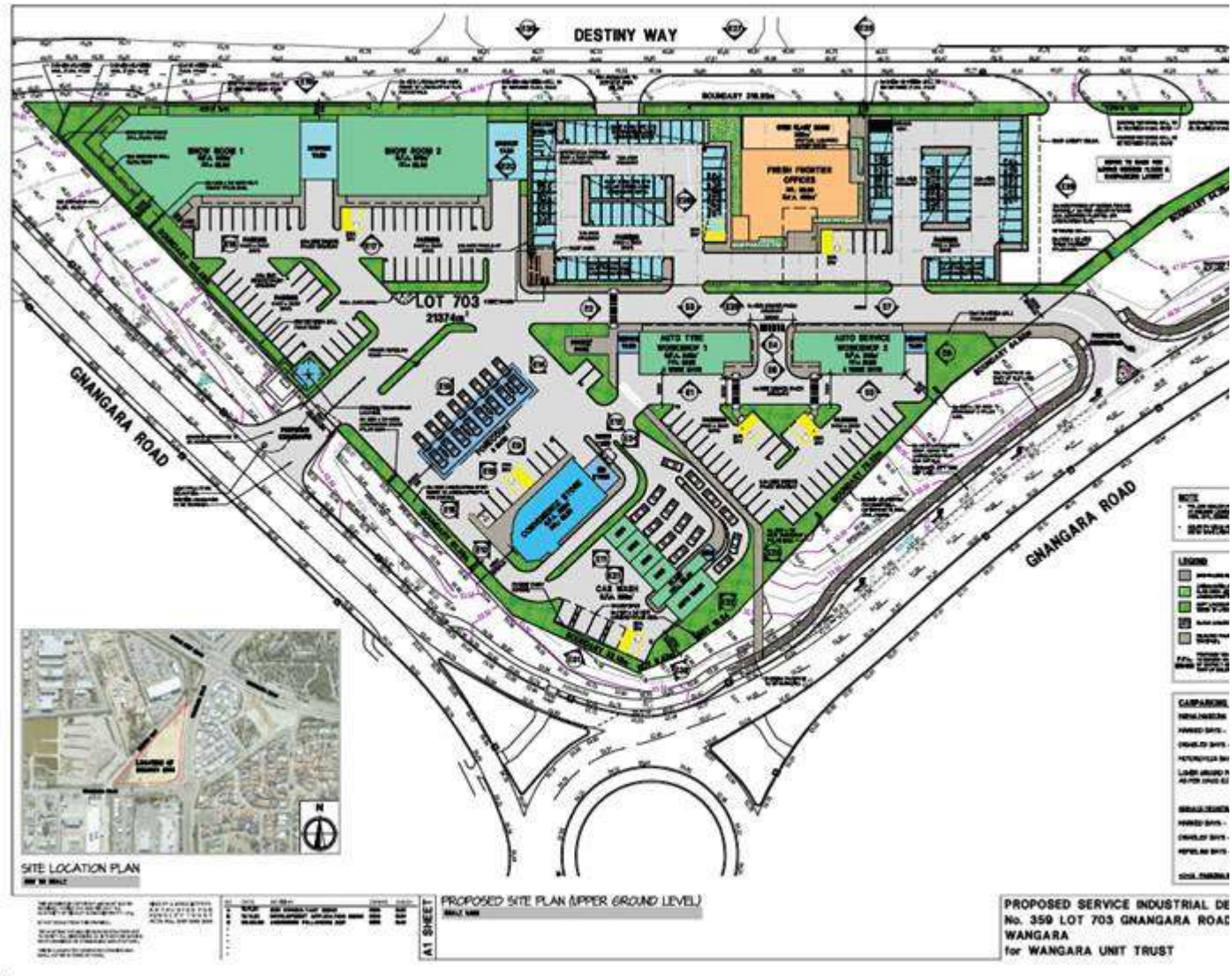

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ATTACHMENT 7

Enquiries: Steve Fernandez on (08) 9323 4517
Our Ref: 22/3095 (D22#590133)
Your Ref: DA2021/2022

14 June 2022

Chief Executive Officer
City of Wanneroo
Locked Bag 1
WANNEROO WA 6946

Email: enquiries@wanneroo.wa.gov.au

Dear Sir/Madam,

PROPOSED DEVELOPEMNT - LOT 703 (359) GNANGARA ROAD WANGARA – REF: DA2021/2030 [COMMERCIAL/ SERVICE INDUSTRIAL DEVELOPMENT]

In response to correspondence received on the 22 April 2022 please be advised this development is located on a section of Gnangara Road which is not part of the State Road Network. Main Roads has no objections to the proposal and provide the following comments for local governments consideration:

a) Additional information is required in relation to the Transport Impact Assessment (TIA) prepared in accordance with Transport Impact Assessment Guidelines (August 2016).
    - The proposed full movement in crossover (C1) on the southern side of the site may be problematic. Vehicles turning right into the development from Gnangara Rd must give way to east bound traffic travelling at 70 km/h. At times of heavy traffic demand this may pose an unsafe situation. There is no proposed channelisation for this movement, increasing the chance of rear end crashes.
    - The full movement crossover (C1) may cause excessive queueing. Vehicles waiting for a gap when turning right into the development from Gnangara Rd may block vehicles travelling west bound (as this is a single lane) causing a queue back towards the Mirrabooka Avenue roundabout. The modelling is only showing 4 vehicles turning right into this crossover. this seems very low. The City should consider what impact this crossover will have on the Mirrabooka Avenue Roundabout.
    - The TIA mentions a 2% annual traffic growth rate on Gnangara Road but does not include a methodology as to how this value was achieved.
    - The SIDRA model does not include a base model for the location prior to the inclusion of this development on the subject site.

b) Main Roads advise the following in relation to the Ocean Reef Upper Swan Highway (formerly Gnangara Road/ Ocean Reef Road)

- Access should be from Destiny Way. All vehicular access should be removed from eastern boundary at Gnangara Road given the long term plans for this area.
- There is limited land for upgrades to the Ocean Reef / Gnangara / Gnangara / Sydney Road intersection.
- The Ocean Reef / Gnangara Road (east / west link) is ultimately planned to be upgraded to an expressway standard.
- Sydney Road to the north will access the East Wanneroo District Structure Plan area and carry increasing traffic volumes. This may put more pressure on this intersection.

The following signage conditions are recommended to be incorporated into the city approval:

1. The type of sign, size, content and location must comply with all relevant by-laws and planning schemes made by Council.
2. The sign and sign structure are to be placed on private property and shall not overhang or encroach upon the road reserve.
3. If the sign is illuminated, it must be of a low-level not exceeding 300cd/m2 during the hours of the night, and not flash, pulsate or chase during all hours.
4. The sign shall not be in electronic/digital format.
5. The sign shall not contain fluorescent, reflective or retro-reflective colours or materials.

Main Roads encourages local government in liaising with applicants to promote and capitalise on our pre-lodgement consultation service, prior to lodgement of planning proposals, especially where development plans involve land adjacent to or have the potential to impact on the State road network.

Further information on the pre-lodgement consultation process can be found on Main Roads website at mainroads.wa.gov.au > Technical & Commercial > Planning & Development

Should the City disagree with or resolve not to include as part of its conditional approval any of the above conditions or advice, Main Roads requests an opportunity to meet and discuss the application further, prior to a final determination being made.

Main Roads requests a copy of the City's final determination on this proposal to be sent to planninginfo@mainroads.wa.gov.au.

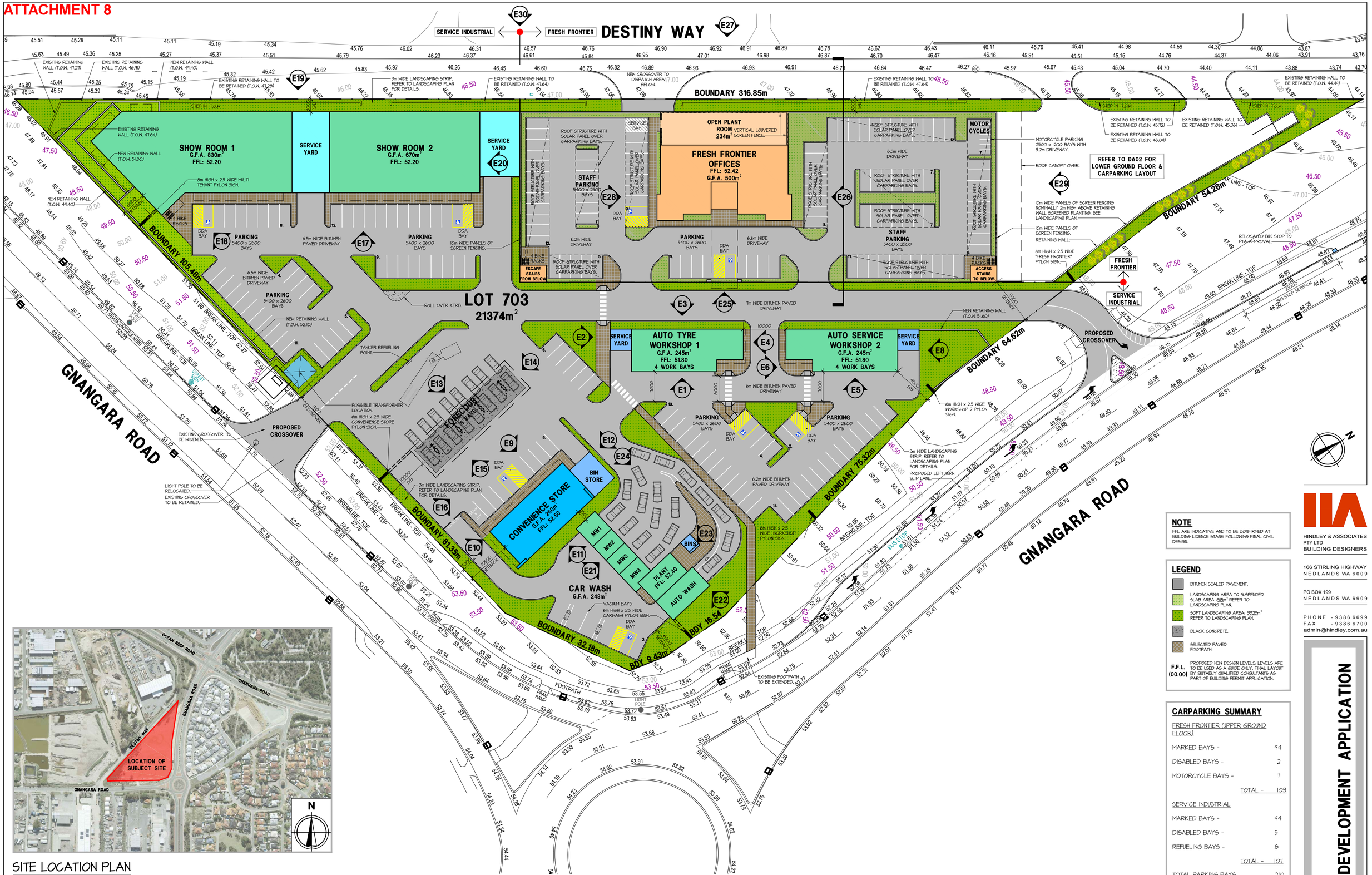
In the interim, if you have any queries please do not hesitate to contact Steve Fernandez

Yours sincerely

mthornely.

Maryanne Thornely
Road Access and Planning Manager/A

ATTACHMENT 8



SITE LOCATION PLAN

NOT TO SCALE

NOTE

FFL ARE INDICATIVE AND TO BE CONFIRMED AT BUILDING LICENCE STAGE FOLLOWING FINAL CIVIL DESIGN.

LEGEND

- BITUMEN SEALED PAVEMENT.
- LANDSCAPING AREA TO SUSPENDED SLAB AREA 515m² REFER TO LANDSCAPING PLAN.
- SOFT LANDSCAPING AREA: 3323m² REFER TO LANDSCAPING PLAN.
- BLACK CONCRETE.
- SELECTED PAVED FOOTPATH.

F.F.L. (00.00) PROPOSED NEW DESIGN LEVELS, LEVELS ARE TO BE USED AS A GUIDE ONLY. FINAL LAYOUT BY SUITABLY QUALIFIED CONSULTANTS AS PART OF BUILDING PERMIT APPLICATION.

CARPARKING SUMMARY

FRESH FRONTIER (UPPER GROUND FLOOR)

MARKED BAYS -	94
DISABLED BAYS -	2
MOTORCYCLE BAYS -	7
TOTAL -	103

SERVICE INDUSTRIAL

MARKED BAYS -	94
DISABLED BAYS -	5
REFUELING BAYS -	8
TOTAL -	107
TOTAL PARKING BAYS	210

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

PHONE - 9386 6699
FAX - 9386 6700
admin@hindley.com.au

DEVELOPMENT APPLICATION

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HINDLEY & ASSOCIATES P/L AS TRUSTEE FOR HINDLEY TRUST ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	11.11.21	SUB CONSULTANT ISSUE	MDB	SJH
B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
-				
-				
-				
-				
-				

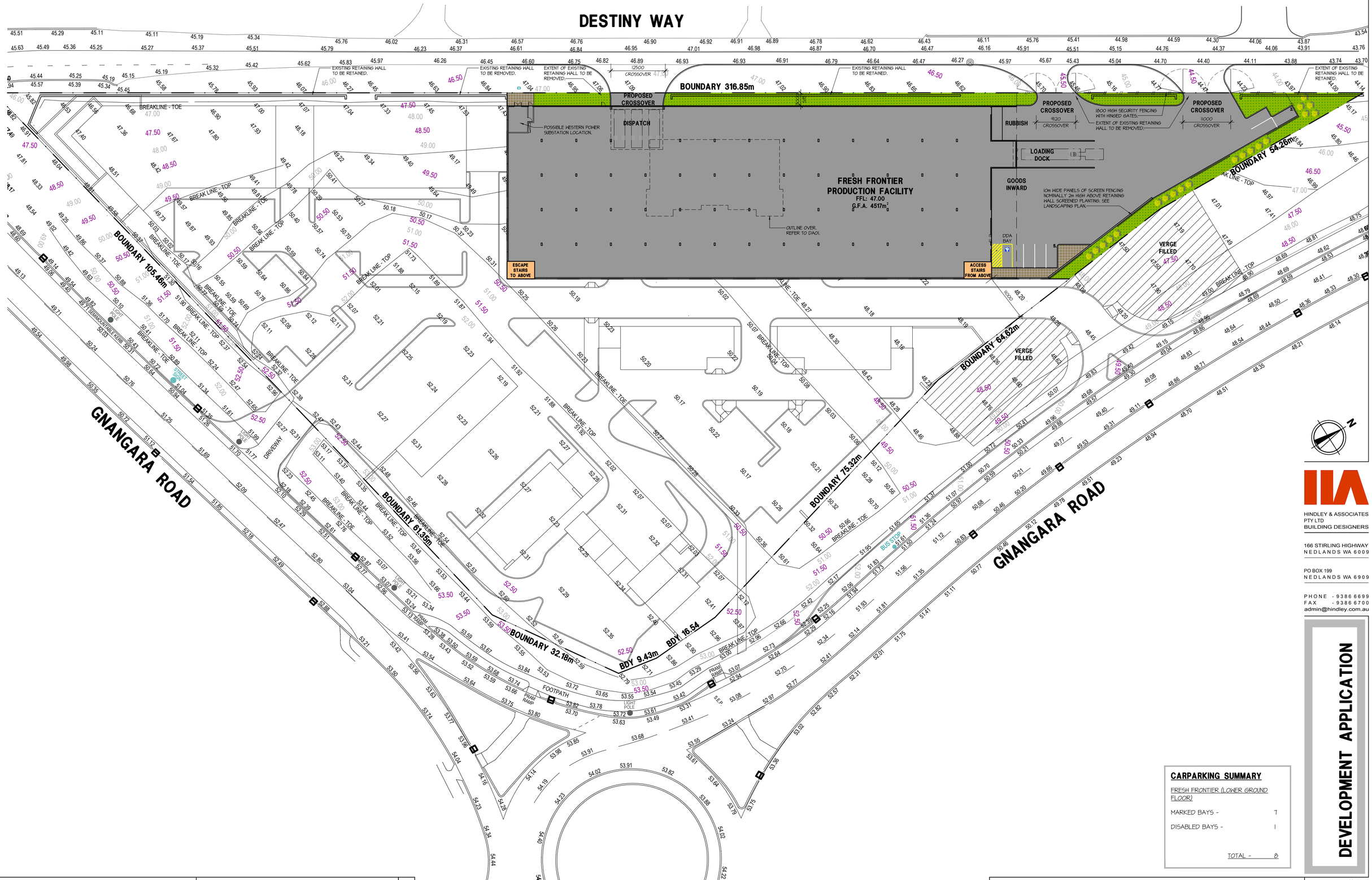
A1 SHEET

PROPOSED SITE PLAN (UPPER GROUND LEVEL)

SCALE 1:400

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date -	12.11.21
Design -	SJH
Drawn -	MDB
Checked -	SJH
Scale -	1:400
Job No. -	556
Dwg -	DA01
Rev -	B



CARPARKING SUMMARY

FRESH FRONTIER (LOWER GROUND FLOOR)

MARKED BAYS - 7

DISABLED BAYS - 1

TOTAL - 8

DEVELOPMENT APPLICATION

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

PHONE - 9386 6699
FAX - 9386 6700
admin@hindley.com.au

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HINDLEY & ASSOCIATES P/L
AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	11.11.21	SUB CONSULTANT ISSUE	MDB	SJH
B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
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-				
-				
-				

A1 SHEET

PROPOSED SITE PLAN LOWER GROUND LEVEL

SCALE 1:400

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date - 12.11.21
Design - SJH
Drawn - MDB
Checked - SJH
Scale - 1:400
Job No. - 556
Dwg - DA02
Rev - B

WORKSHOP 1
SCALE 1:200

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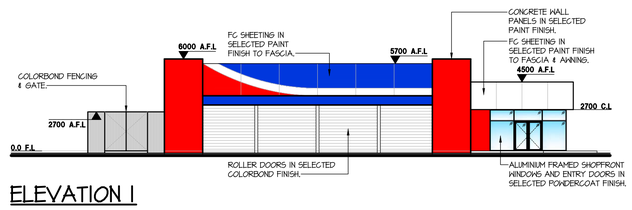

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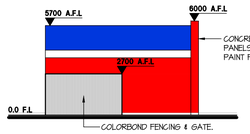

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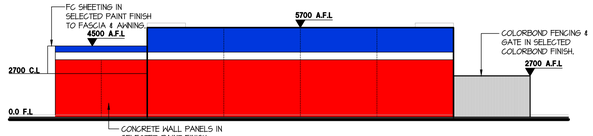

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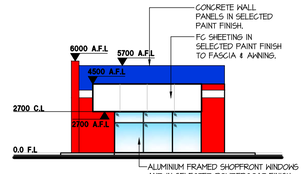
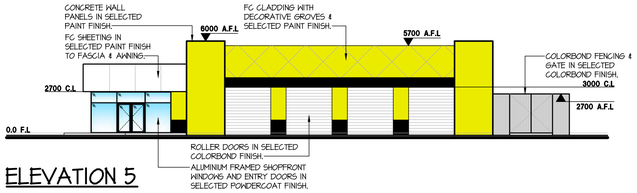


WORKSHOP 2
SCALE 1:200

ELEVATION 5



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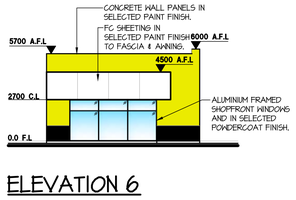

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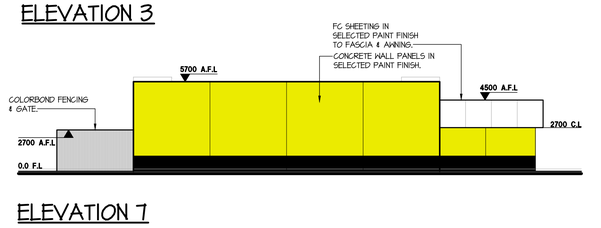

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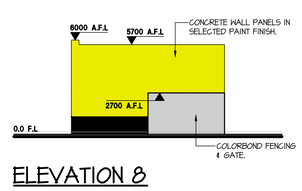
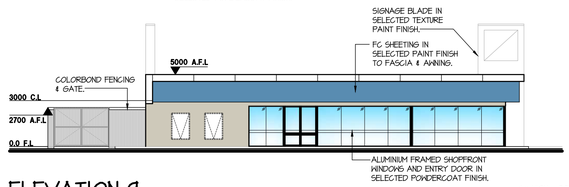


CONVENIENCE STORE
SCALE 1:200

ELEVATION 9



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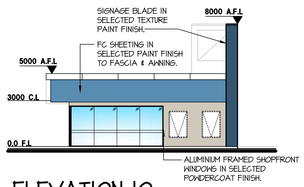

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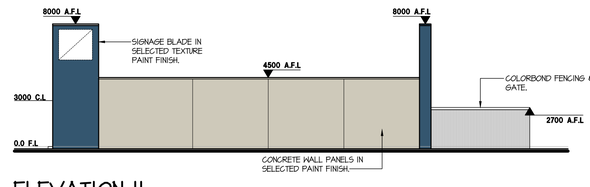

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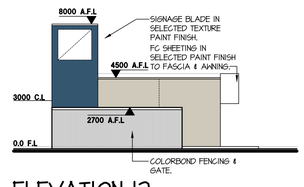
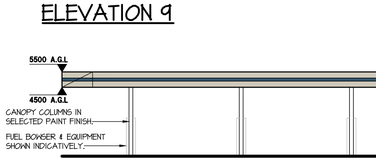


FUEL CANOPY
SCALE 1:200

ELEVATION 13



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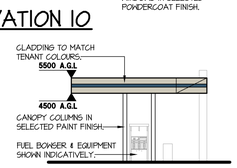
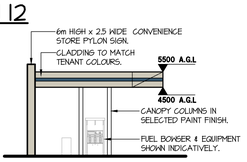


ELEVATION 15

ELEVATION 16



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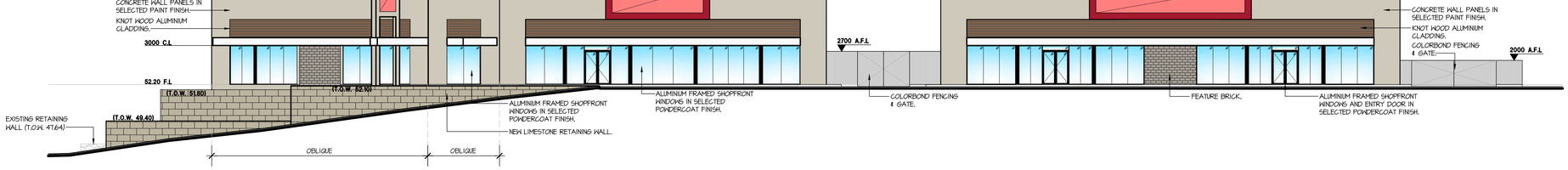
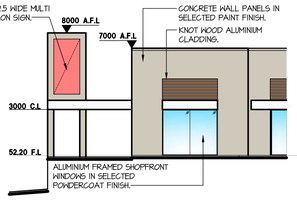
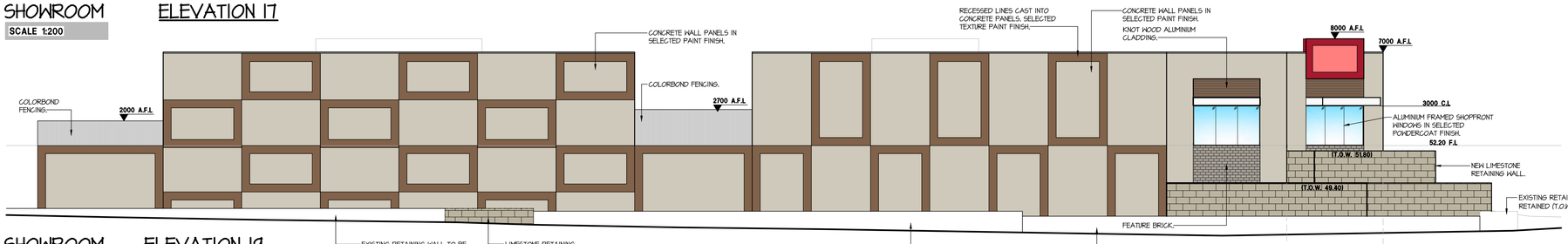


ELEVATION 18

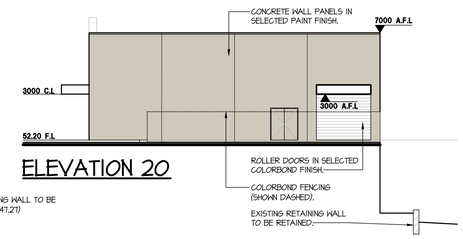


SHOWROOM
SCALE 1:200

ELEVATION 19

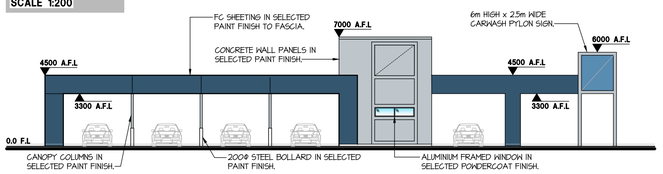


ELEVATION 20

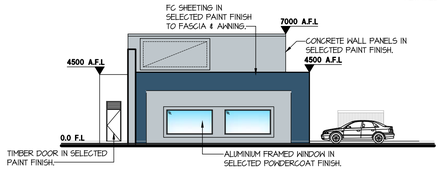


SHOWROOM
SCALE 1:200

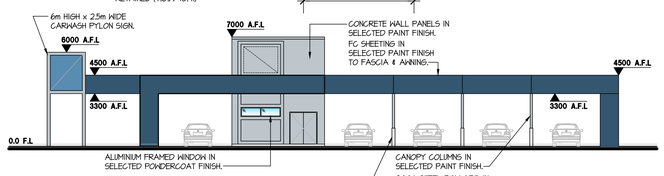
ELEVATION 21



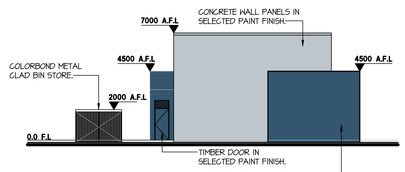
ELEVATION 22



ELEVATION 23



ELEVATION 24



PROPOSED ELEVATIONS
SCALE 1:200

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

PHONE - 9386 6699
FAX - 9386 6700
admin@hindley.com.au

DEVELOPMENT APPLICATION

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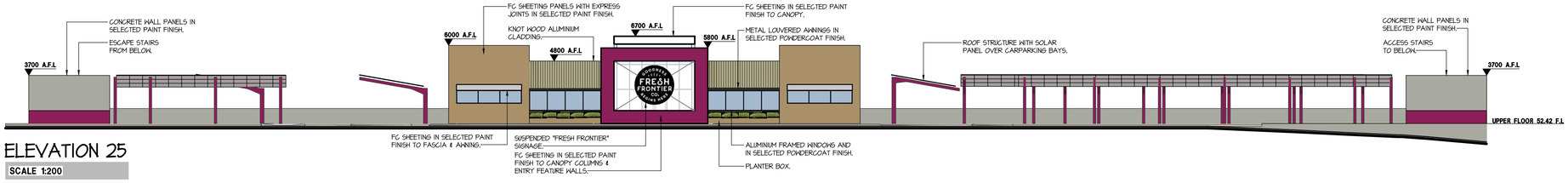
HINDLEY & ASSOCIATES P/L AS TRUSTEE FOR HINDLEY TRUST ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	11.11.21	SUB CONSULTANT ISSUE	MDB	SJH
B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
-				
-				
-				
-				
-				

A1 SHEET

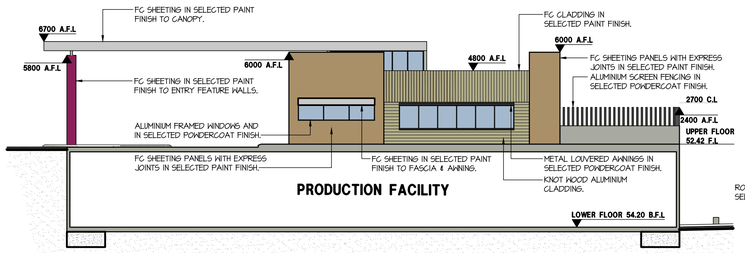
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date	-	12.11.21
Design	-	SJH
Drawn	-	MDB
Checked	-	SJH
Scale	-	1:200
Job No.		556
Dwg -		DA03
Rev -		B



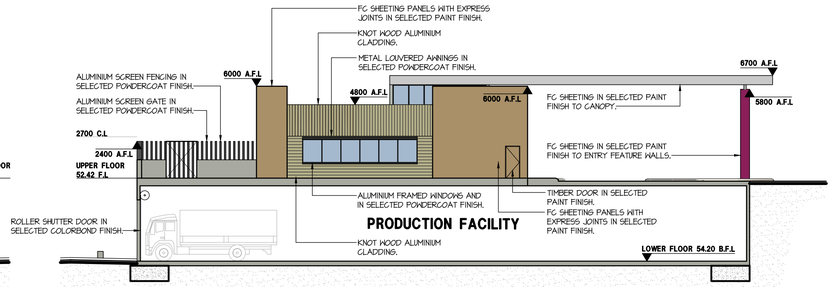
ELEVATION 25

SCALE 1:200



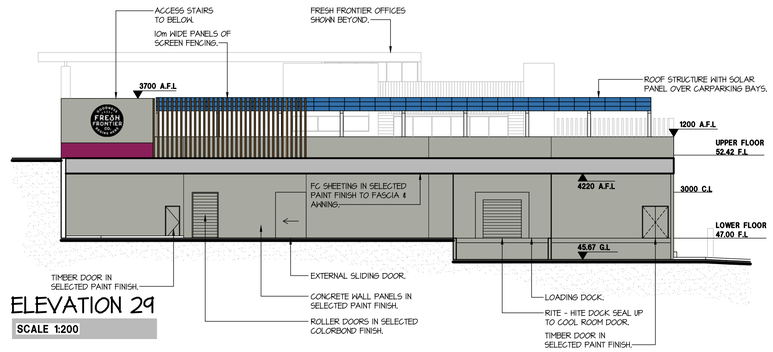
SECTION / ELEVATION 26

SCALE 1:200



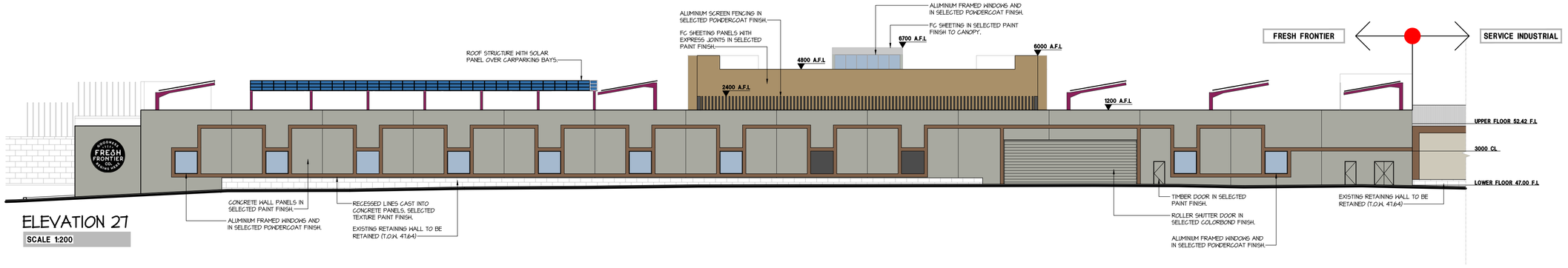
SECTION / ELEVATION 28

SCALE 1:200



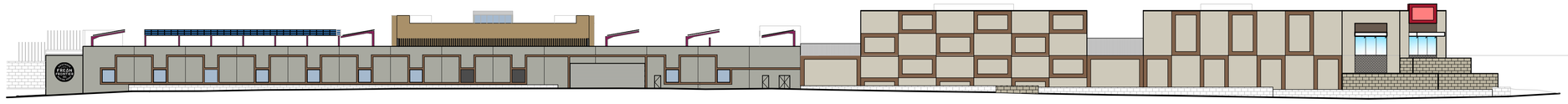
ELEVATION 29

SCALE 1:200



ELEVATION 27

SCALE 1:200



ELEVATION 30 (DESTINY WAY)

NOT TO SCALE

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

PHONE - 9386 6699
FAX - 9386 6700
admin@hindley.com.au

DEVELOPMENT APPLICATION

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HINDLEY & ASSOCIATES P/L
AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	11.11.21	SUB CONSULTANT ISSUE	MDB	SJH
B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
-				
-				
-				
-				
-				
-				

A1 SHEET

PROPOSED ELEVATIONS

NOT TO SCALE

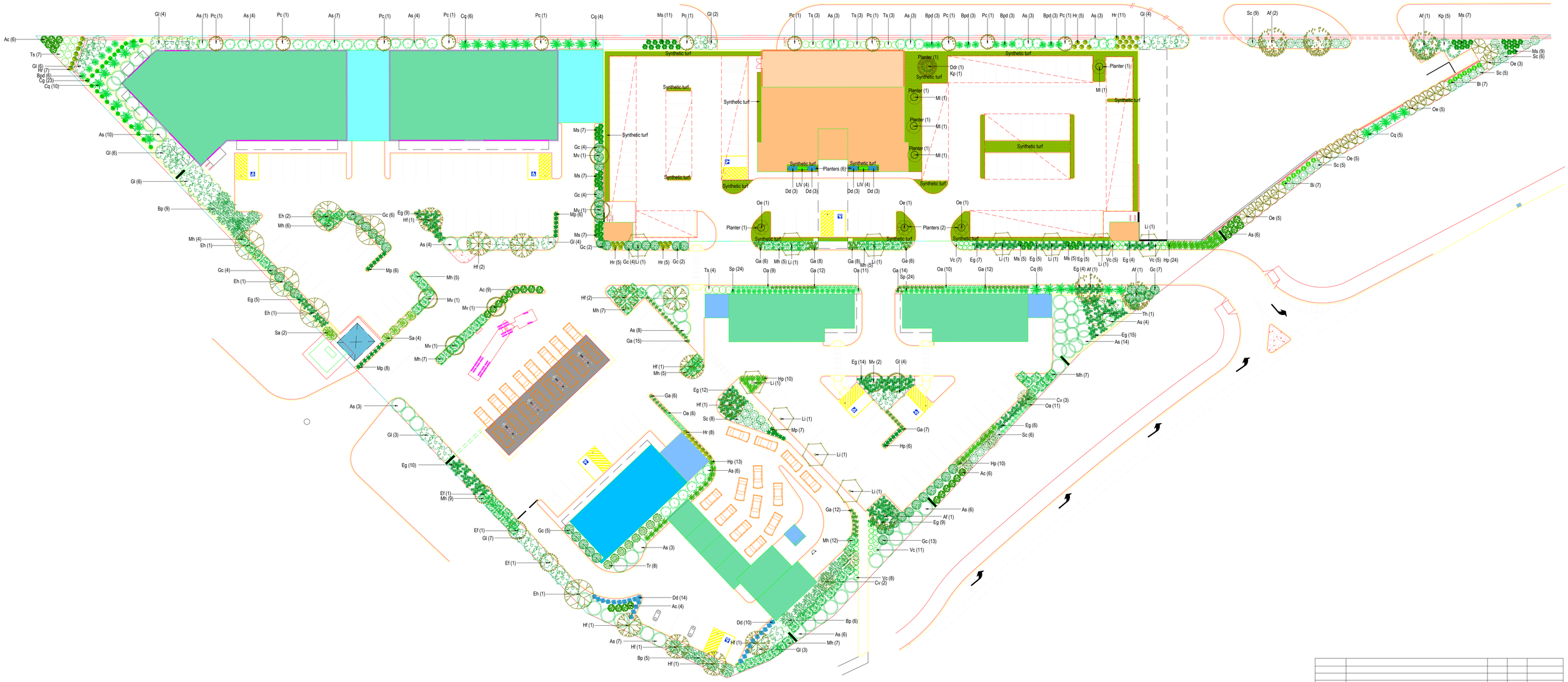
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date	12.11.21
Design	SJH
Drawn	MDB
Checked	SJH
Scale	1:200
Job No.	556
Dwg	DA04
Rev	B

LANDSCAPE PLAN DRAWING INDEX

DRAWING NO.	TITLE
21170_01	LANDSCAPE PLAN
21170_02	PLANT SCHEDULE AND PLANTING SPECIFICATIONS
21170_03	TYPICAL DRAWINGS

PLANTER DETAILS		
SYMBOL	ELEMENT	SIMILAR ARRANGEMENTS
◯	2200Ø x 1000 GRC PLANTER U BOWL	PLANTER IN CONCRETE FINISH FROM POTS WHOLESALE DIRECT
◯	1500Ø x 700 GRC PLANTER U BOWL	PLANTER IN CONCRETE FINISH FROM POTS WHOLESALE DIRECT OR SIMILAR
▭	2000 x 600 x 600 GRC PLANTER TROUGH	PLANTER IN CONCRETE FINISH FROM POTS WHOLESALE DIRECT OR SIMILAR



A	DEVELOPMENT APPLICATION	AC	AC	19.11.2021
revision/issue	description	drawn	checked	date

project
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
location
NO. 359 LOT 703 GNANGARA ROAD, WANGARA

drawn AC
checked AC

description
LANDSCAPE PLAN

scale 1:400 @A1
date 19.11.2021
project no 21170
dwg no 01
rev 01

URBAN FORM
COMMERCIAL AND RESIDENTIAL
LANDSCAPE DESIGN SERVICES
P. 0438 124 315
E. admin@urbanformlandscapes.com.au

City of Wanneroo

Design Review Panel
Meeting Minutes

Meeting Date and Time: Thursday 3rd February 2022; Time 2:00pm
Meeting Venue: Leschenaultia Room

Meeting Commenced: 2:00pm

1. Attendance

Panel Members

Dominic Snellgrove	Chairperson
Munira Mackay	Panel Member
Nerida Moredoundt	Panel Member
Simon Venturi	Panel Member

Proponents

Item No. 4.1

Nathan Stewart	Rowe Group
George Hajigabriel	Rowe Group
Steve Hindley	Hindley & Associates

Item No. 4.2

Nathan Stewart	Rowe Group
George Hajigabriel	Rowe Group
Steve Hindley	Hindley & Associates
Brian McCubbing	BMC Properties

City of Wanneroo Officers

Greg Bowering	Manager Approval Services
Coralie Claudio	Coordinator Planning Services
Alex Jarvis	Senior Planner
Nick De Vecchis	Senior Planner
Claire Rogers	Administration Officer
Sue Wesley	A/Snr Administration Officer

Item No. 4.1

Nick De Vecchis	Senior Planner

Item No. 4.2

Alex Jarvis	Senior Planner

2. Apologies

Nil

3. Declaration of Interest

Nil

4. Design Review Applications

Item 1

4.1	Property Location:	Lot 703 (359) Gnangara Road, Wangara
	Development Application No:	DRP2022/2
	Development Description:	Service Industrial Development
	Applicant:	Rowe Group
	Owner:	JAO & MDL Investments Pty Ltd

4.1a Officer Presentation

4.1b Proponent Presentation

4.1c Design Principals

Items presented to the Design Review Panel are assessed by a panel of architects and urban and landscape designers referencing the 10 Design Principals outlined in Local Planning Policy 4.23 – Design Review Panel, which are:

1. Context and Character
2. Landscape Quality
3. Built form and Scale
4. Functionality and Build Quality
5. Sustainability
6. Amenity
7. Legibility
8. Safety
9. Community
10. Aesthetics

The Panel will provide commentary in relation to those areas of the proposal that demonstrate strengths and design weaknesses and those areas that would benefit from further improvement.

(a) Strengths of the Proposal

(b) Weaknesses of the Proposal

(c) Suggested Improvements to the Proposal

(d) Recommendation

Design review report and recommendations		
Design quality evaluation		
		Supported
		Pending further attention
		Not supported
		Insufficient information to evaluate
Strengths of the proposal		• Important collection of uses and generator of local employment. • Challenging site shape and configuration. • An appropriate location within an existing industrial precinct. • ESD initiatives including PV panels on car bay shade structures. • A dedicated pedestrian access point and link located at the roundabout intersection. • Generous 18% landscape coverage. • Well-illustrated proposal with instructive use of 3D imagery. • Tiered and layered landscaping at the entry to Destiny Way.
Principle 1 - **Context and character**		*Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*
		• The location of the site within an existing industrial precinct allows for more flexibility with respect to public domain interaction and streetscape engagement. • However, there remains important opportunities for the master plan and design approach to reference the local and broader site context. • Both the landscape design and the individual buildings have the capacity to reference the character of the area more deliberately through material selection, colour palette and landscape species selection. • Whilst the site is predominantly accessed by vehicles, it does not include a study of the local pedestrian network and access to public transport. An analysis of the pedestrian network may reveal further opportunity for pedestrian access points and cross site links. • The north-south road link, as a device for organising the location of built form within the site, has the potential to be a successful masterplan gesture. However, it currently lacks pedestrian foot paths. • The eastern intersection of Gnangara Road at the roundabout constitutes the most visually important element of the site and precinct and has the capacity to present more coherently and attractively.
Recommendation		• **Consider how the elevational treatments might include materials, textures and colours that relate to and reference the local context and character of the area.** • **Develop the east west link, and organising structure of the master plan, to include pedestrian footpaths** • **Consider consolidation of the landscape into a larger central pocket park that might include seating and shade canopy and shade trees. This central space could become the heart of the precinct and offer important amenity to people who visit and work in the precinct.**

		• **Illustrate how broader pedestrian linkages, including public transport, connect with the site, and how pedestrian movement through the site interfaces with this** broader network. • **Consider ways in which the eastern intersection of Gnangara Road at the roundabout could present more coherently and provide a legible and attractive form of address for the precinct. This may take the form of additional landscape infrastructure or development of the facades that address the corner with materials and colours that present in an attractive and contextually appropriate way.**
Principle 2 - **Landscape quality**		*Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*
		• The inclusion of a landscape professional with associated species selection and the quantum of landscape cover is supported. • However, the landscape proposal comprises of small patches of soft landscape dispersed throughout the precinct offering little opportunity for public amenity. • The proposed use of synthetic turf is not supported. Artificial turf is notorious hot under solar glare.
Recommendation		• **Consider consolidation of the landscape into a larger central pocket park that might include seating and shade canopy and shade trees. This central space could become the heart of the precinct and offer important amenity to people who visit and work in the precinct.** • **Consider introducing shallow on-structure planting in lieu of artificial turf with a minimum depth of 300mm.** • **Tree canopy to be shown at maturity on landscaping plan** • **Consider additional tree canopy including providing shade trees to be provided at 1 per 4 bays in car parking area**
Principle 3 - **Built form and scale**		*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.*
		• The built form and scale of the proposal is appropriate
Recommendation		• Showroom walls facing Destiny Way could be further articulated
Principle 4 - **Functionality and build quality**		*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.*
		• The planning is generally functional for the proposed uses.
Recommendation		• **None**
Principle 5 - **Sustainability**		*Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.*
		• The absence of a sustainability professional at this stage of the design process is of significant concern. • Whilst the Panel support the proposed integration of solar PVs on car port roofs there remain there remain further and significant opportunities to incorporate intelligent ESD initiatives into the master plan and design. • The project incorporates a significant area of asphalt and roof scape with associated impact on the urban heat island effect.

Recommendation		• **Consider appointing an ESD professional to assist with developing a coherent and effective ESD design strategy.** • **Consider how additional landscape foliage and tree canopy might assist with mitigating the urban heat island effect.** • **Consider a precinct wide solar PV strategy which incorporates PV panels on all roof structures.**
Principle 6 - **Amenity**		*Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.*
		• Whilst the precinct offers an important collection of uses and generator of local employment there is little or no amenity within the site for visitors or workers.
Recommendation		• **Consider consolidation of the landscape into a larger central pocket park that might include seating and shade canopy and shade trees. This central space could become the heart of the precinct and offer important amenity to people who visit and work in the precinct.**
Principle 7 - **Legibility**		*Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.*
		• A dedicated pedestrian access point and link located at the roundabout intersection is a welcome point of pedestrian access to the site. • The north-south road link, as a device for organising the location of built form within the site, has the potential to be a successful masterplan gesture. However, it currently lacks pedestrian legibility and foot paths. • Whilst the site is predominantly accessed by vehicles it does not include a study of the local pedestrian network and access to public transport. An analysis of the pedestrian network may reveal further opportunity for pedestrian access points and cross site links.
Recommendation		• **Develop the east west link, and organising structure of the master plan, to include pedestrian footpaths** • **Illustrate how broader pedestrian linkages, including public transport, connect with the site, and how pedestrian movement through the site interfaces with this** broader network.
Principle 8 - **Safety**		*Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*
		• Not discussed
Recommendation		• **None**
Principle 9 - **Community**		*Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.*
		• The proposed uses provide important and valued community focused amenity.
Recommendation		• **None**
Principle 10 **Aesthetics**		*Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.*
		• It is not clear from the presentation or the 3D imagery 'how' the context and character of the area have informed the aesthetic approach to crafting built-form on the site.
Recommendation		• **Consider how the elevational treatments might include materials, textures**

		and colours that relate to and reference the local context and character of the area.

Key issues/recommendations	The Panel acknowledge that the site location sits within an existing industrial area. However, there are a series of important considerations that have the capacity to lift the quality and amenity of the proposal including.: • Develop the elevational treatments to include materials, textures and colours that relate to and reference the local context and character of the area. • Develop the east west link, and organising structure of the master plan, to include pedestrian footpaths. • Consolidation of landscape into a larger central pocket park that might include seating and shade canopy and shade trees. This central space could become the heart of the precinct and offer important amenity to people who visit and work in the precinct. • Consider appointing an ESD professional to assist with developing a coherent and effective ESD design strategy. The Panel look forward to seeing the response to this commentary and other comments within the report.

Design Review progress	
	Supported
	Pending further attention
	Not yet supported
	Yet to be addressed

	DR1	*DR2*	*DR3*
Principle 1 - **Context and character**			
Principle 2 - **Landscape quality**			
Principle 3 - **Built form and scale**			
Principle 4 - **Functionality and build quality**			
Principle 5 - **Sustainability**			
Principle 6 - **Amenity**			
Principle 7 - **Legibility**			
Principle 8 - **Safety**			
Principle 9 - **Community**			
Principle 10 - **Aesthetics**			

Signed by Chairperson – (Dominic Snellgrove)

Dated: **05-02-22**

Recommendations Summary **Item 1 – DRP2022/2 – Lot 703 (No. 359) Gnangara Road, Wangara – Proposed Service Industrial Development**	
DRP 1 – DRP Recommendations **DRP Meeting 3 February 2022**	**DRP 1 – Applicant Response**
Context and Character - *Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place*	
1. Consider how the elevational treatments might include materials, textures and colours that relate to and reference the local context and character of the area.	The materials, textures and colours proposed in the elevations of the proposed development relate to the existing development within the surrounding 'General Industrial' zone and the adjacent residential development, east of Gnangara Road, which backs onto the subject site. The subject site has been vacant since it was first created in 1953. The subject site is one of the last remaining undeveloped sites within the Wangara industrial area. The proposed development is an acceptable outcome given the nature of the proposal and its location between and existing industrial area (west) and a residential area (east). The proposed development forms a logical transition use between these existing areas. The proposal will provide a substantial upgrade from the surrounding architectural styles and appearance.
2. Develop the east west link, and organising structure of the master plan, to include pedestrian footpaths	An east west link has been further enhanced by the addition of a footpath from the proposed relocated bus stop on Gnangara Road providing access to the proposed uses via a network of footpaths all linking to the "pocket park". In addition, awnings are provided over the footpath adjoining the Auto Tyre Workshop and Auto Service Workshop, further improving the pedestrian amenity through the subject site.
3. Consider consolidation of the landscape into a larger central pocket park that might include seating and shade canopy and shade trees. This central space could become the heart of the precinct and offer important amenity to people who visit and work in the precinct.	A "pocket park" has been created centrally to the subject site with a paved central area which will be surrounded by low level landscaping and shade trees and incorporate street furniture.
4. Illustrate how broader pedestrian linkages, including public transport, connect with the site, and how pedestrian movement through the site interfaces with this broader network.	As per comment 2 above.
5. Consider ways in which the eastern intersection of Gnangara Road at the roundabout could present more coherently and provide a legible and	The elevational treatment of the Car Wash has been improved to provide feature screening and shade sails over the vacuum bays which incorporates a signage

Recommendations Summary Item 1 – DRP2022/2 – Lot 703 (No. 359) Gnangara Road, Wangara – Proposed Service Industrial Development	
DRP 1 – DRP Recommendations **DRP Meeting 3 February 2022**	**DRP 1 – Applicant Response**
attractive form of address for the precinct. This may take the form of additional landscape infrastructure or development of the facades that address the corner with materials and colours that present in an attractive and contextually appropriate way.	opportunity for site identification. This feature screening has also been included into the Car Wash elevations along Gnangara Road to provide an integrated appearance.
Landscape Quality *Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*	
6. Consider consolidation of the landscape into a larger central pocket park that might include seating and shade canopy and shade trees. This central space could become the heart of the precinct and offer important amenity to people who visit and work in the precinct.	As per comment 3 above.
7. Consider introducing shallow on-structure planting in lieu of artificial turf with a minimum depth of 300mm.	The synthetic turf has been deleted and will be replaced with low level planter boxes and appropriate planting to areas not covered with PV Cell Structures or footpaths used to access the car parking spaces.
8. Tree canopy to be shown at maturity on landscaping plan	The tree canopy has been shown on the Landscape Plan at maturity size. This will clearly show the final outcome of the proposed development.
9. Consider additional tree canopy including providing shade trees to be provided at 1 per 4 bays in car parking area	Additional trees have been provided within the car parking areas which are not rooved or directly fronting the buildings. The number of trees are provided at a rate of 1 tree per 4 car spaces in areas able to accommodate tree plantings (i.e. all at-grade parking areas).
Built Form and Scale *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.*	

Recommendations Summary **Item 1 – DRP2022/2 – Lot 703 (No. 359) Gnangara Road, Wangara – Proposed Service Industrial Development**	
DRP 1 – DRP Recommendations **DRP Meeting 3 February 2022**	**DRP 1 – Applicant Response**
10. Showroom walls facing Destiny Way could be further articulated	The Showroom buildings have been further articulated through the use of additional plantings within the retaining walls in between the Showrooms and at the eastern end of the building. Further articulation is provided on the roof profile of the Showroom buildings with recessed lines in the roof profile. Limestone retailing walls have been provided in between each Showroom to break up the large concrete wall panels of each Showroom.
Functionality and Build Quality *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.*	
N/A	N/A
Sustainability *Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.*	
11. Consider appointing an ESD professional to assist with developing a coherent and effective ESD design strategy.	We are of the view that a report from an ESD professional is not necessary for a development of this size, scale and type of uses. The proposed development includes the use of solar panels on top of the shade structures within the car park of the Fresh Frontier component. In addition, the proposed development will need to be compliant with the Section J requirements of the National Construction Code of Australia which requires development to incorporate energy efficient initiatives. The landowner will recommend that solar panels are used by tenants.
12. Consider how additional landscape foliage and tree canopy might assist with	As per comment 9 above.

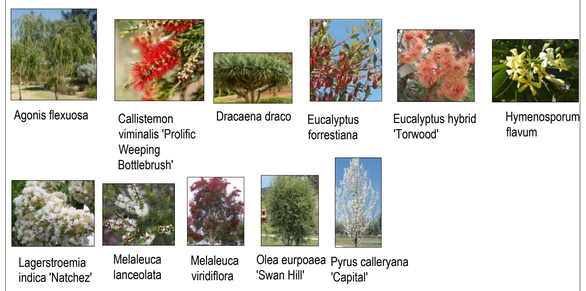
Recommendations Summary Item 1 – DRP2022/2 – Lot 703 (No. 359) Gnangara Road, Wangara – Proposed Service Industrial Development	
DRP 1 – DRP Recommendations **DRP Meeting 3 February 2022**	**DRP 1 – Applicant Response**
mitigating the urban heat island effect.	
13. Consider a precinct wide solar PV strategy which incorporates PV panels on all roof structures.	The landowner will recommend that solar panels are used by tenants.
Amenity *Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.*	
14. Consider consolidation of the landscape into a larger central pocket park that might include seating and shade canopy and shade trees. This central space could become the heart of the precinct and offer important amenity to people who visit and work in the precinct.	As per comment 3 above.
Legibility *Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.*	
15. Develop the east west link, and organising structure of the master plan, to include pedestrian footpaths.	As per comment 2 above.
16. Illustrate how broader pedestrian linkages, including public transport, connect with the site, and how pedestrian movement through the site interfaces with this broader network.	As per comment 2 above.
Safety *Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*	
None	N/A
Community *Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.*	
None	N/A

Recommendations Summary **Item 1 – DRP2022/2 – Lot 703 (No. 359) Gnangara Road, Wangara – Proposed Service Industrial Development**	
DRP 1 – DRP Recommendations **DRP Meeting 3 February 2022**	**DRP 1 – Applicant Response**
Aesthetics *Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.*	
17. Consider how the elevational treatments might include materials, textures and colours that relate to and reference the local context and character of the area.	As per comment 1 above.

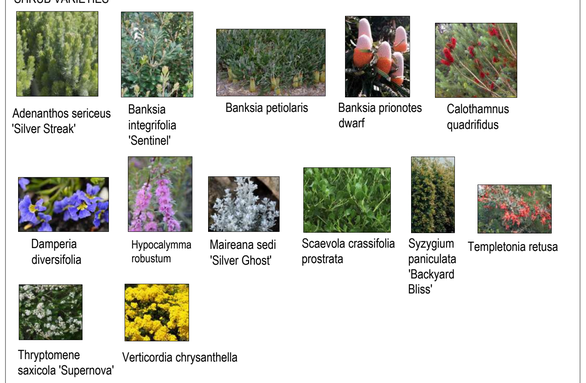
PLANT SCHEDULE

SYMBOL	CODE	BOTANIC NAME	MATURE HEIGHT X WIDTH	MINIMUM INSTALLATION SIZE	NUMBER
TREES					
	Af	Agonis flexuosa	8m x 6m	75 Litre	6
	Cv	Callistemon viminalis 'Prolific Weeping Bottlebrush'	6m x 4m	75 Litre	5
	Ddr	Dracaena draco	9m x 4m	90 Litre	1
	Ef	Eucalyptus forrestiana 'Fuchsia Gum'	6m x 4m	75 Litre	3
	Et	Eucalyptus hybrid 'Torwood'	5m x 6m	75 Litre	7
	Hf	Hymenosporum flavum	8m x 5m	75 Litre	11
	Li	Lagerstroemia indica 'Natchez'	7m x 5m	75 Litre	7
	Ml	Melaleuca lanceolata	7m x 3m	30 Litre	4
	Mv	Melaleuca viridiflora	8m x 4m	75 Litre	7
	Oe	Olea eurpoaea 'Swan Hill' (non fruiting)	6m x 3m	30 Litre	21
	Pc	Pyrus calleryana 'Capital'	3m x 9m	75 Litre	11
SHRUBS					
	As	Adenanthos sericeus 'Silver Streak'	3m x 2.5m	14cm	38
	Bi	Banksia integrifolia 'Sentinel'	2.5m x 1m	30cm	14
	Bp	Banksia petiolaris	60cm x 3m	13cm	20
	Bpd	Banksia prionotes dwarf	1.5m x 1.5m	13cm	18
	Cq	Calothamnus quadrifidus	2.5m x 2.5m	13cm	31
	Dd	Damperia diversifolia	50cm x 1m	13cm	36
	Hr	Hypocalymma robustum	1m x 1m	13cm	41
	Ms	Maireana sedi 'Silver Ghost'	1m x 1m	13cm	58
	Sc	Scaevola crassifolia prostrate	50cm x 2m	13cm	39
	Sp	Syzygium paniculata 'Backyard Bliss'	4m x 1m	5 Litre	48
	Tr	Templetonia retusa	2m x 2m	14cm	8
	Ts	Thryptomene saxicola 'Supernova'	80cm x 1.5m	13cm	20
	Vc	Verticordia chrysanthella	50cm x 1m	13cm	36
GRASSES					
	LIV	Lomandra longifolia 'Verday'	80cm x 70cm	14cm	8
GROUND COVER					
	AsS	Acacia saligna 'Springtime Casacde'	30cm x 3m	13cm	61
	Ac	Adenanthos cuneatus 'Coral Carpet'	30cm x 1.5m	13cm	31
	Cg	Casuarina glauca 'Cousin It'	10cm x 1m	13cm	23
	Eg	Eremophila glabra 'Kalbarri Carpet'	20cm x 2m	13cm	105
	Ga	Grevillea alpina x rosmarinifolia 'Firecracker'	40cm x 80cm	13cm	106
	Gc	Grevillea crithmifolia 'Green Carpet'	20cm x 2m	13cm	50
	Gl	Grevillea laurifolia x willsii 'Royal Mantle'	50cm x 3m	13cm	49
	Hp	Hemiandra pungens alba	30cm x 1.5m	13cm	57
	Kp	Kennedia prostrata	10cm x 3m	13cm	6
	Mh	Melaleuca huegelii prostrate	20cm x 2m	13cm	79
	Mp	Myoporium parvifolium	10cm x 1m	13cm	33
	Oa	Olearia axillaris 'Beach Ball'	40m x 80m	13cm	47
	Sa	Scaevola albida 'Super Cluster'	10cm x 2m	13cm	6
TOTAL PLANTS					1151

TREE VARIETIES



SHRUB VARIETIES



GRASS VARIETIES

GROUND COVER VARIETIES

HOW TO READ PLANTING NOTATIONS AND SYMBOLS ON THE LANDSCAPE PLAN

SYMBOLS

PLANT SYMBOLS ON THIS DRAWING DENOTE SPECIES AND THEIR PLACEMENT. THE PLANT SYMBOL KEY IS PROVIDED ON THE PLANT SCHEDULE. PLAN SECTIONS SHOULD BE PRINTED ON A1 AT HIGHEST QUALITY. IT IS IMPERATIVE FOR CORRECT PLANT PLACEMENT THAT SYMBOLS ARE LEGIBLE BY THE LANDSCAPE INSTALLER. IF SMALLER SECTIONS ARE REQUIRED THAT THOSE PROVIDED, CONTACT THE DESIGNER.

SYMBOLS INDICATE THE MASS OF THE SPECIES IN THE AREA ONLY. ACTUAL PLANT NUMBERS ARE PROVIDED IN NOTATIONS. THESE PLANTS SHOULD BE EVENLY SPACED WITHIN THE AREA INDICATED. ROWS SHOULD BE STAGGERED.

PLANTING SPECIFICATIONS

ALL PLANTING AREAS ARE TO BE PREPARED AND PLANTED IN ACCORDANCE WITH INDUSTRY BEST PRACTICE AND THE INSTRUCTIONS BELOW.

A. PREPARATION OF SOIL IN GARDEN BED AREAS:
I. REMOVE ALL TRACES OF BUILDERS' MATERIAL FROM PLANTING AREAS INCLUDING RUBBLE, SAND, MORTAR AND ALL OTHER EXTRANEOUS MATERIAL.
II. REMOVE ALL WEEDS IN GARDEN BED AREAS BY SPRAYING WEEDS WITH A STANDARD INDUSTRY HERBICIDE FOLLOWING MANUFACTURER'S SPECIFICATIONS AND LEAVE FOR RECOMMENDED TIME.
III. REMOVE DEAD PLANT MATTER AFTER TIME SPECIFIED ON HERBICIDE PRODUCT.
IV. UNDERTAKE SOIL IMPROVEMENT SUITABLE FOR NATIVE PLANTS.

B. IN-GROUND PLANTING
I. PLANT TREES IN ACCORDANCE WITH STANDARD DRAWING 'TYPICAL TREE PLANTING' IN THIS PLAN SET. INSTALL ROOT BARRIERS TO ALL TREES IN CARPARK AREAS. CLEAR LOWER TREE BRANCHES SO 75% OF TRUNK IS CLEAR.
II. PLANT SHRUBS, GRASSES AND GROUND COVERS IN ACCORDANCE WITH 'SHRUB PLANTING DETAIL' IN THIS PLAN SET AND WATER IN THOROUGHLY.

C. TUB AND TROUGH PLANTING
I. SELF WATERING SYSTEMS TO BE INSTALLED IN ALL PLANTERS.
II. FILL PLANTERS WITH MIX OF HIGH QUALITY POTTING MIX AND SAND.
III. TREES TO BE STAKED AND GUYED.
IV. WATER IN WELL.

D. MULCH
I. AFTER PLANTING, APPLY CHUNKY (25-50MM) PINE BARK WOOD CHIPS TO A MINIMUM DEPTH OF 75MM (MAXIMUM 100MM) TO ALL PLANTING BEDS AND PLANTERS, KEEPING MULCH CLEAR OF PLANT STEMS.
II. TIDY AND GRADE MULCH AFTER APPLICATION.

IRRIGATION SPECIFICATIONS

1. ALL GARDEN BEDS TO BE IRRIGATED. WATER SUPPLY IS SCHEME WATER.
2. IRRIGATION LAYOUT BY OTHERS.

revision/issue	description	drawn	checked	date
A	DEVELOPMENT APPLICATION	AC	AC	19.11.2021

project: PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
location: NO. 359 LOT 703 GNANGARA ROAD, WANGARA

drawn: AC
checked: AC
description: PLANT SCHEDULE AND PLANTING SPECIFICATIONS
scale:
date:
project no: 21170
dwg no: 02
rev: 01

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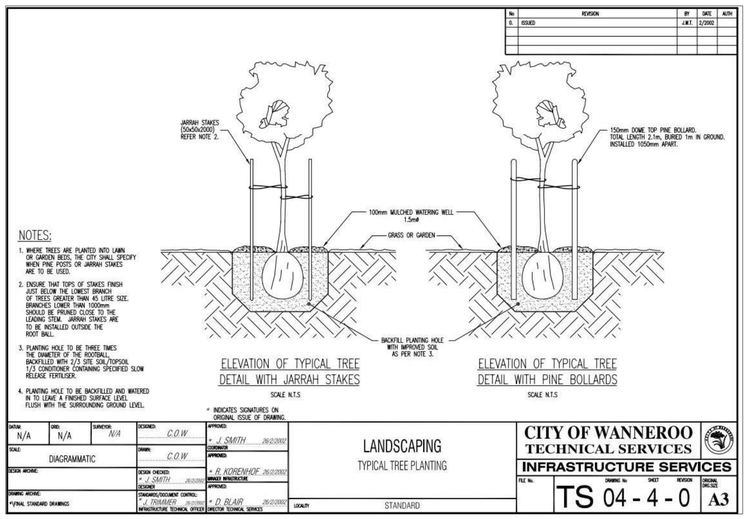
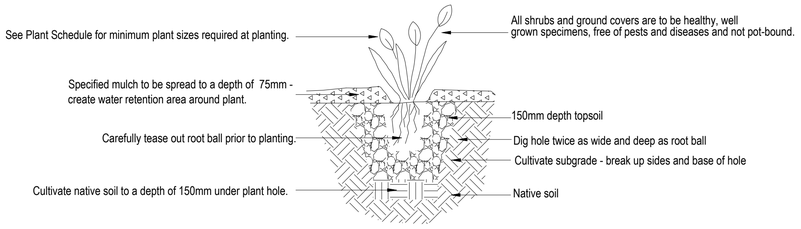


1 / 21170_3 TREE PLANTING DETAIL
Typical Section
Not to scale



2 / 21170_3 SHRUB PLANTING DETAIL
Typical Section
Not to scale

A	DEVELOPMENT APPLICATION	AC	AC	19.11.2021
revision/issue	description	drawn	checked	date

project
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
location
NO. 359 LOT 703 GNANGARA ROAD, WANGARA

drawn AC
checked AC
scale

description
TYPICAL DRAWINGS

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date
project no 21170
dwg no 03
rev 01

ATTACHMENT 10

transport planning
traffic engineering
modelling

Proposed Service Industrial Development

Lot 703 (#359) Gnangara Road, Wangara

Transport Impact Assessment

PREPARED FOR:
The Wangara Unit Trust

November 2021

Document history and status

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M Rasouli	r01	R white	04/11/2021	Draft
M Rasouli	r01a	R white	15/11/2021	Final
M Rasouli	r01b	R white	15/11/2021	Minor modifications

File name: t21.166.mr.r01b

Author: Mohammad Rasouli

Project manager: Mohammad Rasouli

Client: The Wangara Unit Trust

Project: Lot 703 (#359) Gnangara Road Wangara

Document revision: r01b

Project number: t21.166

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1 Introduction

This TIA has been prepared by Transcore on behalf of The Wangara Unit Trust with regards to the proposed service industrial development at Lot 703 (#359) Gnangara Road, Wangara, in the City of Wanneroo.

The location of the subject site is shown in **Figure 1.** The Site is a large vacant triangular shaped Lot (about 2.13 hectares) that is surrounded by Destiny Way to the west, and Gnangara Road to the south and east. The site is located at the eastern edge of the Wangara Industrial Area.

The site has excellent access and egress opportunities having frontage to regional roads such as Gnangara Road to the south and east of the site. Currently the site has a crossover on Gnangara Road (southern boundary).

Key issues that will be addressed in this report include the traffic generation and distribution of the proposed development, operation of the development crossovers on surrounding roads and the capacity of the roundabout intersection on Gnangara Road and the nearby signalised intersection at Ocean Reef Road for the existing, 2023 and 2031 scenarios.

Figure 1: Location of the subject site

The location of the subject site within the *Metropolitan Region Scheme* context is illustrated in **Figure 2**. Review of the *Metropolitan Regional Scheme* confirms that Gnangara Road in this vicinity is covered by an "Other Regional Roads" Reservation. The subject site is zoned as *"Industrial"* in the *MRS*.

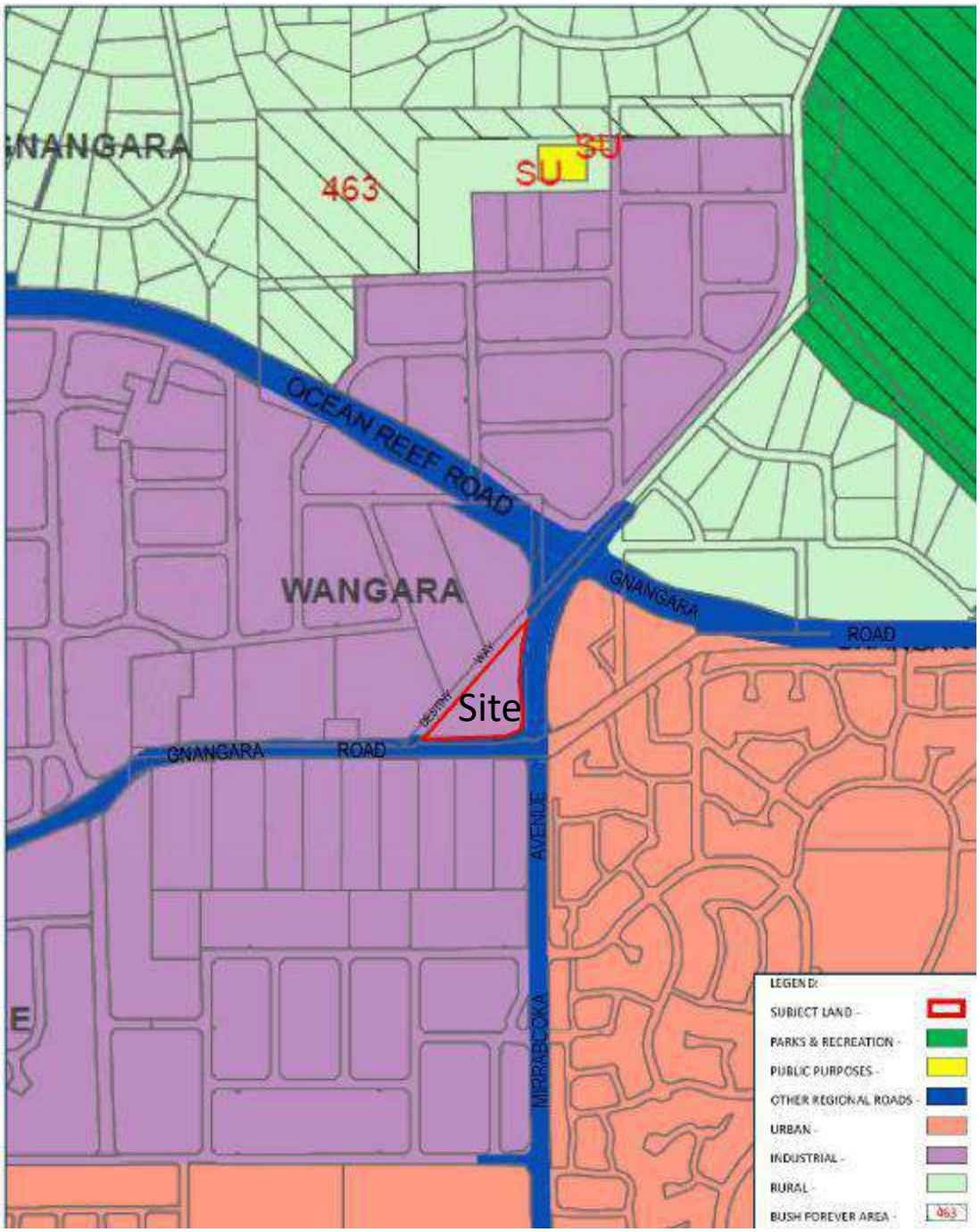


Figure 2. Site location within Metropolitan Region Scheme

2 Development Proposal

The development proposal is for a service industrial development which comprises the following elements:

- Fresh Frontier wholesale distribution facility;
- Showroom tenancies;
- Convenience Store (eight light vehicle fuelling positions);
- Carwash; and,
- Two auto workshops.

A copy of the development plan is provided in **Appendix A**.

The proposed development will be developed in stages. In the first stage the proposed Fresh Frontier will be developed (say 2023) and later on the rest of the land uses will be developed (say by year 2031).

Stage 1 development entails the construction of a processing facility (approximately 5,020m^2 GFA) as the prime manufacturing, processing and distribution facility where fresh product is received, processed, packed and stored for wholesale distribution throughout the Perth Metropolitan Region and regional Western Australia.

The layout of operations of the proposed Fresh Frontier is over two levels. The lower ground floor is for receival, processing, assembly, storage and distribution operation. All access to the lower ground floor is provided via Destiny Way (to dispatch area and service area) to facilitate truck receival and delivery which is separated from the primary administration and offices on the upper floor.

The upper floor is for Fresh Frontier administration and offices. The proposed car bays on the upper level are accessible by the existing and proposed development crossovers on Gnangara Road, which will be developed as part of the Stage 1 development. The location of the access points has undergone preliminary consultation with the Department of Planning, Lands and Heritage (DPLH). Transcore prepared a concept design for the proposed left in/ left out crossover on Gnangara Road (eastern boundary of the site). A copy of the concept design is provided in **Appendix B** of this TIA.

Parking provision shown in the development plan (**Appendix A**) is a total of 218 bays on site consisting of:

Lower Ground Level
7 Marked Bays
1 Disabled Bay

Upper Ground Level
188 Marked Bays
7 Disabled Bay
8 Refuelling Bays (at Convenience Store)
7 Motor cycle Bays

2.1 Vehicle Access

The proposed access/egress system intended to serve the development is shown in **Figure 3** and comprises the following elements:

- An existing full movement crossover on Gnangara Road southern boundary (C1);
- A proposed Left in/ Left out crossover on Gnangara Road eastern boundary (C2);
- A full movement crossover on Destiny Way for Fresh Frontier dispatch activity (C3 at lower level); and,
- Two full movement crossovers on Destiny Way for Fresh Frontier service area (C4 and C5 at lower level).

Figure 3. Proposed access/egress system

The proposed development crossover on Gnangara Road (eastern boundary) is located on an "Other Regional Road". Preliminary engagement has already occurred with DPLH in respect to the proposed treatment of access. Transcore has also developed a concept design for the proposed left turn slip lane on Gnangara Road which entails a 100m left turn slip lane (including taper) to satisfy Austroads guidelines for the posted speed limit of 70km/h (design speed 80km/h) on Gnangara Road. It should be noted that currently a bus stop (on Bus Route 376) exists to the south of the proposed Left in/ Left out crossover. This bus stop would need to be relocated to the north of the proposed Left in/ Left out crossover in consultation with the Public Transport Authority (PTA).

2.2 Queue Assessment

The stacking capacity of the proposed Convenience Store and queue analysis at the filling points have been assessed in more detail to investigate the impacts of higher-than-average site patronage during peak weekday operational periods (i.e. "cheap fuel days"). This sensitivity analysis was undertaken in order to confirm the capacity of the Convenience Store to operate satisfactorily under amplified traffic activity conditions.

Similarly, the stacking capacity of the proposed carwash was also reviewed to ensure that the carwash queue would not extend back to the proposed Convenience Store.

2.2.1 Queue analysis for light vehicles (busy day or cheap fuel day)

In order to demonstrate that during the potential extreme stacking incidents at the Convenience Store the level of potential queue can be managed within the site, with no impact on the proposed crossover on Gnangara Road, a queuing analysis is undertaken assuming occurrence of the "busy day" scenario.

The queueing assessment used for this project has previously been developed by Transcore and used for a number of similar projects for the purpose of queueing and stacking capacity assessments of service stations, carwash and fast-food restaurant drive-through facilities. The modelling methodology has been modified to fit service stations queueing at bowsers. Accordingly, this model was used to investigate the "busy day" scenario for service station operations.

The subject Convenience Store is proposed to include a total of four dispensers - 8 fuelling positions under the canopy (i.e. up to 8 vehicles can simultaneously refuel at any one time). The dispensers are placed in one by four format (one row of four dispensers) as shown on the proposed development plan attached in **Appendix A**.

Based on peak hour trip generation outlined in the TIA, it is estimated that there will be 112 (56 inbound / 56 outbound) trips during the weekday PM peak hour period, which is the busiest peak hour for combined traffic generation of the Convenience Store and Gnangara Road.

In order to ensure a robust assessment, it is conservatively assumed that the trade during the "busy day" scenario would be 50% higher than the typical weekday peak hour.

Accordingly, it is assumed that the site would attract about 84 vehicles per PM peak hour on this occasion.

Previous experience indicates that under normal circumstances the rate of service per fill point (time taken for a customer to park at a fill point, get fuel, pay for fuel and leave the fill point and Convenience Store site) is usually between 2-3 minutes. However, during the "busy day" scenario due to high turnover of vehicles and "pressure" from the patrons waiting to access the bowsers, the refuelling activity during these periods is shortened but still assumed to be at the higher end of the typical range – i.e. 3 min service time assumed.

Accordingly, conservatively a service rate of 20 vehicles per hour per fill point (60/3 = 20) is therefore assumed for the "busy day" peak hour.

Assuming that all bowsers will be in operation during the peak periods results in a service rate of 160 (8x20) vehicles per hour for a "busy day" scenario. It is also assumed that vehicles would enter the service channel with the shortest queue, therefore over the peak hour the transactions at each service channel would be evenly split.

Queue Modelling

A queue length analysis was undertaken to assess the provision of storage for vehicles within the service channels. For this purpose, an M/M/1 queuing model was adopted for each bowser. The M/M/1 is a single-server queue model that can be used to approximate simple systems.

The queueing model adopts the following assumptions:

- Vehicles arrive randomly following Poisson's probability distribution;
- Service time is exponentially distributed;
- There is one server per queue;
- The capacity of the queue in which arriving users wait before being served is infinite (for the purpose of identifying queue space requirements);
- The population of users (i.e., the pool of users) available to join the system is infinite; and,
- The queue is serviced on a first come, first served basis.

The results of the queuing analysis are detailed in **Figure 4**. In summary, critical peak hour analysis for light vehicles at the proposed Convenience Store established the following:

- The system utilisation rate is at 53% during the weekday "busy day" PM peak hour;
- The number of fill points in the system (refuelling) is 8;
- The expected number in the system is 5 vehicles during the weekday "busy day" PM peak hour;
- The expected time in the queue for a vehicle to get to a fill point is 4 seconds during the "busy day" PM peak hour;
- The expected total time in the queue is 184 seconds during the weekday "busy day" PM peak hour; and,

- The 95th percentile queue within the whole system is 8 vehicles during the "busy day" PM peak hour.

The queuing usually adopted for robust analysis is the 95th percentile queue. This queue length will not be exceeded 95% of the time.

Moreover, in addition to the 8 vehicles parked at the bowsers, at least another 8 vehicles can be stacked behind the cars filling up at the bowsers without impacting the traffic circulations within the proposed Convenience Store. According to the queuing analysis, this site can accommodate almost twice the typical PM peak hour queuing at the bowsers. Therefore, it is concluded that under typical peak conditions all queueing will be accommodated within the subject site and no stacking or queue backs onto Gnangara Road is expected.

M/M/s - Car Park Queuing Analysis (Poisson Arrival and Service Rates)

M/M/s

	vph	vps
Arrival rate	84	0.023333
Service rate	20	0.005556
Number of servers	8	8

Utilization	**52.50%**		**52.50%**	
P(0), probability that the system is empty	**0.0148**		**0.0148**	
Lq, expected queue length	**0.0828**	(cars)	**6.0000**	(metres)
L, expected number in system	**4.2828**	(cars)	**30.0000**	(metres)
Wq, expected time in queue	**0.0010**	(hours)	**3.5490**	(seconds)
W, expected total time in system	**0.0510**	(hours)	**183.5490**	(seconds)
Probability that a customer waits	**0.0749**		**0.0749**	
95% Queue	**8.0000**	(cars)	**48.0000**	(metres)

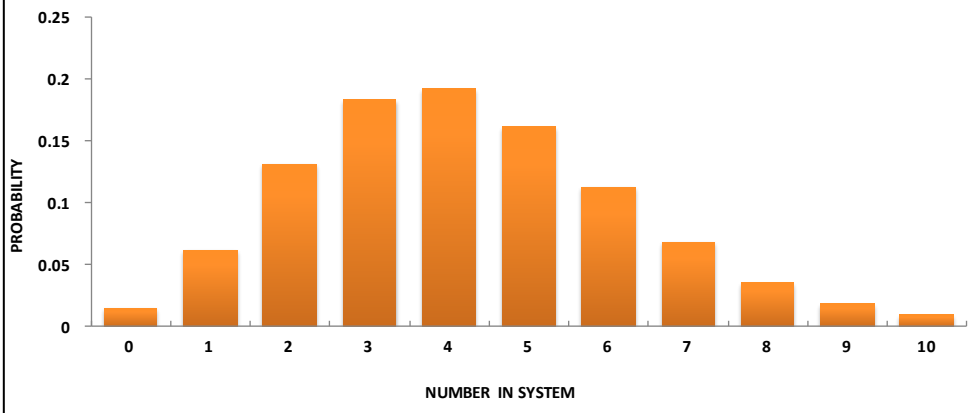


Figure 4. PM peak "cheap fuel" hour queuing analysis

2.2.2 Stacking Capacity for the car wash

The queue analysis of the proposed carwash facility was undertaken to investigate the potential queueing during the peak weekend operational periods.

The proposed carwash facility includes five parallel bays (i.e. five parallel service channels) so that each bay is accessible independently. The total service time per vehicle is expected to be about 10 minutes. This translates into a service rate of six vehicles per hour per bay. Therefore, the proposed five parallel bays would conservatively generate about 30vph.

The peak demand is anticipated to occur on Saturdays and Sundays between 9:00AM – 12noon.

A queue length analysis was undertaken to assess the potential queueing within the carwash system. For this purpose, an M/M/1 queuing model was adopted for each COB. The M/M/1 is a single-server queue model that can be used to approximate simple systems.

The results of the queuing analysis are detailed in Figure 5.

In summary, critical hour queuing analysis of the Convenience Store established the following for each case:

- The system utilisation is at 60% during the peak weekend hour;
- The expected number in the system is up to four vehicles;
- The expected time in the queue is up to one minute; and,
- The 95th percentile queue is eight cars (five being serviced and three cars waiting).

The queue length usually adopted for robust analysis is the 95th percentile queue. Based on the queue estimation model, the estimated queue will not exceed a queue length of five vehicles 95% of the time. It is therefore concluded that under typical peak conditions an occasional queue of three vehicle (i.e. three cars waiting in the queue) during the peak operation period of the carwash will be accommodated within the site with no impact on the operation of the Convenience Store.

M/M/s - Drive Through Queuing Analysis (Poisson Arrival and Service Rates)

M/M/s	vph	vps
Arrival rate	30	0.0083333
Service rate	10	0.0027778
Number of servers	5	5

Utilization	60.00%		60.00%	
P(0), probability that the system is empty	0.0466		0.0466	
Lq, expected queue length	0.3542	(cars)	6.0000	(metres)
L, expected number in system	3.3542	(cars)	24.0000	(metres)
Wq, expected time in queue	0.0118	(hours)	42.5073	(seconds)
W, expected total time in system	0.1118	(hours)	402.5073	(seconds)
Probability that a customer waits	0.2362		0.2362	
95% Queue	8.0000	(cars)	48.0000	(metres)

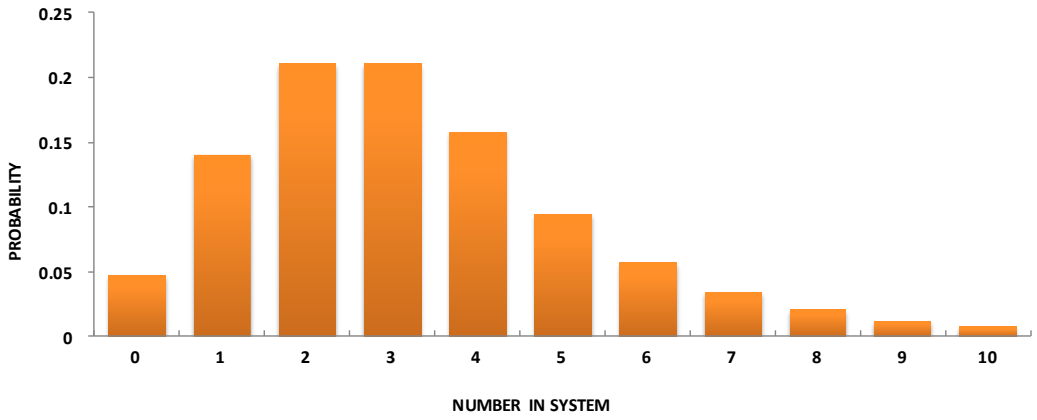


Figure 5. Peak weekend hour queuing analysis at the carwash facility

3 Existing Situation

3.1 Existing Road Network

Gnangara Road to the south and east of the subject site is classified as a Distributor A Road in the Main Roads WA Functional Road Hierarchy (refer **Figure 6**) and is constructed as a single carriageway road. It operates under the speed limit of 70 km/h in the vicinity of the subject site. Gnangara Road is classified as "Other Regional Road" in the MRS. The intersection of Gnangara Road and Ocean Reef Road is constructed as a signalised intersection.

Destiny Way is a local distributor road servicing industrial premises and is a local road under the control of the City of Wanneroo. It entails a 6.0m pavement and unsealed shoulders on both sides.

Figure 6: Existing road hierarchy

3.2 Existing Traffic Volumes on Roads

The most recent available SCATS data for the signalised intersection of Gnangara Road/ Ocean Reef Road was sourced from Main Roads WA. Transcore also undertook a video traffic survey at the roundabout intersection on Gnangara Road in November 2020. **Figure 7** illustrates the existing traffic counts on the surrounding roads and intersections.

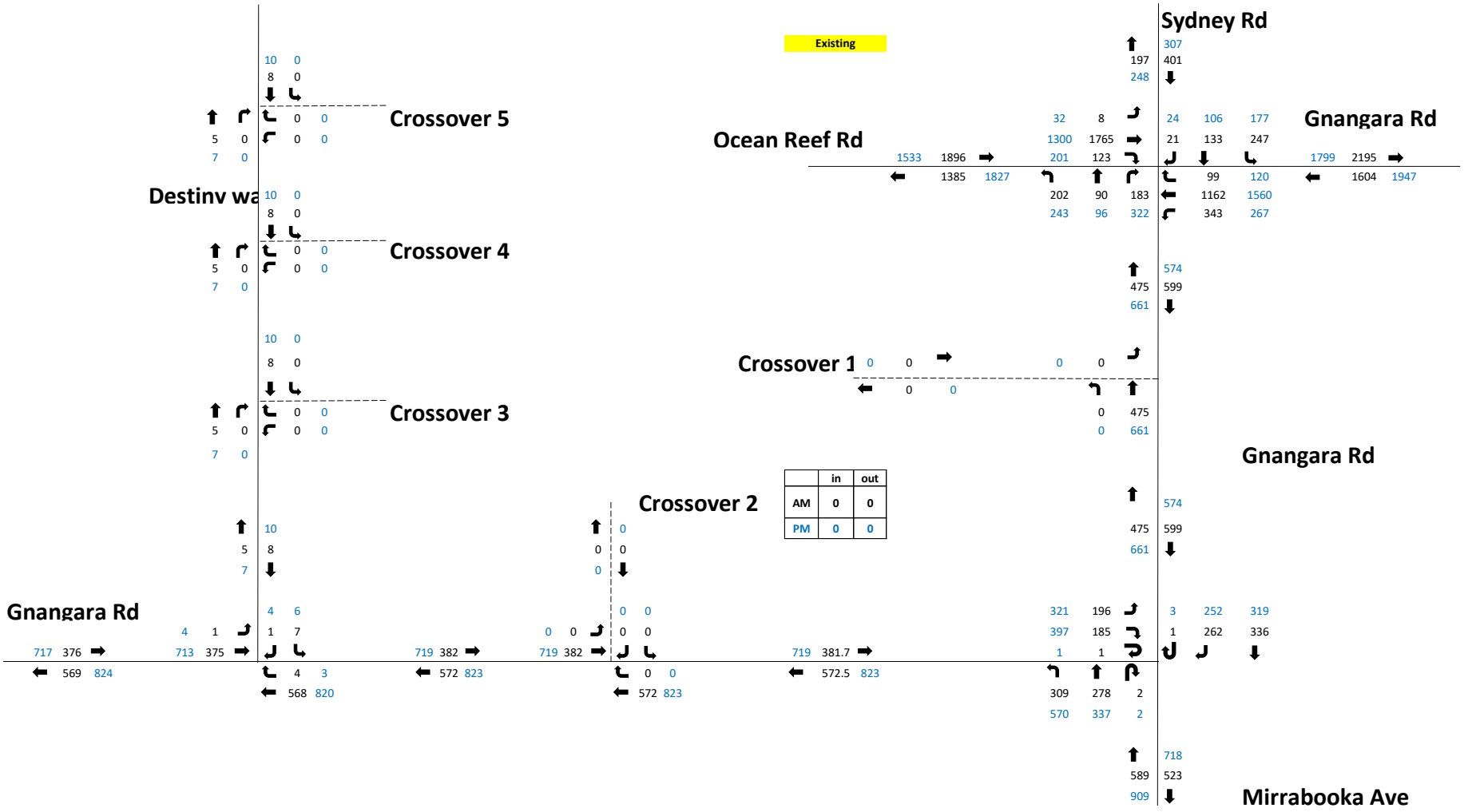


Figure 7: Existing traffic counts for AM/ PM peak hours

3.3 Heavy Vehicles

Restricted Access Vehicle (RAV) Network routes are designated by Main Roads WA for access by large heavy vehicle combinations.

Gnangara Road adjacent to the site forms part of RAV Tandem Drive Network 4 as shown in **Figure 8**. The RAV Tandem Drive Network 4 classification permits a variety of prime mover and trailer combinations, such as B-doubles up to a maximum length of 27.5m.

Figure 8. Existing heavy vehicle road network classification (RAV)

3.4 Public Transport Access

Available nearby transport services are shown in **Figure 9**. At present, the subject locality has convenient access to public transport services. Bus route 376 travels along Gnangara Road with a bus stop located on Gnangara Road on the eastern side of the subject site (Stop No: 27698).

Figure 9: Existing bus routes (source: Transperth)

3.5 Pedestrian and Cyclist Facilities

Currently, high quality shared paths are provided on Gnangara Road to the east of the subject site, as shown in the Department of Transport's Perth Bike Map series (refer **Figure 10**), which continues along Gnangara Road to the east of the traffic lights.

A 3.0m shared path is also in place along the western side of Gnangara Road (not shown on the Bike Map) which connects to the existing shared path on Ocean Reef Road to the north of the subject site.

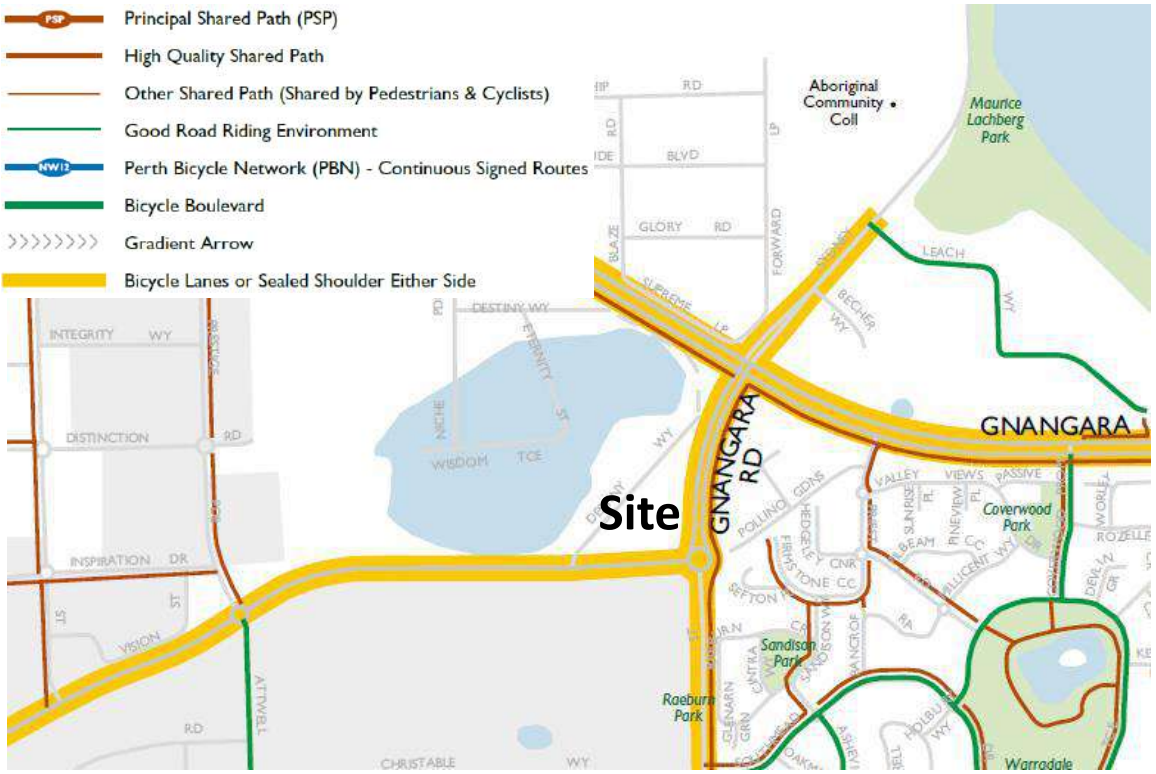


Figure 10: Bike Map

4 Changes to Surrounding Transport Networks

As part of this proposed development, a new left in/ left out crossover will be constructed on Gnangara Road (eastern boundary of the site) with a left turn slip lane approximately 100m long (including taper). The existing bus stop on Gnangara Road would also need to be relocated to the north of the proposed Left in/ Left out crossover with consultation with PTA.

The existing full movement crossover on Gnangara Road (southern boundary of the site) would be retained but modified to accommodate the turning movements of fuel tankers and service vehicles.

Three full movement crossovers are proposed on Destiny Way.

5 Integration with Surrounding Area

The proposed development entails a service industrial development which is in line with the existing and future surrounding land uses in the area.

The subject site is zoned 'Industrial' under the Metropolitan Region Scheme (MRS). The site forms the eastern edge of the Wangara Industrial area and is positioned as the interface between the Wangara Industrial area and the residential suburb of Landsdale, separated by Gnangara Road.

6 Traffic Assessment

6.1 Assessment Period

The assessment years that are adopted for the analysis are 2023 and 2031, with the following assumptions:

- 2023: Full development of proposed Fresh Frontier; and,
- 2031: Full development of the entire site.

6.2 Trip Generation and Distribution

Based on the information provided to Transcore, the proposed Fresh Frontier will operate with the following activities summarised in **Table 1** during the 24 hours of operation.

Table 1: Fresh Frontier activities and staff profile

items	Shift patterns	numbers
Deliveries	8 AM-4 PM	1 semi (20 meters) a day & various trucks (4 to 8 meters)
Dispatch	3 AM- 6 AM	various trucks (4 to 8 meters)
Rubbish	10 AM - 11 AM	3 times a week
Production Staff *	6 AM - 9 PM	65 Staff
Office Staff	8 AM-4:30 PM	12 Staff
Parked vehicle on site	Overnight	1 small van

**4 start at 6.00 am, 30 start between 8.00 am & 9.00am, 15 start at 1.00 pm*

Review of the activities summarised in **Table 1** indicates that the dispatch and deliveries would not happen during the road network peak hours. The main activities during the peak hours are the arrival and departure of the production and office staff which is estimated to be about 40 inbound and 4 outbound trips during the AM peak hour and the reverse during the PM peak hour.

As evident the trip generation of the proposed Fresh Frontier is estimated to be less than 100vph and according to WAPC Guidelines the traffic impact of the Stage 1 development is expected to be minimal and would not warrant further assessment.

The trip generation of the proposed Convenience Store, showroom and workshop areas have been estimated using the trip rates suggested in RTA NSW – Guide to Traffic Generating Developments and the Institute of Transport Engineers Trip Generation Manual (10th Edition).

Trip generation of the proposed carwash was estimated to be about 30vph assuming total service time per vehicle of about 10 minutes which translates into a service rate of six vehicles per hour per bay (total of 5 bays).

It should be noted that since showroom types of land uses typically generate minimal trips during the weekday AM peak hour of the adjacent road network (typically businesses commence operations around 9 or 10AM), adjustment factors have been applied for such land uses in an attempt to realistically represent the actual traffic generation of these land uses during this period.

Due to the land use mix within the proposed development incidences of multi-purpose trips[1] (i.e., cross-trade) are anticipated in 2031. Accordingly, the applied cross-trade adjustment is calculated to result in a moderate overall reduction in trip generation of approximately 25% (In accordance with RTA NSW – Guide to Traffic Generating Developments) mainly during the weekday afternoon and for overall daily trips.

Accordingly, it is estimated that after full development of all land uses, the proposal would generate a total of approximately 1,864 trips per weekday (both inbound and outbound) and approximately 200vph during the AM and PM peak hours (refer **Table 2**). **Table 3** summarises the passing trade and primary trips component of the total generated trips for 2031.

The distribution of traffic to and from the proposed development for year 2023 and 2031 was evaluated by considering the catchment area of the proposed development as well as the available access and egress routes to and from the site. Separate distributions were modelled for primary trips (non-passing trade) and pass-by trips. Accordingly, the total 2023 and 2031 development traffic are illustrated in **Figure 11** and **Figure 12.**

[1] *Multi-purpose trips are incidences where more than one shop/outlet are visited within the development (also referred to as "cross-trade")*

Table 2: 2031 Weekday daily, morning peak, afternoon peak hour trip generation for the proposed land uses

Land use	Quantity	Daily Rate	Weekd-AM Peak	Weekd-PM Peak	Cross Trade	Daily Trips	Weekd-AM trips	Weekd-PM trips	AM		PM	
									IN	OUT	IN	OUT
Fresh Frontier						165	44	44	40	4	4	40
Convenience Store	8	205.36	12.47	13.99	0.25	1232	100	84	50	50	42	42
Showroom	1500	0.33	0.0042	0.042	0.25	371	6	47	3	3	24	23
Workshop (Auto Tyres and Auto Motor servicing)	490	0.2	0.014	0.023	0.25	81	7	8	4	3	4	4
Carwash	5	48	6	6	0.25	180	30	23	15	15	11	12
TOTAL TRAFFIC						**2029**	**187**	**206**	**112**	**75**	**85**	**121**

Table 3: 2031 Passing trade and primary trips components of the trip generation

Passing Trade Component

		AM		PM	
	Daily Trips	IN	OUT	IN	OUT
0	0	0	0	0	0
60%	739	30	30	25	25
28%	104	1	1	7	7
43%	35	2	1	2	2
60%	108	9	9	7	7
	986	**42**	**41**	**41**	**41**

Primary Trips Component

	AM		PM	
Daily Trips	IN	OUT	IN	OUT
0	40	4	4	40
493	20	20	17	17
267	2	2	17	16
46	2	2	2	2
72	6	6	4	5
878	**70**	**34**	**44**	**80**

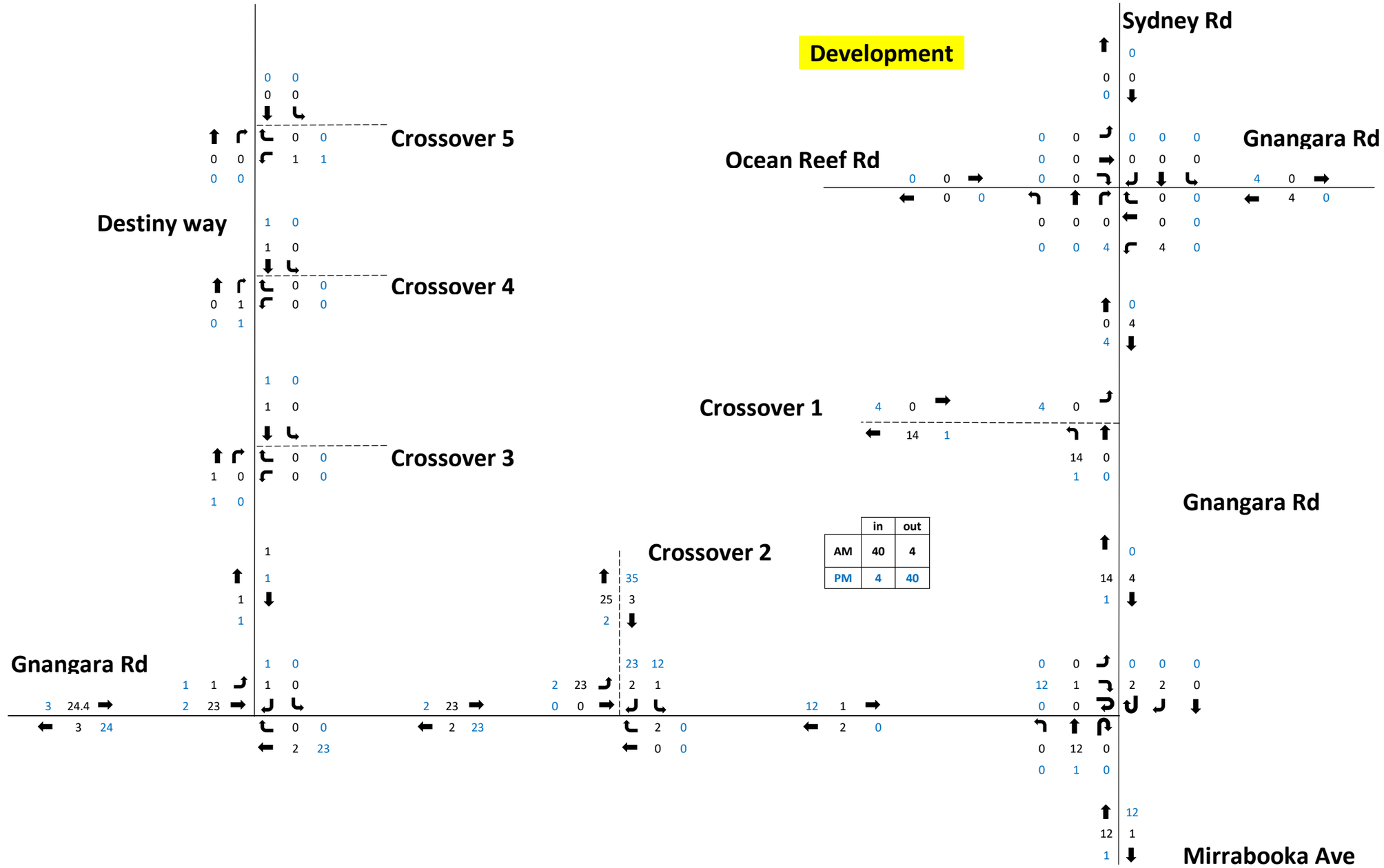


Figure 11: 2023- Total development traffic – AM Weekday, PM Weekday

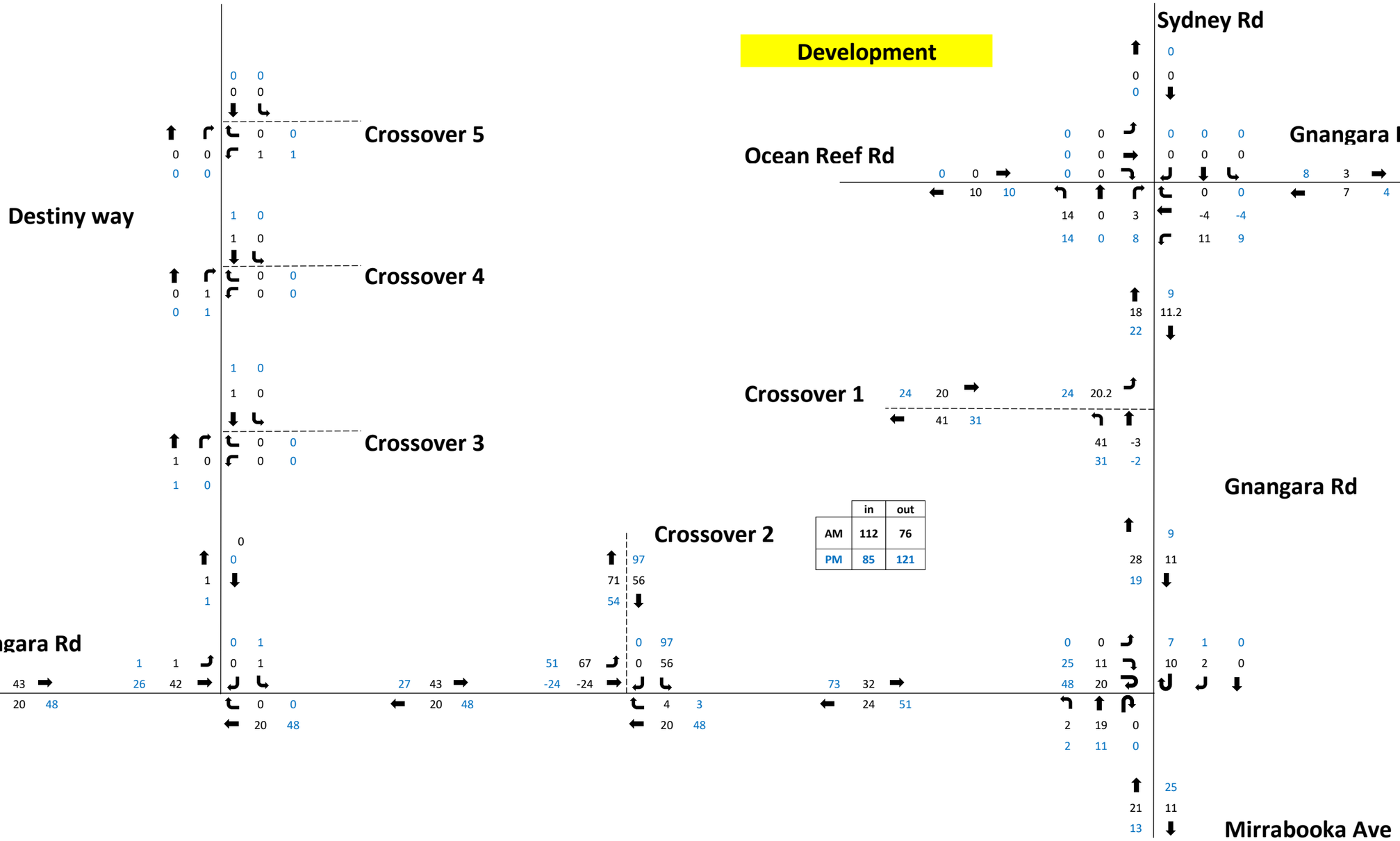


Figure 12: 2031- Total development traffic – AM Weekday, PM Weekday

6.3 Traffic Flow Forecasts

The existing traffic counts on surrounding roads and intersections were presented in **Figure 7.** The total projected traffic volumes for year 2023 and 2031 are presented in **Figure 13** and **Figure 14**.

For the 2023 and 2031 traffic projections on Gnangara Road a 2% annual traffic growth was applied to the through traffic on Gnangara Road.

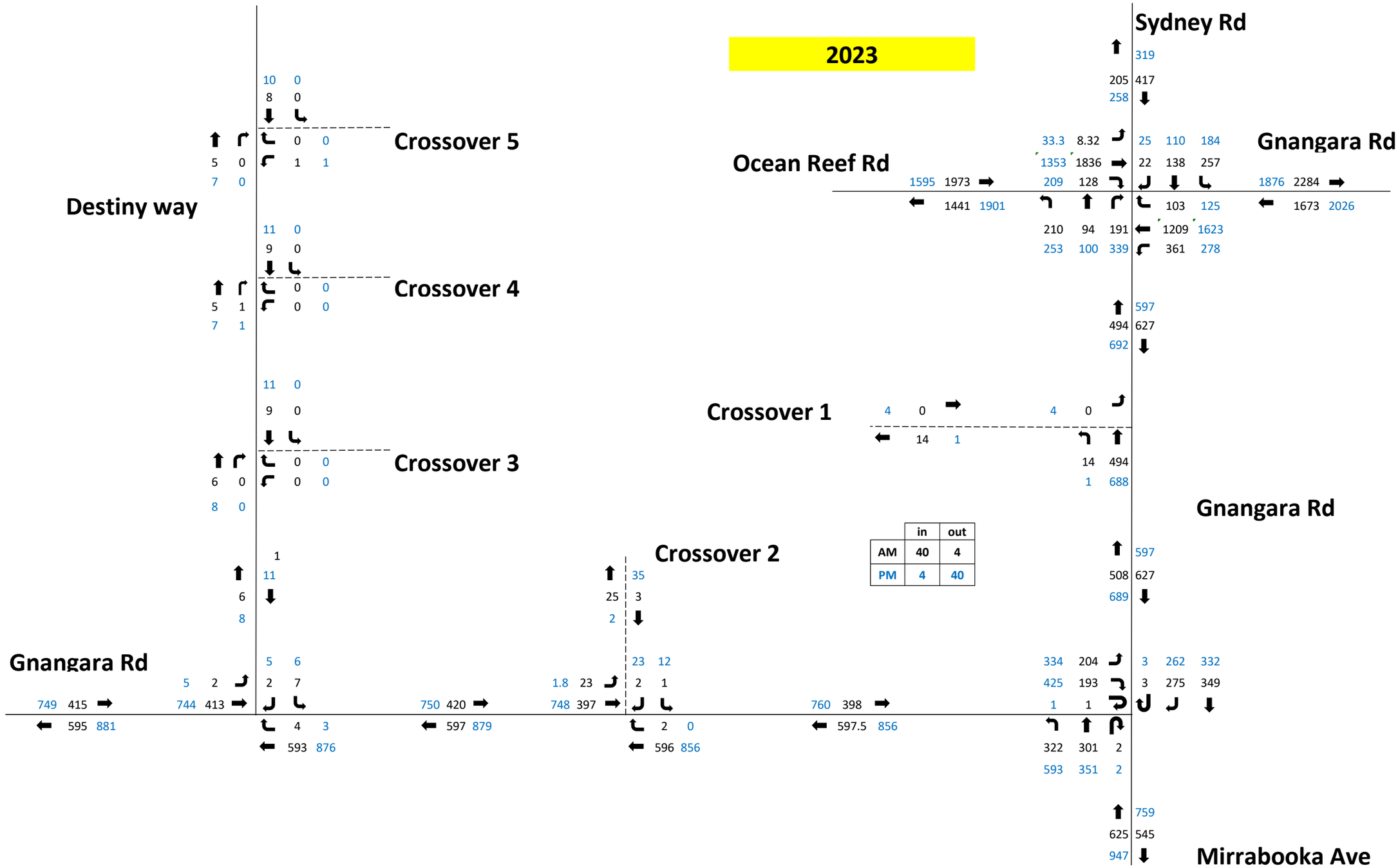


Figure 13: Total (2023) traffic – AM Weekday, PM Weekday

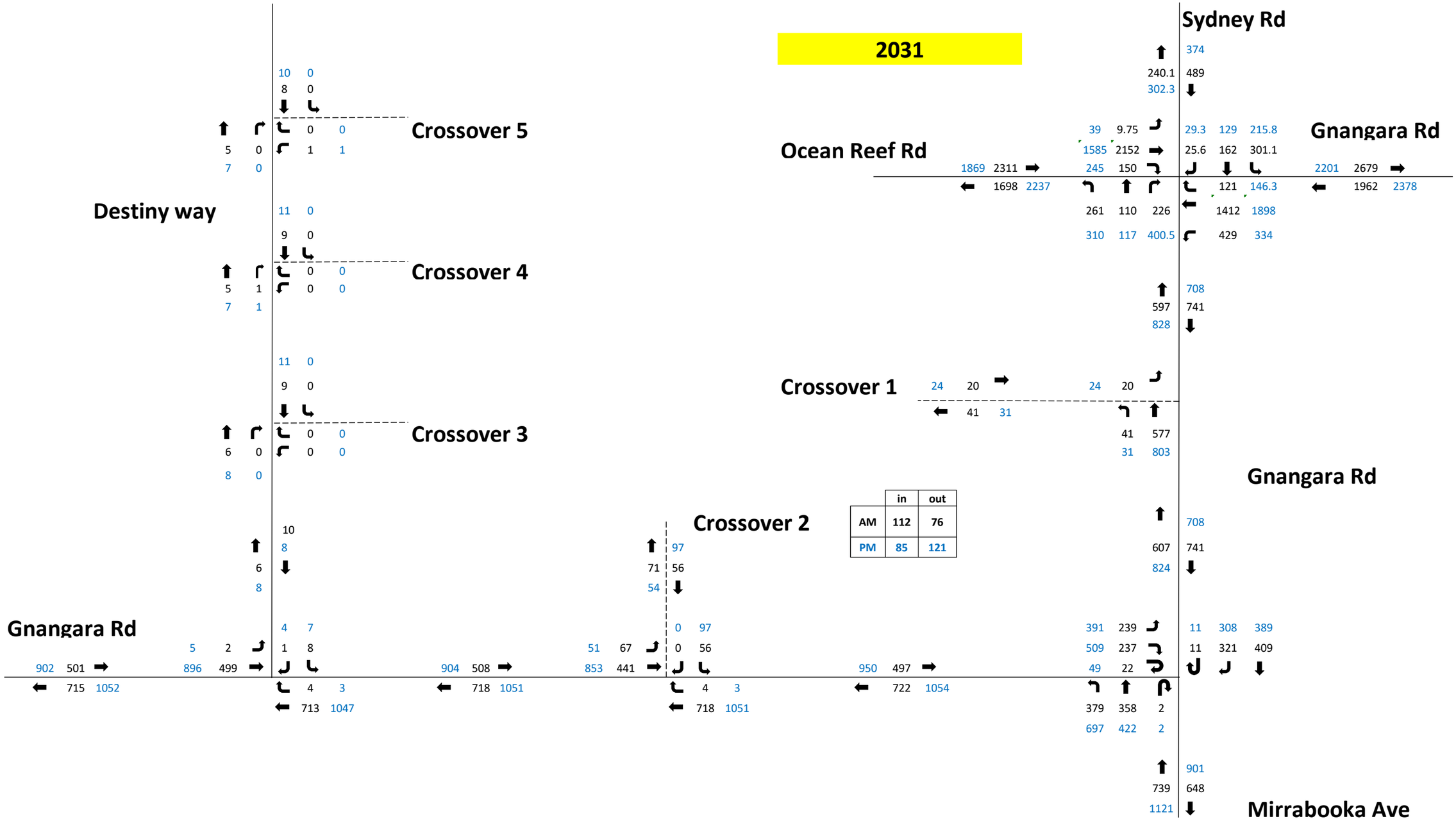


Figure 14: Total (2031) traffic – AM Weekday, PM Weekday

6.4 Analysis of Local Intersections & Crossovers

As mentioned before the trip generation of the proposed Fresh Frontier in 2023 is estimated to be less than 100vph and according to WAPC TIA Guidelines the traffic impact of the Stage 1 development is expected to be minimal and would not warrant further assessment. Therefore, capacity analysis was not undertaken for year 2023.

Network capacity analysis was undertaken using the SIDRA computer software package for year 2031. 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.

SIDRA Network models (refer **Figure 15**) were developed to assess the proposed development crossovers on Gnangara Road, intersection of Gnangara Road/ Destiny Way and nearby roundabout and signalised intersection as an integrated traffic network. The proposed Fresh Frontier crossovers on Destiny Way are used for dispatch and servicing and would not generate much traffic during the peak hours and therefore have not been included in the SIDRA network.

The results of the SIDRA network analysis for year 2031 are summarised in **Appendix C**. The SIDRA intersection models were coded with reference to Main Roads WA Operational Modelling Guidelines. All relevant parameters such as heavy vehicle groups, PCU factors, etc. were coded as per the Main Roads WA Guidelines.

Figure 15: SIDRA Network Model – 2031

SIGNALISED INTERSECTION

SIDRA analysis undertaken indicates that the existing signalised intersection of Gnangara Road/ Ocean Reef Road/ Sydney Road currently operates at capacity and with moderate queues on both approaches of Gnangara Road. The level of queues was observed during the AM and PM peak hours to develop the existing calibrated model. In order to achieve the calibration for the observed queues, the environment factor for some approaches of the signalised intersection were adjusted slightly in SIDRA. The suggested adjustments were kept the same for developing the future scenarios.

The intersection analysis for year 2031 indicates that the additional development traffic would not change significantly the traffic operation of the existing intersection. The reported LoS remains the same during the AM peak hour and would change slightly for some of the movements during the PM peak hours.

GNANGARA ROAD ROUNDABOUT

SIDRA analysis and site observations undertaken indicate that the existing Gnangara Road roundabout currently operates satisfactorily with LoS A and moderate queues and delays. The level of queues was observed during the AM and PM peak hours to develop the existing calibrated model. In order to achieve the calibration for the observed queues, the area factor for Gnangara Road eastbound approach were adjusted slightly in SIDRA. The suggested adjustment was kept the same for developing the future scenarios.

GNANGARA ROAD/ DESTINY WAY INTERSECTION

SIDRA analysis and site observations undertaken indicate that the existing intersection of Gnangara Road/ Destiny Way operates satisfactorily with minimal queues at the intersection. Currently some delays are experienced for the right turn movement out of Destiny Way into Gnangara Road which is related to the through traffic on Gnangara Road. However, the reported queue is less than one car on Destiny Way.

The proposal would not add any additional traffic on Destiny Way and its approach to the intersection with Gnangara Road during the peak hours. All the delivery and services would happen outside of the road network peak hours. Accordingly, no significant changes to the operation of the intersection are expected.

DEVELOPMENT CROSSOVERS

SIDRA analysis indicates that the proposed left in/ left out crossover on Gnangara Road (eastern boundary of the site) would operate satisfactorily and well within capacity. The full movement crossover on Gnangara Road (southern boundary of the site) would also operate satisfactorily during the peak hours except the right-out movement from the development to Gnangara Road due to the sheer volume of traffic on Gnangara Road. It is expected that the right-out movements would turn left at the crossover and make a U-turn at the roundabout intersection on Gnangara Road instead. It should be noted that the projected right turn movements are minimal and would not affect the traffic operation of the roundabout intersection. The right turn movements would still happen satisfactorily during the rest of the day (off-peak).

NETWORK OPERATION

Relevant SIDRA network outputs were reviewed for assessed peak hours to establish the operation of the development crossovers and the nearby roundabout and signalised intersections on Gnangara Road as an integrated network.

As detailed in **Figure 16** and **Figure 17** there are no queue back from the nearby intersections to the development crossovers. Similarly, no queue back from development crossovers to the nearby intersections is reported.

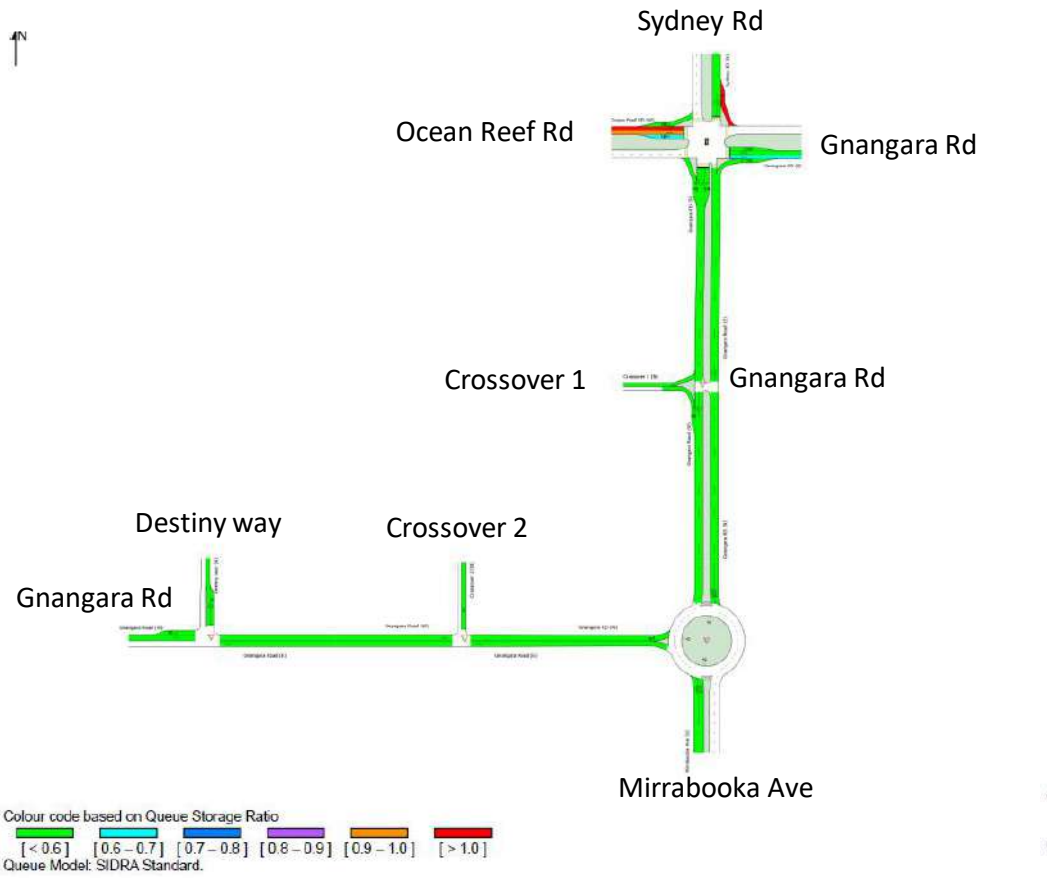


Figure 16: Weekday AM peak hour network analysis – queue storage ratio (2031)

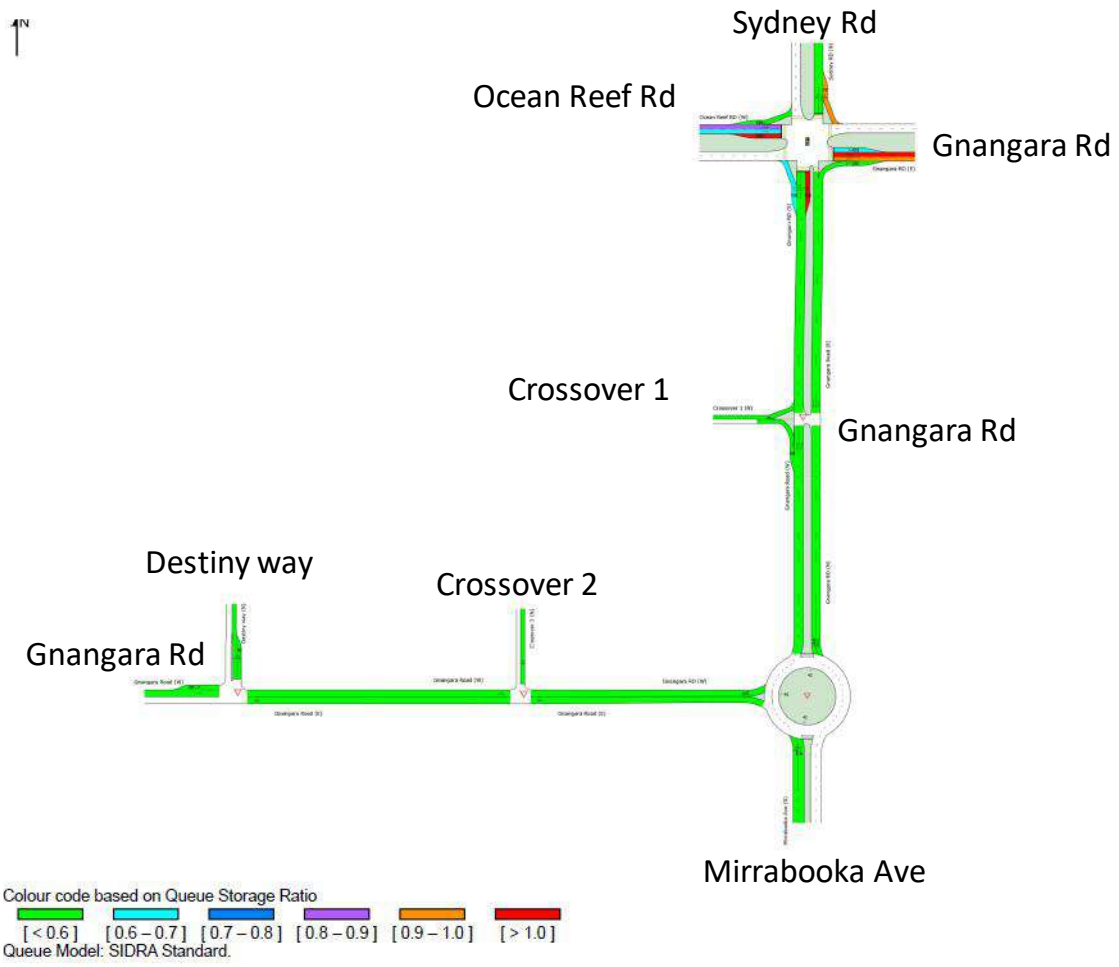


Figure 17: Weekday PM peak hour network analysis – queue storage ratio (2031)

6.5 Impact 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 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 development will not increase traffic flows near the quoted WAPC threshold to warrant further detailed analysis. The proposed development will not increase traffic on any lanes on the surrounding road network by more than 100vph,

therefore the impact on the surrounding road network and intersection will not be significant.

6.6 Impact on Neighbouring Areas

Due to the location of the subject site, its accessibility via major regional roads, significant passing trade component and limited number of residential dwellings within the immediate vicinity, the traffic impact from the development in the area will be limited.

6.7 Traffic Noise and Vibration

Due to the location of the subject site, its accessibility via major regional roads, significant passing trade component, the traffic impact from the development in the area will be limited.

It generally requires a doubling of traffic volumes on a road to produce a perceptible 3dB(A) increase in road noise. The proposed development will not increase traffic volumes or noise on surrounding roads anywhere near this level.

7 Parking

The proposed parking provision for the proposed Fresh Frontier is 110 bays including 3 disabled bays. The parking provision for the other land uses within the site is 107 bays including five disabled bays and eight refuelling bays for the proposed Convenience Store.

It is considered that the proposed parking provision is adequate to meet the parking demand of the proposed development.

8 Provision for Heavy Vehicles

There are a number of heavy vehicles associated with different land uses within the proposed development as explained below:

Fresh Frontier
The dispatch will happen from the proposed dedicated crossover on Destiny Way which leads to the ground floor and provides access/ egress to three loading bays on the ground floor. The Ground Floor level is set so that there is 2% cross fall to the verge and it is about 1% over the landscape strip. The dispatch area is under the suspended slab and is level. The dispatch vehicles are up to 8.8m long and are expected to have sufficient height clearance when reversing to the ground floor.

Turn path analysis undertaken confirms satisfactory traffic movements of the dispatch trucks reversing to the dispatch area and exiting the dispatch area in forward gear. It should be noted that the dispatching will start at 3.00 am and the trucks would leave the site by 6.00 am. Therefore, no traffic is expected on Destiny Way to oppose/ conflict with the movements of the delivery trucks entering and exiting the dispatch area.

The largest truck that would enter and exit the Fresh Frontier service area is a 19.0m semi-trailer which would visit the site once a day. Four to six deliveries per day are also expected by smaller trucks up to 8.8m long.

Turn path analysis undertaken for 19.0m semi-trailer and 8.8m delivery trucks confirms satisfactory traffic movements within the Fresh Frontier service area and its crossovers on Destiny Way.

Convenience Store
19.0m fuel tankers are expected to be used for the fuel deliveries. The fuel tankers would enter the site via the existing crossover on Gnangara Road (southern boundary) and exit the site from the proposed left in/ left out crossover on Gnangara Road (eastern boundary). Minor modifications to the existing crossover on Gnangara Road (southern boundary) are required to accommodate the turning movements of fuel tankers.

12.5m service vehicles are expected to be used for deliveries which show satisfactory access, circulation and egress within the site.

Turn path analysis undertaken for 19.0m fuel tanker and 12.5m service vehicle are presented in **Appendix D**.

Carwash
8.8m service vehicles are expected to be used for the rubbish collection and deliveries associated with the proposed carwash and are expected to visit the site outside of the peak operating time of the proposed carwash. Turn path analysis undertaken for 8.8m service vehicles are presented in **Appendix D** and confirms satisfactory traffic movements of the 8.8m trucks entering and exiting the site.

Showroom and Workshops

8.8m service vehicles are expected to use the proposed loading bays provided for the proposed showroom and workshops which show satisfactory access, circulation and egress within the site.

Turn path analysis undertaken for 8.8m service vehicles are presented in **Appendix D**.

9 Public Transport Access

Details of the available public transport services in this locality are provided in section 3.4 of this report. At present, bus stop (Stop No: 27698) on Bus route 376 is located to the south of the proposed left in/ left out crossover on Gnangara Road and will be located within the proposed left turn slip lane which is suggested for this crossover. It is recommended to relocate the existing bus stop to the north of the proposed crossover in consultation with PTA.

10 Pedestrian Access

Details of the pedestrian and cyclist facilities in this locality are provided in section 3.5 of the report.

11 Conclusions

This TIA has been prepared by Transcore on behalf of The Wangara Unit Trust with regards to the proposed commercial development at Lot 703 (#359) Gnangara Road, Wangara, in the City of Wanneroo.

The proposed development will be developed in stages. In the first stage the proposed Fresh Frontier will be developed (say 2023) and later on the rest of the land uses will be developed (say by year 2031).

The assessment years that are adopted for the analysis are 2023 and 2031, with the following assumptions:

- 2023: Full development of proposed Fresh Frontier; and,
- 2031: Full development of the entire site.

The trip generation of the proposed Fresh Frontier is estimated to be less than 100vph and according to WAPC Guidelines the traffic impact of the Stage 1 development is expected to be minimal and would not warrant further assessment.

The layout of operations of the proposed Fresh Frontier is over two levels. All access to the lower ground floor is provided via Destiny Way (to dispatch area and service area) to facilitate truck receival and delivery which is separated from the primary administration and offices on the upper floor.

The upper floor is for Fresh Frontier administration and offices. The proposed car bays provided on the upper level are accessible by the existing and proposed development crossovers on Gnangara Road which will be developed as part of the Stage 1 development.

Preliminary engagement has already occurred with DPLH in respect to the proposed treatment of access. Transcore has also developed a concept design for the proposed left turn slip lane Gnangara Road (eastern boundary of the site) which entails a 100m left turn slip lane (including taper) in accordance with Austroads guidelines for the posted speed limit of 70kmh on Gnangara Road. It should be noted that currently a bus stop (on Bus Route 376) exists to the south of the proposed Left in/ Left out crossover. This bus stop would need to be relocated to the north of the proposed Left in/ Left out crossover in consultation with the Public Transport Authority (PTA).

It is estimated that after full development of all land uses, the proposal would generate a total of approximately 1,864 trips per weekday (both inbound and outbound) and approximately 200vph during the AM and PM peak hours in 2031.

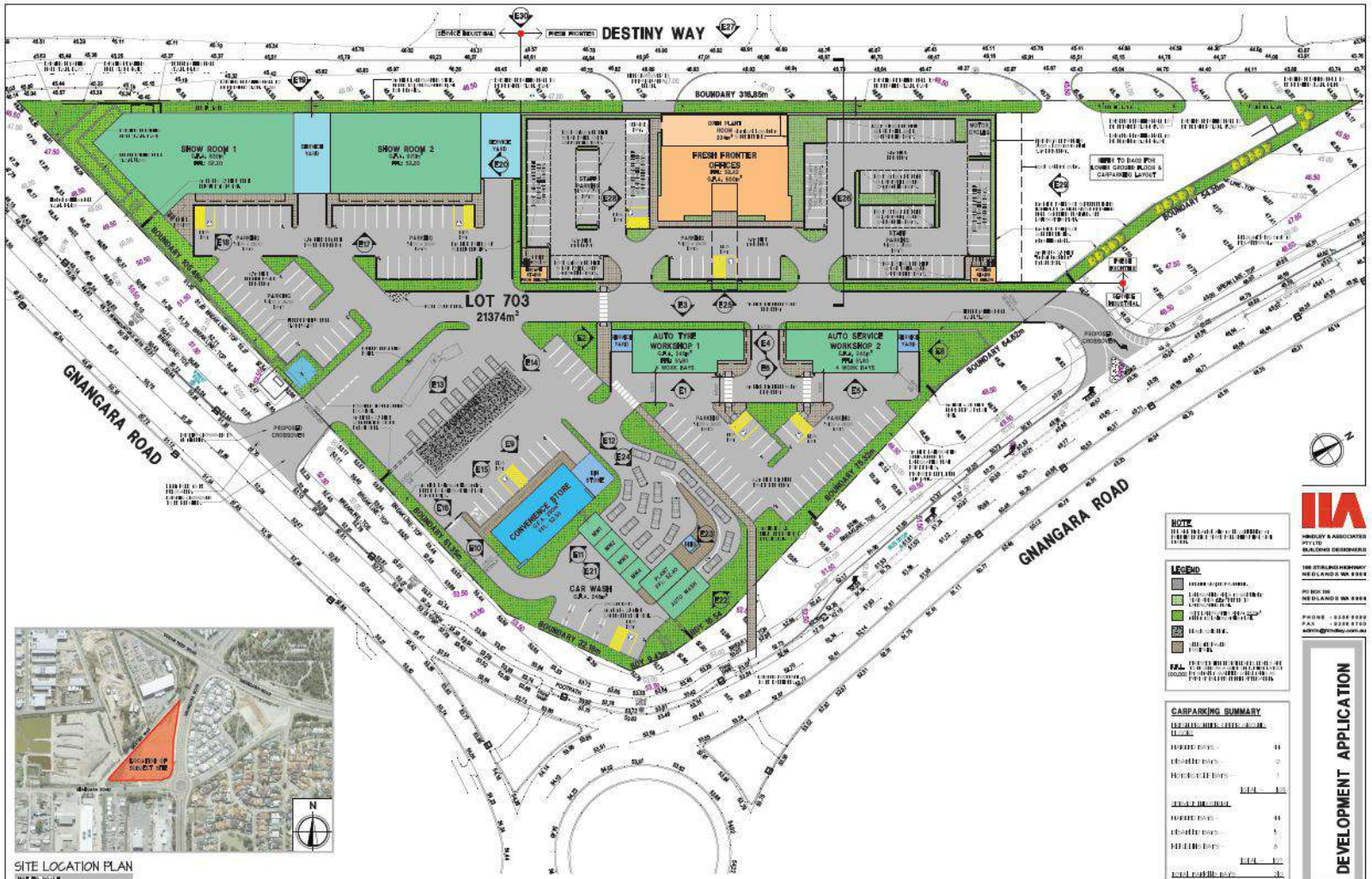
SIDRA Network models were developed to assess the proposed development crossovers on Gnangara Road, intersection of Gnangara Road/ Destiny Way and nearby roundabout and signalised intersection as an integrated traffic network for AM and PM peak hours.

Relevant SIDRA network outputs were reviewed for assessed peak hours to establish the operation of the development crossovers and the nearby roundabout and signalised intersections on Gnangara Road as an integrated network. As detailed in **Figure 16** and **Figure 17** there are no queuing of traffic back from the nearby intersections to the development crossovers. Similarly, no queue back from development crossovers to the nearby intersections is reported.

Appendix A

PROPOSED DEVELOPMENT

20 years anniversary
transcore
transport planning
traffic engineering
modelling



SITE LOCATION PLAN

NOT TO SCALE

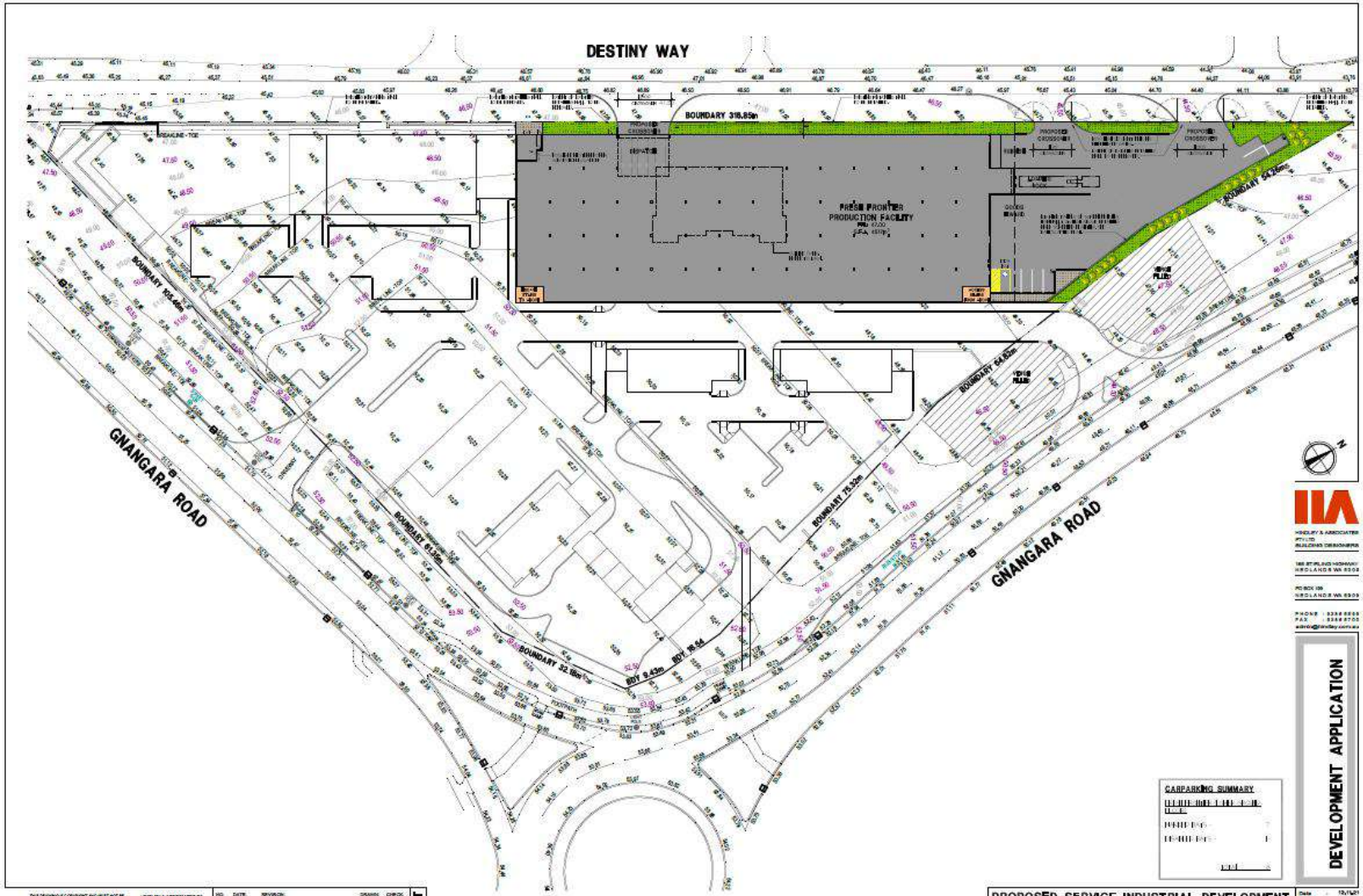
PROPOSED SITE PLAN (UPPER GROUND LEVEL)

SCALE 1:500

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

DA01 B

A1 SHEET


DESTINY WAY
GNANGARA ROAD
GNANGARA ROAD
BOUNDARY 318.85m
BOUNDARY 105.46m
BOUNDARY 61.35m
BOUNDARY 32.18m
BDY 9.43m
BDY 16.54
BOUNDARY 75.32m
BOUNDARY 64.82m
BOUNDARY 54.26m
FRESH FRONTIER PRODUCTION FACILITY
CARPARKING SUMMARY
DEVELOPMENT APPLICATION
A1 SHEET
PROPOSED SITE PLAN LOWER GROUND LEVEL
PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST
DA02
B

Appendix B

PROPOSED CONCEPT LAYOUT FOR THE DEVELOPMENT

CROSSOVER ON GNANGARA ROAD (EASTERN BOUNDARY)

20 years anniversary
transcore
transport planning
traffic engineering
modelling

Lot 703 (#359) Gnangara Road, Wangara

Gnangara Road left turn slip lane

t21.166.sk19

29/10/2021

Scale: 1:500 @ A3

Appendix C

INTERSECTION ANALYSIS – SIDRA RESULTS

MOVEMENT SUMMARY

Site: [Gnangara Rd & Destiny way - Existing - AM (Site Folder: Existing)]

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Gnangara Road (E)														
5	T1	568	15.8	598	15.8	0.340	0.1	LOS A	0.1	0.9	0.01	0.00	0.02	69.7
6	R2	4	20.0	4	20.0	0.340	10.1	LOS B	0.1	0.9	0.01	0.00	0.02	45.0
Approach		572	15.8	602	15.8	0.340	0.1	NA	0.1	0.9	0.01	0.00	0.02	69.5
North: Destiny way (N)														
7	L2	7	20.0	7	20.0	0.008	6.9	LOS A	0.0	0.3	0.46	0.58	0.46	36.9
9	R2	1	20.0	1	20.0	0.006	24.7	LOS C	0.0	0.2	0.84	0.85	0.84	34.6
Approach		8	20.0	8	20.0	0.008	9.1	LOS A	0.0	0.3	0.51	0.61	0.51	36.4
West: Gnangara Road (W)														
10	L2	1	20.0	1	20.0	0.001	6.8	LOS A	0.0	0.0	0.00	0.61	0.00	52.5
11	T1	375	20.1	395	20.1	0.228	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		376	20.1	396	20.1	0.228	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.8
All Vehicles		956	17.5	1006	17.5	0.340	0.2	NA	0.1	0.9	0.01	0.01	0.01	69.3

MOVEMENT SUMMARY

Site: [Gnangara Rd & Sydney Rd & Ocean Reef Rd - Existing - AM (Site Folder: Existing)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Gnangara RD (S)														
10	L2	202	12.0	213	12.0	0.167	10.2	LOS B	2.9	24.5	0.34	0.68	0.34	51.7
11	T1	90	12.0	95	12.0	0.159	34.8	LOS C	4.0	33.0	0.82	0.65	0.82	27.6
12	R2	183	12.0	193	12.0	*0.579	62.6	LOS E	5.3	43.8	1.00	0.78	1.02	25.6
Approach		475	12.0	500	12.0	0.579	35.0	LOS D	5.3	43.8	0.69	0.71	0.69	33.8
East: Gnangara RD (E)														
1	L2	343	16.3	361	16.3	0.117	7.9	LOS A	0.0	0.0	0.00	0.59	0.00	59.6
2	T1	1162	16.3	1223	16.3	0.502	28.1	LOS C	24.8	219.6	0.83	0.72	0.83	49.7
3	R2	99	16.3	104	16.3	0.621	64.9	LOS E	5.7	50.8	1.00	0.77	1.04	24.9
Approach		1604	16.3	1688	16.3	0.621	26.0	LOS C	24.8	219.6	0.66	0.70	0.66	48.9
North: Sydney RD (N)														
4	L2	247	16.1	260	16.1	0.248	17.8	LOS B	6.7	57.9	0.56	0.75	0.56	44.2
5	T1	133	16.1	140	16.1	*0.245	36.8	LOS D	6.0	52.0	0.85	0.71	0.85	26.6
6	R2	21	16.1	22	16.1	0.138	60.6	LOS E	1.2	10.0	0.97	0.70	0.97	25.2
Approach		401	16.1	422	16.1	0.248	26.3	LOS C	6.7	57.9	0.68	0.73	0.68	36.9
West: Ocean Reef RD (W)														
7	L2	8	15.2	8	15.2	0.004	8.8	LOS A	0.1	0.5	0.20	0.62	0.20	57.1
8	T1	1765	15.2	1858	15.2	*0.784	31.8	LOS C	45.0	392.2	0.94	0.84	0.94	47.3
9	R2	123	15.2	129	15.2	*0.760	66.8	LOS E	7.3	63.8	1.00	0.83	1.17	25.3
Approach		1896	15.2	1996	15.2	0.784	34.0	LOS C	45.0	392.2	0.94	0.84	0.95	45.4
All Vehicles		4376	15.3	4606	15.3	0.784	30.5	LOS C	45.0	392.2	0.79	0.76	0.79	44.7

MOVEMENT SUMMARY

Site: [Mirrabooka Ave & Gnangara Rd - Existing - AM (Site Folder: Existing)]

Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Mirrabooka Ave (S)														
10	L2	309	12.0	325	12.0	0.261	5.5	LOS A	1.6	13.5	0.49	0.56	0.49	52.4
11	T1	278	12.0	293	12.0	0.261	5.7	LOS A	1.6	13.5	0.52	0.51	0.52	45.5
12u	U	2	12.0	2	12.0	0.261	15.7	LOS B	1.5	12.7	0.52	0.51	0.52	60.7
Approach		589	12.0	620	12.0	0.261	5.6	LOS A	1.6	13.5	0.51	0.54	0.51	48.7
North: Gnangara RD (N)														
5	T1	336	16.1	354	16.1	0.262	4.7	LOS A	1.7	14.9	0.46	0.46	0.46	54.6
6	R2	262	16.4	276	16.4	0.262	12.5	LOS B	1.7	14.5	0.49	0.65	0.49	25.0
6u	U	1	16.4	1	16.4	0.262	15.4	LOS B	1.7	14.5	0.49	0.65	0.49	26.8
Approach		599	16.2	631	16.2	0.262	8.1	LOS A	1.7	14.9	0.47	0.54	0.47	40.2
West: Gnangara RD (W)														
7	L2	196	20.1	206	20.1	0.211	3.6	LOS A	1.1	9.6	0.35	0.59	0.35	43.1
9	R2	185	16.1	195	16.1	0.211	10.5	LOS B	1.1	9.6	0.35	0.59	0.35	52.1
9u	U	1	20.1	1	20.1	0.211	13.4	LOS B	1.1	9.6	0.35	0.59	0.35	36.9
Approach		382	18.2	402	18.2	0.211	7.0	LOS A	1.1	9.6	0.35	0.59	0.35	48.4
All Vehicles		1570	15.1	1653	15.1	0.262	6.9	LOS A	1.7	14.9	0.46	0.55	0.46	45.1

MOVEMENT SUMMARY

Site: [Gnangara Rd & Destiny way - Existing - PM (Site Folder: Existing)]

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Gnangara Road (E)														
5	T1	820	15.8	863	15.8	0.491	0.3	LOS A	0.3	2.5	0.02	0.00	0.03	69.2
6	R2	3	20.0	3	20.0	0.491	25.0	LOS D	0.3	2.5	0.02	0.00	0.03	44.6
Approach		823	15.8	866	15.8	0.491	0.4	NA	0.3	2.5	0.02	0.00	0.03	69.1
North: Destiny way (N)														
7	L2	6	20.0	6	20.0	0.014	11.3	LOS B	0.0	0.5	0.69	0.77	0.69	32.8
9	R2	4	20.0	4	20.0	0.147	123.3	LOS F	0.4	3.7	0.98	0.99	0.98	15.5
Approach		10	20.0	11	20.0	0.147	56.1	LOS F	0.4	3.7	0.80	0.86	0.81	19.8
West: Gnangara Road (W)														
10	L2	4	20.0	4	20.0	0.003	6.8	LOS A	0.0	0.0	0.00	0.61	0.00	52.5
11	T1	713	20.1	751	20.1	0.434	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	69.6
Approach		717	20.1	755	20.1	0.434	0.2	NA	0.0	0.0	0.00	0.00	0.00	69.4
All Vehicles		1550	17.8	1632	17.8	0.491	0.6	NA	0.4	3.7	0.02	0.01	0.02	68.3

MOVEMENT SUMMARY

Site: [Gnangara Rd & Sydney Rd & Ocean Reef Rd - Existing - PM (Site Folder: Existing)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Gnangara RD (S)														
10	L2	243	12.0	256	12.0	0.200	13.8	LOS B	4.9	40.6	0.48	0.71	0.48	48.4
11	T1	96	12.0	101	12.0	0.155	29.7	LOS C	3.7	31.0	0.80	0.63	0.80	30.4
12	R2	322	12.0	339	12.0	*0.927	70.4	LOS E	9.9	82.3	1.00	1.02	1.57	23.8
Approach		661	12.0	696	12.0	0.927	43.7	LOS D	9.9	82.3	0.78	0.85	1.06	30.5
East: Gnangara RD (E)														
1	L2	267	16.3	281	16.3	0.091	7.9	LOS A	0.0	0.0	0.00	0.59	0.00	59.6
2	T1	1560	16.3	1642	16.3	*0.893	43.0	LOS D	43.9	388.0	1.00	1.00	1.15	41.4
3	R2	120	16.3	126	16.3	0.513	56.4	LOS E	6.1	54.0	1.00	0.77	1.00	27.2
Approach		1947	16.3	2049	16.3	0.893	39.1	LOS D	43.9	388.0	0.86	0.93	0.98	41.7
North: Sydney RD (N)														
4	L2	177	16.1	186	16.1	0.161	14.9	LOS B	3.7	31.8	0.49	0.72	0.49	46.5
5	T1	106	16.1	112	16.1	*0.177	31.0	LOS C	4.2	35.9	0.81	0.67	0.81	29.6
6	R2	24	16.1	25	16.1	0.144	55.1	LOS E	1.2	10.3	0.96	0.71	0.96	26.7
Approach		307	16.1	323	16.1	0.177	23.6	LOS C	4.2	35.9	0.64	0.70	0.64	38.6
West: Ocean Reef RD (W)														
7	L2	32	15.2	34	15.2	0.017	8.9	LOS A	0.2	2.0	0.22	0.64	0.22	56.9
8	T1	1300	15.2	1368	15.2	0.739	33.9	LOS C	30.7	267.7	0.96	0.84	0.96	46.1
9	R2	201	15.2	212	15.2	*0.847	62.0	LOS E	11.1	97.0	1.00	0.89	1.27	26.5
Approach		1533	15.2	1614	15.2	0.847	37.0	LOS D	30.7	267.7	0.95	0.84	0.98	43.1
All Vehicles		4448	15.3	4682	15.3	0.927	38.0	LOS D	43.9	388.0	0.86	0.87	0.97	40.4

MOVEMENT SUMMARY

Site: [Mirrabooka Ave & Gnangara Rd - Existing - PM (Site Folder: Existing)]

Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Mirrabooka Ave (S)														
10	L2	570	12.0	600	12.0	0.458	5.7	LOS A	3.5	29.1	0.60	0.60	0.60	51.7
11	T1	337	12.0	355	12.0	0.349	5.9	LOS A	2.3	18.8	0.57	0.52	0.57	45.1
12u	U	2	12.0	2	12.0	0.349	15.8	LOS B	2.3	18.8	0.57	0.52	0.57	60.3
Approach		909	12.0	957	12.0	0.458	5.8	LOS A	3.5	29.1	0.59	0.57	0.59	48.8
North: Gnangara RD (N)														
5	T1	319	16.1	336	16.1	0.299	6.1	LOS A	2.2	18.8	0.68	0.58	0.68	52.6
6	R2	252	16.4	265	16.4	0.316	14.4	LOS B	2.1	18.6	0.71	0.77	0.71	33.3
6u	U	3	16.4	3	16.4	0.316	17.3	LOS B	2.1	18.6	0.71	0.77	0.71	35.1
Approach		574	16.2	604	16.2	0.316	9.8	LOS A	2.2	18.8	0.69	0.67	0.69	44.6
West: Gnangara RD (W)														
7	L2	321	20.1	338	20.1	0.415	4.1	LOS A	2.9	25.9	0.51	0.63	0.51	41.5
9	R2	397	16.1	418	16.1	0.415	11.0	LOS B	2.9	25.9	0.51	0.63	0.51	50.8
9u	U	1	20.1	1	20.1	0.415	13.9	LOS B	2.9	25.9	0.51	0.63	0.51	35.6
Approach		719	17.9	757	17.9	0.415	7.9	LOS A	2.9	25.9	0.51	0.63	0.51	47.6
All Vehicles		2202	15.0	2318	15.0	0.458	7.5	LOS A	3.5	29.1	0.59	0.62	0.59	47.3

MOVEMENT SUMMARY

Site: [Gnangara Rd & Crossover 1 - 2031 - AM (Site Folder: 2031)]

Network: N101 [AM (Network Folder: 2033)]

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Gnangara Road (W)														
10	L2	43	2.0	43	2.0	0.024	8.4	LOS A	0.0	0.0	0.00	0.67	0.00	33.7
11	T1	607	12.0	607	12.0	0.176	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		651	11.3	651	11.3	0.176	0.6	NA	0.0	0.0	0.00	0.04	0.00	64.1
North: Gnangara Road (E)														
5	T1	780	16.1	780	16.1	0.234	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		780	16.1	780	16.1	0.234	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.8
West: Crossover 1 (N)														
7	L2	21	2.0	21	2.0	0.022	1.4	LOS A	0.1	0.6	0.37	0.24	0.37	16.8
Approach		21	2.0	21	2.0	0.022	1.4	LOS A	0.1	0.6	0.37	0.24	0.37	16.8
All Vehicles		1452	13.8	1452	13.8	0.234	0.3	NA	0.1	0.6	0.01	0.02	0.01	67.1

MOVEMENT SUMMARY

Site: [Gnangara Rd & Crossover 2 - 2031 - AM (Site Folder: 2031)]

Network: N101 [AM (Network Folder: 2033)]

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Gnangara Road (E)														
5	T1	756	15.8	756	15.8	0.426	0.1	LOS A	0.1	0.9	0.01	0.00	0.02	68.5
6	R2	4	2.0	4	2.0	0.426	10.0	LOS A	0.1	0.9	0.01	0.00	0.02	66.1
Approach		760	15.7	760	15.7	0.426	0.1	NA	0.1	0.9	0.01	0.00	0.02	68.5
North: Crossover 2 (N)														
7	L2	59	2.0	59	2.0	0.067	2.1	LOS A	0.2	1.9	0.50	0.41	0.50	14.6
9	R2	1	2.0	1	2.0	0.067	16.1	LOS C	0.2	1.9	0.50	0.41	0.50	14.6
Approach		60	2.0	60	2.0	0.067	2.4	LOS A	0.2	1.9	0.50	0.41	0.50	14.6
West: Gnangara Road (W)														
10	L2	71	2.0	71	2.0	0.305	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	33.0
11	T1	464	20.1	464	20.1	0.305	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	60.1
Approach		535	17.7	535	17.7	0.305	0.7	NA	0.0	0.0	0.00	0.08	0.00	53.4
All Vehicles		1355	15.9	1355	15.9	0.426	0.5	NA	0.2	1.9	0.03	0.05	0.03	58.1

MOVEMENT SUMMARY

Site: [Gnangara Rd & Destiny way - 2031 - AM (Site Folder: 2031)]

Network: N101 [AM (Network Folder: 2033)]

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Gnangara Road (E)														
5	T1	751	15.8	751	15.8	0.426	0.1	LOS A	0.2	1.5	0.02	0.00	0.02	69.5
6	R2	4	20.0	4	20.0	0.426	13.9	LOS B	0.2	1.5	0.02	0.00	0.02	44.9
Approach		755	15.8	755	15.8	0.426	0.2	NA	0.2	1.5	0.02	0.00	0.02	69.4
North: Destiny way (N)														
7	L2	8	20.0	8	20.0	0.012	8.1	LOS A	0.0	0.4	0.54	0.65	0.54	35.5
9	R2	1	20.0	1	20.0	0.014	48.1	LOS E	0.0	0.4	0.93	0.96	0.93	26.8
Approach		9	20.0	9	20.0	0.014	12.5	LOS B	0.0	0.4	0.58	0.68	0.58	32.7
West: Gnangara Road (W)														
10	L2	2	20.0	2	20.0	0.001	6.8	LOS A	0.0	0.0	0.00	0.61	0.00	52.5
11	T1	525	20.1	525	20.1	0.304	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		527	20.1	527	20.1	0.304	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.6
All Vehicles		1292	17.6	1292	17.6	0.426	0.3	NA	0.2	1.5	0.01	0.01	0.02	69.2

MOVEMENT SUMMARY

Site: [Gnangara Rd & Sydney Rd & Ocean Reef Rd - 2031- AM (Site Folder: 2031)]

Network: N101 [AM (Network Folder: 2033)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Gnangara RD (S)														
10	L2	275	12.0	275	12.0	0.238	12.5	LOS B	5.5	46.1	0.43	0.71	0.43	49.5
11	T1	116	12.0	116	12.0	0.213	40.5	LOS D	5.5	45.7	0.86	0.68	0.86	25.0
12	R2	238	12.0	238	12.0	*0.781	71.5	LOS E	7.4	61.8	1.00	0.86	1.21	23.6
Approach		628	12.0	628	12.0	0.781	40.0	LOS D	7.4	61.8	0.72	0.76	0.80	31.7
East: Gnangara RD (E)														
1	L2	452	16.3	452	16.3	0.147	7.9	LOS A	0.0	0.0	0.00	0.59	0.00	60.7
2	T1	1486	16.3	1486	16.3	0.577	27.8	LOS C	34.5	304.9	0.81	0.72	0.81	49.9
3	R2	127	16.3	127	16.3	0.709	70.3	LOS E	7.7	68.1	1.00	0.80	1.10	23.7
Approach		2065	16.3	2065	16.3	0.709	26.1	LOS C	34.5	304.9	0.65	0.70	0.65	48.4
North: Sydney RD (N)														
4	L2	317	16.1	317	16.1	0.330	24.4	LOS C	11.3	97.8	0.69	0.78	0.69	39.6
5	T1	171	16.1	171	16.1	*0.325	42.8	LOS D	8.3	72.1	0.88	0.74	0.88	14.1
6	R2	27	16.1	27	16.1	0.187	66.5	LOS E	1.6	13.6	0.98	0.71	0.98	23.8
Approach		515	16.1	515	16.1	0.330	32.7	LOS C	11.3	97.8	0.77	0.76	0.77	31.1
West: Ocean Reef RD (W)														
7	L2	11	15.2	11	15.2	0.005	8.9	LOS A	0.1	0.7	0.20	0.63	0.20	56.9
8	T1	2265	15.2	2265	15.2	*0.860	33.2	LOS C	61.4	535.4	0.96	0.88	0.97	46.5
9	R2	158	15.2	158	15.2	*0.867	74.8	LOS E	10.0	87.4	1.00	0.90	1.32	19.2
Approach		2434	15.2	2434	15.2	0.867	35.8	LOS D	61.4	535.4	0.96	0.88	0.99	44.3
All Vehicles		5642	15.3	5642	15.3	0.867	32.4	LOS C	61.4	535.4	0.80	0.79	0.82	43.2

MOVEMENT SUMMARY

Site: [Mirrabooka Ave & Gnangara Rd - 2031 - AM (Site Folder: 2031)]

Network: N101 [AM (Network Folder: 2033)]

Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Mirrabooka Ave (S)														
10	L2	399	12.0	399	12.0	0.355	6.0	LOS A	2.5	20.6	0.62	0.63	0.62	51.9
11	T1	377	12.0	377	12.0	0.355	6.5	LOS A	2.5	20.6	0.64	0.58	0.64	50.6
12u	U	2	12.0	2	12.0	0.355	16.5	LOS B	2.3	19.0	0.64	0.58	0.64	59.7
Approach		778	12.0	778	12.0	0.355	6.3	LOS A	2.5	20.6	0.63	0.61	0.63	51.3
North: Gnangara RD (N)														
5	T1	431	16.1	431	16.1	0.343	5.3	LOS A	2.5	21.3	0.57	0.51	0.57	53.6
6	R2	338	16.4	338	16.4	0.354	13.2	LOS B	2.4	21.2	0.61	0.71	0.61	31.2
6u	U	12	16.4	12	16.4	0.354	16.2	LOS B	2.4	21.2	0.61	0.71	0.61	31.2
Approach		780	16.2	780	16.2	0.354	8.9	LOS A	2.5	21.3	0.59	0.60	0.59	45.6
West: Gnangara RD (W)														
7	L2	252	20.1	252	20.1	0.285	3.8	LOS A	1.6	14.5	0.45	0.62	0.45	33.6
9	R2	249	16.1	249	16.1	0.285	10.7	LOS B	1.6	14.5	0.45	0.62	0.45	51.3
9u	U	23	20.1	23	20.1	0.285	13.6	LOS B	1.6	14.5	0.45	0.62	0.45	33.6
Approach		524	18.2	524	18.2	0.285	7.5	LOS A	1.6	14.5	0.45	0.62	0.45	45.5
All Vehicles		2082	15.1	2082	15.1	0.355	7.6	LOS A	2.5	21.3	0.57	0.60	0.57	47.7

MOVEMENT SUMMARY

Site: [Gnangara Rd & Crossover 1 - 2031 - PM (Site Folder: 2031)] **Network: N101 [PM (Network Folder: 2033)]**

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Gnangara Road (W)														
10	L2	33	2.0	33	2.0	0.018	8.4	LOS A	0.0	0.0	0.00	0.67	0.00	33.7
11	T1	845	12.0	845	12.0	0.244	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		878	11.6	878	11.6	0.244	0.3	NA	0.0	0.0	0.00	0.02	0.00	66.4
North: Gnangara Road (E)														
5	T1	745	16.1	745	16.1	0.224	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		745	16.1	745	16.1	0.224	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.8
West: Crossover 1 (N)														
7	L2	25	2.0	25	2.0	0.031	2.2	LOS A	0.1	0.8	0.45	0.34	0.45	15.6
Approach		25	2.0	25	2.0	0.031	2.2	LOS A	0.1	0.8	0.45	0.34	0.45	15.6
All Vehicles		1648	13.5	1648	13.5	0.244	0.2	NA	0.1	0.8	0.01	0.02	0.01	67.5

MOVEMENT SUMMARY

Site: [Gnangara Rd & Crossover 2 - 2031 - PM (Site Folder: 2031)] **Network: N101 [PM (Network Folder: 2033)]**

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Gnangara Road (E)														
5	T1	1106	15.8	1106	15.8	0.624	0.2	LOS A	0.3	2.7	0.02	0.00	0.04	65.8
6	R2	3	2.0	3	2.0	0.624	29.9	LOS D	0.3	2.7	0.02	0.00	0.04	64.0
Approach		1109	15.8	1109	15.8	0.624	0.3	NA	0.3	2.7	0.02	0.00	0.04	65.8
North: Crossover 2 (N)														
7	L2	102	2.0	102	2.0	0.281	8.9	LOS A	1.0	7.6	0.81	0.89	0.93	7.7
9	R2	1	2.0	1	2.0	0.281	143.7	LOS F	1.0	7.6	0.81	0.89	0.93	7.7
Approach		103	2.0	103	2.0	0.281	10.3	LOS B	1.0	7.6	0.81	0.89	0.93	7.7
West: Gnangara Road (W)														
10	L2	54	2.0	54	2.0	0.547	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	34.0
11	T1	898	20.1	898	20.1	0.547	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	64.8
Approach		952	19.1	952	19.1	0.547	0.4	NA	0.0	0.0	0.00	0.04	0.00	61.1
All Vehicles		2164	16.6	2164	16.6	0.624	0.8	NA	1.0	7.6	0.05	0.06	0.06	56.5

MOVEMENT SUMMARY

Site: [Gnangara Rd & Destiny way - 2031 - PM (Site Folder: 2031)] **Network: N101 [PM (Network Folder: 2033)]**

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Gnangara Road (E)														
5	T1	1102	15.8	1102	15.8	0.631	0.8	LOS A	0.8	7.3	0.04	0.00	0.06	67.9
6	R2	3	20.0	3	20.0	0.631	56.1	LOS F	0.8	7.3	0.04	0.00	0.06	43.7
Approach		1105	15.8	1105	15.8	0.631	1.0	NA	0.8	7.3	0.04	0.00	0.06	67.8
North: Destiny way (N)														
7	L2	7	20.0	7	20.0	0.027	16.9	LOS C	0.1	0.8	0.81	0.91	0.81	26.8
9	R2	4	20.0	4	20.0	0.871	1214.4	LOS F	2.2	21.4	1.00	1.05	1.19	2.2
Approach		12	20.0	12	20.0	0.871	452.3	LOS F	2.2	21.4	0.88	0.96	0.95	3.3
West: Gnangara Road (W)														
10	L2	5	20.0	5	20.0	0.004	6.8	LOS A	0.0	0.0	0.00	0.61	0.00	52.5
11	T1	943	20.1	943	20.1	0.546	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	69.4
Approach		948	20.1	948	20.1	0.546	0.3	NA	0.0	0.0	0.00	0.00	0.00	69.2
All Vehicles		2065	17.8	2065	17.8	0.871	3.2	NA	2.2	21.4	0.03	0.01	0.04	62.9

MOVEMENT SUMMARY

Site: [Gnangara Rd & Sydney Rd & Ocean Reef Rd - 2031 - PM (Site Folder: 2031)] **Network: N101 [PM (Network Folder: 2033)]**

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Gnangara RD (S)														
10	L2	326	12.0	326	12.0	0.298	18.5	LOS B	10.4	86.8	0.55	0.75	0.55	44.6
11	T1	123	12.0	123	12.0	0.264	51.4	LOS D	7.1	59.2	0.89	0.71	0.89	21.2
12	R2	422	12.0	422	12.0	*0.862	81.0	LOS F	15.5	129.2	1.00	0.91	1.24	21.8
Approach		872	12.0	872	12.0	0.862	53.4	LOS D	15.5	129.2	0.82	0.82	0.93	27.3
East: Gnangara RD (E)														
1	L2	352	16.3	352	16.3	0.114	7.9	LOS A	0.0	0.0	0.00	0.59	0.00	60.8
2	T1	1998	16.3	1998	16.3	*0.853	37.2	LOS D	59.0	521.9	0.92	0.84	0.92	44.3
3	R2	154	16.3	154	16.3	0.538	73.4	LOS E	10.1	89.7	1.00	0.79	1.00	23.0
Approach		2503	16.3	2503	16.3	0.853	35.3	LOS D	59.0	521.9	0.80	0.80	0.80	43.4
North: Sydney RD (N)														
4	L2	227	16.1	227	16.1	0.242	22.2	LOS C	8.2	71.2	0.60	0.76	0.60	41.0
5	T1	136	16.1	136	16.1	*0.302	53.0	LOS D	7.9	68.5	0.90	0.74	0.90	11.8
6	R2	31	16.1	31	16.1	0.130	68.8	LOS E	1.9	16.5	0.94	0.72	0.94	23.3
Approach		394	16.1	394	16.1	0.302	36.4	LOS D	8.2	71.2	0.73	0.75	0.73	29.2
West: Ocean Reef RD (W)														
7	L2	41	15.2	41	15.2	0.019	9.2	LOS A	0.4	3.4	0.20	0.64	0.20	56.6
8	T1	1668	15.2	1668	15.2	0.690	34.6	LOS C	49.4	431.0	0.86	0.77	0.86	45.7
9	R2	258	15.2	258	15.2	*0.889	83.2	LOS F	19.0	165.5	1.00	0.91	1.26	17.7
Approach		1967	15.2	1967	15.2	0.889	40.4	LOS D	49.4	431.0	0.86	0.78	0.90	41.1
All Vehicles		5736	15.3	5736	15.3	0.889	39.9	LOS D	59.0	521.9	0.82	0.79	0.85	39.0

MOVEMENT SUMMARY

Site: [Mirrabooka Ave & Gnangara Rd - 2031 - PM (Site Folder: 2031)]

Network: N101 [PM (Network Folder: 2033)]

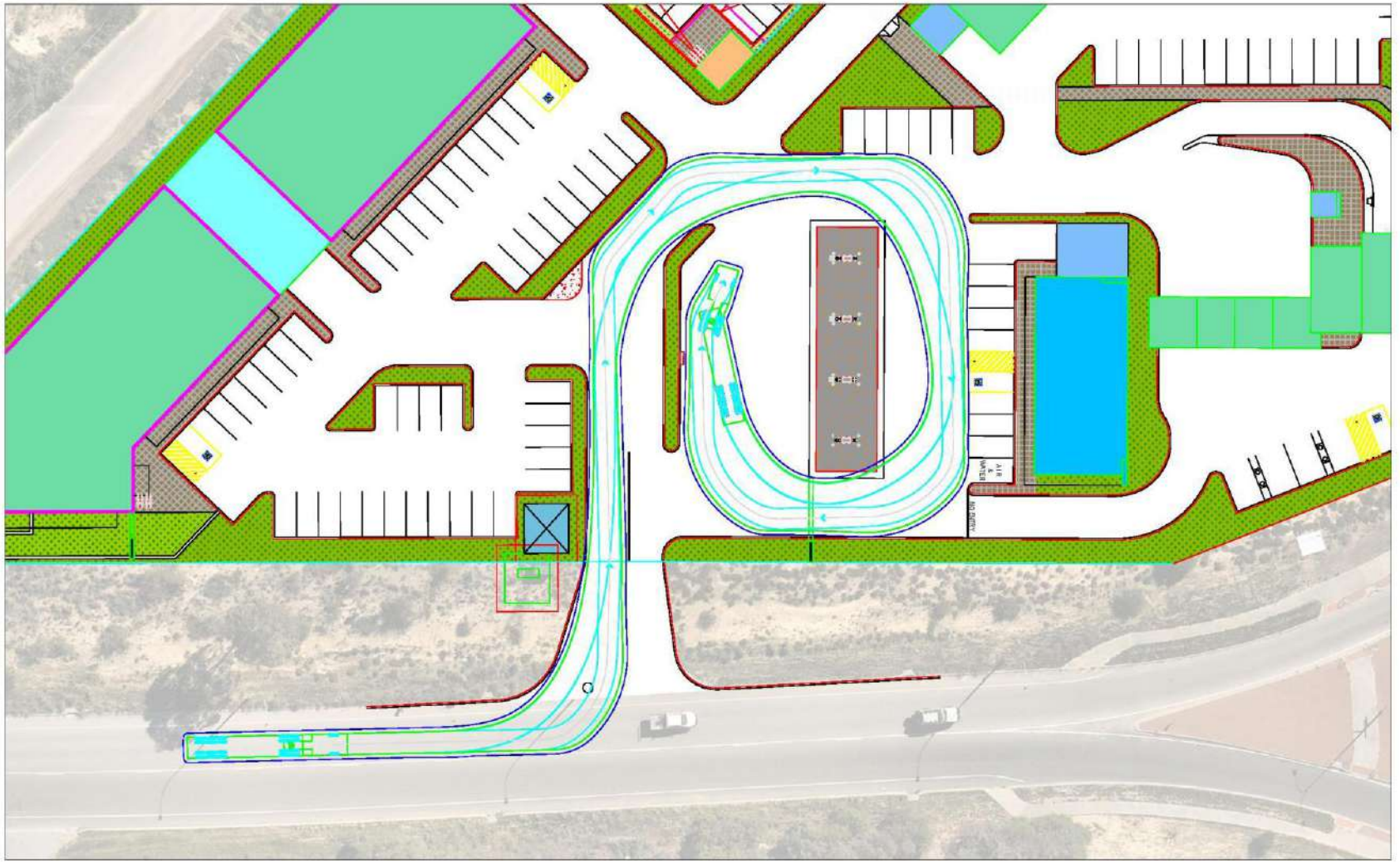
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Mirrabooka Ave (S)														
10	L2	734	12.0	734	12.0	0.617	7.4	LOS A	6.2	51.3	0.80	0.76	0.87	50.5
11	T1	444	12.0	444	12.0	0.491	7.1	LOS A	3.7	30.6	0.75	0.63	0.76	49.4
12u	U	2	12.0	2	12.0	0.491	17.1	LOS B	3.7	30.6	0.75	0.63	0.76	58.8
Approach		1180	12.0	1180	12.0	0.617	7.3	LOS A	6.2	51.3	0.78	0.71	0.83	50.0
North: Gnangara RD (N)														
5	T1	409	16.1	409	16.1	0.440	7.6	LOS A	3.8	32.6	0.89	0.73	0.89	50.8
6	R2	324	16.4	324	16.4	0.497	17.9	LOS B	4.3	37.3	0.91	0.95	1.02	27.3
6u	U	12	16.4	12	16.4	0.497	20.8	LOS C	4.3	37.3	0.91	0.95	1.02	27.3
Approach		745	16.2	745	16.2	0.497	12.3	LOS B	4.3	37.3	0.89	0.83	0.95	41.9
West: Gnangara RD (W)														
7	L2	412	20.1	412	20.1	0.591	4.8	LOS A	5.4	47.9	0.71	0.70	0.72	31.4
9	R2	536	16.1	536	16.1	0.591	11.7	LOS B	5.4	47.9	0.71	0.70	0.72	49.5
9u	U	52	20.1	52	20.1	0.591	14.6	LOS B	5.4	47.9	0.71	0.70	0.72	31.4
Approach		999	18.0	999	18.0	0.591	9.0	LOS A	5.4	47.9	0.71	0.70	0.72	44.3
All Vehicles		2924	15.1	2924	15.1	0.617	9.1	LOS A	6.2	51.3	0.79	0.74	0.82	45.8

Appendix D

TURN PATH ANALYSIS



Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 19.0m Semi-Trailer
Fuel tanker entry

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk01a
3/11/2021
Scale: 1:400 @ A3

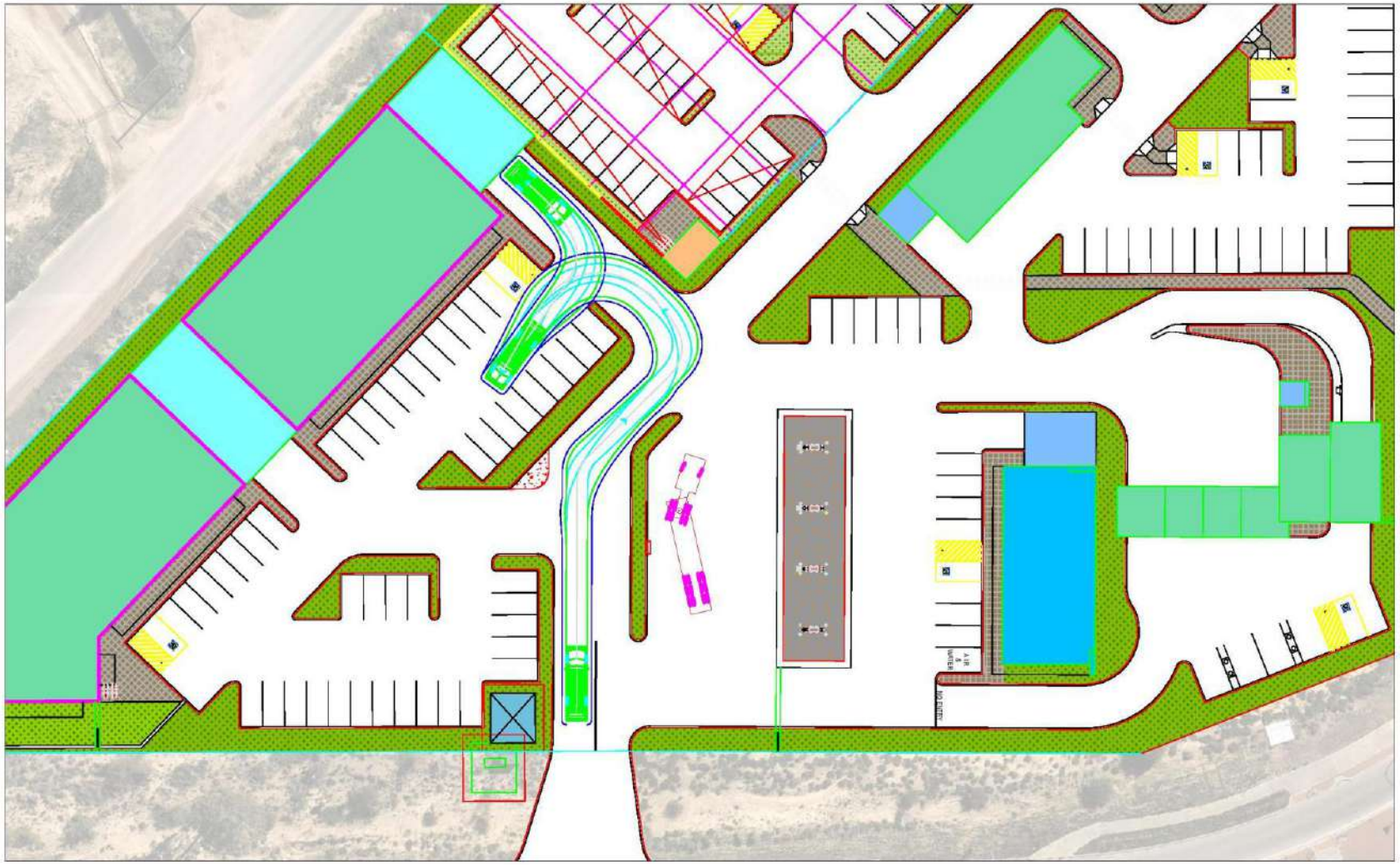
transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 19.0m Semi-Trailer
Fuel tanker exit

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk02a
3/11/2021
Scale: 1:750 @ A3

transcore

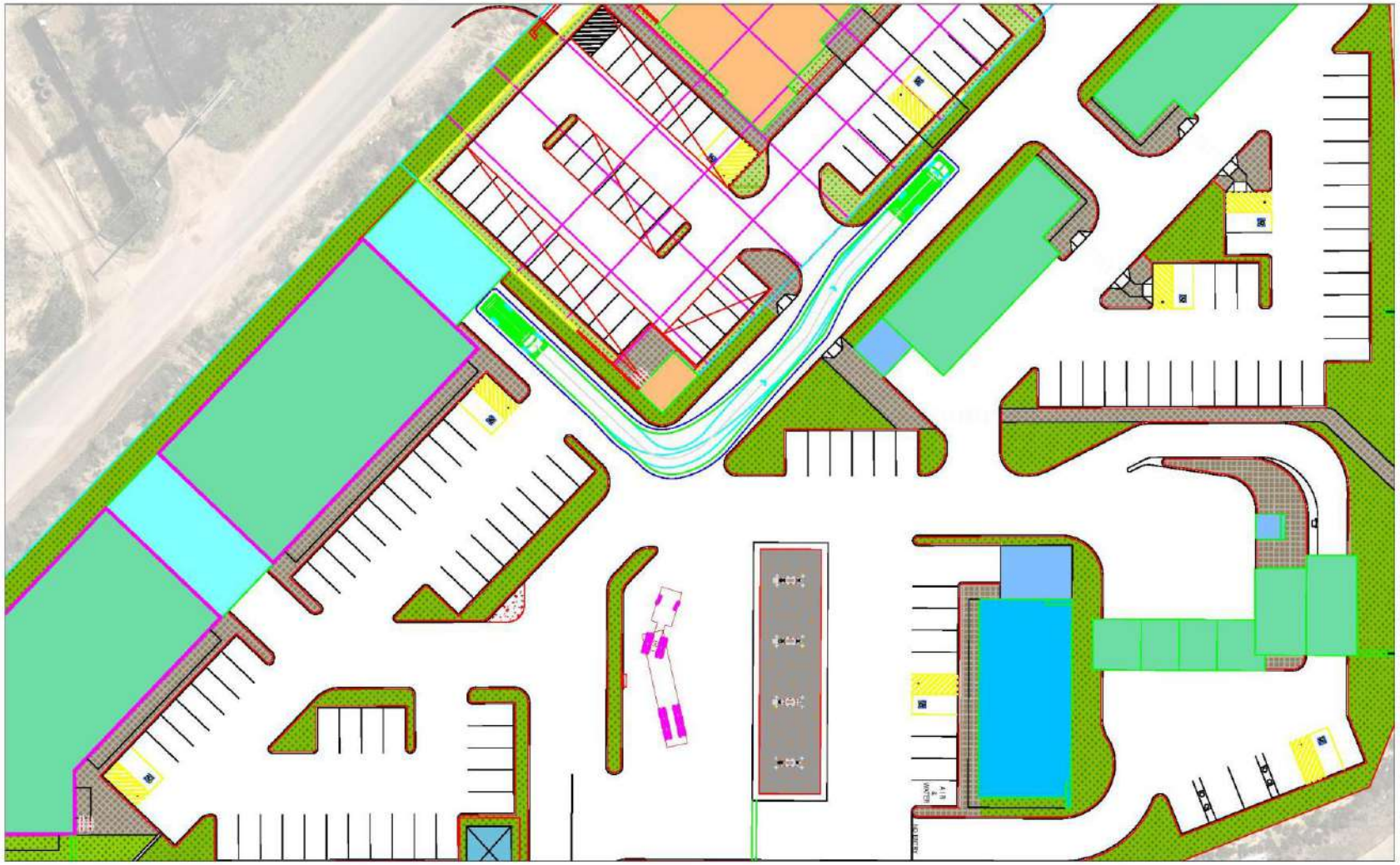


Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle entry - movement 1

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk09a
3/11/2021
Scale: 1:400 @ A3

transcore



Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle exit - movement 1

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk10a
3/11/2021
Scale: 1:400 @ A3

transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle entry - movement 2

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk11a
3/11/2021
Scale: 1:400 @ A3

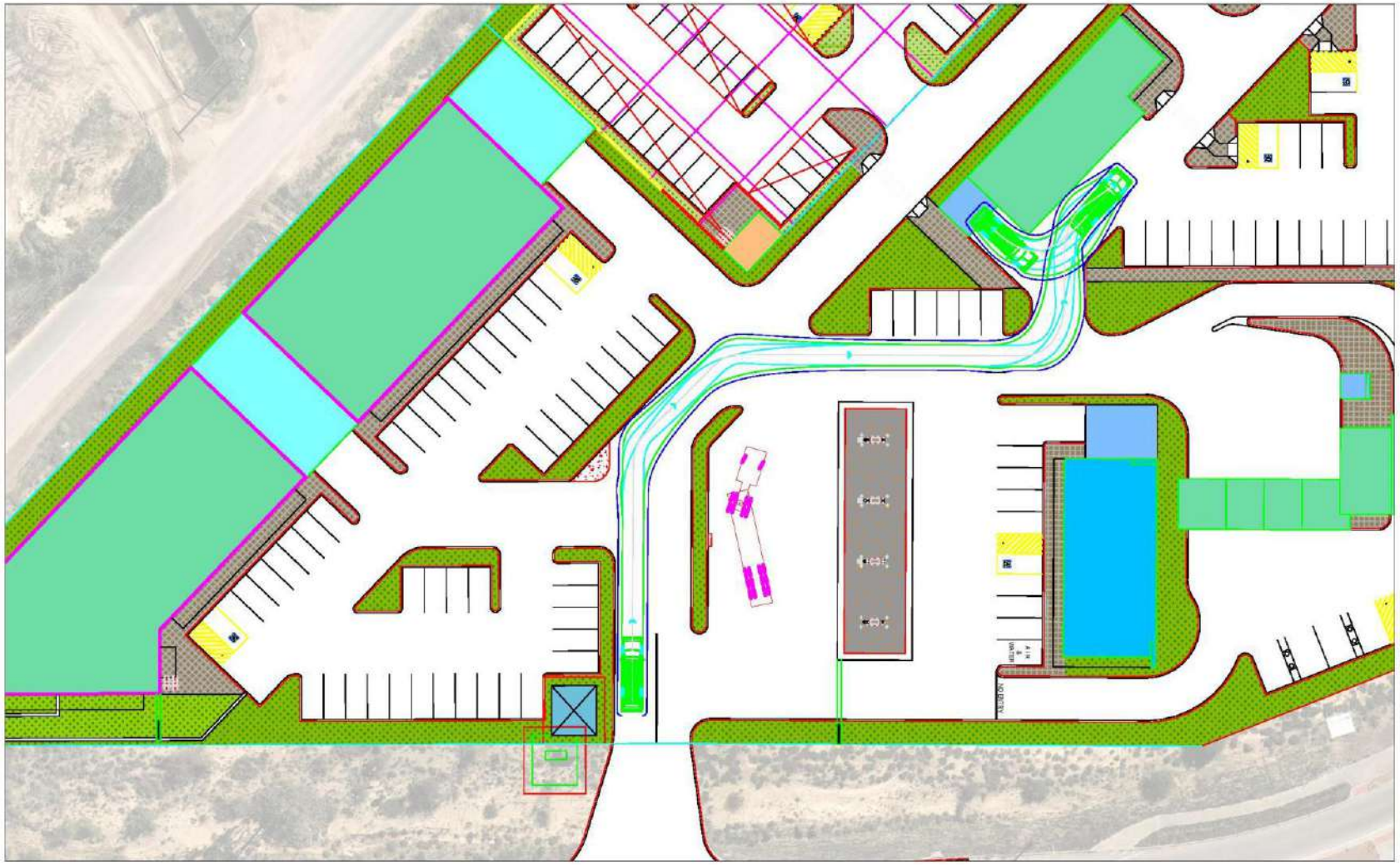
transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle exit - movement 2

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk12a
3/11/2021
Scale: 1:400 @ A3

transcore



Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle entry - movement 3

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk13a
3/11/2021
Scale: 1:400 @ A3

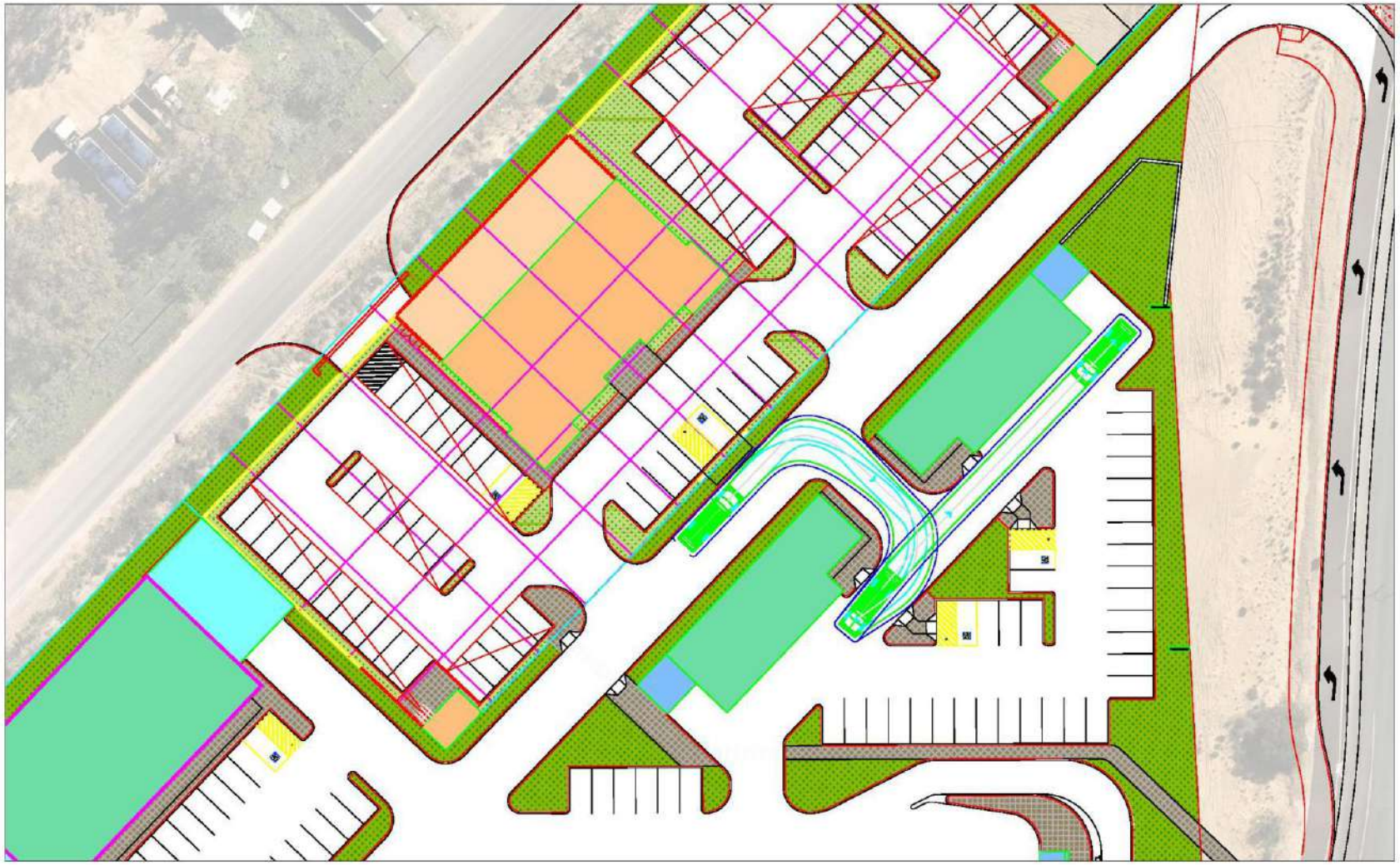
transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle exit - movement 3

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk14a
3/11/2021
Scale: 1:400 @ A3

transcore

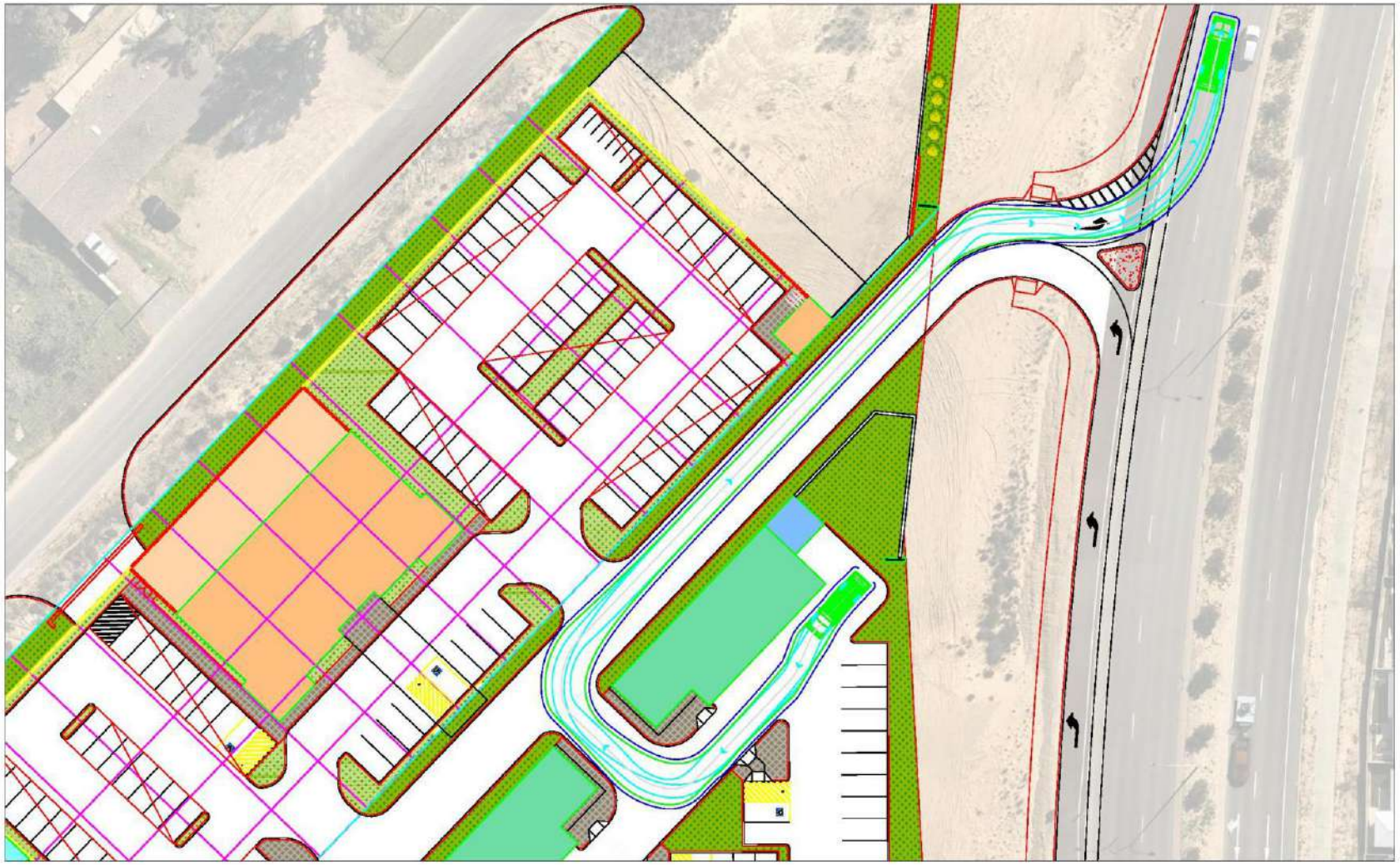


Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle entry - movement 4

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk15a
3/11/2021
Scale: 1:400 @ A3

transcore

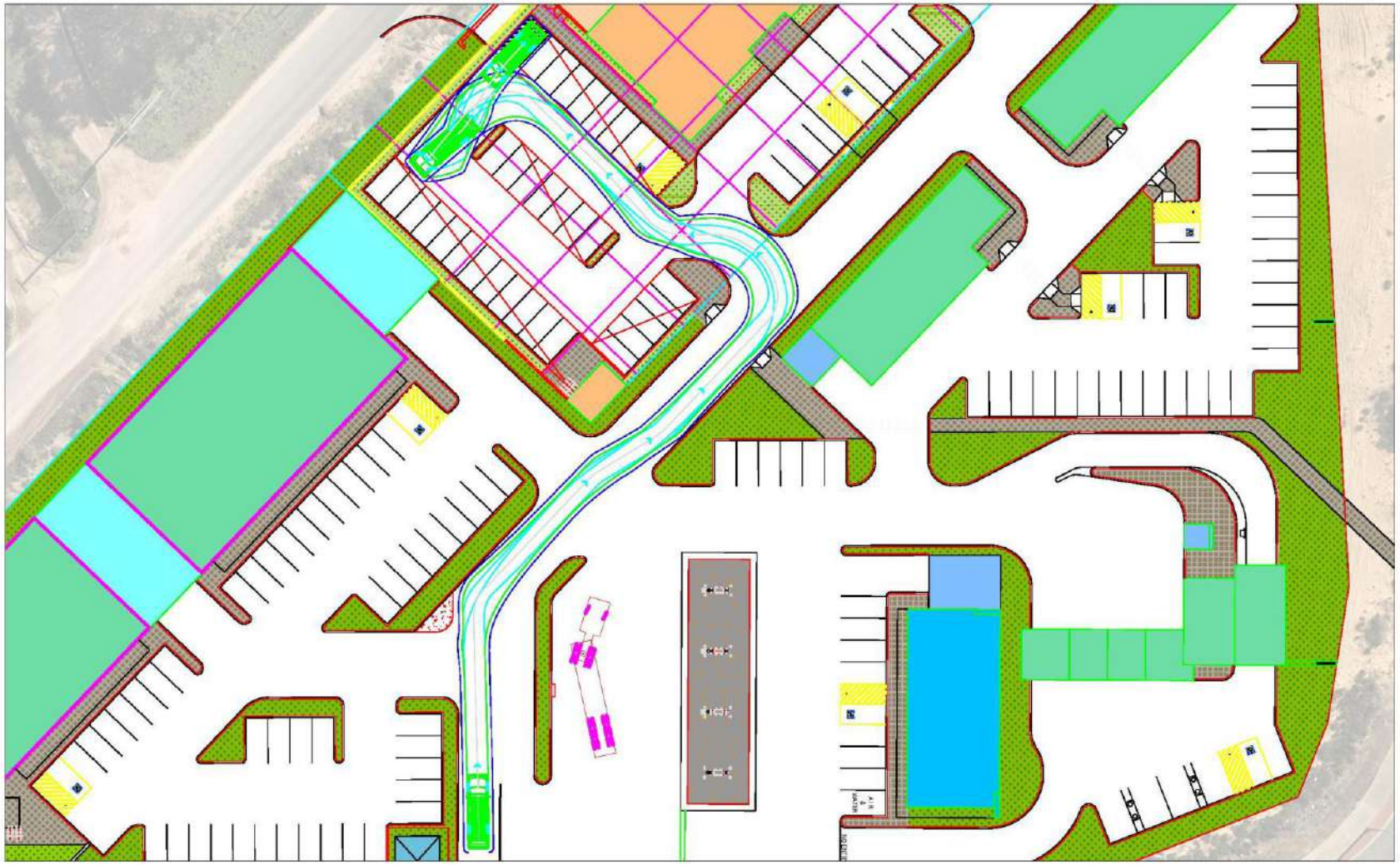


Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle exit - movement 4

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk16a
3/11/2021
Scale: 1:400 @ A3

transcore



Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle entry - movement 5

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk17a
3/11/2021
Scale: 1:400 @ A3

transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle exit - movement 5

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk18a
3/11/2021
Scale: 1:400 @ A3

transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 19m Semi-Trailer
Semi-trailer entry for delivery - movement 1

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk19a
3/11/2021
Scale: 1:400 @ A3

transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 19m Semi-Trailer
Semi-trailer exit after delivery - movement 1

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk20a
3/11/2021
Scale: 1:400 @ A3

transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 19m Semi-Trailer
Semi-trailer entry for delivery - movement 2

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk21a
3/11/2021
Scale: 1:400 @ A3

transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 19m Semi-Trailer
Semi-trailer exit after delivery - movement 2

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk22a
3/11/2021
Scale: 1:400 @ A3

transcore

Lot 703 (#359) Gnangara Road, Wangara

Austroads 2013: 8.8m Service Vehicle

Service vehicle entry & exit movements for delivery

LEGEND

Vehicle Body

Wheel Path

500mm Clearance

t21.166.sk23a

3/11/2021

Scale: 1:400 @ A3

transcore

Lot 703 (#359) Gnangara Road, Wangara

Austroads 2013: 8.8m Service Vehicle

Service vehicle reverse entries for dispatch area

LEGEND

Vehicle Body

Wheel Path

500mm Clearance

t21.166.sk25a

3/11/2021

Scale: 1:400 @ A3

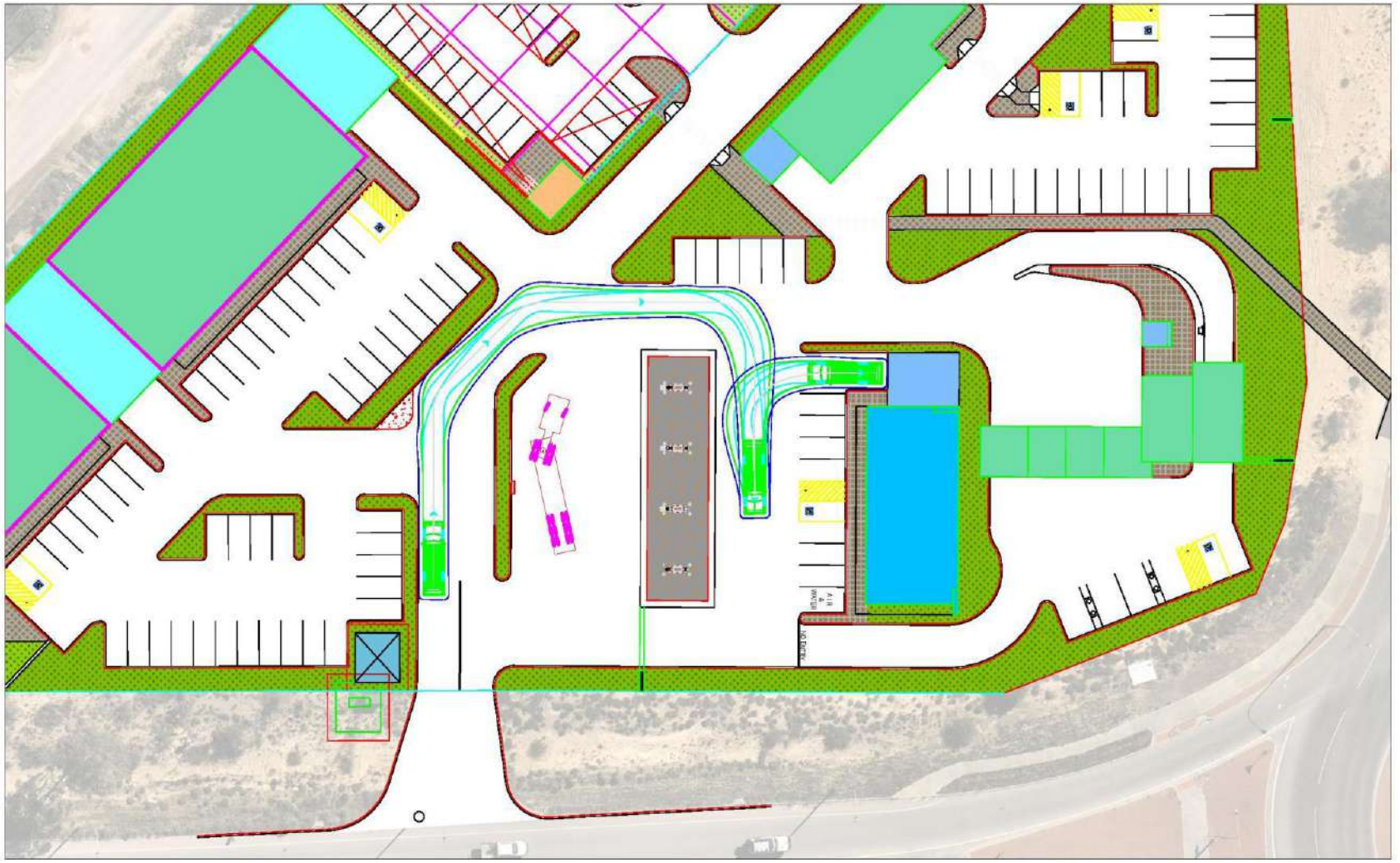
transcore

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle forward exist from dispatch area

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk26a
3/11/2021
Scale: 1:400 @ A3

transcore

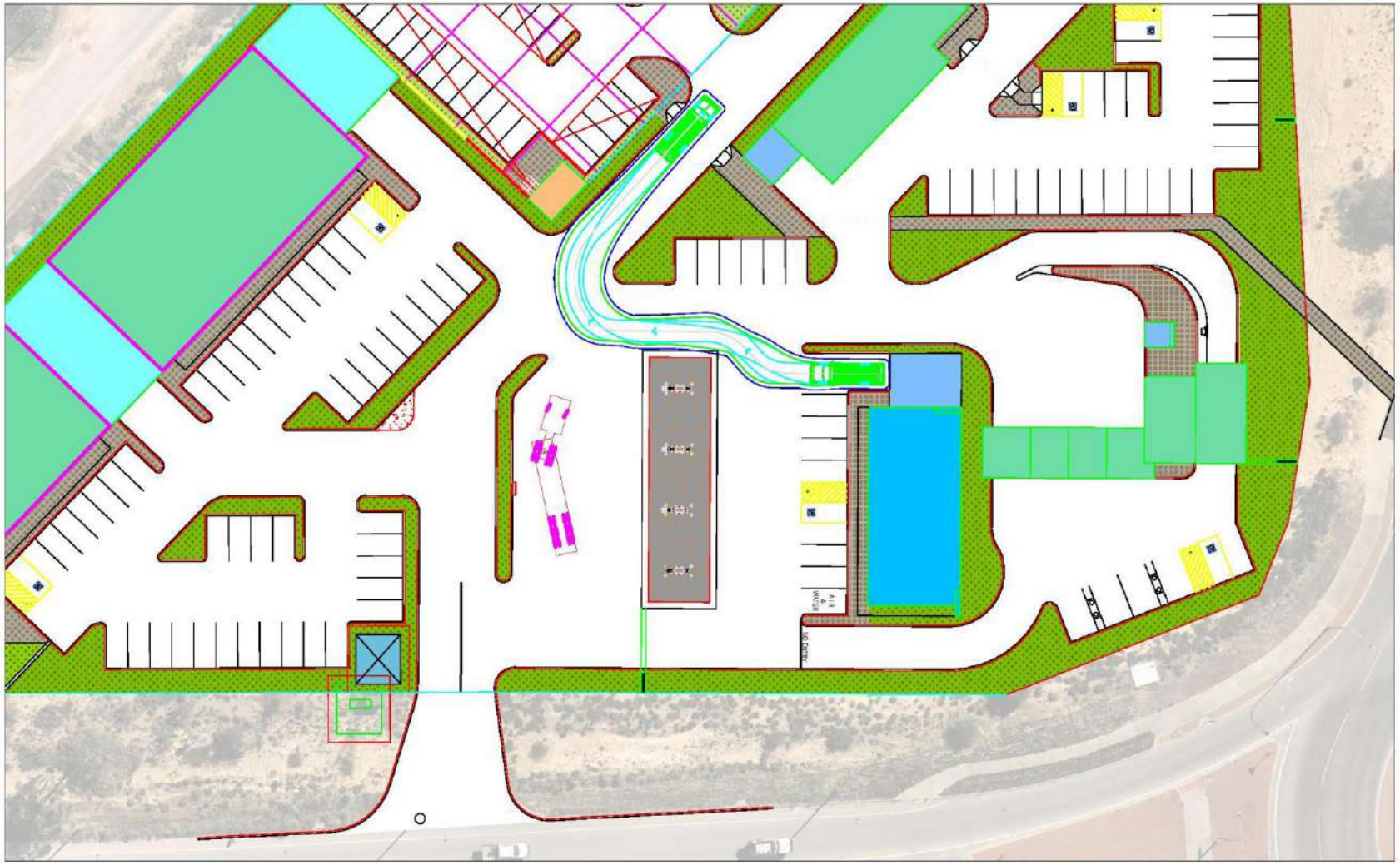


Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle entry (service station)

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk27a
3/11/2021
Scale: 1:400 @ A3

transcore

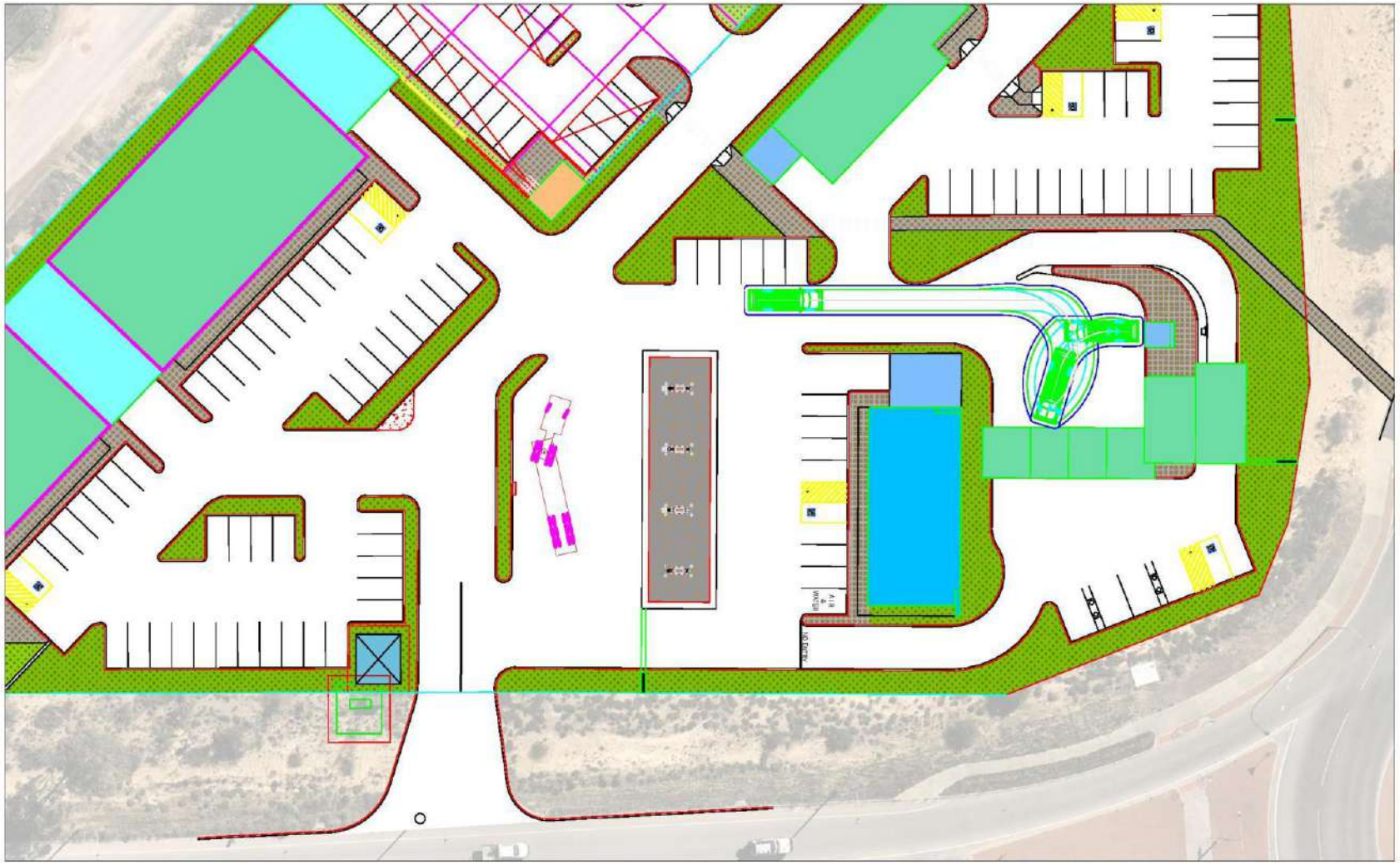


Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle exit (service station)

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk28a
3/11/2021
Scale: 1:400 @ A3

transcore



Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle entry (car wash)

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.166.sk29a
3/11/2021
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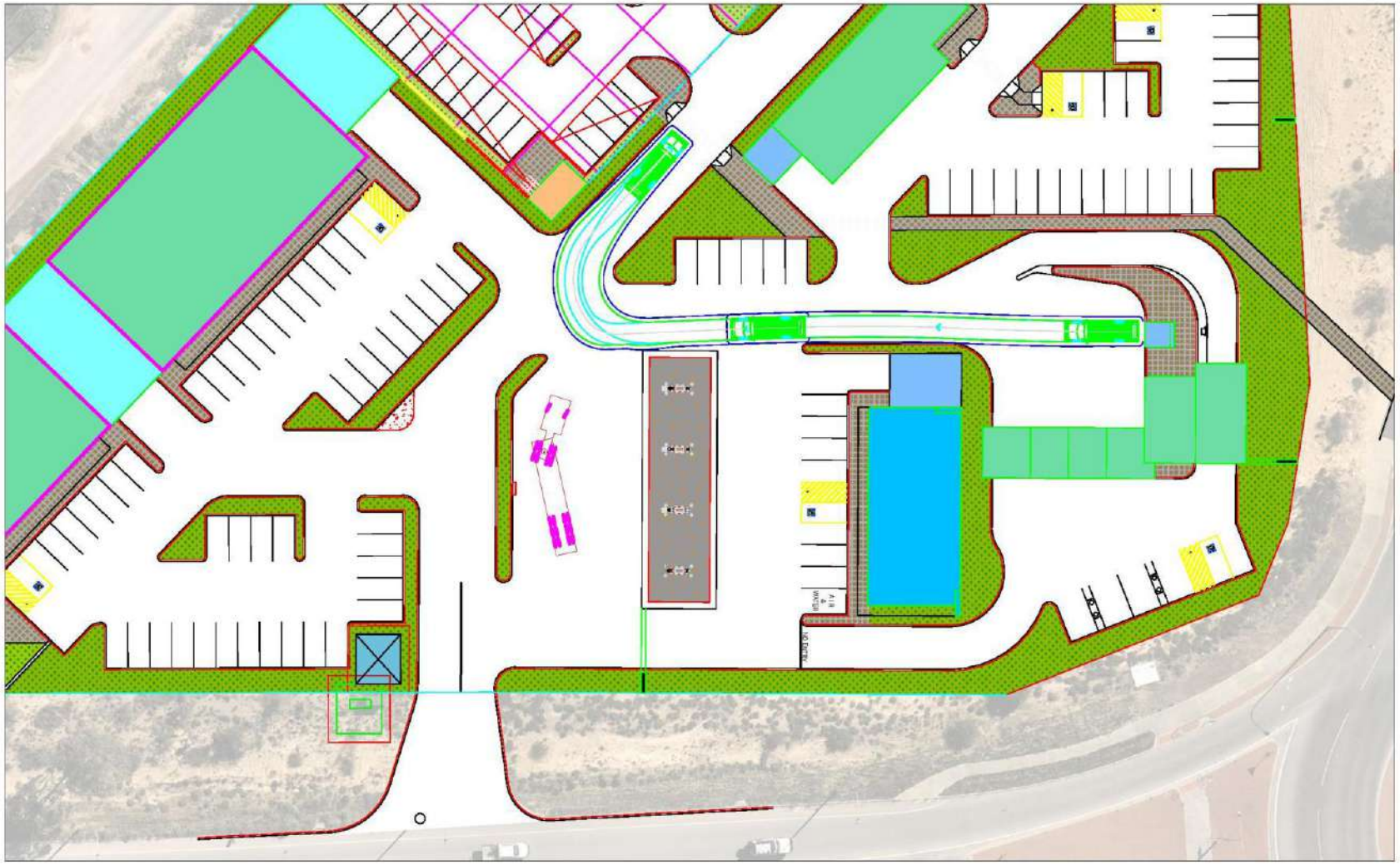

Lot 703 (#359) Gnangara Road, Wangara
Austroads 2013: 8.8m Service Vehicle
Service vehicle exit (car wash)

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

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3/11/2021
Scale: 1:400 @ A3

transcore

Lot 703 (359) Gnangara Road, Wangara| CITY AND DPLH COMMENTS

16 May 2022

	COMMENTS	STATUS/COMMENT
	CITY OF WANNEROO COMMENTS	
1	C1 Access Point: The upstream functional length and downstream functional length do not meet the distance requirements against Austroads Guide to Road Design. C1 access point located approx. 90m from Mirrabooka Ave/Gnangara Rd roundabout and 120m from Destiny Way. In accordance with the Guide to Road Design Part 4 & 4A the distance requires 215m for upstream length and 181m for downstream length for 80km/h design speed road. These distances are very crucial for a driver to avoid a collision with a vehicle entering the road from an access connection. To prevent ambiguity for road users, a potential solution is for the crossover to Gnangara Road to be dedicated as ingress and egress only.	Crossover 1 on Gnangara Road is an existing full movement crossover on Gnangara Road (southern boundary) which has been retained and modified to accommodate the turning movements of fuel tankers and service vehicles. This existing crossover has been constructed in accordance with the 2017 subdivision approval for this site, which specifies 90m vehicle access restriction measured from the outside kerb of the Mirrabooka Avenue roundabout. The traffic operation of through this crossover and nearby intersections (Gnangara Road roundabout and Destiny Way intersection) has been assessed using SIDRA network which confirms satisfactory traffic operations with no queue back from the nearby intersections to the development crossover and no queue back from development crossover to the nearby intersections. Transcore is fully aware of this requirement of Austroads. It should be noted that the access spacing documented in Appendix E of Austroads Guide to Road Design Part 4 is only a guide and the onerous nature of this requirement suggests that it is only applicable in certain circumstances including greenfield projects. This requirement of Austroads is almost impossible to achieve for most corner sites in brown field environment or greenfield sites with limited frontage on abutting roads. A full movement crossover at this location is essential for satisfactory traffic circulation and operation of the development considering Destiny Way is used for service vehicles only and the Gnangara Road (eastern boundary) crossover is proposed as a left in/left out crossover.
2	In addition to that an intersection warrant assessment is recommended for the existing crossover C1 to identify any mitigation measures for right turning movements and left turning movements to ensure the safe movement of traffic along Gnangara Road. Without this assessment there is the potential for right and left turners to present a safety risk for vehicles travelling at 70 km/h along Gnangara Road	Provision of turn lanes at crossover 1 is not recommended at this stage as SIDRA analysis for this crossover indicates satisfactory operation as a basic T-intersection. Review of the 85th percentile speed for eastbound and westbound traffic through the entire day along Gnangara Road (west of Mirrabooka Av (SLK 3.65)) indicates 66km/h and 70 km/h for eastbound and westbound directions respectively. It should be noted that the 85th percentile speed during the road network peak hours is lower than the average daily 85th percentile speed. Turn lanes are generally not essential for roads with signposted or operating speeds of less than 70kmh. However, in order to investigate the turn lane requirements at the proposed development crossover 1 on Gnangara Road, Main Roads WA Turn Lane Warrants has been applied to the 2031 traffic projections at this crossover. Applying Main Roads WA Turn Lane Warrants to the proposed crossover indicates that a BAR/ AUL treatment would be required at the crossover. The basic right turn treatment (BAR) turn treatment is used where traffic volumes do not warrant a higher order treatment (such as right turn pocket or CHR treatment). Accordingly, the BAR would provide sufficient pavement width for the through traffic to pass a vehicle waiting to turn right. The Auxiliary left turn lane (AUL) treatment is suitable where there are low to moderate through and turning volumes at a crossover. The project team is prepared to investigate this matter further if the BAR and AUL treatment is acceptable.
3	Further assessment of the swept path analysis for the development's crossovers is recommended to ensure there is sufficient capacity for two-way movement of the maximum desired vehicles servicing the use	The turn path analysis undertaken indicates that the proposed development crossovers on Gnangara Road (C1 and C2) can accommodate the two-way movement of a B99 car and a service vehicle simultaneously. However, it should be noted that larger vehicles (such as fuel tankers) may require to use the full length of the driveway to enter or exit a crossover. Considering the fuel tanker activities are minimal and would happen only about twice per week and generally outside the peak operating times of the development, then full use of the driveway by these vehicles is acceptable as per standard practice.
4	While the report identifies the existing pathway along Mirrabooka Ave & Gnangara Rd north, it failed to assess the pathway requirements on Gnangara Rd west section & on Destiny Way. It is recommended to provide pathway in accordance with the City's Pathway Policy	Destiny Way fronting the site is serving the movement of service vehicles only and as such a pedestrian path along this road is not warranted. The proposed development entails a service industrial development which is in line with the existing and future surrounding land uses in the area and therefore significant pedestrian activity is not expected for this locality. The existing pathway along Mirrabooka Ave & Gnangara Rd north should be sufficient to address the pedestrian activity relevant to the proposed development and provide connectivity between the residential catchments and the development. Nevertheless, the project team is willing to investigate this matter further if city considerers such paths essential and warranted.

	DPLH COMMENTS	
1	The north-south portion of Gnangara Road is classified as an 'Other Regional Road under Main Roads WA control' within WAPC Plan No SP 694/5. As such it is recommended that comments be sought from Main Roads regarding the proposed left in/left out crossover (referred to as C2) at the eastern boundary.	Gnangara Road forming the southern and eastern boundary of the proposed development is classified as an 'Other Regional Road". As such the ultimate authority for this road rests with WAPC/DPLH with its care and control vested with City of Wanneroo. Main Roads WA is not an approval authority nor is a referral agency for this project and therefore involvement of this agency is not warranted nor necessary. Notwithstanding, the proposed Li/Lo crossover is critical for satisfactory traffic operation of the proposed development and facilitating traffic circulation of fuel tankers, service vehicles and general traffic. Without the proposed Li/ Lo crossover all the traffic pressure would be on the proposed full movement crossover on Gnangara Road southern boundary road. A single full movement crossover is not sufficient to accommodate the traffic generation of the proposed development.
2	ITE Trip Generation Manual (11th Edition) indicates 92 daily trips for a 5,020m2 processing facility warehouse (165 provided), 1,376 trips for a convenience store with 8 fuelling positions (1,232 provided), 100 trips for a 1,500m2 showroom (371 provided), 125 trips for 490m2 auto workshop(s) (81 provided) and 540 trips for a car wash with 5 stalls (180 provided). This equates to a total of 2,233 daily trips without cross trade discount applied. 2,029 daily trips have been estimated in the supporting Transport Impact Assessment (ITE broadly in accordance with methodology provided by Transcore);	Noted.
3	It is unclear if a left-turning slip lane is required based on proposed traffic volumes at the C1 access point. It is recommended that the proposal be assessed against Main Roads WA intersection warrants if required.	Refer item 2 above for the responses to the city comments.
4	SIDRA intersection analysis shows satisfactory performance for crossovers servicing the site. It is recommended that the submitted swept path plans be verified/checked to the satisfaction of the City's Technical Services Directorate.	Noted.

APPENDIX A

TURN LANE ASSESSMENTS

INTERSECTION WARRANTS

Main Roads WA Supplement to Austroads Guide to Road Design - Part 4 A.8

DESIGN SPEED =	80km/h
SPLITTER ISLAND YES / NO =	No
DUAL CARRIAGEWAY YES / NO =	No

MOVEMENT	COUNT (v/h)	HV (%)
Q_{T1} =	718	22
Q_R =	4	2
Q_{T2} =	441	22
Q_L =	67	2

RIGHT TURN ASSESSMENT

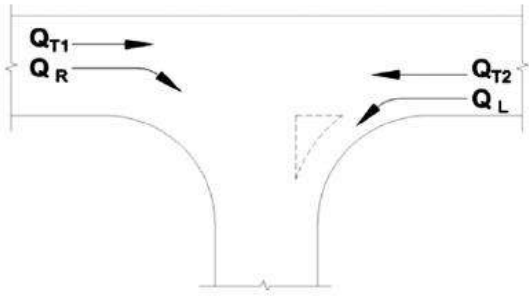
Q_m =	1226
% HV =	20.907
x =	2.83
TREATMENT =	**BAR**

LEFT TURN ASSESSMENT

Q_m =	441
% HV =	22.000
x =	3.52
TREATMENT =	**AUL or CHL**

Source: Austroads GTM Part 6 - 2017

Figure 2.27: Calculation of the major road traffic volume Q_M



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Source: TMR (2016a).

INTERSECTION WARRANTS

Main Roads WA Supplement to Austroads Guide to Road Design - Part 4 A.8

DESIGN SPEED =	80km/h
SPLITTER ISLAND YES / NO =	No
DUAL CARRIAGEWAY YES / NO =	No

MOVEMENT	COUNT (v/h)	HV (%)
Q_{T1} =	1051	16
Q_R =	3	2
Q_{T2} =	853	16
Q_L =	51	2

RIGHT TURN ASSESSMENT

Q_m =	1955
% HV =	15.635
x =	3.72
TREATMENT =	**BAR**

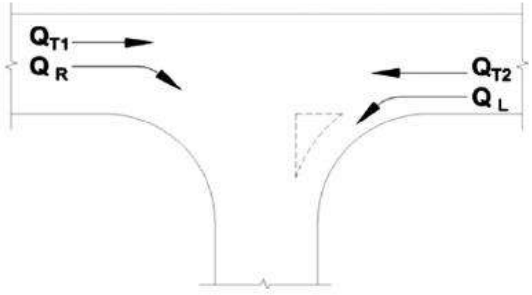
LEFT TURN ASSESSMENT

Q_m =	853
% HV =	16.000
x =	5.53
TREATMENT =	**AUL or CHL**

Source: Austroads GTM Part 6 - 2017

Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings

Figure 2.27: Calculation of the major road traffic volume Q_M



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Source: TMR (2016a).

ATTACHMENT 11

Gnangara Road (east)

Lot 703 (#359) Gnangara Road, Wangara
Gnangara Road left turn slip lane

t21.166.sk19
29/10/2021
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Gnangara Road (south)

Lot 703 □□3□9□Gnangara Road, Wangara

Gnangara Road widening and le□t turn sli□ lane

t□1.166.sk□0

11/07/□0□□

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ATTACHMENT 12

City of Wanneroo – Planning & Sustainability
Landscaping Requirements for Non-rural and Non-residential Developments

As per DPS 2:
4.17 LANDSCAPING REQUIREMENTS FOR NON RURAL AND NON RESIDENTIAL DEVELOPMENT

4.17.1 A minimum of 8% of the area of a development site shall be set aside, developed and maintained as landscaping to a standard satisfactory to the Council. In addition the road verge adjacent to the lot shall be landscaped and maintained to the satisfaction of the Council.

4.17.2 When a proposed development includes a car parking area abutting a street, an area no less than 3 metres wide within the lot along all street alignments shall be set aside, developed and maintained as landscaping to a standard satisfactory to the Council. This landscaped area shall be included in the minimum 8% of the area of the total development site referred to in the previous subclause.

4.17.3 Landscaping shall be carried out and maintained on all those areas of a development site which are not approved for buildings, accessways, storage purposes or car parking. Alternatively, Council may require these areas to be screened from view of streets and other public places.

4.17.4 Landscape areas shall be designed and located to improve the visual appeal of the development from the street and other public spaces and the standard of amenity for those using the development. The use of endemic trees and shrubs are encouraged.

4.17.5 Shade trees shall be planted and maintained in car parking areas designed within the wells at the rate of one tree for every four (4) car parking bays, to the Council's satisfaction.

Land Development (Landscape & Conservation Items) Checklist

Design
Should be undertaken by a suitably qualified consultant.

Format
A1 or A3, scaled appropriately so plans are legible at A3, preferably in colour.

Plant legend
Include the botanical names and the common names (to ensure correct identification, and so Compliance officers can interpret the plans if need be in the future).

Species
The commercial & industrial developments species list (City HPE ref 14/145917) recommends suitable species.

Diversity
Ground cover and shrub mix - to be a minimum of six different species.

Trees – one species for the verge, and at least one other species for the lot, depending on the size of the area to be landscaped.

Density
Spreading groundcovers and small shrubs at 3 plants per m^2. Reduced density may be considered if medium and large spreading shrubs are used. As an average, 3 plants accounts for losses and assists in weed suppression.

Car park
One shade tree to be provided per four bays (rounded up to the nearest tree) is required. Exceptions are if it is not possible to achieve due to proximity to building awnings. Trees within the carpark areas to be to CoW standard drawing (tree wells) which is available on the City's website.

Verges
The proponent is required to landscape the verge with street trees and waterwise planting, i.e. not turf. The City of Wanneroo is a Waterwise Council and there are objectives that are required to be met. Turf is only approved where it serves a function in Public Open Space. The City aligns itself to the Perth NRM Guidelines for Industrial Development, May 2010, refer D9 for waterwise landscaping. https://www.perthnrm.com/nrmwp/wp-content/uploads/2020/03/PNRM-Guidelines-for-industrial-development.pdf

Street tree setbacks are:

a) 1m from kerb edge, footpath mow strip/garden edging and paved surfaces;
b) 1.5m from crossovers;
c) 2.5m from structures including (but not limited to) walls, built elements, signs and streetlights;
d) 3.5m from side entry drainage pits;
e) All are to be aligned as per the services Utility Providers Code of Practice for WA. As a rule of thumb the setback requirement is 2.7m offset from the property boundary.

Verge groundcover planting is to be set back 600mm from back of kerb, to provide a mulch-only strip for maintenance and safety (sightlines).

Tree spacing on verges is to be a minimum of 1 tree every 15m, however 10m spacing is preferred.

No trees are to be planted in truncation areas. Planting in truncation and sightline areas is to be a maximum of 600mm at mature height.

Mulch
All landscaped areas are to be mulched to 75mm depth. Organic mulch is to meet AS.

Irrigation
Irrigation to be to City standards – specification available on the City's website.

Maintenance
Recommend the following annotation is included:
"the ongoing maintenance of the landscaped areas including the road reserve (except street trees, which are the responsibility of the City) is to be provided to the satisfaction of the City and in accordance to District Planning Scheme 2" This maintenance includes formative pruning of site trees in accordance to AS4373 Pruning of Amenity Trees 1996.

Developments in Meridian Park, Neerabup
The applicant is to ensure the design complies with the Meridian Park Design Guidelines and to provide an endorsement by the estate architect. 699 (developmentwa.com.au)

ATTACHMENT 13

HERRING STORER ACOUSTICS

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT

LOT 703 (# 359) GNANGARA ROAD WANGARA

ENVIRONMENTAL NOISE REVIEW

MAY 2022

OUR REFERENCE: 29546-1-22166

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:
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DOCUMENT CONTROL PAGE

ENVIRONMENTAL ACOUSTIC ASSESSMENT

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
WANGARA

Job No: 22166

Document Reference: 29546-1-22166

FOR

ROWE GROUP

DOCUMENT INFORMATION			
Author:	Tim Reynolds	**Checked By:**	George Watts
Date of Issue:	20 May 2022		

REVISION HISTORY

Revision	Description	Date	Author	Checked

DOCUMENT DISTRIBUTION

Copy No.	Version No.	Destination	Hard Copy	Electronic Copy
1	1	Rowe Group Attn: Nathan Stewart Email: Nathan.Stewart@rowegroup.com.au		☒

This report has been prepared in accordance with the scope of services and on the basis of information and documents provided to Herring Storer Acoustics by the client. To the extent that this report relies on data and measurements taken at or under the times and conditions specified within the report and any findings, conclusions or recommendations only apply to those circumstances and no greater reliance should be assumed. The client acknowledges and agrees that the reports or presentations are provided by Herring Storer Acoustics to assist the client to conduct its own independent assessment.

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4.	MODELLING		4
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APPENDICIES

A Plan

1. INTRODUCTION

Herring Storer Acoustics were commissioned by the Rowe Group on behalf of JAO & MDL Investments Limited to undertake a review of the noise that would emanate from some of the proposed uses within the proposal service industrial development to be located at Lot 703 (# 359) Gnangara Road, Wangara.

From information provided, we understand that the City's Health Officer has raised with the potential noise from the Service Station and Carwash, particularly if the intent is for 24/7 operations.

Thus, we have reviewed noise emissions from the Service Station / Convenience Store and Carwash, as requested by council and provide this review / technical note.

This report assesses noise emissions from the premises with regards to compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997*. To simplify the assessment, we have limited the review to the following:

SERVICE STATION

- Mechanical Services.
- Ordering Speaker; and
- Tyre Inflator indicator.

CARWASH

- Vacuum units.
- Handheld pressure hose; and
- Auto carwash.

For reference, the plans of the proposed development are attached in Appendix A.

2. SUMMARY

We understand that the above uses (ie Service Station and Carwash) would be open 24 hours per day, thus, noise received at the neighbouring noise (highly) sensitive premises from the development needs to comply with the appropriate assigned noise levels for the night period.

The review assessment shows that noise received at the closest neighbouring residence across Gnangara Road would with the current design, comply with the Regulatory requirements at all times and no noise mitigation is required.

3. CRITERIA

The allowable noise level for noise sensitive premises in the vicinity of the proposed Facility site is prescribed by the *Environmental Protection (Noise) Regulations 1997*. Regulations 7 and 8 stipulate maximum allowable external noise levels or assigned noise levels that can be received at a premise from another premises. For residential premises, this noise level is determined by the calculation of an influencing factor, which is then added to the base levels shown below. The influencing factor is calculated for the usage of land within two circles, having radii of 100m and 450m from the premises of concern. The base noise levels for residential premises and the assigned noise levels for industrial premises are listed in Table 3.1.

TABLE 3.1 - BASELINE ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: highly sensitive area	0700 - 1900 hours Monday to Saturday (Day)	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	40 + IF	50 + IF	65 + IF
	1900 - 2200 hours all days (Evening)	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	35 + IF	45 + IF	55 + IF

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.
IF is the influencing factor.

It is a requirement that received noise be free of annoying characteristics (tonality, modulation and impulsiveness), defined below as per Regulation 9.

"impulsiveness" means a variation in the emission of a noise where the difference between L_{Apeak} and $L_{Amax(Slow)}$ is more than 15 dB when determined for a single representative event;

"modulation" means a variation in the emission of noise that –

(a) is more than 3 dB L_{AFast} or is more than 3 dB L_{AFast} in any one-third octave band;

(b) is present for more at least 10% of the representative assessment period; and

(c) is regular, cyclic and audible;

"tonality" means the presence in the noise emission of tonal characteristics where the difference between –

(a) the A-weighted sound pressure level in any one-third octave band; and

(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as L_{ASlow} levels.

Where the noise emission is not music, if the above characteristics exist and cannot be practicably removed, then any measured level is adjusted according to Table 3.2 below.

TABLE 3.2 - ADJUSTMENTS TO MEASURED LEVELS

Where **tonality** is present	Where **modulation** is present	Where **impulsiveness** is present
+5 dB(A)	+5 dB(A)	+10 dB(A)

Note: These adjustments are cumulative to a maximum of 15 dB.

For this development, the closest residential premises of concern are located, as shown on Figure 3.1 below.

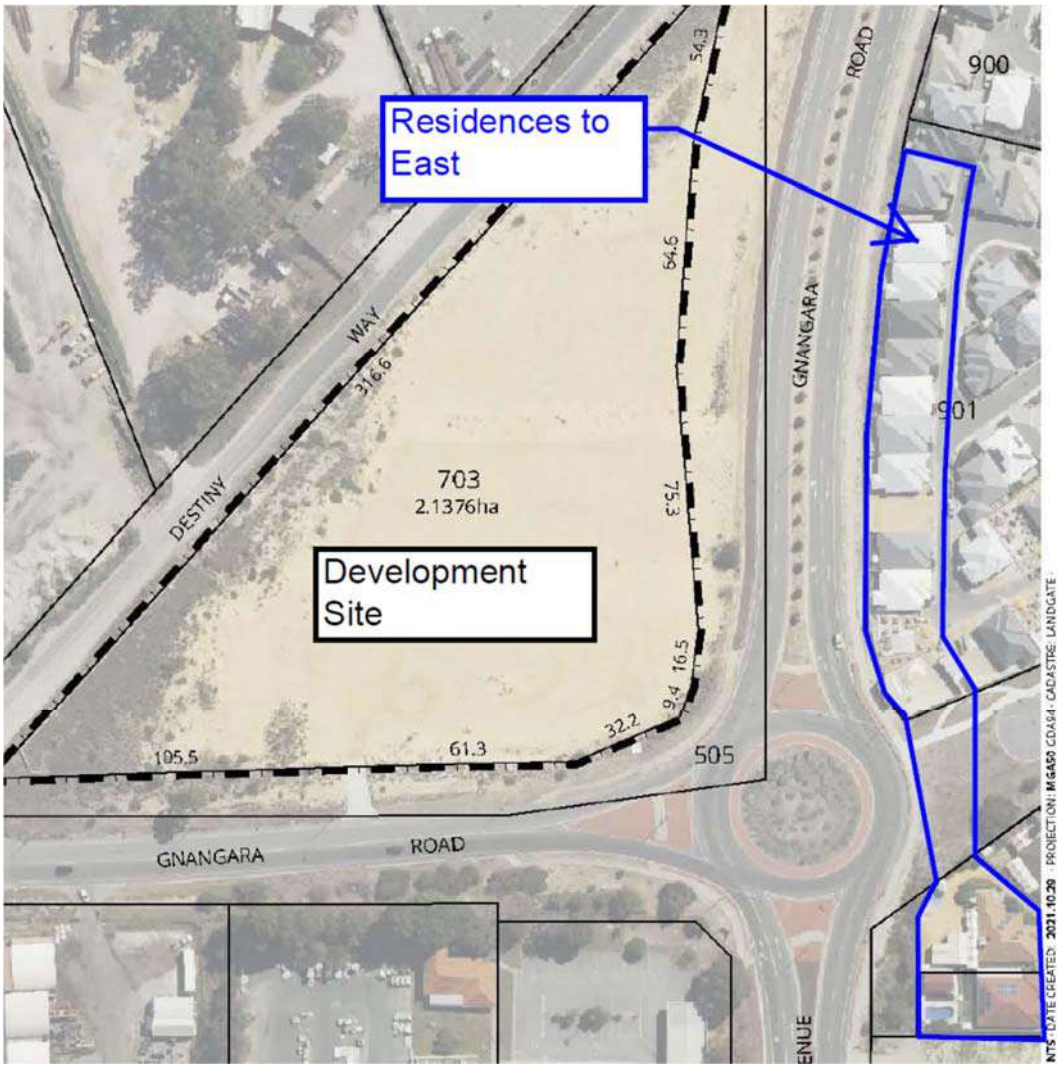


FIGURE 3.1 – AREA AROUND PROPOSED DEVELOPMENT

At the above neighbouring residences, given the traffic volumes of Gnangara Road and Ocean Reef Road and the area of industrial land, the Influencing Factor has been determined to be +8 dB. Thus, the assigned noise levels for these residences are as listed in Table 3.3.

TABLE 3.3 - ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		$L_{A\ 10}$	$L_{A\ 1}$	$L_{A\ max}$
Noise sensitive premises: Highly sensitive area	0700 - 1900 hours Monday to Saturday	53	63	73
	0900 - 1900 hours Sunday and Public Holidays	48	58	73
	1900 - 2200 hours all days	48	58	63
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	43	53	63

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.

4. MODELLING

Modelling of the noise propagation from the proposed development was carried out using an environmental noise modelling computer program, "SoundPlan". Calculations were carried out using the EPA worst case weather conditions as stated in the Environmental Protection Authority's *"Draft Guidance for Assessment of Environmental Factors No.8 - Environmental Noise"*.

Noise emissions from the development has been based on review of the high noise sources. Such that noise level associated with other sources would be less than those considered and hence would be compliant. These source, include:

SERVICE STATION

- Mechanical Services.
- Ordering Speaker; and
- Tyre Inflator indicator.

CARWASH

- Vacuum units.
- Handheld pressure hose; and
- Auto carwash.

We note that the service station incorporates a coffee drive thru, thus the noise associated with the ordering speaker has been included in the review.

The calculations for the service station were based in the sound power levels listed in Table 4.1.

TABLE 4.1 – SERVICE STATION SOUND POWER LEVELS

Item of Equipment	Sound Power Level, (dB(A))
Mechanical Services	2 Air Conditioning Condensing units at 71 2 Refrigeration units at 75
Ordering Speaker	83
Tyre Inflator Indicator	88

As there is some diversity in usage of the carwash, noise modelling was undertaken for the car wash and vacuum bays, assuming the following activities are taking place:

DAY, EVENING and SUNDAY / PUBLIC HOLIDAY DAY PERIOD

- 4 vacuum units in operations.
- 3 hand wash; and
- the Auto and Super carwashes in use.

NIGHT PERIOD

- 2 vacuum units in operations.
- 2 hand wash bays and
- the auto carwash in use.

We understand that the carwash would be open 24 hours per day, 7 days per week. Given the possible usage, noise emissions from the car wash and vacuum bays need to comply with the assigned L_{A10} noise level.

From measurements undertaken at a similar facility, noise emissions associated with the vacuum units and wash down are listed in Table 4.2.

TABLE 4.2 – SUMMARY OF NOISE EMISSIONS FROM OPERATIONS

Item of Equipment	Sound Power Level, (dB(A))
Vacuum Unit	93
Hand Carwash (Pressure Hose)	91
Auto carwash	89

Note: The above noise levels are without any noise mitigations.

The above noise sources need to comply with the following assigned noise levels:

L_{A10} - Mechanical services, ordering speaker, and carwash.
L_{AMax} - Tyre inflator indicator.

With regards to noise emissions, the following are noted:

1 Given the road traffic in the area, it is highly unlikely that any penalties would be applicable to the noise received at the neighbouring residences. However, to provide a conservative assessment, the appropriate possible penalties have been included in the assessments.

2 Noise associated with the mechanical services does not take into account any diversity of operation. Such diversity would occur during the night period.

3 It has been assumed that the mechanical services for the service station would be located on the eastern side of the roof. No screening has been included in the assessment.

5. RESULTS

Calculations were undertaken to all the residences noted on Figure 3.1. However, to simplify the assessment, only the noise received at the worst case location has been listed in Tables 5.1 and 5.2.

TABLE 5.1 – WORST CASE CALCULATED NOISE LEVELS
SERVICE STATION

Item	Calculated Noise Levels (dB(A))		
	Mechanical Services	Ordering Speaker	Tyre Inflator Indicator
Residences to East	33	27	29

TABLE 5.2 – WORST CASE CALCULATED NOISE LEVELS
CARWASH

Item	Calculated Noise Levels (dB(A))	
	Day Period	Night Period
Residences to East	41	38

6. ASSESSMENT

The following provided the acoustic assessment for the noise sources requiring compliance, as listed in Table 5.1.

6.1 L_{A10} NOISE EMISSION – MECHANICAL SERVICES

Noise emissions from the mechanical services would be steady state and would operate for the majority of time. Hence noise received from the mechanical services needs to comply with the assigned L_{A10} noise level.

To be conservative, a +5 dB(A) penalty has been applied to the calculated noise level associated with the combined noise from the mechanical services. Table 6.1 lists the characteristics that should be included in the assessable noise level.

TABLE 6.1 – APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{A10} NOISE LEVELS, dB(A)
MECHANICAL SERVICES

Location	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Residences to East	33	+5	-	-	38

Table 6.2 shows the applicable Assigned Noise Levels, and assessable noise level emissions associated for the scenarios associated with the mechanical services.

TABLE 6.2 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
MECHANICAL SERVICES

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{A10} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Residences to East	38	Night Period	43	Complies

Noise received from voices, including an ordering speaker, within the drive thru's, would not contain any annoying characteristics. Thus, the assessable noise level would be as listed in Table 5.1 above.

Table 6.3 shows the applicable Assigned Noise Levels, and assessable noise level emissions associated for the scenarios associated with the ordering speakers.

TABLE 6.3 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS ORDERING SPEAKER

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{A10} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Residences to East	27	Night Period	43	Complies

Again, to be conservative, a +5 dB(A) penalty has been applied to the calculated noise level associated with the combined noise from the Carwash. Table 6.4 lists the characteristics that should be included in the assessable noise level.

TABLE 6.4 – APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{A10} NOISE LEVELS, dB(A) CARWASH

Location	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Residences to East					
Day Period	41	+5	-	-	46
Night Period	38	+5	-	-	43

Table 6.5 shows the applicable Assigned Noise Levels, and assessable noise level emissions associated for the scenarios associated with the carwash.

TABLE 6.5 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS CARWASH

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{A10} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Residences to East	46	Day Period	53	Complies
		Sunday / Public Holiday Day Period	48	Complies
		Evening Period	48	Complies
	43	Night Period	43	Complies

6.2 L_{AMAX} NOISE EMISSION – TYRE INFLATOR INDICATOR

Noise emissions from tyre inflator beep indicator needs to comply with the assigned L_{AMax} noise level. As the critical period for compliance for this source is the night period, this scenario includes noise emissions from the sources associated with L_{AMax} noise levels. However, under the Regulations, each of these sources needs to be considered individually, it is the highest calculated noise levels used for assessment, rather than the cumulative overall noise levels.

Noise associated with the closing of a tyre inflator beep indicator could be both tonal and impulsive. Thus, to be conservative, both the +5 dB(A) penalty for tonality and the +10 dB(A) penalty for impulsiveness have been applied.

Table 6.6 list the characteristics that should be included and the assessable noise levels and the assessable noise level for tyre inflator beep indicator.

TABLE 6.6 – APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{AMAX} NOISE LEVELS, dB(A)
TYRE INFLATOR INDICATOR

Locations	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Residences to East	29	+5	-	+10	44

Table 6.7 shows the applicable Assigned Noise Levels, and assessable noise level emissions associated for the scenarios associated with the tyre inflator indicator.

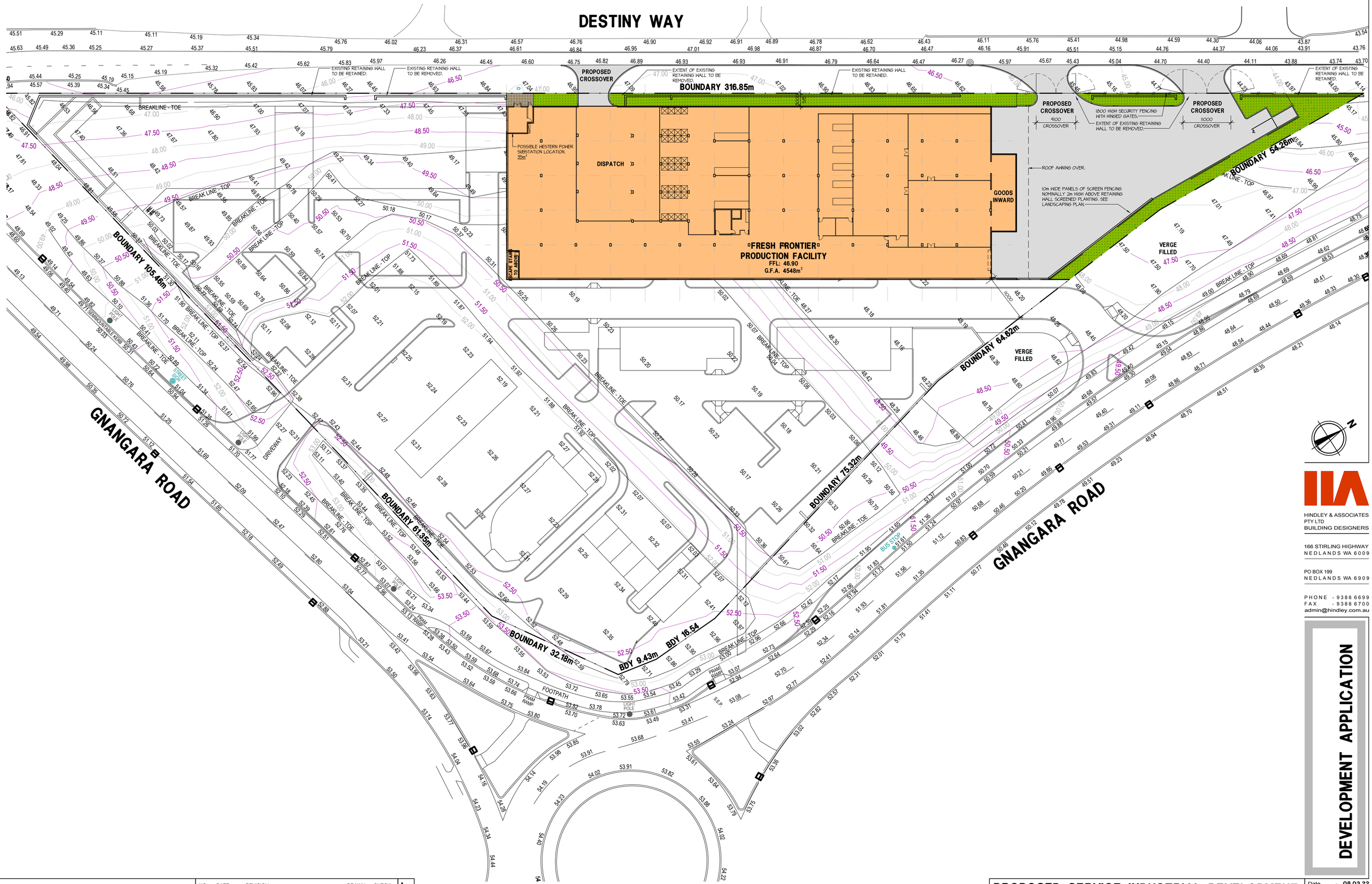
TABLE 6.7 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
TYRE INFLATOR INDICATOR

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{Amax} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Residences to East	44	Night Period	63	Complies

From the above assessments, it can be seen that noise received at the neighbouring residences, even using a conservative analysis, complies with the requirements of the *Environmental Protection (Noise) Regulations 1997*.

APPENDIX A

PLAN



HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

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HINDLEY & ASSOCIATES P/L
AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	11.11.21	SUB CONSULTANT ISSUE	MDB	SJH
B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
C	08.03.22	AMMENDED FOLLOWING DRP	MDB	SJH
-				
-				
-				
-				
-				

A1 SHEET

PROPOSED SITE PLAN LOWER GROUND LEVEL

SCALE 1:400

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date	08.03.22
Design	SJH
Drawn	MDB
Checked	SJH
Scale	1:400
Job No.	556
Dwg	DA02
Rev	C

DESTINY WAY

BOUNDARY 316.85m

GNANGARA ROAD

BOUNDARY 105.46m

BOUNDARY 54.26m

BOUNDARY 64.82m

BOUNDARY 75.32m

BOUNDARY 61.35m

BDY 16.54

BDY 9.43m

BOUNDARY 32.18m

LOT 703
21374m²

SHOW ROOM 1
G.F.A. 830m²
FFL: 52.00

SHOW ROOM 2
G.F.A. 670m²
FFL: 52.00

SERVICE YARD

SERVICE YARD

SERVICE YARD

SERVICE YARD

MOTOR CYCLES

OPEN PLANT ROOM
200m²
VERTICAL LOUVERED SCREEN FENCE.

FRESH FRONTIER OFFICES
FFL: 52.30
G.F.A. 490m²

AUTO TYRE WORKSHOP 1
G.F.A. 245m²
FFL: 51.80
4 WORK BAYS

AUTO SERVICE WORKSHOP 2
G.F.A. 245m²
FFL: 51.80
4 WORK BAYS

POCKET PARK

FORECOURT
8 BAYS

CONVENIENCE STORE
G.F.A. 185m²
FFL: 52.50

BIN STORE

CAR WASH
G.F.A. 250m²

AUTO WASH

PLANT
FFL: 52.40

BINS

MW1

MW2

MW3

MW3

REFER TO DA02 FOR LOWER GROUND FLOOR & CARPARKING LAYOUT

PROPOSED CROSSOVER

PROPOSED CROSSOVER

EXISTING CROSSOVER TO BE WIDENED

EXISTING CROSSOVER TO BE RETAINED.

LIGHT POLE TO BE RELOCATED.

NEW RETAINING WALL (T.O.W. 51.80)

NEW RETAINING WALL (T.O.W. 52.10)

NEW RETAINING WALL (T.O.W. 51.60)

EXISTING RETAINING WALL (T.O.W. 47.27)

EXISTING RETAINING WALL (T.O.W. 46.18)

NEW RETAINING WALL (T.O.W. 44.40)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 47.28)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 47.64)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 41.64)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 45.12)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 46.04)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 45.36)

EXISTING RETAINING WALL TO BE RETAINED (T.O.W. 44.98)

NEW CROSSOVER TO DISPATCH AREA BELOW.

ROOF CANOPY BELOW.

STEP IN T.O.W.

SERVICE BAY.

ROOF STRUCTURE WITH SOLAR PANELS OVER CARPARKING BAYS.

MOTORCYCLE PARKING 2500 x 1200 BAYS WITH 3.0m DRIVEWAY.

7.4m WIDE DRIVEWAY

6.6m WIDE DRIVEWAY

PARKING 5400 x 2600 BAYS

DDA BAY

ROOF OVER.

SCAPE STAIR FROM BELOW

10m WIDE PANELS OF SCREEN FENCING.

10m WIDE PANELS OF SCREEN FENCING NOMINALLY 2m HIGH ABOVE RETAINING WALL SCREENED PLANTING, SEE LANDSCAPING PLAN.

RETAINING WALL.

6m HIGH x 2.5 WIDE "FRESH FRONTIER" PYLON SIGN.

RELOCATED BUS STOP TO PTA APPROVAL.

PROPOSED LEFT TURN SLIP LANE.

NEW FOOTPATH AS PART OF SLIP LANE WORKS.

6m HIGH x 2.5 WIDE WORKSHOP 2 PYLON SIGN.

3m WIDE LANDSCAPING STRIP, REFER TO LANDSCAPING PLAN FOR DETAILS.

PROPOSED LEFT TURN SLIP LANE.

6m HIGH x 2.5 WIDE WORKSHOP PYLON SIGN.

EXTENT OF STEPPED RETAINING WALL DETERMINED BY FINAL CIVIL DESIGN.

6.2m WIDE BITUMEN PAVED DRIVEWAY

7m WIDE BITUMEN PAVED DRIVEWAY

6m WIDE BITUMEN PAVED DRIVEWAY

6.5m WIDE BITUMEN PAVED DRIVEWAY

3m WIDE LANDSCAPING STRIP, REFER TO LANDSCAPING PLAN FOR DETAILS.

6m HIGH x 2.5 WIDE MULTI TENANT PYLON SIGN.

6m HIGH x 2.5 WIDE CONVENIENCE STORE PYLON SIGN.

6m HIGH x 2.5 WIDE CARWASH PYLON SIGN.

VACUUM BAYS

FEATURE ENTRY SCREEN.

TANKER REFUELING POINT.

POSSIBLE TRANSFORMER LOCATION.

ROLL OVER KERB.

4 BIKE RACKS

2 BIKE RACKS

FOOTPATH

EXISTING FOOTPATH TO BE EXTENDED.

PRAM RAMP

LIGHT POLE

BUS STOP

S.E.P.

6000 SETBACK

10000 SETBACK

BREAK LINE - TOP

BREAK LINE - TOE

SEPARATION CABLE WORK

E1 E2 E3 E4 E5 E6 E7 E8 E9 E10 E11 E12 E13 E14 E15 E16 E17 E18 E19 E20 E21 E22 E23 E24 E25 E26 E27 E28 E29 E30 E31 E32

N

NOTE

- FFL ARE INDICATIVE AND TO BE CONFIRMED AT BUILDING LICENCE STAGE FOLLOWING FINAL CIVIL DESIGN.
- SOLAR PV CELLS ARE RECOMMENDED FOR USE BY BOTH LANDOWNERS & TENANTS

LEGEND

- BITUMEN SEALED PAVEMENT.
- LANDSCAPING AREA TO SUSPENDED SLAB AREA :334m² REFER TO LANDSCAPING PLAN.
- SOFT LANDSCAPING AREA: 3182m² REFER TO LANDSCAPING PLAN.
- BLACK CONCRETE.
- SELECTED PAVED FOOTPATH.

F.F.L. (00.00) PROPOSED NEW DESIGN LEVELS, LEVELS ARE TO BE USED AS A GUIDE ONLY. FINAL LAYOUT BY SUITABLY QUALIFIED CONSULTANTS AS PART OF BUILDING PERMIT APPLICATION.

CARPARKING SUMMARY

FRESH FRONTIER

MARKED BAYS -	94
DISABLED BAYS -	2
MOTORCYCLE BAYS -	7
LOWER GROUND PARKING - AS PER DA02 (C)	3
TOTAL -	106

SERVICE INDUSTRIAL

MARKED BAYS -	91
DISABLED BAYS -	5
REFUELING BAYS -	8
TOTAL -	104
TOTAL PARKING BAYS	210

SITE LOCATION PLAN
NOT TO SCALE

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

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AS TRUSTEE FOR
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ACN No. 088 989 904

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B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
C	08.03.22	AMMENDED FOLLOWING DRP	MDB	SJH

A1 SHEET

PROPOSED SITE PLAN (UPPER GROUND LEVEL)

SCALE 1:400

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date -	08.03.22
Design -	SJH
Drawn -	MDB
Checked -	SJH
Scale -	1:400
Job No. -	556
Dwg -	DA01
Rev -	C

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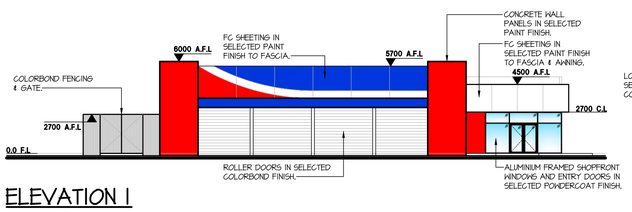
SCALE 1:200



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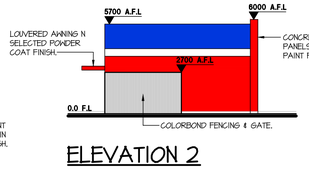

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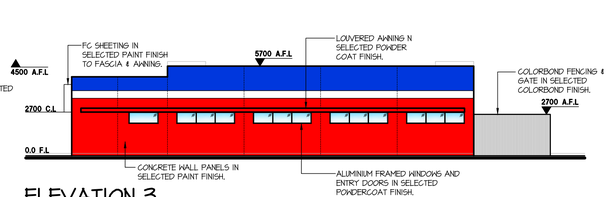

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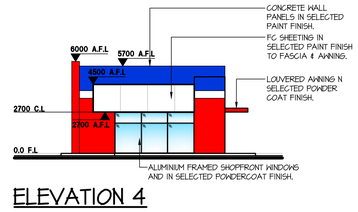

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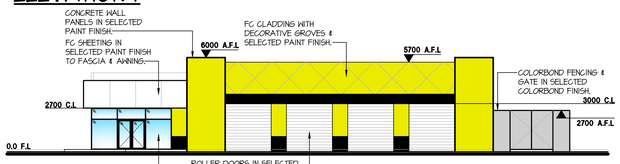

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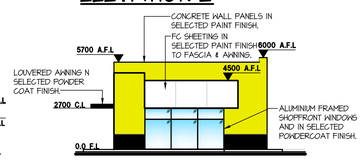

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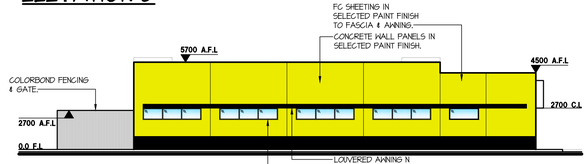

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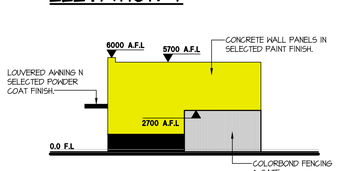

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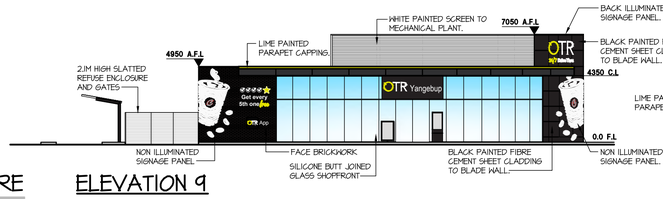
CONVENIENCE STORE
SCALE 1:200



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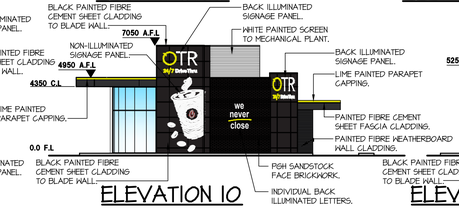

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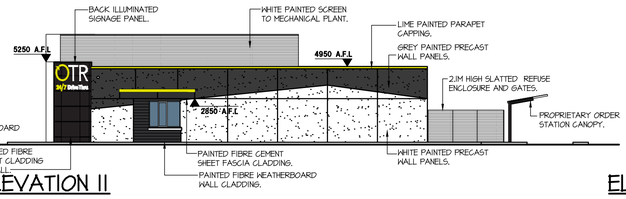

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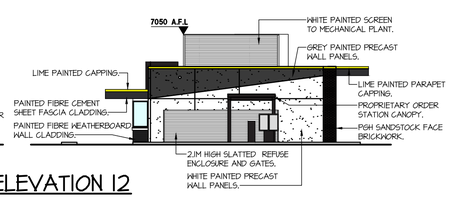

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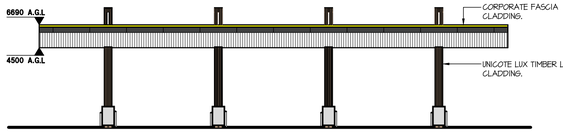

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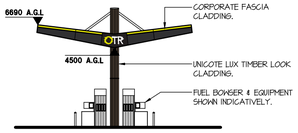

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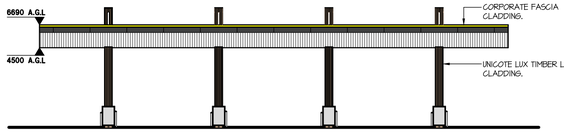

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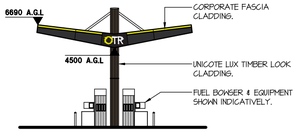
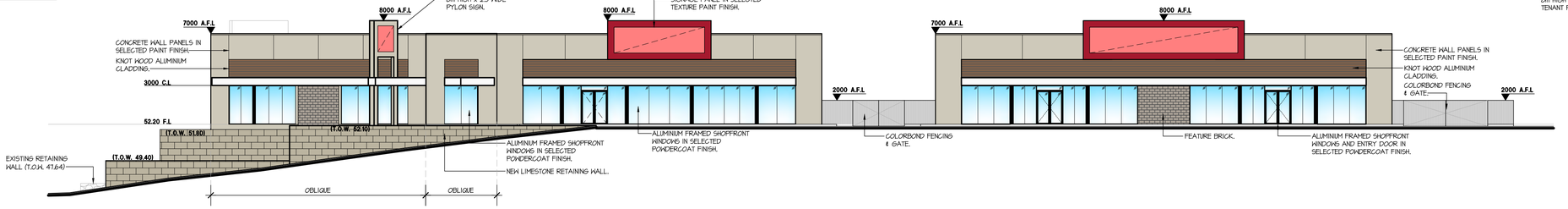


ELEVATION 16

FUEL CANOPY
SCALE 1:200



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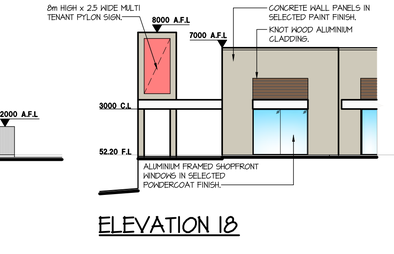
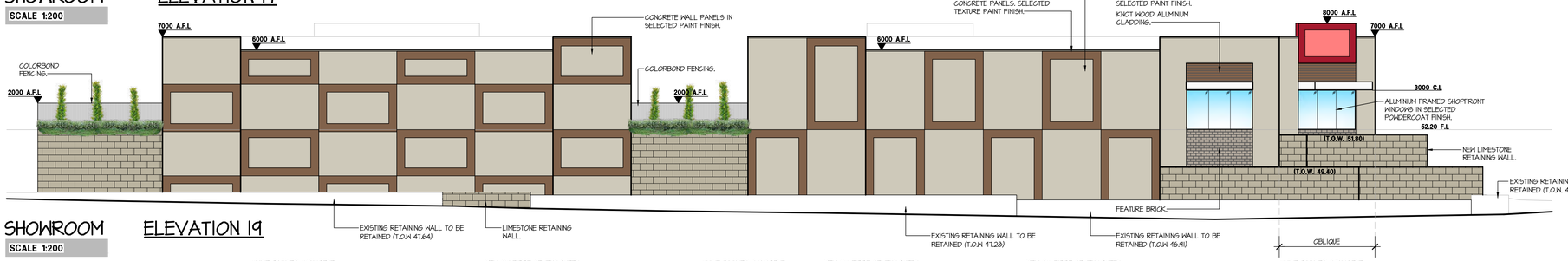


ELEVATION 18

SHOWROOM
SCALE 1:200



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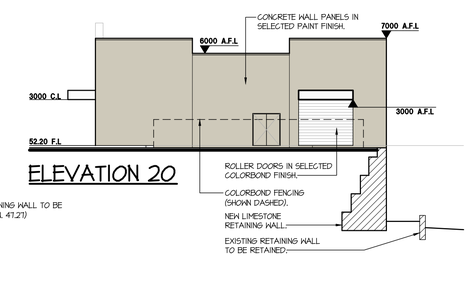
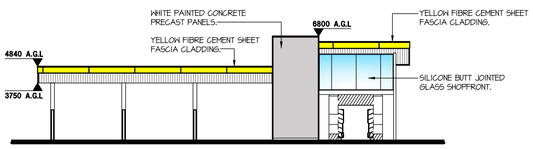


ELEVATION 20

CAR WASH
SCALE 1:200



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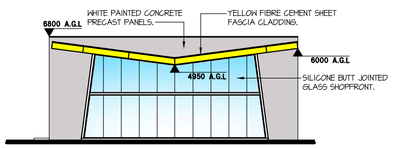

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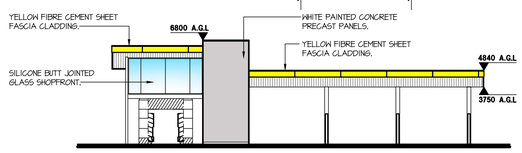

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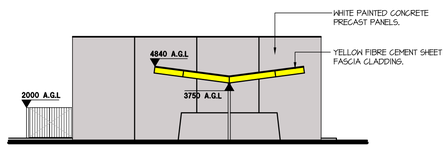
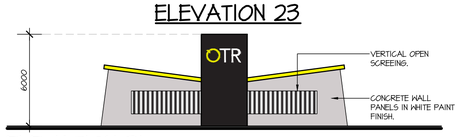


ELEVATION 24

PROPOSED ELEVATIONS
SCALE 1:200



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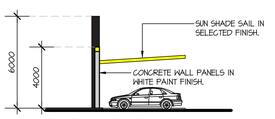

ELEVATION 32

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HINDLEY & ASSOCIATES P/L
AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	11.11.21	SUB CONSULTANT ISSUE	MDB	SJH
B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
C	08.03.22	AMMENDED FOLLOWING DRP	MDB	SJH

A1 SHEET

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
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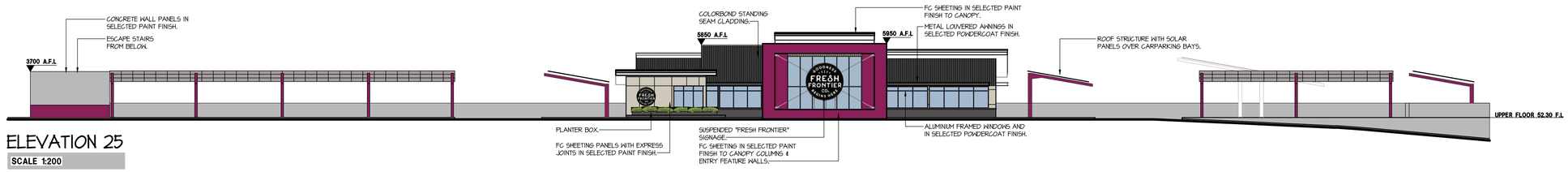
PHONE - 9386 6699
FAX - 9386 6700
admin@hindley.com.au

DEVELOPMENT APPLICATION

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date	-	08.03.22
Design	-	SJH
Drawn	-	MDB
Checked	-	SJH
Scale	-	1:200
Job No.		556
Dwg -		DA03
Rev -		C



ELEVATION 25

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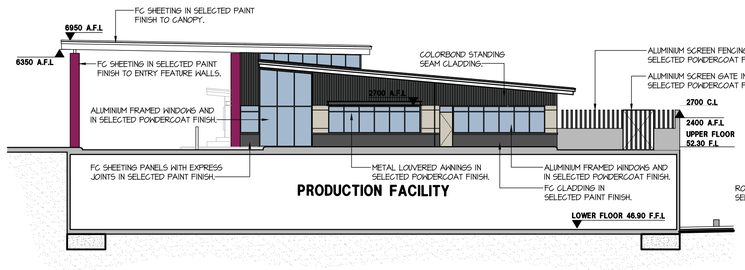
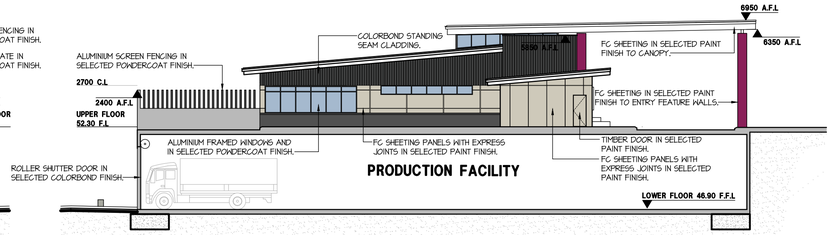


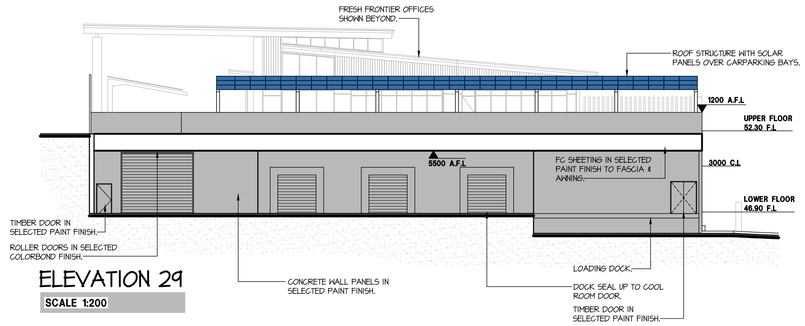
SECTION / ELEVATION 26

SCALE 1:200



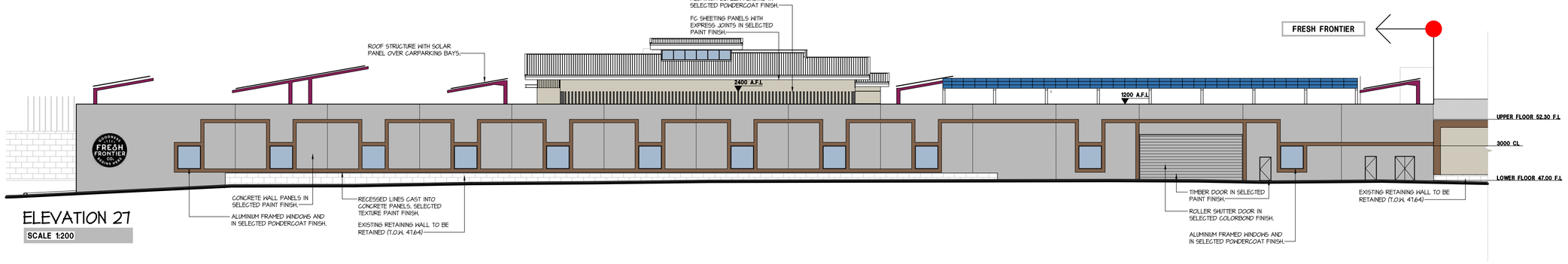
SECTION / ELEVATION 28

SCALE 1:200



ELEVATION 29

SCALE 1:200



ELEVATION 27

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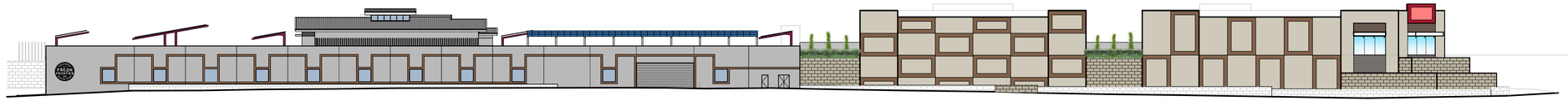

ELEVATION 30 (DESTINY WAY)

NOT TO SCALE

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
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DEVELOPMENT APPLICATION

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AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	11.11.21	SUB CONSULTANT ISSUE	MDB	SJH
B	12.11.21	DEVELOPMENT APPLICATION ISSUE	MDB	SJH
C	08.03.22	AMMENDED FOLLOWING DRP	MDB	SJH
-				
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-				
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A1 SHEET

PROPOSED ELEVATIONS

NOT TO SCALE

PROPOSED SERVICE INDUSTRIAL DEVELOPMENT
No. 359 LOT 703 GNANGARA ROAD
WANGARA
for WANGARA UNIT TRUST

Date	08.03.22
Design	SJH
Drawn	MDB
Checked	SJH
Scale	1:200
Job No.	556
Dwg	DA04
Rev	C

LOT 53 (No.67) FOLLY ROAD, BALDIVIS - PROPOSED PLACE OF WORSHIP (HINDU TEMPLE)

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer Joint Development Assessment Panel	
Local Government Area:	City of Rockingham	
Applicant:	Archetype Design Studio	
Owner:	Ms A P Byers	
Value of Development:	$5million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)	
Responsible Authority:	City of Rockingham	
Authorising Officer:	Mr Peter Ricci, Acting Director Planning and Development Services	
LG Reference:	DD020.2021.00000340.001	
DAP File No:	DAP/21/02148	
Application Received Date:	9 December 2021	
Report Due Date:	8 August 2022	
Application Statutory Process Timeframe:	+90 Days with Applicant's consent	
Attachment(s):	**Attachment 1** Original Responsible Authority Report **Attachment 2** Design Review Panel Meeting Notes **Attachment 3** Additional Information and Amended Development Plans (Post Deferral) **Attachment 4** Proposed Operating Hours	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	☒ Yes ☐ N/A	Complete Responsible Authority Recommendation section
	☐ No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Metro Outer Joint Development Assessment Panel resolves to:

Refuse DAP Application reference DAP/21/02148 and the accompanying plans:

- Location Plan, Drawing No. 01, Revision 5, dated 10 June 2022;

- Site Plan: Total Lot, Drawing No. 02, Revision 5, dated 10 June 2022;
- Proposed Development East of Mid Tree Line, Drawing No.3, Revision 5, dated 10 June 2022;
- Temple Plan, Priests Quarters and Toilet Block, Drawing No.4, Revision 5, dated 10 June 2022;
- Elevations, Drawing No.5, Revision 5, dated 10 June 2022;
- Multi-Purpose Hall, Dining and Library Plan, Drawing No.6, Revision 5, dated 10 June 2022;
- Multi-Purpose Hall, Dining and Library Elevations, Drawing No.7, Revision 5, dated 10 June 2022;
- Guests Accommodation Plan and Elevations, Drawing No.8, Revision 5, dated 10 June 2022;
- Landscape Plan, Drawing No.9, Revision 5, dated 10 June 2022;
- Bushfire APZ Strategy, Drawing No. 10, Revision 5, dated 10 June 2022;
- Staging Diagram, Drawing No.11, Revision 5, dated 10 June 2022.

In accordance with Clause 68 of the Planning and Development (Local Planning Schemes) Regulations 2015 and the provisions of clause 68(2)(c) of the deemed provisions of the City of Rockingham Town Planning Scheme No. 2, for the following reasons:

1. The proposed development is not consistent with the City of Rockingham Town Planning Scheme No.2 Objective of the Rural Zone (Clause 4.11.1), which is to preserve land for farming and foster semi-rural development which is sympathetic to the rural character of the area.

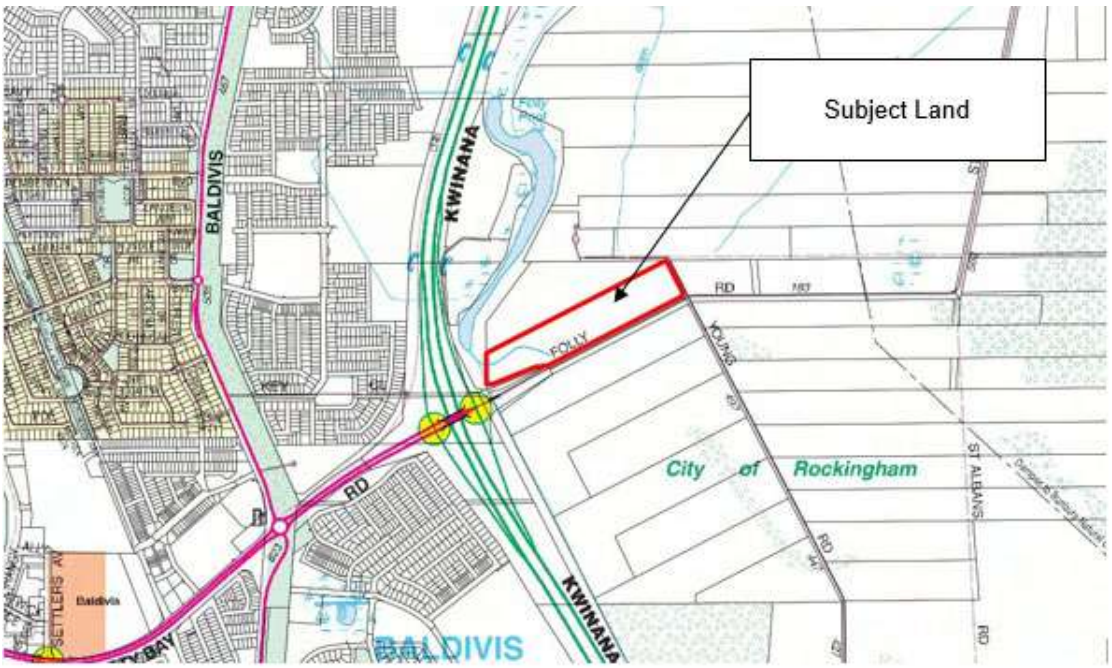
2. The proposed development is not consistent with the strategic intent for Planning Precinct 2A under the City of Rockingham Planning Policy 3.3.1 - Rural Land Strategy, as it has not been sufficiently demonstrated that the development will protect and enhance the visual character and amenity of the locality.

3. The intensity of the proposed development exceeds what could reasonably be expected within this rural locality, based on the range of activity proposed and number of people likely to attend the site.

4. The proposed development is considered to have an adverse impact on the rural character and amenity of the locality, due to the proposed scale and intensity of the use; visual impacts and the potential noise nuisance associated in particular with vehicles leaving events during evening and night time hours.

5. The proposed development is contrary to orderly and proper planning principles.

Background:



1. Location Map

2. Aerial Photograph of the Subject Site

Site Context

The subject land is located on the northern side of Folly Road, west of Young Road, in Baldivis and comprises of the following characteristics:

- Two (2) rural outbuildings that obtain vehicular access from the existing crossover on Folly Road;

- Predominantly in open grassland, with pockets of established trees located at the western end of the property and within the central-eastern portion of the site; and

- The land is generally flat and low lying, with the western portion (approximately 4ha) affected by the 1 in 100 year floodplain.

The surrounding locality comprises:

- Folly Pool to the west, which is a Conservation Category Wetland, beyond which lies the Kwinana Freeway (a 'Primary Regional Road'), and the Baldivis urban area further to the west. Elevated topography east of Folly Pool screens the subject site from the Kwinana Freeway and Baldivis urban area. Despite the proximity of the Freeway, the mature trees and wetland vegetation of Folly Pool reinforce the rural character at the western end of the site.

- North and east of the site on Young Road (Young Road is a cul-de-sac at this point which serves the following properties):

  - Lot 923 (No.547) Young Road comprises of 'unused' rural land with two rural sheds, however, currently contains no dwelling;

  - Lot 33 (No.574) Young Road contains a dwelling and rural sheds, and is used for keeping animals, including horses ('Rural Pursuit');

  - Lot 52 Young Road contains a rural shed and is used for grazing animals ('Agriculture - Extensive'); and

  - Lot 103 (No.151) Folly Road contains two dwellings and sheds.

- South-east of the site (south of Folly Road, east of Young Road) on Lot 202 (No.154) Folly Road a small citrus orchard and shed are located on the eastern portion. The western portion comprises open grassland and trees.

- A rural stockfeed business is situated opposite the site to the south on Lot 55 (No.66) Folly Road. Lot 55 contains a dwelling and six (6) rural sheds, with some approximately 6-8m high. Established trees substantially screen the buildings from public view, but some of the buildings can be seen looking east from the western end of Folly Road.

- In the hierarchy of the surrounding road network Folly Road is an 'Access Road'. Folly Road (between the Kwinana Freeway and Young Road) is also reserved as an 'Other Regional Road' (ORR) in the MRS. Despite this, there are no plans to upgrade Folly Road to an ORR standard. Further, there is a 'drainage lot' owned by the Water Corporation in the middle of the ORR reservation, which is also a constraint to road widening (the road reserve is only 10m wide adjoining the subject site).

Figure 3 depicts the properties referenced above.

3. Map of the Surrounding Locality

Details: Outline of Development Application

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Rural
Local Planning Scheme	Town Planning Scheme No.2
Local Planning Scheme - Zone/Reserve	Rural
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	'A' Discretionary Place of Worship Reception Centre 'D' Discretionary Residential Building 'IP' Incidental Use Ancillary Accommodation
Lot Size:	7.4362ha
Existing Land Use:	N/A
State Heritage Register	No
Local Heritage	☑ N/A ☐ Heritage List ☐ Heritage Area

Design Review	☐ N/A ☑ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

Background

The history of this Development Application is outlined below:

- On 9 December 2021, an application seeking Development Approval was lodged with the City of Rockingham (City) for a proposed Place of Worship (Hindu Temple) on the subject land.

- The application was advertised for public comment between 7 January and 4 February 2022, during which 255 submissions were received, comprising of 183 submissions for, and 72 submissions against the proposal.

- The application was referred to the Ordinary meeting of Council on 26 April 2022, where it was resolved to adopt a Responsible Authority Report (RAR) recommending refusal of a Hindu Temple development on the subject land, for the following reasons (**Attachment 1**):

  "1. The proposed development is not consistent with the City's Town Planning Scheme No.2 Objective of the Rural Zone (Clause 4.11.1), which is to preserve land for farming and foster semi-rural development which is sympathetic to the rural character of the area.

  2. The proposed development is not consistent with the strategic intent for Planning Precinct 2A under the City of Rockingham Planning Policy 3.3.1 - Rural Land Strategy, as it has not been sufficiently demonstrated that the development will protect and enhance the visual character of the rural area.

  3. The intensity of the proposed development exceeds what could reasonably be expected within this rural area, based on the number of people likely to attend the site.

  4. The proposed development has not demonstrated that the existing or proposed landscaping treatments, intended to visually screen the development, can be retained in its entirety and maintain compliance with State Planning Policy 3.7 - Planning Bushfire Prone Areas.

  5. The acoustic barrier required to mitigate noise on Lot 923 Young Road, Baldivis is considered to adversely impact visual amenity when viewed from land to the north of the site; Young Road adjoining the site to the east, and potentially from Folly Road to the south.

6. *The proposed development includes 'Grouped Dwellings' which is a prohibited ('X') land use in the Rural zone, under the City's Town Planning Scheme No.2.*

7. *The proposed development is contrary to orderly and proper planning principles*."

- On 3 May 2022, the Applicant submitted amended plans and additional information in an attempt to address the City's recommended reasons for refusal.

- On 9 May 2022, at the meeting of the MOJDAP, determination of the application was deferred until 8 August 2022 for the following reasons:

  "To enable further discussion with the City to consider the late information provided by the applicant and seek clarification concerning:

  1. *Landfill requirements for stormwater management and effluent disposal;*

  2. *Hours of operation as it affects environmental noise measures;*

  3. *Bushfire management requirements as they affect landscaping and screening;*

  4. *Housing accommodation proposed on site".*

- On 16 May 2022, City Officers met with the Applicant and it's Consultant Team to discuss the reasons for deferral.

- On the 19 May 2022, the Applicant submitted amended plans and additional information in an attempt to address the MOJDAP's reasons for deferral.

- On 30 May 2022, while not a reason for deferral, the City presented the amended plans to the City's Design Review Panel (DRP) for comment (**Attachment 2**). The DRP meeting outcomes are discussed below in the Policy section of this Report.

- On 13 June 2022, the Applicant submitted further amended plans and technical reports, which form the basis of this revised RAR to the MOJDAP (**Attachment 3**).

This Report focuses on the Applicant's amended application received on the 13 June 2022; addresses the previous concerns raised by the City (where relevant), and responds to the reasons for deferral by the MOJDAP. All other background information is contained in Attachment 1.

The following sections of the report are based on the application information, as amended.

Details

The amended application seeks Development Approval for buildings to be constructed and used for a Place of Worship, Reception Centre, Single Dwelling and Ancillary Accommodation.

Key elements include:

- A Hindu Temple building, with ancillary Chariot Store, Kitchen and Ablution buildings;
- A Priest's residence;
- A Multi-purpose Hall;
- A Dining Hall;
- A Library building;
- Ancillary Guests Accommodation Dwelling;
- A total of 105 on-site car parking bays; and
- 'Strategic' landscape plantings to screen the development from the public domain.

The Temple (and the ancillary buildings) are proposed to be used for daily prayer sessions. Following the prayer sessions, people in attendance move to the Multi-Purpose Hall to further develop and engage in the various practises of Hinduism.

The Dining Hall is proposed to operate during lunch and dinner on Fridays and the weekend to serve those wishing to stay for a meal after attending prayer sessions at the Temple.

The Multi-purpose Hall and the Dining Hall are also proposed to be used for cultural functions, including use during festival days. Weddings will also be held in the Multi-purpose Hall.

Prayer sessions are proposed to occur between 7am - 1pm and 5pm - 9pm daily.

The Library will hold a collection of religious texts and resources available for loan; be used for cultural learnings, the teaching of Sanskrit language, yoga classes (between 6pm - 7pm) and scripture classes (between 3pm - 6pm).

Hindu Festival days are proposed once a month, on average, between 7am - 1pm and 5pm - 9pm.

Weddings are proposed to occur six (6) times per year on average, on Saturdays and Sundays between 9am - 11pm (although the Architectural and Visual Landscape Report states Fridays as well). It is understood that weddings will not be held on that same days as Hindu festivals.

In order to maintain compliance with the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations) when a dwelling is constructed in the future on the adjoining land at Lot 923 Young Road, the Applicant proposes to modify operating times of the Hindu festivals and weddings as follows:

- Hindu festivals: If held on Sundays and Public Holidays, will occur between 9am - 9pm.

- Weddings: To be held between 9am – 7pm on Saturdays only. No weddings are proposed on Sundays or public holidays.

Special Hindu Festivals

In order to better understand the frequency of the special Hindu festivals, on the 27 June 2022 the Applicant provided the following additional information at the City's request:

"The Hindu Festivals are spread throughout the year, and follow the lunar cycle, so they are not set dates throughout the year.

Generally they are distributed quite evenly.

The following is typical of the major festivals:

- *Pradosham* *January*
- *Sivaratri* *February*
- *Sri RamanaVani* *March/April*
- *Ugadi* *April*
- *Brahmostsavam* *June/July*
- *Ganesha Chaturti* *Aug/Sep*
- *Janmasthami* *September*
- *Navarathri* *October*
- *Deepavali* *Oct/Nov.*

As you can see, there may be some overlap, so there may be some months where there are no festivals, and some where they occur and are observed in the same month.

Although some festivals may be observed over one night only eg Shivaratri, others such as Navaratri are traditionally observed in Hinduism over a period of 9 days.

In such circumstances, the Temple will select the most significant day (usually being either the first or last day), to be observed at the Temple.

Consequently, even if the Festivals last a week or so, they will only be celebrated on one day at the Temple.

Where possible, these observance days will be selected to spread out so they fall on weekends, and in the month where there are no other festivals".

This information was supplemented by additional information provided by the Applicant on 29 June 2022, that stated:

"Further to previous emails, please see attached a table depicting the Hindu Festival days to be observed by the Balaji Temple.

This was prepared by our clients and their Temple priests, and is more accurate than the more generic festival list that I prepared a few days ago".

	Hindu Festivals	**English Months**	**Expected crowd (numbers based on last 10 years statistics)**
1	Sankranthi (Goda kalyanam)	January	125 - 150
2	Bhsima Ekadasi	February	75 - 100
3	Sri Rama Navami	April - May	300 -350
4	Ramanuja Tiru nakshatram	May	75
5	Ashada Purnima Guru Purnima	June - July	150
6	Sravana Bahula Astami (Krushnastami)	July - August	100 - 130
	Sravana Purnima Sri Lakshmi Hayagri:va	July - August	100 - 125
7	Sravana Sri Mahalakshmi Kumkumarchana	August	125 - 150
8	Aswija shukla (Vijaya) dasami/ Sri Srinivasa Kalyanam	August - September	300 - 350
9	Karthika Amavasya Deepavali	October - November	125
10	Marghasira Shukla Ekadasi - Gita jayanthi	December	100
11	Vaikunta Ekadasi	December - January	150
12	Temple consecration day Anniversary celebrations (3 to 5 days)...dates based on Temple consecration.		

What is evident is that:

- As the festivals are based on the lunar cycle, there is no uniformity or set dates throughout the year for these events;
- There are times when more than 1 festival may be held in a calendar month; and
- Numbers attending the festivals vary considerably between months.

Attachment 4 provides a summary of the proposed operating hours, as understood by the City, before and after a dwelling is constructed on Lot 923 Young Road.

The development is proposed to be constructed in stages, involving:

1. 0-12 months from approval:

    - Earthworks, slabs, drainage;
    - Major tree plantings.

2. 12-24 months:

    - Main Temple, Ablution and Kitchen buildings;
    - Vehicle access, main car park;

3. 2-5 years:

    - Dining hall;
    - Library building;
    - Priest residence.

4. 6-10 years:

    - Multi-purpose hall;
    - Guest accommodation;
    - Additional car parking.

The main changes (compared to the original application) are as follows, and for clarity are shown on the Amended Site Plan in Figure 4 further below:

- The 89m acoustic barrier proposed parallel to the eastern end of the northern boundary for noise mitigation is no longer proposed. Instead the Applicant intends to modify operating hours of the Hindu festivals and weddings to achieve acoustic compliance.

- Operating hours have increased for daily prayer sessions, Hindu festivals and weddings;

- The two Priest dwellings have been amalgamated into a single two (2) storey dwelling;

- The guest accommodation dwelling has been reduced in size;

- On-site car parking has reduced in bay numbers, with car bays shifted away from the northern boundary, and relocated to a new car park adjacent to the Multi-purpose hall;

- An effluent disposal field is proposed west of the Temple building;

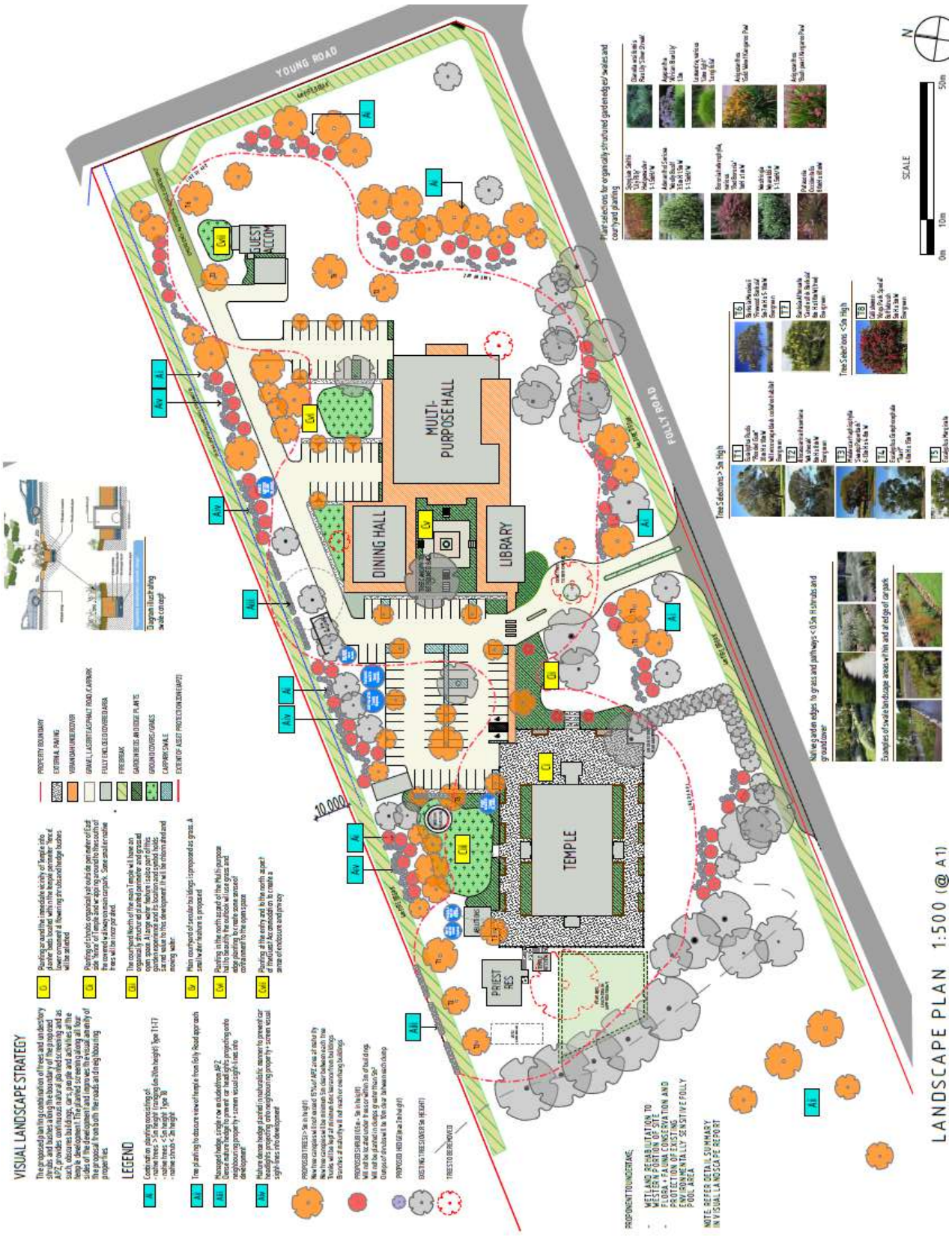
- Additional landscape plantings are proposed outside of a designated 21m wide Asset Protection Zone (APZ) for bushfire mitigation, including along the northern boundary interface (refer to Figure 5 below); and

- The staging timeframe for constructing the Multi-Purpose Hall has been pushed back from 3-4 years to 6-10 years from Development Approval.

The Applicant submitted the following revised reports and plans in support of the amended application:

- Architectural Plans (Archetype Design Studio, Rev 5, 10 June 2022);
- Architectural and Visual Landscape Report (Archetype Design Studio, Version 4, dated 13 June 2022);
- Transport Impact Assessment (Shawmac, Rev D, dated 10 June 2022);
- Acoustic Report (Marshall Day Acoustics, Revision 5, dated 28 June 2022;
- Site and Soil Investigation Report (Waterinsight; Rev 4, June 2022);
- Bushfire Management Plan (Envision, Version 5, dated 11 June 2022); and
- Development Application Report (Peter Webb Associates, Version 11, dated 13 June 2021).

4. Amended Site Plan



5. Amended Landscape Plan

Legislation and Policy:

Legislation

- Planning and Development Act 2005
- Metropolitan Region Scheme
- Planning and Development (Local Planning Schemes) Regulations 2015 (the Regulations)
- Town Planning Scheme No.2 (TPS2)
- Environmental Protection (Noise) Regulations 1997

State Government Policies

- State Planning Policy 3.7 - Planning in Bushfire Prone Areas (SPP3.7)
- State Planning Policy 7.0 – *Design of the Built Environment* (SPP7.0)
- Government Sewerage Policy (September 2019)

Local Policies

- Planning Policy 3.1.1 - Rural Land Strategy (PP3.1.1)

Consultation:

Public Consultation

The amended proposal has not been advertised for public comment as it is considered that the submissions received to date are still of relevance to the Local Government.

Of the 255 submissions that were received, 72 objected or raised concerns.

The public submissions objecting (refer **Attachment 1**) raised the following 'broad' concerns:

- That the proposal will adversely affect the surrounding rural character and amenity in terms of traffic generation, visual and noise impact;

- The impact on Lot 923 (547) Young Road given the location of the proposed car parking, proposed buildings and intensity of use;

- The appropriateness of the built form in a rural context; and

- The environmental impact of the development on ground and surface water resources, wetlands and habitats for flora and fauna.

Outstanding concerns expressed by submitters, as they relate to the amended application are discussed below.

Referrals/consultation with Government/Service Agencies

The responses that were received on the original application form part of **Attachment 1**.

Any issues raised have either been resolved, or were of an 'information only' nature. As such, no further consultation occurred with the consulted agencies.

Design Review Panel Advice

On 30 May 2022, amended plans were presented to the City's Design Review Panel ('DRP") for consideration, to provide independent feedback on site planning and layout of the development.

Specifically, the purpose was primarily aimed to gauge the views of the DRP with respect to how the development compliments the key 'Design Principles' contained in SPP7.0 relevant to this proposal. **Attachment 2** contains the DRP meeting notes in full, however, in summary, the DRP considered that:

- Noise and glare attenuation to the north was the 'weakest' part of the application. The interface with the northern property needed to be well resolved.

- The location of car parking near the northern boundary was also not favoured, and it was suggested that it should be relocated.

- The building design, bulk and scale was considered appropriate, having considered the locational context of the site.

- The Temple is a necessarily distinctive building, the visual impact of which is ameliorated by the retained trees.

- Design of the secular buildings is appropriate to the local context.

- The landscaping strategy was generally supported. Additional landscaping was also suggested around the Library and Hall buildings; in the car parks and along the northern property boundary.

The DRP is an independent forum used by the City to offer an assessment of a proposal against SPP7.0. The Principles in SPP7.0 cut across a number of design related disciplines, with some more aligned to architecture and urban design, whilst others have a broader planning connotation.

The DRP, which compromised two Architects and a Landscape Architect, concluded that the 'design is supported', on the basis that it was viewed that the proposal complied with the relevant Design Principles of SPP7.0.

Swan Valley Planning

Not Applicable

Planning Assessment:

The proposal has been assessed against the requirements of all relevant Legislation; the Scheme, State and Local Planning Policies, as previously outlined in the Legislation and Policy section of this Report. The following matters have been identified as key considerations for the determination of this application:

Environmental Protection (Noise) Regulations 1997 (Noise Regulations)

A concern of the City with the original Development Application related to an 89m long acoustic barrier, which was recommended by the Applicant's consultant to mitigate noise and achieve acoustic compliance. Without the barrier, aspects of noise from the Hindu festivals and weddings would not comply with the Noise Regulations when a dwelling gets constructed on the adjoining property to the north (Lot 923 Young Road).

The City considered that an 89m long noise barrier would adversely impact the rural amenity, as it would not be a form of rural fencing expected in the 'Rural' zone; this formed a reason for recommending refusal from April 2022.

In order to achieve compliance with the Noise Regulations, the Applicant has amended the proposed operating hours for the Hindu festivals and weddings upon a dwelling being constructed on Lot 923 Young Road (**Attachment 4**). It is also noted that the amended Application increases the duration of morning Prayer and Festival sessions, as well as weddings, which have been extended to operate between 9am - 11pm on weekend days.

The Acoustic Report considers the application, if managed correctly, can comply with the Noise Regulations where an operational noise management plan is adopted by the operator.

The City considers it is possible to achieve compliance with the Noise Regulations in the manner proposed, that avoids the need for an acoustic barrier.

The City considers, however, that managing noise compliance could be difficult for this development, as in order to achieve compliance, activities will need to be managed carefully to ensure that occupancy numbers are not exceeded; that traffic noise from the proposed activities does not generate a nuisance for neighbours, and ensure that no cars arrive in the car parks prior 7am in time for prayer sessions while night time hours are still in force.

As discussed, however, under the heading of Rural Land Strategy, there will be traffic noise generated that is exempted under the Noise Regulations, and will not be capable of enforcement, which is of concern to the City due to the potential impact on the amenity of the surrounding properties.

State Planning Policy 3.7 - *Planning in Bushfire Prone Areas* (SPP3.7)

An amended Bushfire Management Plan (BMP) was submitted that depicts a 21m wide APZ around habitable buildings, while a Bushfire Attack Level (BAL) contour plan demonstrates that BAL-29 will not be exceeded post-development.

Within the BMP, an APZ Strategy Plan indicates how vegetation within and outside of the APZ can be planted and managed to mitigate bushfire risk and maximise screening of the development.

The revised application complies with SPP3.7.

As such, Reason No.4 of the City's previous reason for refusal no longer applies, when considered with the landscaping proposed.

State Planning Policy 7.0 - *Design of the Built Environment* (SPP7.0)

As mentioned earlier, on 30 May 2022 amended plans were presented to the City's DRP for consideration, to provide independent feedback and to gauge the views of the DRP with respect to how the development compliments the key 'Design Principles' contained in SPP7.0 relevant to this proposal.

The DRP concluded that the 'design is supported', on the basis that it was viewed that the proposal complied with the relevant Design Principles of SPP7.0 (**Attachment 2**).

SPP7.0 is one of several considerations to which the decision maker is required to give due regard (but is not bound by), pursuant to Clause 67 (2) of the *Planning and Development (Local Planning Schemes) Regulations 2015* and section 77 of the *Planning and Development Act 2005.*

From a planning perspective, the City's assessment of the proposed development differs from the DRP, in respect to Design Principle 1 - *Context and Character*, which states that "*Good design responds to and enhances the distinctive characteristics of the local area, contributing to a sense of place*".

Taking account of the proposed scale, intensity and impact of development, it is the City's view that the Application will adversely impact the existing rural character and amenity of the locality. As such, the proposal does not enhance the distinctive characteristics of the local area, or contribute positively to a sense of place. This matter is further discussed below.

The City's assessment of the Application also differs from the DRP in respect to Design Principle 3 - *Built Form and Scale*, which states that "*Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between the existing built form and the intended future character of the local area*".

The scale of the proposed built form has predominantly been justified by the Applicant on the basis on the scale of the buildings on Lot 55 Folly Road. The City notes, however, that the scale of the proposed development significantly exceeds the scale of development on Lot 55 Folly Road (refer to Figure 9). Furthermore, the character of the proposed use is not consistent with the character of the use of Lot 55 (a rural business), or with the intended future character of the area, as expressed in the Rural zone objective.

Government Sewerage Policy (September 2019)

An updated Site and Soil Report has been provided which identifies that the area required to dispose of treated effluent is:

- 3,360m², if sub-surface irrigation is proposed; or
- 580m² (within a 20m x 29m footprint) where flat bead leach drains are proposed.

The Report recommends the latter, in order to minimise spatial requirements and to enable the waste water system to be screened from surrounding view.

To achieve 1.5m separation between the base of the leach drain and the maximum groundwater level, the Report indicates, based on the observed groundwater and surface levels, approximately 730mm of fill will be required. The City notes that by allowing for soil cover, a total fill extent can be expected of approximately 1m.

The City acknowledges the visual benefit to locating the effluent disposal area west of the Temple building, where the impact of fill on the landform can be mitigated through the screening provided by the buildings and surrounding vegetation. The matter of fill is considered to be adequately resolved.

Local Planning Policies

PP3.1.1 Rural Land Strategy (RLS)

The RLS considers the City's rural land in terms of 'Policy Areas' which are further divided into 'Planning Precincts'. The subject land is situated in Policy Area 2 - Baldivis East, which is described as:

"*The Baldivis (east) precinct is located on the eastern side of the Kwinana Freeway generally between Mundijong Road to the north and Karnup Road to the south, extending eastward to the municipal boundary. The precinct is predominantly zoned Rural, with some Special Rural zoned land in the vicinity of Doghill Road*".

The City previously raised concerns in respect to the following provisions of the RLS:

- "*That building construction to BAL-29 be required to limit clearing associated with the bushfire risk mitigations*";

As noted previously, the amended BMP depicts a reduced 21m wide APZ around buildings. The refined APZ allows for an improved post-development landscaping outcome, which is the intent of this provision.

- "*All buildings and outbuildings are to be sympathetic in design, materials and colour to compliment the surrounding landscape elements and be sited away from focal points and located where screening vegetation or landform can be utilised*."

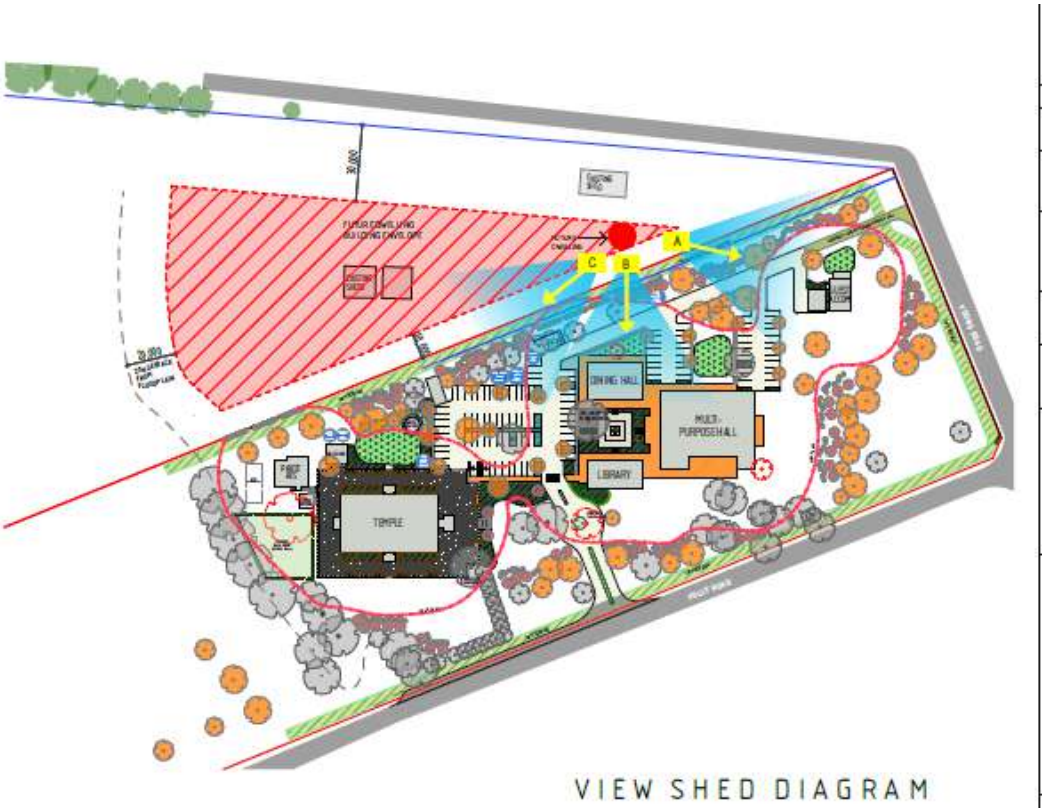
As mentioned above, the City's DRP generally supported the application in respect to the design of the built form, and the amended APZ and landscape strategy have resulted in an improved vegetation screening outcome that is more consistent with the above policy provision.

Notwithstanding, the City is concerned that even with the screening provided by the existing trees and proposed landscaping, the buildings will still be visible, as:

- Despite the landscape plantings proposed (as shown on the revised Landscape Plan along the northern property interface with Lot 923 Young Road), the proposed development setbacks limit the amount, and therefore the effectiveness of screening the development from views from the north, which is from where the impact is considered to be greatest. When a dwelling is built on Lot 923 Young Road in the future, it could potentially be constructed up 10m from the common boundary, as due to flooding, the building envelope is restricted to the eastern portion of this land, similar to the building envelope on the subject land.

6. Building Envelopes on Lot 923 Young Rd and Lot 53 Folly Rd

The Applicant provided the following montages depicting the visual impact of the development when viewed from Lot 923 Young Road once the proposed landscape plantings have reached maturity.



7. View Shed Montages

The images above present the views of the development from a dwelling set back 10m from the northern boundary of the subject site.

The following photographs were taken by City staff from the same location for realistic context and comparison:

Photo A

Photo B

8. Photographs of Northern Boundary from Lot 923 Young Road

The photographs suggest the close proximity of the boundary (depicted by the fence line) and the visually open nature of the landscape at present, and provide a more accurate understanding of the minimal separation between the development and a future dwelling.

As the Applicants' montages show, the Dining Hall and Multi-Purpose Hall can be seen from this viewpoint, which are set back within the site approximately 22m and 45m respectively.

Despite the proposed screening, activity on the site will be clearly discernible.

- Proposed tree plantings will need to reach a height of at least 15m for the Temple 'Goporam's' to be screened, which would take some time. Until then, the Goporam's will be visible above the tree line.

- The eastern (main) Goporam will be illuminated at night. The extent of illumination is not what would typically be expected on a Rural context, and as such, is considered to impact the visual character of the surrounding area.

- In the event that the established trees are removed due to health or safety, it will take time for the screening effect they provided to be replaced. Furthermore, it would be difficult to enforce suitable replacement tree plantings in such a scenario.

The Strategic Intent for Planning Precinct 2A, includes:

"To protect and enhance visual character and amenity".

The potential impact of the development on the existing rural character, and consequently, the amenity of the locality was a key issue raised in submissions opposing the application, and is an ongoing concern for the City. Amenity is defined to mean "*all those factors which combine to form the character of an area and include the present and future amenity*".

In order to establish what the impact is on the rural character, it is important to define the locality.

The locality surrounding the subject site is either Rural or Special Rural zoned land, and land reserved for Parks and Recreation under the MRS and TPS2.

Properties within the locality were previously described under the heading Site Context, and were depicted on the map in Figure 3.

Despite the location of the subject land on the fringe of the Rural zone, the existing character of the locality is distinctly rural. The physical characteristics of the locality engender a sense of rural serenity, which is not unduly compromised by traffic noise from the freeway or by vehicles using Folly Road. The future character can be expected to change over time as land is developed in accordance with the current Rural zoning. Reasonable expectations of change can be gained by reference to the TPS2 Zoning Table, which identifies potentially permissible land uses.

It is considered the application will change the existing and intended future rural character due to:

- Traffic Noise: Increase traffic volumes coming and going from the site at different times for daily prayer sessions, monthly Hindu festivals and bi-monthly weddings, in addition to the residential traffic generated by the proposed dwellings and any service vehicles. It is considered that the noise from car movements accessing the carparks (Noting the entrance, driveway and car park areas would be deemed a 'road' under the Noise Regulations) and on Folly Road may cause a nuisance for nearby properties, from cars attending and leaving the site, particularly in the evening and night for the weddings (where all guests' cars (ie 100+) arrive and depart at a similar time), or in the mornings if vehicles arrive prior to the commencement of 7am prayer sessions.

  If noise complaints are received by the City, it would be difficult to enforce due to certain noise emissions such as engine noise, idling and braking being exempt under *Environmental Protection (Noise) Regulations 1997* where operating on a road. The associated traffic movements are considered out of context for the area, and will have an adverse impact on the amenity of the immediate area.

- Scale: The application proposes a number of buildings of a significant scale, which gives rise to concerns about the intensity of the development, which is linked to the total number of persons residing on the site and visiting the site on a daily basis.

  The proposal exceeds the scale that can be expected of traditional and permissible uses in the 'Rural' zone. The application involves nine buildings that will be used for the predominant use (Place of Worship) and the various incidental uses (Reception Centre, Residential Building, and Ancillary Accommodation).

The Applicant has attempted to justify the scale of proposed development on the basis of the scale of the existing rural buildings on Lot 55 Folly Road. It is noted that (contrary to what the Applicant's density plan shows) the scale of the proposed development on the subject site significantly exceeds the scale of the built form on Lot 55 Folly Road (refer to Figure 9 below). The issue of scale needs to account for the 'character' of the uses being compared - in this case comparing a rural business land use to what effectively amounts to a Hindu temple and cultural centre.

Overall, the intensity of the proposed development exceeds what could reasonably be expected within the area, based on the number of people that will visit the site and the frequency of such. The hours of operation and the number of persons attending activities on the site will ensure that the amenity impacts are unacceptable.

9. Building Areas on Lot 53 and Lot 55 Folly Road

- Visual Impact: The visual impact of development is discussed above.

- Proposed Land Use Intensity. In a cumulative context, the proposed land use is not considered compatible with the surrounding rural properties as the application involves the continuous massing of people on the site; a range of activity and operating hours at a proposed level of intensity that fluctuates over time, from:

  - Daily Prayers: Worshippers attending twice daily prayer sessions, seven days a week. During weekdays up to 100 people can be expected to attend the site across the two prayer sessions, while up to 300 people can be expected across two sessions on weekend days.

- Hindu Festivals: In addition to daily prayer sessions, Hindu festivals will be held on average once a month. Up to 325 people can be expected to attend the site across two sessions on a weekday, and up to 450 if held on weekend days.

- Weddings: Weddings will be held every second month, which will combine with the daily prayer sessions and any Hindu festivals held in the same month to significantly increase activity on the site. Up to 400 people may attend weddings.

- Priest Dwelling: The Priest's and their families (up to 12 people) who will live on the site.

- Guest Accommodation: Visiting guests (up to 8 people at a time) to staying in the Ancillary Accommodation dwelling.

- Yoga classes twice a week (20 people); and

- The general movement of people and vehicles (including caterers and service vehicles) onto, around and off the site.

The intensity of the proposed use involves an overall level of activity on the site that is considerably beyond what can reasonably be expected in a Rural zone.

Further, the proposal involves a range of ancillary buildings and activities that are beyond what could be reasonably be expected for a 'Place of Worship'.

The application is therefore not considered consistent with the above strategic intent of the City's RLS.

As such, the City's reasons No.2 and 3 for recommending refusal in April 2022 remain unchanged.

Town Planning Scheme No.2 (TPS2)

The objective for the Rural zone is to preserve land for farming and foster semi-rural development, which is sympathetic to the particular characteristics of the area in which it is located.

The character, scale and intensity of the proposed development cumulatively, being a Hindu temple and in essence, a community centre, is not considered to constitute the reasonable expectations of 'semi-rural' development in a Rural zone under TPS2.

As discussed in relation to the Rural Land Strategy, the scale and intensity of the proposed development is such that granting Development Approval would likely adversely impact the existing rural character of the area. As such, the application is not considered consistent with the Rural zone objective of TPS2.

Permissibility

Based on the information provided, the City has interpreted the proposed land uses as follows:

- The Temple (and ancillary buildings including the Temple Kitchen, Ablution building, Library and Dining Hall) is interpreted under TPS2 as a 'Place of Worship' (the predominant use of the land). A Place of Worship is a use that is not permitted in a 'Rural' zone, unless discretion has been exercised by granting Development Approval after advertising the proposal for public comment ('A' use).

- The Priest's dwelling is interpreted as a 'Residential Building' (Incidental use), which is a use that is not permitted unless the responsible authority has exercised its discretion by granting Development Approval ('D' use).

  A 'Residential Building' means:

  "*A building or portion of a building, together with rooms and outbuildings separate from such building but incidental thereto; such building being used or intended, adapted or designed to be used for the purpose of human habitation:*

  - *Temporality by two or more persons; or*

  - *Permanently by seven or more persons, who do not comprise a single family, but does not include a hospital or sanatorium, a prison, a hotel, a motel or a residential school*".

  The City is satisfied that the re-designed Priest's dwelling is not a 'grouped dwelling' and therefore Reason No.6 of the refusal recommendation no longer applies.

- As the Multi-Purpose Hall will be used for weddings, it is interpreted as a 'Reception Centre', which is also an 'A' use (Incidental use).

- The guest accommodation dwelling is interpreted as Ancillary Accommodation, which is an 'IP' use in the rural zone, being incidental to the predominant use (Incidental use).

All of the above land uses are discretionary uses under TPS2.

Parking

The proposal includes 105 car parking spaces which complies with the car parking requirements of TPS2, based on the rates required for a 'Place of Worship', 'Reception Centre', and the R-Codes (103 required).

Setbacks

TPS2 requires all development to be set back 30m from Folly Road and Young Road and 10m from other boundaries. The building setbacks comply.

Comments

The proposed development as submitted was advertised for public comment, and valid planning objections were received from various surrounding landowners regarding impacts on the rural amenity.

Amended plans and reports were submitted that addressed some of the concerns of the City; some of the City's recommended reasons for refusal and the following reasons the MOJDAP deferred the decision making:

- *"Landfill requirements for stormwater management and effluent disposal:*
- *Hours of operation as it affects environmental noise measures:*
- *Bushfire management requirements as they affect landscaping and screening:*
- *Housing accommodation proposed on site."*

The amended application has been considered against the relevant planning framework, and although some of the previously reported matters have been addressed, the City maintains its concerns that the proposal is not a compatible use.

Due to the intensity and scale proposed, the development is considered likely to adversely impact the rural character and amenity of the locality, which is in direct conflict with the City's RLS, and the objective for the Rural zone outlined in TPS2.

Conclusion

It is recommended that the application is refused accordingly. The proposed development is considered to be contrary to ordinary and proper planning principles having due regard to the local planning framework.

LOT 53 (No.67) FOLLY ROAD, BALDIVIS - PROPOSED PLACE OF WORSHIP (HINDU TEMPLE)

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer Joint Development Assessment Panel	
Local Government Area:	City of Rockingham	
Applicant:	Archetype Design Studio	
Owner:	Ms A P Byers	
Value of Development:	$5million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)	
Responsible Authority:	City of Rockingham	
Authorising Officer:	Mr Peter Ricci, Acting Director Planning and Development Services	
LG Reference:	DD020.2021.00000340.001	
DAP File No:	DAP/21/02148	
Application Received Date:	9 December 2021	
Report Due Date:	27 April 2022	
Application Statutory Process Timeframe:	+90 Days with Applicant's consent	
Attachment(s):	**Attachment 1** Original Development Application **Attachment 2** Additional Information and Amended Development Plans **Attachment 3** Submission Schedule **Attachment 4** External Agency Comments **Attachment 5** Applicant's Responses to External Agency Comments	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	☒ Yes ☐ N/A	Complete Responsible Authority Recommendation section
	☐ No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Metro Outer Joint Development Assessment Panel resolves to:
Refuse DAP Application reference DAP/21/02148 and the accompanying plans:

- Location Plan, Drawing No. 01, Revision 1, dated 2 March 2022;

- Site Plan: Total Lot, Drawing No. 02, Revision 1, dated 2 March 2022;
- Proposed Development East of Mid Tree Line, Drawing No.3, Revision 1, dated 2 March 2022;
- Temple Plan, Priests Quarters & Toilet Block, Drawing No.4, Revision 1, dated 2 March 2022;
- Elevations, Drawing No.5, Revision 1, dated 2 March 2022;
- Multi-Purpose Hall, Dining & Library Plan, Drawing No.6, Revision 1, dated 2 March 2022;
- Multi-Purpose Hall, Dining & Library Elevations, Drawing No.7, Revision 1, dated 2 March 2022;
- Guests Accommodation Plan & Elevations, Drawing No.8, Revision 1, dated 2 March 2022;
- Landscape Plan, Drawing No.9, Revision 1, dated 2 March 2022;
- Staging Diagram, Drawing No.10, Revision 1, dated 2 March 2022;
- Perspective Renders, Drawing No.11, Revision 1, dated 2 March 2022.

In accordance with Clause 68 of the Planning and Development (Local Planning Schemes) Regulations 2015 and the provisions of clause 68(2)(c) of the deemed provisions of the City of Rockingham Town Planning Scheme No. 2, for the following reasons:

1. The proposed development is not consistent with the City's Town Planning Scheme No.2 Objective of the Rural Zone (Clause 4.11.1), which is to preserve land for farming and foster semi-rural development which is sympathetic to the rural character of the area.
2. The proposed development is not consistent with the strategic intent for Planning Precinct 2A under the City of Rockingham Planning Policy 3.3.1 – Rural Land Strategy, as it has not been sufficiently demonstrated that the development will protect and enhance the visual character of the rural area.
3. The intensity of the proposed development exceeds what could reasonably be expected within this rural area, based on the number of people likely to attend the site.
4. The proposed development has not demonstrated that the existing or proposed landscaping treatments, intended to visually screen the development, can be retained in its entirety and maintain compliance with State Planning Policy 3.7 - Planning Bushfire Prone Areas.
5. The acoustic barrier required to mitigate noise on Lot 923 Young Road, Baldivis is considered to adversely impact visual amenity when viewed from land to the north of the site; Young Road adjoining the site to the east, and potentially from Folly Road to the south.
6. The proposed development includes 'Grouped Dwellings' which is a prohibited ('X') land use in the Rural zone, under the City's Town Planning Scheme No.2.
7. The proposed development is contrary to orderly and proper planning principles.

Background:

1. Location Map

2. Aerial Photograph of the Subject Site

Site Context

The subject land is located on the northern side of Folly Road, west of Young Road, Baldivis and comprises of the following characteristics:

- Two (2) rural outbuildings that obtain vehicular access from the existing crossover on Folly Road;

- Predominantly in open grassland, with pockets of established trees located at the western end of the property and within the central-eastern portion of the site; and
- The land is generally flat and low lying, with the western portion (approximately 4ha) affected by the 1 in 100 year floodplain.

The surrounding land comprises:

- West of the site is the southern extent of Folly Pool and the Peel Main Drain. Folly Pool is a Conservation Category Wetland (CCW) and Bush Forever Site. Immediately west of Folly Pool is the Kwinana Freeway and the Baldivis urban area;
- Lot 923 (No.547) Young Road adjoins the site to the north-west, which is a triangular shaped 6.4ha rural property containing three (3) rural sheds;
- Lot 33 (No.574) Young Road is approximately 80m north of the site, which is a 2.98ha property containing a dwelling, outbuildings and paddocks used for the keeping of horses;
- Lot 52 Young Road is located immediately north of the site across Young Road, which is a 5.2ha vacant rural property;
- Lot 103 (No.151) Folly Road is a 2.4ha property located directly opposite the site on the eastern side of Young Road, and contains two dwellings and rural outbuildings;
- Lot 202 (No. 154) Folly Road is diagonally opposite the site, east of Young Road and south of Folly Road. This is a 6.2ha property containing a commercial fruit orchard business and an outbuilding at the eastern end; and
- Lot 55 (No.66) Folly Road is a 7ha property opposite the site on the southern side of Folly Road, containing a dwelling and several rural outbuildings. A rural business operates on this land.

Figure 3 depicts the properties referenced above.

3. Map of the Surrounding Locality

Details: Outline of Development Application

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Rural
Local Planning Scheme	Town Planning Scheme No.2
Local Planning Scheme - Zone/Reserve	Rural
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	'A' Discretionary Place of Worship 'X' Prohibited Grouped Dwellings
Lot Size:	7.4362ha
Existing Land Use:	N/A
State Heritage Register	No
Local Heritage	☑ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☑ N/A ☐ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

Background

On 9 December 2021, an application seeking Development Approval was lodged with the City of Rockingham (City) for a proposed Place of Worship (Hindu Temple) on the subject land.

The application was accompanied by the following information:

- Development Application Report (Peter Webb Associates, dated 9 December 2021);
- Architectural Plans (Archetype Design Studio, Rev 0, 9 December 2021);
- Transport Impact Assessment (Shawmac, Version A, dated 6 December 2021);
- Acoustic Report (Marshall Day Acoustics, Rev 0, dated 29 November 2021);
- Architectural and Visual Landscape Report (Archetype Design Studio, Version 1, dated 9 December 2021);
- Environmental Assessment Report (Coterra Environment, Rev 0, November 2021);
- Site and Soil Investigation Report (Waterinsight; Rev 2, December 2021);
- Water Management Strategy (Waterinsight, Rev 2, December 2021);
- Bushfire Management Plan (Envision, Version 2, dated 29 November 2021);
- Site Survey (Cottage Surveys, dated 18 August 2021).

On 10 February 2022, following public consultation, additional information was requested from the Applicant in response to various matters identified in the City's assessment and in the submissions received.

Subsequently, the applicant submitted the following revised plans and reports, and amended the application to change the commencement time of morning prayer sessions and special Hindu Festivals from 6am to 7am:

- Architectural Plans (Archetype Design Studio, Rev 1, 2 March 2022);
- Transport Impact Assessment (Shawmac, Rev C, dated 25 March 2022);
- Acoustic Report (Marshall Day Acoustics, Rev 2, dated 24 March 2022);
- Architectural and Visual Landscape Report (Archetype Design Studio, Version 3, dated 23 March 2022);
- Environmental Assessment Report (Coterra Environment, Rev 1, February 2022);
- Site and Soil Investigation Report (Waterinsight; Rev 3, February 2022);
- Water Management Strategy (Waterinsight, Rev 3, February 2022);
- Bushfire Management Plan (Envision, Version 3, dated 22 February 2022).

The following sections of the report are based on the application information, as amended.

Details

This application seeks JDAP Approval for the following:

- A Hindu Temple building (975m²), Kitchen (27m²) and Toilet buildings (66m²);
- A Chariot Store (an existing shed 55m²):

- A Multipurpose Hall (1,046m²);
- A Dining Hall (334m²);
- A Library Building (243m²);
- An Ancillary Guests Accommodation Dwelling (169m²);
- Two (2) Priest's dwellings (160m² each);
- 113 On-site car parking bays;
- A relocated crossover on Folly Road provides primary vehicle access to the site, while a new secondary access point for service and emergency vehicles is proposed on Young Road;
- Seven (7) water tanks are provided for potable water, grey water and water for firefighting purposes;
- A 4m wide fire break is proposed around the property boundaries; and
- Site landscaping is proposed utilising strategic tree planting in an attempt to screen the development.

Activities

Daily Prayers

The main activity at the site will be two daily prayer sessions held in the Temple building, Monday to Sunday, with morning prayer sessions commencing at 7am, and evening prayer sessions finishing at 9pm. The highest attendence days are Saturdays and Sundays where 150 worshippers are expected to attend each session, with a total of 300 worshippers expected to attend the site over the entire day.

On other days of the week, a total of 50 worshippers are expected to visit the site each session (100 per day).

Special Hindu Fesitival Days

Special Hindu Festival days will be held once a month on average in two sessions per day, with morning sessions comencing at 7am and evening sessions finishing at 9pm.

For the Hindu Festival days that are held during weekdays, 75 worshippers are expected to attend the morning sessions, while up to 250 worshippers are expected attend the evening sessions.

For Hindu Festival days that are held during the weekends, up to 200 worshippers are expected for the morning sessions and 250 for the evening sessions. On these days, approxinmalty 450 worshippers are expected to attend the site over the entire day.

Hindu Weddings

Hindu weddings will be held on Friday nights or weekends, six (6) times a year on average, catering for up to 400 attendees between 6pm and 12am.

Other activities

Additional activities consist of weekday yoga classes, weekend scripture classes generally following or held in conjunction with daily prayer sessions.

Two proposed dwellings will be used for the accommodation of Priest's and their families, whilest up to eight (8) visiting guests will reside in a third proposed Guest Accommodation dwelling.

The proposed activity times and attendence numbers are summarised as follows:

Day	Activity	Number of Persons	Time
Weekdays Monday - Friday	Prayers Morning session	25-50	7am - 12pm
	Prayers Evening session	25-50	5pm - 9pm
	Yoga Classes (2 per week)	20	6pm-7pm
Weekend days Saturday - Sunday	Prayers Morning session	100 - 150	7am - 12pm
	Prayers Evening session	100 - 150	5pm - 9pm
	Scripture Classes	50 - 75 (included in the above)	3pm - 6pm
If on a weekday Once per month (on average)	Special Hindu Festival days Morning session	50 - 75	7am - 12pm
	Special Hindu Festival days Evening session	200 - 250	5pm - 9pm
If on a weekend day Once per month	Special Hindu Festival days Morning session	200	7am - 12pm
	Special Hindu Festival days Evening session	200 - 250	5pm - 9pm
Friday nights or weekends 6 times per year (on average)	Hindu Weddings	300 - 400	6pm - 12am

Legislation and Policy:

Legislation

- Planning and Development Act 2005
- Metropolitan Region Scheme
- Planning and Development (Local Planning Schemes) Regulations 2015 (the Regulations)
- Town Planning Scheme No.2 (TPS2)
- Environmental Protection (Noise) Regulations 1997

State Government Policies

- State Planning Policy 2.1 Peel-Harvey Coastal Plain Catchment (SPP2.1)
- State Planning Policy 3.7 - Planning in Bushfire Prone Areas (SPP3.7)
- Development Control Policy 5.1 Regional Roads (Draft) (DC5.1)

- Guidelines for Planning in Bushfire Prone Areas (Version 1.3)
- Government Sewerage Policy (September 2019)

Local Policies

- Planning Policy 3.1.1 - Rural Land Strategy (PP3.1.1)

Consultation:

Public Consultation

The City advertised the application for public comment in accordance with clause 64 of the deemed provisions of Town Planning Scheme No.2 (TPS2), which included the following:

- The application was advertised for a 28 day period (until 4 February 2022);
- Two signs were erected by the applicant along the property frontages inviting comment;
- The application and supporting information was placed on the City's website;
- A hard copy of the application and all supporting technical reports were available for public inspection at the City Administration Offices; and
- The City sent out 229 letters to all owners and occupiers within 500m of the subject site, as indicated in the Consultation Map below.

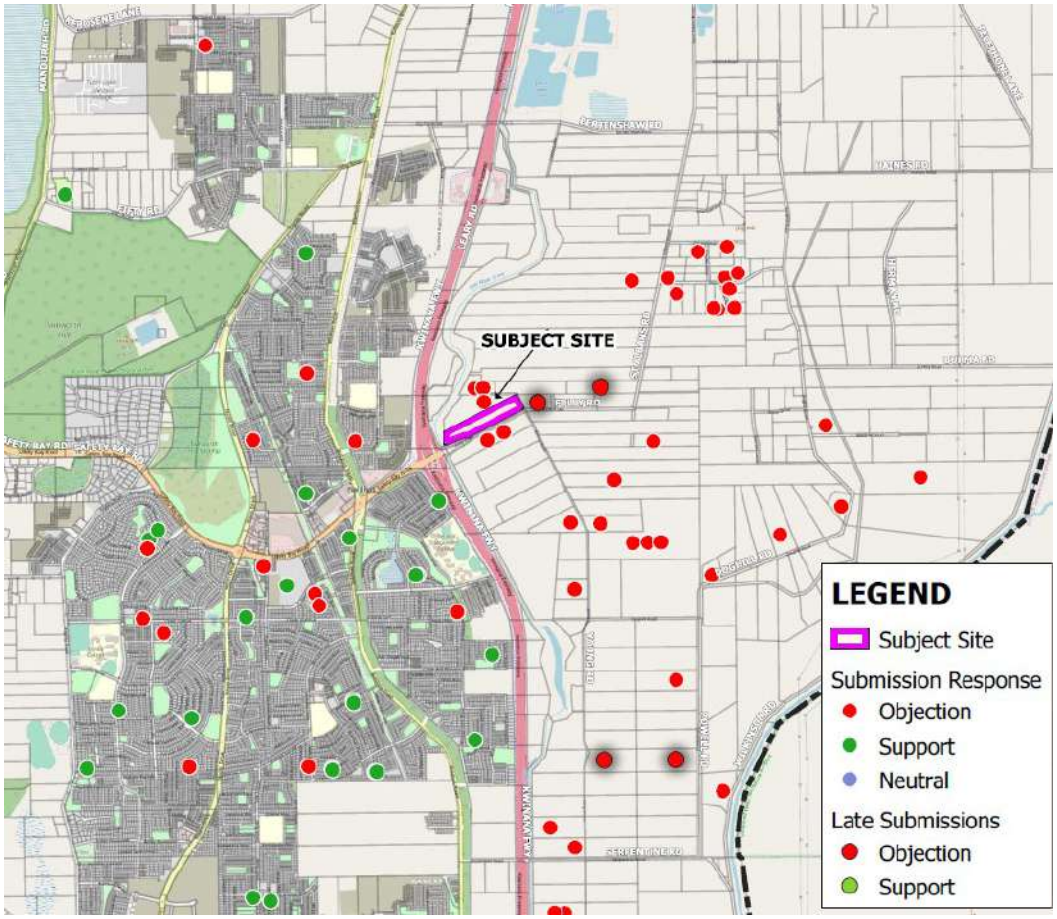
4. Consultation Map

A total of 255 submissions were received during the submission period, as follows:

- 183 submissions in support of the application;
- 72 submissions objected or raised concerns. Some objectors lodged several submissions each, which are recorded in the Submission Schedule contained in Attachment 3 to this report.

There were four (4) late submissions received. Of the submissions received, 145 supporters and three (3) objectors submissions did not originate from within the municipality of the City of Rockingham.

The locations from where the relevant submission originated within the City are identified on Figure 5.



5. Submission Map

A summary of submissioner concerns is provided below, which contains the applicant's and the City's responses to the matters raised.

Submission: **Concerns the development will adversely affect the peaceful lifestyle of surrounding properties, which is the reason people purchased land in the Rural zone.**
Applicant's Comment: *"The property currently comprises of vacant unused Rural zoned land. The Rural zone provides the opportunity for a wide range of different land uses to be considered for approval under the Rural zoning, being land uses which are considered most suitably located on larger landholdings, such as this semi-rural setting. It is not a zone which is designed specifically for residential purposes.* *The validity of this reason to objecting to the proposal on planning grounds is therefore questioned.* *A 'Place of Worship' is just one of many land uses capable of being considered for approval within the Rural zone, pursuant to Local Planning Scheme No. 2. Other uses which can also be considered for approval in the Rural zone on this landholding include (but are not limited to): Caravan Park, Brewery, Restaurant/Café, Abattoir, Agriculture – Extensive, Agriculture – Intensive, and Animal Husbandry.* *A Temple for the Hindu community to visit, pray and engage in peaceful quiet practices such as yoga and scripture reading in a semi-rural environment such as this site is an essential aspect of the Hindu faith and worship.*

The very nature of this proposed development and use seeks to encourage peaceful reflection and engagement with the surrounding semi-rural setting.

The proposed use of the land as a Place of Worship by the Hindu community is therefore a use which complements the peaceful lifestyle noted by this submitter, as living peacefully in balance with the natural environment is central to its own philosophy.

Further, it is worthwhile noting that the ancillary activities proposed to occur on the land, such as the Hindu festivals and occasional weddings do not involve any amplified music or bell ringing. Further, these events will be alcohol free. (Noting that Hindus do not drink alcohol.)

There will be no impact on the peaceful lifestyle enjoyed by the submitter, other than the obvious fact that this vacant rural zoned land will be developed and used".

City Comment:

TPS2 provides for a range of discretionary land uses within the Rural zone, which includes a Place of Worship.

Each application is considered on planning merit and due regard given to a range of considerations, including any impact on the amenity of the locality.

Land use permissibility is considered in this Report, and the amenity impact of the application is discussed in the Planning Assessment section below.

Submission:

Concerns about the impact on 547 Young Road (adjoining the site to the north) given the proposed location of the car parking area; proposed buildings and the intensity of use.

Applicant's Comment:

"The property the subject of this Application currently comprises of vacant unused 'Rural' zoned land.

The land identified in this submission at 547 Young Road is also vacant Rural zoned land.

As the City is aware, the Rural zone provides the opportunity for a wide range of different land uses to be considered for approval in this location, being land uses which are considered most suitably located on larger landholdings in such semi-rural settings, as the property the subject of this Application. It is not a zone which is designed to accommodate only residential land use.

A 'Place of Worship' is just one of many land use categories capable of being considered by the City for approval within the Rural zone, subject to the provisions of Local Planning Scheme No. 2. Other uses which can also be considered for approval in the Rural zone on this landholding include (but are not limited to): Caravan Park, Brewery, Restaurant/Café, Abattoir, Agriculture – Extensive, Agriculture – Intensive, and Animal Husbandry.

The proposed use of the land as a Place of Worship by the Hindu community will complement the rural setting in the manner sought by the submitter, as living peacefully in balance with the natural environment is central to the Hindu philosophy.

Further, it is worthwhile noting that the ancillary activities proposed to occur on the land, such as the Hindu festivals and occasional weddings do not involve any amplified music or belling ringing. Further, these events will be alcohol free. (Noting that Hindus do not drink alcohol.)

The Acoustic Assessment demonstrates that the Application can satisfy all relevant requirements of the Environmental Protection (Noise) Regulations 1997".

City Comment:

The City's assessment of the impact on No.547 Young Road is discussed in the Planning Assessment section below.

Submission:

The buildings, given the proposed building height are not in keeping and will adversely affect the visual amenity, which the proposed landscape screening will not adequately mitigate.

Applicant's Comment:

"The subject site is currently vacant, rural zoned land. It is therefore relevant to note that any built form proposed on this land will be adding to the existing built form and visual amenity of this location. The fundamental element of the design has therefore been to ensure that this additional built form and the use of the site by the Hindu community is undertaken in a manner which respects the existing rural character and visual amenity of this location in a manner which will ensure that the built form and height of the development complements and positively contributes to the semi-rural character and amenity of this location.

The design and layout of the buildings are purposefully proposed in a cluster formation with open fields and additional landscaping designed between the buildings and around the periphery of the site to ensure that the built form absorbs into the land, to a similar extent that the existing rural structures on the land blend with this semi-rural setting.

The arrangement of the built form on the land specifically addresses the surrounding existing amenity and character:

- *The Temple is proposed to be located at the further possible distance from the residential properties located to the east of Young Road.*
- *The ancillary accommodation for guests is designed to front onto Young Road, which residential use complements the existing residential dwellings on the eastern side of Young Road.*
- *The multipurpose hall, dining hall and library are located in the more central location of the site and designed with a frontage to Folly Road, which building scale is similar to the large rural shed forms visible directly opposite at the West Coast Chaff operation at 66 Folly Road.*

The building forms are to be constructed using traditional rural building materials of limestone and timber posts with colorbond roofing material, which together with the sweeping verandahs and pitched roofs of the traditional rural architectural form assist in ensuring the Temple and the associated buildings complement the existing character and amenity of this semi-rural location.

The updated Visual Assessment submitted as part of Applicant's response to the outcome of the advertising referral process demonstrates that the built form and scale of the development will sufficiently absorb into the site to ensure the visual amenity of this semi-rural location is maintained and improved".

City Comment:

The City considers that the proposed building heights are acceptable, as they are generally consistent with the prevailing height of structures (up to approximately 8m high) in the surrounding area.

The religious buildings are clustered and set back from Folly Road and are intended to be potentially screened from view by existing and proposed trees. The Temple 'Gopuram' (vertical structures above the roof of the temple building) elements are not inconsistent with the steeple structures associated with traditional Places of Worship.

The secular buildings have more traditional appearances, consistent with the design of dwellings and rural outbuildings in the surrounding locality.

While building height maybe acceptable, the City does have genuine concerns about the potential visual impact of development, in the event the intended landscape screening outcomes cannot be delivered up front, or achieved. These concerns are discussed in the Planning Assessment section below.

Submission:

Concerns that the night time lighting, or proposed event lighting will adversely affect surrounding properties.

Applicant's Comment:

"This Application does not propose to host external events.

The Temple and parking area will be provided with internal lighting for the safety of patrons but so as not to result in light spill outside of the property boundaries. The lighting will only be used during the hours of operation".

City Comment:

The City understands that the main entry of the Temple building will be illuminated at night, however, this building element is likely to be generally screened by vegetation, once it reaches a mature state.

The pathways surrounding the Temple are proposed to be illuminated with low level lighting, however, the extent of illumination proposed is not what would typically be applied to a Rural zoned property.

Submission:

The Gopuram structures and the brightly coloured architectural adornments typical of a Hindu Temple will be visually obtrusive.

Applicant's Comment:

"The Gopuram structures are neutral limestone coloured, which is a base natural tone. The coloured adornments comprising of a neutral pallets (such as the photo attached) which are not obtrusive within a natural rural setting characterised by blue sky, greenery, and the various colours of the nearby rural sheds, will be hidden behind existing and proposed planting of mature vegetation.

The entire Temple and entry statements have been positioned on a portion of the property which is set as far away from the intersection as possible, and out of sight lines of the intersection and approaching roads. The proposed landscaping has carefully considered all sightlines, and proposed trees in key locations to screen the building, and the impact on the environment will not be visually obtrusive".

City Comment:

The Gopuram structures could be substantially screened from the public domain by the existing and proposed trees, and are not considered likely to be visually obtrusive from this perspective once the proposed trees reach maturity.

For reasons explained in the Planning Assessment section of this Report, the effectiveness of the proposed landscaping will be compromised by bushfire protection requirements applicable to the development.
Submission: **The Visual Assessment report does not contain accurate montages representing views from all angles, including from the north.**
Applicant's Comment: *"All perspectives views have been double checked, and one was found to be inaccurate and has been corrected.* *New perspectives from the north and north east have been provided in the amended plans".*
City Comment: The visual montages are considered sufficient and suitable.
Submission: **Concerns Folly Road is not able to cope with the volume of traffic (including construction traffic), given it's existing condition and there being no plans to upgrade it. Will road upgrading be necessary?**
Applicant's Comment: *"The Traffic Impact Assessment prepared by Shawmac confirms that the traffic generated by the proposed development will not result in traffic capacity or road safety issues. The conclusion being that no upgrading to Folly Road is required to support this development, other than providing turning lanes to accommodate vehicles entering the site.* *The TIA recommends that turning treatments be constructed at the access to the site on Folly Road, including an auxiliary left turn lane and an auxiliary right turn lane. This will facilitate safe turning movements into the development in order to remove any perceived, possible impact on through traffic along Folly Road".*
City Comment: The City has assessed the applicant's TIA and considers Folly Road can accommodate with additional traffic flows, subject to the provision of a left turn lane (i.e. a short Auxiliary left, or 'AUL(S)'). Traffic and safety is discussed in detail in the Planning Assessment section of this Report.
Submission: **Concern there is inadequate on site car parking for the development, when Hindu festivals occur.**
Applicant's Comment: "*The Traffic Impact Assessment prepared by Shawmac confirms that the proposed on-site parking is sufficient to support the development and use of this site, including the use of the site on Festival days".*
City Comment: The car parking proposed complies with the TPS2 requirements.
Submission: **The Traffic report does not adequately address:** • **The long term capacity of the network, taking account of vehicles coming to the site from the east, or from Mundijong Road through to Folly Road travelling west;**

- **The accident history. The intersection of Folly Road/Young Road claimed the life of a young girl a few years ago;**
- **In respect to safety, weekend cyclists using Folly Road; and**
- **The effect of recent travel and Covid restrictions when reporting the traffic counts.**

Applicant's Comment

"*The Amended TIA addresses the long-term capacity of the road network.*

We assume the crash mentioned relates to the crash occurring in December 2012. Reports on the crash indicate that the driver crossed onto the wrong side of the road and hit a truck. We couldn't find any further details on the cause of the crash.

Whilst any fatality is a tragic outcome, the lack of recent crash history suggests that this was an isolated incident and does not indicate a major safety issue with the road network .The development itself will not generate a significant amount of traffic through the intersection.

Weekend use on a regular basis and for Special Hindu Festival days will generate traffic that is spread out over the day and will not impede safe travel for cyclists. On wedding days, traffic will be limited to short discrete periods during the day and there will be no traffic outside of these periods.

Traffic counts used in assessment were from June 2021 and August 2021. There were little or no cases of community spread during this period. Historical counts show that pre-COVID traffic volumes along Folly Road were much lower than those in 2021".

City Comment:

The City has assessed the TIA provided by the applicant and considers that while there would be an increase in traffic in the vicinity of the proposed development, it adequately addresses traffic generation. The City is also satisfied the surrounding road network can accommodate the generated traffic.

Submission:

Concerns the Acoustic report is misleading and does not account for:

- **outdoor noise associated with the proposed uses;**
- **noise impact on the adjoining property at 547 Young Road;**
- **noise associated with bell ringing, instruments and chanting associated with Hindu events, including early and late in the day. What can be expected?**

Applicant's Comment:

*"**Outdoor noise associated with the proposed uses;***

The Acoustic Assessment confirms that the Application is compliant with the relevant requirements of the Environmental Protection (Noise) Regulations 1997.

Noise associated with bell ringing, instruments and chanting associated with Hindu events, including early and late in the day. What can be expected?

There will be no outdoor activities occurring around the Temple or the Multi Purpose Hall.

The few religious requirements such as circum-navigation of the temple twice a year do not involve any amplified noise or chanting, bell ringing or drumming.

Noise impact on the adjoining property at Lot 923 (547) Young Road;

547 Young Road is currently vacant farming land. The Acoustic Assessment has been updated to consider the adjoining owner's stated intended location of a future residential dwelling on this property. This updated Assessment confirms that the Application is compliant with the relevant requirements of the Environmental Protection (Noise) Regulations 1997".

City Comment:

The City has reviewed the Acoustic Report, and is satisfied that the development can achieve compliance with the Noise Regulations. This is subject to implementing the recommended noise measures which includes a noise barrier, discussed later in this report.

Submission:

Concerns that the impacts of noise from the development cannot be effectively managed or enforced, and will adversely affect surrounding properties.

Applicant's Comment:

"*Our Acoustic Consultant has recommended various treatments for the architectural design, which we are including in our design so that we can contain noise when required.*

We understand that noise is an important consideration for the surrounding community and our noise management procedures will be based on continuously satisfying all relevant requirements of the Environmental Protection (Noise) Regulations 1997, as well as maintaining good relationships with our neighbours".

City Comment:

The Acoustic Report indicates that noise exceedances can be managed by virtue of a Noise Management Plan and by erecting a noise barrier wall parallel to the northern boundary to mitigate noise impact on Lot 923 Young Road.

The noise barrier presents a separate concern from a visual / amenity perspective, which is discussed in the Planning Assessment of this Report.

Submission:

Concern about noise (including chanting/bell ringing/traffic noise) affecting the quiet rural amenity, on a daily basis from 6am.

Applicant's Comment:

"*The proposed development and use does **not** involve outdoor activities around the Temple or the Multi-Purpose Hall, and the daily opening times have been pushed back from 6.00am to 7.00 am.*

The few religious requirements such as circum-navigation of the temple twice a year do not involve any amplified noise or chanting, bell ringing or drumming.

Noise emanating from inside the Temple and Multi Purpose Hall has been modelled by the Acoustic Consultant and shown to be within acceptable limits for a rural area at the relevant times of day.

Traffic noise, including noise from vehicles accessing the car park on the land has been modelled by the Acoustic Consultant and shown to be within acceptable limits for a rural area at the relevant times of day."

City Comment:

The application has been amended to ensure no activity commences prior to 7am.

The applicant's comments are noted above, which indicate there is no outdoor activity proposed other than circum-navigation of the temple twice a year, and that this does not involve any amplified noise or chanting, bell ringing or drumming.

Submission:

Concerns that noise from the development will impact on horses (grazing on nearby land being spooked), wildlife or pets.

Applicant's Comment:

"*Same as above, no noise other than that generated by vehicles and worshippers accessing Temple will be emanating from the development.*

The Acoustic Assessment confirms that the Application can satisfy all relevant requirements of the Environmental Protection (Noise) Regulations 1997.

The use of this land on land zoned for agricultural use and being located immediately abutting the Kwinana Freeway will not result in noise being emitted at a level which would have any impact on domestic or wild animals. Further, there is no state or federal regulation which can be applied to an assessment to determine the impact of noise on animals. Researchers of noise impact on animals is limited and inconclusive. Further, this Application does not propose a development which involves any loud piercing type noise level which might be considered to potentially startle and impact the wellbeing of an animal. On this basis, we do not consider this to be a valid planning reason for objecting to this proposal".

City Comment:

It is considered unlikely that the proposed development noise will adversely impact on animals or livestock, as noise can potentially be contained on site or mitigated, to comply with the Noise Regulations.

Submission:

There are concerns the development will adversely affect:

- **The quality of ground and surface water resources through the disposal of effluent, noting there are properties nearby with drinking water bores;**
- **Folly Pool which is an environmentally sensitive wetland; Bush Forever Sites and the Peel Main Drain; and**
- **Flora and fauna (including Black Cockatoo habitat) on and surrounding the site.**

Applicant's Comment:

"There are concerns the development will adversely affect:

Folly Pool which is an environmentally sensitive wetland; Bush Forever Sites and the Peel Main Drain;

Folly Pool

It is acknowledged that Folly Pool is a conservation category wetland (CCW).

The proposed development footprint is located, at its closest point, 200 metres (m) from the mapped boundary of the CCW (across the neighbouring property). Onsite, the proposed development is located approximately 360 m from the CCW (within the site boundary). It is acknowledged that Folly Pool supports a high diversity of fauna and flora and that local conservation groups assist in the management and maintenance of the area.

In accordance with Guidance Statement No. 33 (EPA, 2008), wetlands that are to be protected typically require a minimum 50 m buffer distance, based on the wetland's values, and development proposed near the wetland. In addition, the Guideline for the Determination of Wetland Buffer Requirements (WAPC, 2005) suggest that buffers for highly important wetlands maintain a distance of up to 100 m for weed infestation and protection of bird habitat, and at least a 100 m buffer to minimise edge effects. The proposed develop exceeds both these separation distances, so from an environmental perspective, the development is not likely to impact Folly Pool flora and fauna attributes.

The Water Management Strategy has included the results of stormwater modelling and storage volumes required to maintain existing hydrological conditions, as required by the Better Urban water Management Guidelines and Stormwater Management Manual for Western Australia. It indicates there is more than enough space available to construct the required drainage areas.

Bush Forever Sites

Folly Pool is identified as part of Bush Forever (BF) Site 418. No development is proposed within approximately 360 m of the boundary of BF Site 418 (within the site boundary), and as such, the development is not likely to impact function or attributes of flora and fauna within BF Site 418 itself.

BF Site 369 is located approximately 1 km east of the site. BF Site 419 is located approximately 1.5 km south of the site. Both of these sites are beyond the area of development impact.

Flora and fauna (including Black Cockatoo habitat) on and surrounding the site.

Vegetation and Flora

Although the site has historically been used for rural purposes since 1953, and that the site was largely cleared in 1970, the existing vegetation could be considered as remnant vegetation. No understorey is present beneath paddock trees, and sheep have been grazing on the crop-sewn land.

The majority of sparsely-remaining paddock trees are representative of the historical Serpentine River Complex (Heddle et al, 1980) which is described as "closed scrub of Melaleuca species and fringing woodland of Eucalyptus rudis – Melaleuca rhaphiophylla along streams". Planted conifer trees are also present on site.

No further assessment was made of vegetation on site on this basis.

It is important to note that remnant vegetation on this site was never representative of Banksia Woodland, as identified in numerous project objections.

Black Cockatoo Habitat

An assessment was made to determine the suitability of black cockatoo breeding/nesting habitat (Harewood, 2021).

An assessment of existing trees was made in response to potential black cockatoo habitat; however, no trees were determined to be suitable for nesting/breeding (Harewood, 2021).

The existing trees (Eucalyptus rudis and Melaleuca rhaphiophylla) are typically not representative of foraging species for Carnaby's Black Cockatoos (Groom, 2011). Eucalyptus rudis can be used for roosting (Groom, 2011), however no evidence of use was recorded on site (Coterra, 2021). Conifer trees (unidentified species) can potentially be used for foraging; however, no evidence of use was recorded on site (Coterra, 2021).

In addition, the existing vegetation is not known to be used Baudin's Black Cockatoo or the Forest Red-tailed Black Cockatoo for nesting or foraging (DEWHA, 2009, TSSC, 2018).

Landscaping and Fauna Habitat Considerations

It is noted that the development is proposing to retain trees, where feasible to do so. The Visual Landscape Report details landscaping plans relevant to the proposed development.

In addition, black cockatoo habitat trees are proposed to be planted to provide future black cockatoo habitat

- *Eucalyptus rudis*
- *Melaleuca rhaphiophylla*
- *Banksia attenuata*
- *Banskia litoralis*
- *Banksia menziesii*
- *Allocasuarina fraseriana*
- *Eucalyptus marginata*
- *Eucalyptus gomphocephala.*

Note: Banksia litoralis has been included as it is known to grow on soils representative of the Serpentine River Complex".

City Comment:

Vegetation

The vegetation on the eastern portion of the site comprises predominantly grass, with some scattered remnant trees (Melaleuca species) and Conifers. The applicant proposes to retain these trees except for two, as one is diseased, and the other is to be removed for bushfire mitigation reasons. The removal of these two trees is intended to be offset by tree plantings outlined on the proposed Landscaping Plan.

The list of proposed revegetation species is supported by the City as it comprises of species endemic to the Rockingham area and capable of growing in low lying sites. As for the tree species selected for the car park, it is suggested that the two species proposed, *Eucalyptus erythronema* and *Fraxinus raywoodii,* are replaced with trees from the native species selection list.

The western portion of the site contains grassland, scattered Melaleuca trees and dense vegetation adjacent to Folly Pool. No development is proposed on the western portion of the site, and these trees will not be impacted.

Fauna

The fauna habitat on the site is limited due to the limited amount of vegetation. The Environmental Assessment Report (EEA) submitted indicates that with the exception of migratory species, fauna species are more likely to be present in areas of better quality vegetation, such as the adjacent Bush Forever Site 418. The City considers this is likely to be the case.

The *Eucalyptus rudis* (Flooded Gum) trees at the western end of the site are considered potential roosting trees for Black Cockatoo species. These trees will be retained and will not be impacted by the development.

Wetlands

Folly Pool adjacent the site is a CCW. Potential threats to the wetland include:

- Increased nutrient loading to surface and groundwater;
- Vegetation clearing associated with the wetland or buffer may potentially impact on wetland values;
- There is potential risk of Acid Sulfate Soils (ASS) impacting the groundwater regime, if not managed appropriately.

It is noted that all construction and development is located on the eastern portion of the site, outside of the 50m CCW buffer. No vegetation will be removed from the western portion of the site.

Waste Water Disposal

The proposal can comply with the Government Sewerage Policy, and as such, it is unlikely that the proposal will detrimentally impact the environmental values of the site or surrounding wetlands.

Conclusion

On balance, these environmental impacts are considered to be manageable.

Submission:

The environmental reports don't acknowledge the presence of fauna such as long neck turtles which have been found on an adjoining property.

Applicant's Comment:

"A Level 1 Fauna Survey was not undertaken as part of the scope of this development, based on the separation distance between Folly Pool and the proposed development. Whilst it is acknowledged that a long neck turtle (identified as Chelodina colliei in Schedule of Submissions), this species is not currently a protected species under the Biodiversity Conservation Act 2016 or the Environment Protection and Biodiversity Conservation Act 1999.

Despite this, it is acknowledged that this species is locally endemic and exists in low populations (DWER, 2022). This species typically lives in a range of seasonal and permanent freshwater habitats including wetlands, lakes and rivers (DWER, 2022). This species spends the majority of its life in water. Female turtles can search for nesting sites up to 800 metres from the water's edge, but generally within 500 m (DWER, 2022).

The proposed development is located approximately 250 m from Folly Pool at its closest point, and whilst possible, it is unlikely that this species would utilise the site for nesting once developed.

If required, a Fauna Relocation and Management Plan could be prepared as a condition of Development Approval, to appropriately manage this species, and other fauna species that potentially utilise the site".

City Comment:

The applicant's response is noted.

Submission:

Concerns that extra traffic from the proposal will create congestion on Folly Road while evacuating during a fire event.

Applicant's Comment:

"The area east of the freeway is a low density residential area – few people over a large catchment. Proportionately there are fewer people evacuating within the distance between the fire and the site.

The expected flow rate of a single lane is 1800 vehicles per hour. The BMP has been adjusted to include a Hindu wedding 200 vehicle, extending the evacuation RSET to 50 minutes (to make the right hand turn onto Folly Road). A broader analysis of the traffic catchment may be required by the City.

The BMP has identified that evacuation is the preferred approach following DFES policy, but the temple itself can provide refuge. It is within a moderate BHL [sic] level area (predominantly grassland) and the expected BAL at the building (both the temple and multi-purpose hall) is less than BAL 10 (refuge standard).

Evacuation should take place if it is safe to do so, but if it was apparent that the evacuation route was not safe, and evacuation could not be completed before the fire's arrival, then refuge on site can be taken".

City Comment:

Traffic evacuating from the development can be adequately managed to minimise any congestion on Folly Road. Should evacuation not be possible, the arrangements are in place to shelter on site.

Submission:

Concern over how the additional uses outside of normal worship times will be managed, in particular:

- **managing noise related to large functions and weddings etc;**
- **relating to third party hire/use of facilities. What is proposed?**

• **what complaints mechanisms exist should residents experience excessive noise or other problems from the development?**
Applicant's Comment: *"Managing noise related to large functions and weddings etc;* *The Temple will have a Management Committee that is responsible for the operations and functioning of the Temple and associated facilities. This will include a noise management plan, and strict terms for the use of the Multifunction Hall, including hours of operation, hours that amplified / loud music must be turned off, operation of doors / windows etc.* *The noise management plan will be a live document that is updated as required in order to maintain ongoing compliance with the Noise Regulations.* *Relating to third party hire/use of facilities. What is proposed?* *The Multi Purpose Hall and Short stay accommodation will not be hired out to third parties, and will only be available for the use of Temple Community members, under terms and conditions to be stipulated, including Noise management.* *What complaints mechanisms exist should residents experience excessive noise or other problems from the development?* *As part of our noise management plan, we intend to develop community engagement procedures. These will include:* • *Contact details that are provided to residents so that they can address any complaints to the responsible person on site* • *Process for managing and registering noise complaints* • *Process for reviewing any complaints received and updating the noise management plan if necessary.* *Any excessive noise concerns can also be reported to the Police and the local government authority and action will be undertaken accordingly".*
City Comment: The proposal has been assessed on planning merit against what was proposed within the Development Application.
Submission: **An alternative site has been suggested, on the corner of the Kwinana Freeway on the north side of Mundijong Road.**
Applicant's Comment: *"No comment in response to this Planning Application is considered necessary in regard to this submission".*
City Comment: This matter is not a relevant planning consideration, as the City must consider the application on its planning merit.
Submission: **There is inconsistency within the bushfire management plan regarding water tank requirements, which should be rectified.**
Applicant's Comment: *"Other than for the DFES comment, (which is addressed elsewhere), there is no inconsistency within the bushfire management plan requiring any change".*

City Comment:

The BMP adequately addresses the bushfire criteria of the Guidelines with respect to water.

Submission:

Concerns the development will adversely affect surrounding property values.

Applicant's Comment:

“Property value is not a valid Planning reason for objecting to a development proposal".

City Comment:

The effect of the proposal on property values is not a relevant planning consideration.

Submission:

Submitters consider the proposed development more akin to Commercial development than Place of Worship. How can the proposal be considered a Place of Worship, given the range of activities proposed?

Applicant's Comment:

"A Place of Worship is a community land use.

The Primary function of the development is that of a Hindu Temple ie a Place of Worship.

The Secondary function is that of a Multifunction Hall, ie a space to support other religious activities of the Hindu faith, including Religious wedding ceremonies, meditation and yoga, and the Library, a space to facilitate instructions in Hindu Vedic texts (ancient religious texts).

Other functions such as the Dining Hall, Priest’s quarters, short stay accommodation and car park are ancillary and incidental uses required in the day to day proper functioning of the Temple.

The Temple is a non-for profit organisation, and there will be no commercial activity on the site, other than fund raising to support the maintenance costs of the Temple".

City Comment:

Land use is discussed in Planning Assessment section of this Report.

Submission:

Concerns that the current electricity infrastructure cannot cope with the existing community needs (give the outages over Christmas) let alone cater for the proposed development as well.

Applicant's Comment:

“Preliminary Investigation reveals that there is a High-Voltage distribution power line (Blue Line) feeding the property from a 25kVa Transformer on the edge of the property on Young St. This transformer only feeds 4 properties, and should be sufficient to cater for the proposed development.

A power failure over Christmas does not necessarily indicate inadequate power supply to the area, and may be caused by numerous other reasons.

Should the voltage supply be inadequate, as determined by future investigation and design by an electrical consultant and Western Power, the developer will bear the cost of a transformer upgrade".

City Comment:

The applicant would be required to provide electricity to the development in accordance with the requirements of the supply authority.

Submission: **There is concern the development may impact Aboriginal heritage, as not all significant sites are known. Concerns the development will conflict with the indigenous significance of Folly Pool.**
Applicant's Comment: *"As detailed in the Town Planning Report, there are no Aboriginal sites or European Heritage sites listed within the boundaries of the site. The proposed Development is situated on the far eastern side of the block, with no community access permitted by the Temple to the Folly Pool area, in order to ensure the protection of the sensitive environment surrounding it".*
City Comment: It is the developers and owners responsibility to ensure that there is no disturbance to any Aboriginal sites.

Referrals/consultation with Government/Service Agencies

The following Government departments and service agencies were consulted:

- Department of Health (DoH);
- Department of Fire and Emergency Services (DFES);
- Department of Planning, Lands and Heritage (DPLH);
- Department of Water and Environmental Regulation (DWER);
- Main Roads Western Australia (MRWA); and
- Water Corporation.

The comments received include:

1. Department of Health (DOH)
Water Supply The drinking water supply must be suitably disinfected and fit for purpose, and deliver safe drinking water that complies with the health-related microbiological and chemical health criteria set out in the *Australian Drinking Water Guidelines* and also be compatible with https://www.healthywa.wa.gov.au/Articles/U_Z/Water-tanks-on-your-property It is recommended that the facility have a drinking water management plan that is approved by the City of Rockingham to ensure that risks associated with drinking water are adequately addressed and mitigated. Should any nasal irrigation practices be carried out consideration should be given to the information contained at - https://www.healthywa.wa.gov.au/Articles/N_RNasal-irrigation-is-it-safe Drinking water infrastructure to comply with all relevant aspects of the BCA. Any food premises on site is to be supplied with potable drinking water to the satisfaction of the City of Rockingham under the food safety regulatory framework. Any non-drinking water on site must be suitably labelled to ensure it cannot be reasonably mistaken for drinking water.
City Comment: Noted.

1. Department of Health (DOH) (cont…)

Wastewater Disposal

In relation to the management of sewage, the DoH has no objection to the proposed, subject to the following:

- Compliance with the Government Sewerage Policy (2019). It is noted the land is subject to high seasonal water tables and the proposal refers to using leach drains. Considering this, up to 2 metres of fill may be required to ensure the 1.5 metre separation from the water table is achieved to the base of the disposal area, including the depth of the leach drain and soil cover;
- A secondary wastewater treatment system should comply with and demonstrate meeting WA health legislation water volumes, water quality and disposal criteria;
- Submission of a plan detailing the proposed building envelopes, land application area/s, all parking bays, setbacks and exclusion zones for the proposal;
- Submission of a formal application for an onsite wastewater treatment system to the City of Rockingham for assessment prior to submission to the DOH.

City Comment:

As the site is located in a Sewerage Sensitive Area, a secondary treatment system with nutrient removal capability is proposed, in accordance with the Government Sewerage Policy.

The City has assessed the proposal against the applicable policy provisions and considers that the development can comply with the Government Sewerage Policy. It is noted however, that there is potential for significant filling being required to achieve the necessary vertical separation, in the event maximum groundwater levels are higher than observed in the applicant's SSE report. This is detailed in the Planning Assessment section of this Report.

2. Department of Fire and Emergency Services

1. Policy measure 6.5 c) Compliance with the Bushfire Protection Criteria

Element	Assessment	Action
Water	A4.2 - not demonstrated It has not been demonstrated that the proposed 50,000 litre water tank dedicated for fire-fighting purposes and adjacent hard-standing can achieve BAL-29 or below and is accessible to a type 3.4 appliance.	Modification to the Bushfire Management Plan (BMP) is required.

City Comment:

The BMP was amended to address the matter. The water tank, post-development, will be located within BAL-29. There is sufficient hardstand proposed for a type 3.4 appliance.

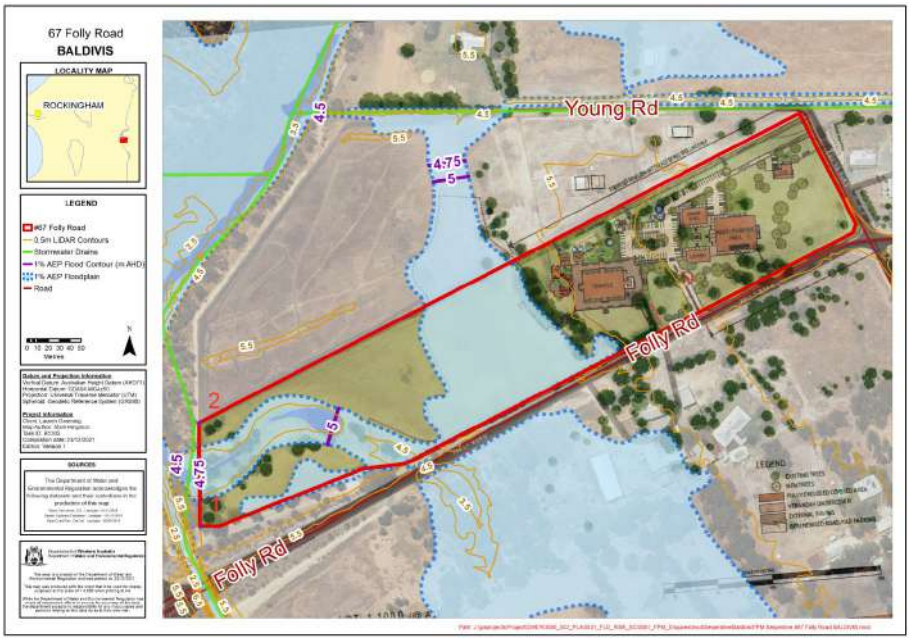
3. Department of Planning, Lands and Heritage (DPLH)

Access

The site currently has one access point onto Folly Road. Access to Folly Road and a secondary access (for service and emergency vehicles) to Young Road are proposed. This is in accordance with the Commission's Regional Roads (Vehicular Access) Policy D.C. 5.1, which seeks to minimise the number of new access points to regional roads.

3. Department of Planning, Lands and Heritage (DPLH) (cont…)
Transport Impact Assessment The supporting transport report by Shawmac (December 2021) indicated that once a month, the site may generate the up to 450 attendees. Recommendation The DPLH has no objection to the proposal on ORR planning grounds.
City Comment: Noted.
4. Department of Water and Environmental Regulation (DWER)
The Department has identified that the proposed Hindu Temple at Lot 53 Folly Road, Baldivis has the potential for impact on water resource values and/or management. In principle the Department does not object to the proposal however key issues, recommendations and advice are provided below and these matters should be addressed.
Issue: Flood Management **Advice** The North-East Baldivis Flood Study shows that a proportion of the lot is subject to flooding during major events with the 1% AEP flood level expected to vary from 4.75 m AHD to 5.0 m AHD (refer to the attached plan). Based on DWER's floodplain management strategy for the area: • It is recommended that any proposed development (i.e. filling, building, etc) be located outside of the 1% AEP floodplain and at a minimum habitable floor level of 500 mm above the estimated flood level (eg, 5.5 m AHD) to ensure adequate flood protection. • Proposed development (i.e. filling, building, etc) that is located within the floodplain (blue shaded area on the plan) will be assessed on its merits on a case-by-case basis. Based on the plan sent through the buildings have been located outside of the floodplain (see attached). The finished floor levels are provided in a relative level, so it's not clear if the buildings are built above 5.5mAHD. Please note that this advice is related to major flooding only and other planning issues such as local stormwater drainage and environmental and ecological considerations may also need to be addressed.

4. Department of Water and Environmental Regulation (DWER) (cont…)



City Comments:

The proposed building slab levels are set at least 5.6mAHD, providing at least 0.5 separation above the estimated 1 in 100 year flood level, which addresses the flood mitigation advice.

Issue: Sewage Sensitive Area Advice In accordance with the Government Sewerage Policy (Government of Western Australia, 2019), the subject land is located within a sewage sensitive area. As this land is not connected to the reticulated sewerage infrastructure, future development of the proposed lot must adhere to the Policy including the requirement for a secondary treatment system with nutrient removal as well as setback requirements from waterways, the maximum groundwater level and areas likely to be flooded in a 10% AEP flood and 1% AEP flood events.

City Comments:

The development can comply with the requirements of the Government Sewerage Policy.

Issue: Peel Harvey Coastal Plain Catchment

Advice

The proponent is to be advised that the proposal is located within the Peel-Harvey catchment and the provision of the Environmental Protection (Peel Inlet – Harvey Estuary) Policy 1992 and the Statement of Planning Policy No 2.1, Peel-Harvey Coastal Plain Catchment (SPP 2.1) shall apply.

City Comments:

Noted.

5. Main Roads WA (MRWA)

Main Roads WA does not object to the proposal subject to the following condition:

1. Attendance and times of operation for worship are to be limited to the following:

Weekday Prayers (Mon-Fri)	25-50 people (morning session)	7:00am to 12:00pm
	25-50 people (evening session)	5:00pm to 9:00pm

5. Main Roads WA (cont…)

Weekday Yoga Classes (2 per week)	20 people (evening session)	6:00pm to 7:00pm
Saturday/Sunday Prayers	100-150 people (morning session)	7:00am to 12:00pm
	100-150 people (evening session)	5:00pm to 9:00pm
Saturday/Sunday Scripture Classes	50-75 people	3:00pm to 6:00pm
Special Hindu Festival Days occurring on average once per month		
Weekday	50-75 people (morning session)	7:00am to 12:00pm
	200-250 people (evening session)	5:00pm to 9:00pm
Weekend	200 people (morning session)	7:00am to 12:00pm
	200-250 people (evening session)	5:00pm to 9:00pm
Hindu Weddings up to a maximum 6 times per year on weekends only		
Weekend	300-400 people	6:00pm to 12:00am

City Comment:

Noted.

6. Water Corporation

Drainage:

The subject area falls within the Peel Drainage Catchment in the Mundijong Drainage District, a rural drainage system. The Peel Main Drain and the Peel Sub G Drain are in close proximity to the subject site to the West and North respectfully.

Rural drains are not designed to give flood protection at all times and some inundation of land can be expected. Water Corporation maintains its existing rural drains to ensure they are capable of clearing water from adjacent rural properties within three days of a storm event, where contours and internal drainage make this physically possible.

Developments within this catchment are required to contain the flows from a one in one-hundred-year storm event on site. Discharge to Water Corporation drains must be compensated to pre-development levels.

Please note the following points regarding the Water Management Strategy provided with the Development Application:

6. Water Corporation (cont…)
Section 2.9 • The developer needs to discuss the North East Baldivis Flood Study with the Department of Environmental Regulations (DWER) and the City of Rockingham to agree fill levels, existing regional flood storage volumes to be retained on site plus compensating basin sizes required to detain additional post development runoff on site. Section 2.10 Refer to DWER regarding regional groundwater modelling and the limited use of infiltration available on site due to the high winter groundwater levels. Section 4.1.1 • The saturated hydraulic conductivity of 3m/day is considered high and does not allow for clogging and poor maintenance of the proposed drainage swales. • Table 8 needs to include the regional flood storage volume that exists on eastern portion of the site and this needs to be discussed and agreed with DWER.
City Comment: The proximity of Water Corporation assets is noted. The applicant's Water Management Strategy (WMS) involves maintaining pre-development flow paths and peak flow rates leaving the site consistent with pre-development conditions.
Water The subject area falls outside a planned water scheme area and therefore a reticulated potable water supply is not immediately available. If a reticulated water connection is required, the development should arrange for water planning to be undertaken. Water Corporation normally schedules areas in the Statewide Planning Program for review when amendments to the Metropolitan Region Scheme indicate servicing is required. If the resulting planning indicates water is feasible then the development may require headworks infrastructure to be constructed.
City Comment: Noted. The applicant's proposed potable water supply includes capturing roof runoff and supplementing needs with imported water by trucks. The DOH has provided comment on this.
Wastewater The subject area falls outside a planned sewerage catchment. If a reticulated sewerage connection is required, the development should arrange for wastewater planning to be undertaken. Water Corporation normally schedules areas in the Statewide Planning Program for review when amendments to the Metropolitan Region Scheme indicate servicing is required. If the resulting planning indicates water is feasible then the development may require headworks infrastructure to be constructed.
City Comment: Noted. This advice has been provided to the applicant.

A copy of the external comments provided by the consulted Government Agencies forms part of Attachment 4.

Design Review Panel Advice

Not Applicable

Swan Valley Planning

Not Applicable

Planning Assessment:

The proposal has been assessed against the requirements of all relevant Legislation; the Scheme, State and Local Planning Policies, as previously outlined in the Legislation and Policy section of this report. The following matters have been identified as key considerations for the determination of this application:

Environmental Protection (Noise) Regulations 1997 (Noise Regulations)

The development is required to comply with the Noise Regulations.

The Applicant's Acoustic Report indicates various off site noise exceedances for the modelled scenarios, which the report submits can be managed.

The main sources of noise generated by proposed development are considered to relate to:

- Noise from the Multi-purpose Hall;
- Noise from cars and patrons using the car parks at night.

Regarding the Multi-purpose Hall the acoustic report modelled noise relating to:

- Weddings (occasional use); and
- General activity – presented as the likely range of regular hall use.

For Weddings (held between 6pm and 12am), breakout noise was assessed to comply with the Noise Regulations with sufficient margin at the existing dwellings on surrounding land at:

- Lot 33 Young Road;
- Lot 103 Folly Road; and
- Lot 55 Folly Road.

To ensure compliance when a dwelling is constructed on Lot 923 Young Road in the future, in order to deal with any 'annoying characteristics' from audible music, the Report indicates that noise management and mitigation would be required.

The report noted:

- Music levels would need to be carefully managed to meet the assigned levels, particularly after 10pm;
- Windows and doors will likely need to be closed at times to contain noise;
- The building envelope will require careful consideration during the detailed design, so that the building is capable of sufficiently containing noise when required; and
- Should a future receiver (dwelling) be introduced at Lot 923 Young Road, additional noise management measures may be required if the music was found to be audible.

For general activity noise, internal noise levels in the Multi–purpose hall are considered to be below that of a wedding, but will vary depending on the activity and number of patrons.

The report considers that with doors and windows opened (natural ventilation mode) there is potential for noise to exceed assigned levels either during evening or night time hours at:

- Lot 103 Folly Road;

- Lot 55 Folly Road; and
- Lot 923 Young Road.

In this regard, the Report recommends the following management measures to reduce noise in order for the venue to successfully operate:

- Hall timetabling - schedule nosier activities for day time hours;
- Reducing sound levels at the source (lower music levels at night or if in natural ventilation mode);
- Closing windows and doors during sensitive periods.

Regarding noise from carparks, the Acoustic report found:

- In terms of *maximum* noise levels, carpark noise would comply with the assigned noise levels when measured at the existing surrounding dwellings, however suggests that a noise barrier would be required to mitigate the noise from car doors slamming when a dwelling is constructed on the adjoining property at Lot 923 Young Road.
- the noise related to weekend morning prayers on Sunday's (ie commencing 7am, which under the Noise Regulations is night time) would comply at all existing and future receiver locations;
- Noise from Special Hindu festivals and Weddings would comply with the assigned levels at all existing surrounding dwellings, but not when a dwelling is constructed on Lot 923 (No. 547) Young Road. To mitigate this, the report recommends a noise barrier to be constructed in the form of a noise wall approximately 89m long, between the car park and the northern property boundary.

6. Proposed Noise Mitigation Barrier

Recommendations in the Acoustic report include:

- Addressing noise when designing the development during the detailed design stage, when the building materials and specifications are known. This includes developing a mechanical services strategy to mitigate noise from mechanical services;

- Developing a Noise Management Plan to outline the management measures required for the use to operate successfully in compliance with the Noise Regulations;
- Installing noise mitigation in the form of a noise barrier to mitigate the noise impact on No. 547 Young Road, for when a dwelling is constructed on this land.

The City considers that management measures included in a Noise Management Plan can address the noise generated from the majority of activities, however, it is concerned that measures required to address the noise impacting on the property at No.547 Young Road include a large noise barrier, which is not in keeping with the surrounding rural context.

The City considers that construction of a noise barrier 89m long will adversely impact the visual amenity, as it is not a rural fencing form expected in the Rural zone.

State Planning Policy 2.1 Peel-Harvey Coastal Plain Catchment (SPP2.1)

SPP2.1 aims to ensure that land use changes within the Peel-Harvey Estuarine System likely to cause environmental damage to the estuary are brought under planning control and prevented.

The objectives of this policy include:

- *"To improve the social, economic, ecological, aesthetic, and recreational potential of the Peel-Harvey Coastal Plain Catchment.*
- *To ensure that changes to land use within the Catchment to the Peel-Harvey Estuarine system are controlled so as to avoid and minimise environmental damage.*
- *To balance environmental protection with the economic viability of the primary sector.*
- *To increase high water-using vegetation cover within the Peel-Harvey Coastal Plain Catchment.*
- *To reflect the environmental objectives in the Draft Environmental Protection Policy (Peel-Harvey Estuarine System) 1992.*
- *To prevent land uses likely to result in excessive nutrient export into the drainage system*".

The City considers that the information submitted with the application demonstrates that the development can be effectively managed to protect local and regional water resources. It is considered therefore that the policy objectives of SPP2.1 can be achieved.

State Planning Policy 3.7 - *Planning in Bushfire Prone Areas* (SPP3.7)

The site is identified as 'bushfire prone' land, and the proposed land use is considered a 'vulnerable' land use, as defined in the policy Guidelines. As such, a Bushfire Management Plan and an Emergency Evacuation Plan have been submitted with the application.

SPP3.7 seeks to guide the implementation of effective risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure.

The objectives of SPP3.7 are to:

"5.1 Avoid any increase in the threat of bushfire to people, property and infrastructure. The preservation of life and the management of bushfire impact are paramount.

5.2 Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision-making at all stages of the planning and development process.

5.3 Ensure that higher order strategic planning documents, strategic planning proposals, subdivision and development applications take into account bushfire protection requirements and include specified bushfire protection measures.

5.4 Achieve an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity, with consideration of the potential impacts of climate change."

The application complies with the relevant policy measures, which ensure that:

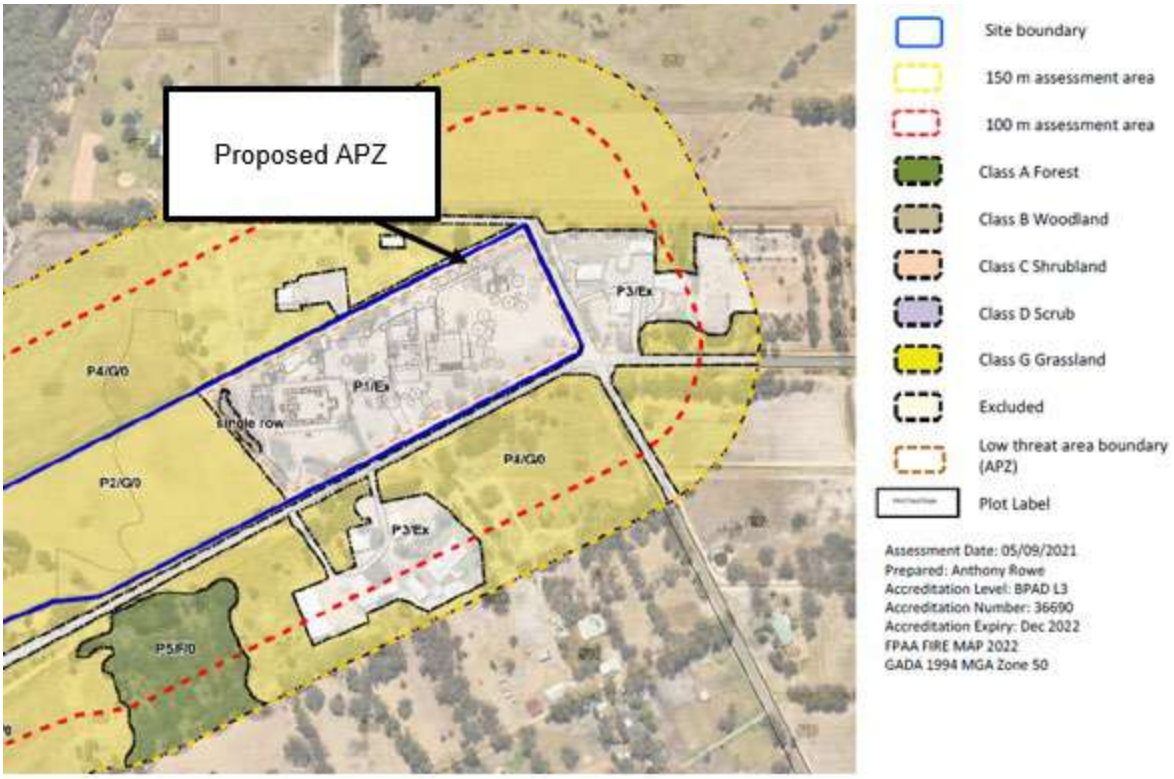
- the development, on completion, will not exceed BAL29; and
- being a vulnerable land use, an Emergency Evacuation Plan has been prepared to the satisfaction of the City.

The application complies with the objectives of SPP3.7, with the exception of policy objective 5.4 in so far as the development is not considered to "*Achieve an appropriate balance between bushfire risk management measures and, …. landscape amenity".*

This is because an APZ has been designated across the entire developable portion of the site, rather than increasing the BAL to reduce the APZ around habitable buildings to the minimum (8m) necessary as suggested to the applicant by the City. The City's approach is consistent with the following policy measure from *Planning Policy 3.1.1 – Rural Land Strategy:*

"*That building construction to BAL-29 be required to limit clearing associated with bushfire risk mitigation*".

The City considers that the maintenance requirements for an APZ are likely to impact strategic tree planting on the site, which could compromise the effectiveness of the proposed landscape screening of the development. Without effective landscaping to screen the buildings, the proposed development may become more visible in the rural landscape, and impact on the rural character of the locality.



7. Proposed APZ Extent

Guidelines for Planning in Bushfire Prone Areas (the 'Guidelines')

The application addresses the bushfire protection criteria in Appendix 4 of the Guidelines as follows:

Element 1 Location:

The development will, on completion, be subject to a low or moderate bushfire hazard level (BAL-29 or below).

Element 2 Siting and design of development

An APZ around all habitable buildings is required to ensure that potential radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29). The BMP proposes to achieve this through delineating an APZ that includes the entire developable portion of the site.

The City, however, notes:

- The BMP contradicts itself as it also delineates the entire proposed APZ area as Low-Threat vegetation (to maintain a low bushfire fuel condition) and does not make a distinction between low threat vegetation and the proposed APZ, and as such, is impossible to implement.
- The BMP's commitment to a 15% canopy cover within the APZ contradicts the extent of canopy cover for the existing and proposed trees shown in the Architectural and Landscape Plans, which when mature, the City considers will exceed 15%.

The City is concerned the APZ will compromise proposed tree planting that is shown on the plans which is intended to provide visual screening to the development, as within an APZ, the Guidelines require:

- lower branches on trees to be removed to a height of 2m;

- tree canopy cover to be less than 15%; and
- tree canopies well spread at least 5m apart so as not to form a continuous canopy.

The City is not satisfied with the proposed outcome, as it does not adequately consider the balance between bushfire risk and landscape amenity.

Element 3 Vehicular access

The site has at least two different vehicle access/ destination options along Folly Road (being a through road).

The internal private driveway is greater than 50m long, and services a number of buildings via a centralised main car park. An emergency vehicle access/egress track is proposed in the north eastern corner of the site, which in effect makes the internal driveway a through road, and is supported.

Element 4 Water

As the site is not connected to reticulated water, the provision of a 50,000 litre water tank is required for this development for bush firefighting purposes.

The application proposes two (2) 75,000 litre water tanks and a 50,000 litre water tank. The 75,000 litre water tanks would also be used to provide water for fighting structural fires, as required by the Construction Code.

Emergency Evacuation Plan (EEP)

Given the nature of the bushfire threat, the EEP strategy promotes evacuation to the west via the Kwinana Freeway and/or Safety Bay Road, although evacuation to the east is also possible should a fire approach from the west. The EEP defines roles; includes evacuation triggers and defines routes to two community evacuation centres located in the urban area of Rockingham to the west. Guidance is also provided in the EEP in the event evacuation is not possible and sheltering on site is required.

The City considers that the EEP is compliant with clause 5.5.2 of the Guidelines.

<u>Government Sewerage Policy (September 2019)</u>

The Government Sewerage Policy (GSP) applies as the site is not connected to reticulated sewerage and is located within a Sewerage Sensitive Area (SSA).

The GSP includes specific requirements for on-site effluent disposal systems in a SSA, including:

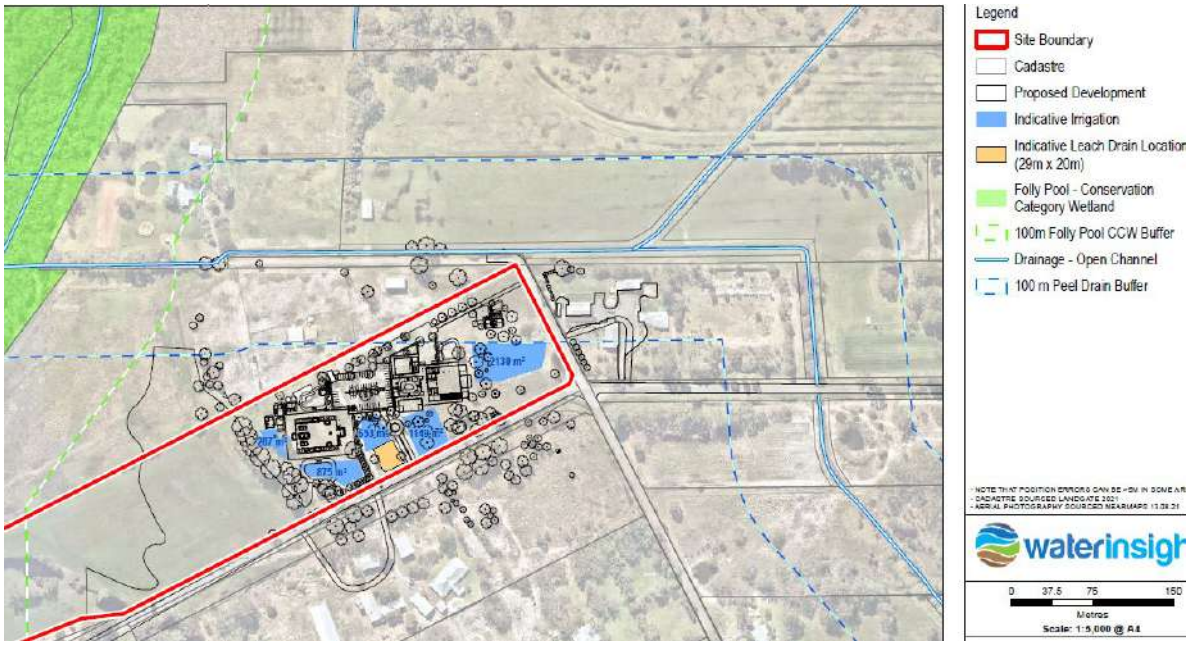
- A minimum lot size of 1ha is required in a SSA;
- Having the following separation from water resources:
  - At least 100m of a significant wetland (and not within a wetland buffer);
  - At least 100m from a drainage system that drains into a significant wetland;
  - Not be located in an area subject to inundation;
  - Not be within 30m of a private bore used for household drinking water purposes.
- The discharge point of the on-site system should have at least 1.5m separation above the highest groundwater level;
- The land application area shall be unencumbered land, in accordance with Schedule 2 of the Policy;
- Secondary treatment systems with nutrient removal are required in SSA's.

A Site and Soil Evaluation report (SSE) was submitted by the applicant, which describes the site, the soils and proposed a secondary treatment system with nutrient removal capabilities, which confirms the site's suitability for on-site waste water management.

Following secondary treatment of waste water, the application proposes the following disposal options:

- Using flat bed semi-inverted leach drains within a 580m² disposal area; or
- Using a combination of leach drains (requiring 136m² disposal area) and sub-surface irrigation (requiring 3,540m² area), to provide irrigated water for the proposed landscaping.

The indicative effluent disposal areas are identified below.



8. Indicative Effluent Disposal Areas

The City considers that the development can comply with the Government Sewerage Policy, but notes that if geotechnical investigation (post approval) report higher groundwater levels than assumed in the SSE report, then additional fill will be required to achieve 1.5m separation between the invert levels of the drainage system and the maximum groundwater levels.

It is estimated that based on the assumed maximum ground water levels, up to 1m of filling in places may be required in the effluent disposal area locations to achieve 1.5m separation (plus additional fill for soil cover). In the event the maximum groundwater levels are observed to be higher than assumed, then additional filling will be necessary.

While the extent of filling the land may satisfy health requirements, the City, from a planning perspective, has amenity concerns if the extent of filling required is excessive to the point of altering the landform. Unfortunately, this cannot be reconciled until the required groundwater monitoring has been completed, to identify peak groundwater levels.

Development Control Policy 5.1 Regional Roads (Draft) (DC5.1)

A portion of Folly Road is reserved as an Other Regional Road (ORR) in the Metropolitan Region Scheme. As the development gains access from Folly Road, the provisions of DC5.1 apply.

DC5.1 seeks to manage vehicle access and improve traffic flow and safety on regional roads by minimising the number of intersections or driveways. There is a general presumption against the creation of new driveways or increased use of existing accesses to these roads.

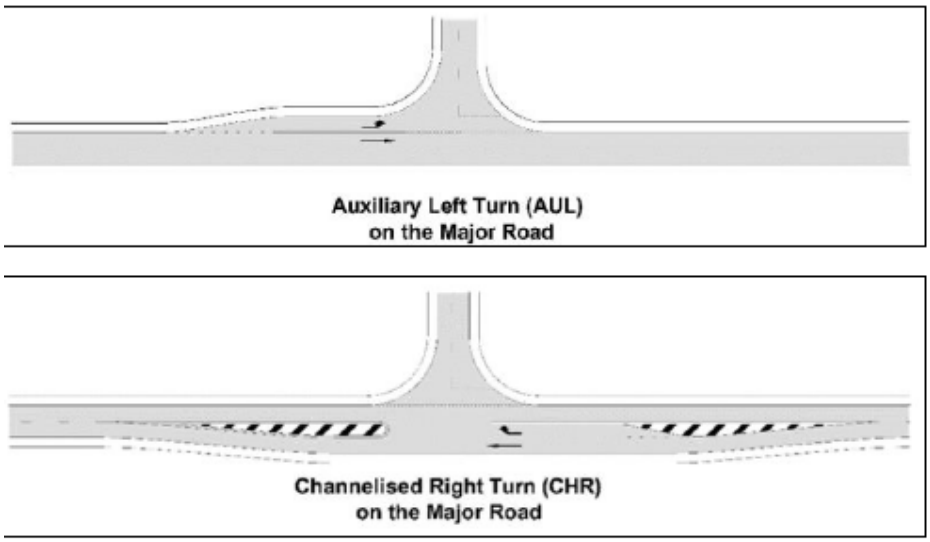
In the context of the current application, the following is noted:

- The application seeks to minimise access onto Folly Road through the provision of a single entry/exit point, relocated 35m east of the existing crossover.
- Folly Road is unlikely to be upgraded to a regional road standard in the foreseeable future.
- In response to concerns of the community about traffic safety, the applicant proposes to install sealed turning lanes (Auxiliary Left Turn and a Channelized Right Turn) adjacent the new crossover.
- The application was referred to DPLH for transport related comment, which in response, indicated no objection to the proposal on ORR planning grounds.
- The TIA indicates that the volume of traffic generated by the proposed development is capable of being accommodated within the capacity on the surrounding road network, and adequate sight distance is achieved.
- While submissions raise concerns about traffic safety on Folly Road, the reporting does not indicate any major road safety issues with the road network, or that the proposed development would increase the risk of crashes.

Overall the City concurs with the applicant's Transport Impact Assessment (TIA), which indicates the surrounding road network has the capacity to accommodate the proposed traffic generation.

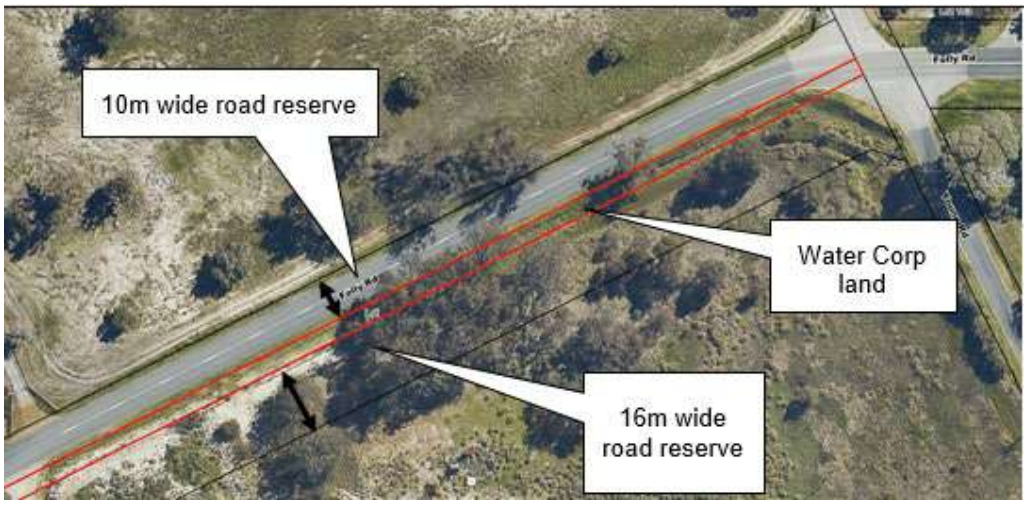
The City, however, has concerns about the proposed vehicle slip lanes along Folly Road, which include:

- a short Auxiliary Left Turn (AUL(S) treatment, and
- a short Channelized Right Turn (CHR(S)) treatment.



9. AUL and CHR Layouts

While the City supports the intended treatments, insufficient space exists within the existing Folly Road reserve (10m wide) to undertake the upgrades. Combined, an AUL(S) and CHR(S) treatment would require approximately 16m of land.



10. Folly Road Reserve

The applicant has proposed the AUL(S) and CHR(S) treatments in response to City comments and community concerns about traffic safety. As the Water Corporation (which in part is the owner of a portion of the adjoining drainage reserve) has not been consulted on the matter, in order to accommodate the proposed slip lanes Folly Road would require realignment northwards onto the subject site, which is a matter that has not been investigated.

It is noted, however, that the trigger for providing the CHR(S) is the Hindu weddings aspect, which are relatively infrequent events proposed to be held six times per year. Further, it is noted that the majority of traffic to the site will arrive from the west. It is considered that there is insufficient nexus for requiring a CHR(S) right turning lane to cater for six weddings per year.

Subject to appropriate road upgrading to install the proposed AUL(S) turning treatment, the application is considered consistent with DC5.1.

Local Planning Policies

PP3.1.1 Rural Land Strategy

The City's Rural Land Strategy (RLS) provides the basis for land use planning in the rural area of the City. In particular, it provides Council with a framework for the assessment of proposals to rezone, subdivide, manage and develop rural land in the City.

The RLS considers the City's rural land in terms of 'Policy Areas' which are further divided into Planning Precincts. The subject land is situated in Policy Area 2 - Baldivis East, which is described as:

"*The Baldivis (east) precinct is located on the eastern side of the Kwinana Freeway generally between Mundijong Road to the north and Karnup Road to the south, extending eastward to the municipal boundary. The precinct is predominantly zoned Rural, with some Special Rural zoned land in the vicinity of Doghill Road*".

The primary objective for this Planning Unit is to protect the multiple overlapping ecological values and linkages from the adverse impacts of development. These areas of environmental significance are fundamental to the remaining visual character and amenity of the area and their ongoing preservation is a key strategic objective of the RLS.

The Strategic Intent for Planning Precinct 2A is as follows:

- *"To minimise the loss of remnant vegetation associated with development and bushfire risk mitigation; particularly the Guildford and Dardanup Complexes.*
- *To avoid potential adverse impacts upon CCWs, REWs, PECs, associated vegetation and buffers.*
- *To avoid potential adverse impacts upon the Bush Forever sites, the Peel Main Drain and Serpentine River.*
- *To protect and enhance visual character and amenity.*
- *To prevent land use planning proposals which will result in an extreme Bushfire Hazard Level (BHL) and/or BAL-40 (very high risk) or BAL-Flame Zone (extreme risk)".*

The application is considered unlikely to adversely impact the ecological values of the site or locality, as discussed earlier in this Report.

The Policy performance standards are generally complied with, except for the following:

1. *"That building construction to BAL-29 be required to limit clearing associated with bushfire risk mitigation",* and
2. *"All buildings and outbuildings shall be sympathetic in design, materials and colour to compliment the surrounding landscape elements and be sited away from focal points and located where screening vegetation and landform can be utilised*".

The City considers that the proposed religious buildings (i.e. the Temple buildings and Priest's dwellings) have been located on the site to maximise screening from the existing trees and proposed tree plantings. The majority of the building form could largely be screened once the proposed tree planting has matured, however, this results in a direct conflict between the tree planting and Bushfire Management Plan requirements for the APZ, which are considered likely to compromise the tree planting effectiveness.

The secular buildings (ie Multi-purpose Hall, Dining Hall, Library and Guest Accommodation dwelling) which are located on the more visually exposed eastern portion of the site, are designed to complement the prevailing architectural form of rural buildings in the area, with pitched roofing, single storey structures with veranda's and conventional cladding.

The City considers that the effectiveness of the design strategy relies heavily on the presence of mature trees to provide visual screening. The City is concerned that:

- The intention for the bushfire APZ to encompass the majority of the developable area of the site, which due to APZ management requirements, is likely to diminish the effectiveness of the proposed landscape screening to mitigate the visual impact of the development. The APZ would impact on views of the development from Folly Road, Young Road and from the north, in particular from Lot 923 Young Road.
- The proposed tree planting will take time (potentially years) to establish to a sufficient size to maximise the screening effect.
- The existing trees and proposed strategic landscaping is insufficient to effectively screen the proposed development when viewing the site from the north. The proposed buildings and car parking will be clearly visible from Lot 923 Young Road, due to the setbacks proposed and the limited scope for tree planting, noting the vegetation will need to be managed in accordance with APZ standards.

- An acoustic barrier required for noise mitigation will utilise a form of solid fencing that is not a form of rural fencing. Although a noise barrier would not be proposed for the purpose of fencing, its size and form is considered inappropriate in this context. It would be difficult to screen this barrier with vegetation if located within an APZ.

As such, the proposed development is not considered consistent with the above policy measures.

3. "*Bushfire management to be addressed in accordance with WAPC Guidelines for Planning in Bushfire Prone Areas."*

As mentioned above, the City considers that the APZ proposed over the entire developable portion of the land will not achieve an appropriate balance between bushfire mitigation and landscape amenity, as maintaining the site to an APZ standard will open up views of the development from the public and private domain.

Overall, the proposal is considered to be inconsistent with the above policy provisions and the strategic intent for Planning Precinct 2A, as it has not been sufficiently demonstrated that the development will protect and enhance the visual character of the rural area, east of the Kwinana Freeway.

Town Planning Scheme No.2 (TPS2)

Zoning:

The subject land is zoned Rural in TPS2.

Rural Zone Objective:

The objective for the Rural zone is "…*to preserve land for farming and foster semi-rural development which is sympathetic to the particular characteristics of the area in which it is located, having due regard to the objectives and principles outlined in the Rural Land Strategy 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*".

A Place of Worship is not considered a traditional rural land use, however, this in itself is not fatal to the application, as it is a discretionary use in the zone and the application must be considered on its planning merit, which is discussed further below.

The City considers that the development is inconsistent with this objective due to the overall prominent scale of the development and the impact this has on the visual landscape character of the site and surrounding land.

As discussed under the heading of the Rural Land Strategy, the City is concerned about the effectiveness of the proposed strategic landscaping to screen the development from surrounding land, due to the:

- Proposed APZ extent;
- Time required for planted trees to mature;
- Inability to effectively screen development from the north; and
- The acoustic barrier, being not a form of structure reasonably expected in the Rural zone.

The number of buildings proposed collectively is considered beyond that which can be reasonably expected in the Rural context (ie the three dwellings in addition to the Place of Worship and other various incidental uses).

Land Uses

Due to the range of buildings and uses proposed, the proposal overall does not fit neatly into one particular land use classification provided in TPS2.

The Predominant Use

The application seeks approval for the development of a Hindu Temple as a 'Place of Worship', being the predominant land use.

A 'Place of Worship', is defined in TPS2 to mean "*premises used for religious activities such as a chapel, church, mosque, synagogue or temple*".

Within the Rural Zone a Place of Worship is a potentially permissible use as it is an 'A' use, meaning that it is a use that is not permitted ('A') unless the local government has exercised its discretion by granting development approval after advertising the proposal.

The Incidental uses

Various aspects of the proposed development are submitted as 'Incidental uses' to the predominant use.

TPS2 defines Incidental Use to mean "*a use of a premises which is consequent on, or naturally attaching, appertaining or relating to, the predominant use*".

In terms of the Religious Buildings (i.e. Temple proper, the Temple Kitchen, Toilet, Chariot Store and Priest's dwellings) the following is noted:

The Temple Kitchen, Toilet buildings and the Chariot Store building:

These are clearly incidental to the use of the Temple, and are able to be considered as such.

Two Priest' Dwellings

These two dwellings are submitted as 'Caretakers Dwellings', incidental to the predominant use. These cannot be approved as Caretakers dwellings as only one dwelling can be considered. Further, the Priest's dwellings do not relate to an industry related activity.

A Caretakers Dwelling is defined in TPS2 as meaning *"a dwelling on the same site as a building, operation or plant used for industry, and occupied by a supervisor of that building, operation or plant*".

The City considers that the Priest's dwellings are best described as a 'Dwelling' in their own right, where a dwelling is defined: "*means a building or portion of a building being used or intended, adapted or designed to be used for the purpose of human habitation on a permanent basis by:*

(a) A single person;

(b) A single family; or

(c) *No more than six persons who do not comprise a single family*".

Within the Rural zone, (apart from a Caretakers Dwelling) only a Single House (ie a dwelling) and an "Ancillary Accommodation" dwelling are permitted.

Ancillary Accommodation is an 'IP' use in the rural zone, which means "*a use that is not permitted unless the use is incidental to the predominant use of the land as determined by the local government*".

The Priest's dwellings are too large to be considered Ancillary Accommodation (being 160m² each), meaning the only other logical option is to treat these two dwellings as "Grouped Dwellings".

Grouped Dwellings are defined to mean: "*A dwelling that is one of a group of two or more dwellings on the same lot such that no dwelling is placed wholly or partly vertically above or below another, except where special conditions of landscape or topography dictate otherwise, and includes a dwelling on a survey strata with common property*".

Grouped Dwellings however, are a prohibited use (an 'X' use) in the Rural Zone, and which are not capable of approval.

In terms of the Secular Buildings (ie the Multi-purpose Hall, Dining Hall, Library building and Guests Accommodation dwelling), the following is noted:

The Multi-purpose Hall, Dining Hall and Library buildings

These buildings will be used for a variety of activities, including teaching and reading Vedas literacy, meditation classes, dancing, yoga and self-development. These uses are all religious activities and relate to the use of the Temple. As such they are also considered incidental uses to the Place of Worship (predominant use).

Special Hindu festivals and Hindu weddings also propose to use the Multi-purpose hall, as a Reception Centre (incidental use).

A Reception Centre is defined to mean: "*premises used to hosted functions on formal or ceremonial occasions*". In the Rural zone a 'Reception Centre' is a use that is not permitted ('A') unless the local government has exercised its discretion by granting development approval after advertising the proposal.

The use of these buildings for Hindu Festivals and Hindu weddings is consistent with this definition, and such, are considered to be permissible incidental uses.

Guests Accommodation dwelling

This is submitted as Ancillary Accommodation, however, the dwelling is too large (eg 169m²) and it is the City's practices to only approve one Ancillary Dwelling up to 100m² area.

Under State Planning Policy 7.3 - Residential Design Codes Volume 1, the Ancillary Dwelling is limited to 70m^2 area.

For the reasons above, the City is only prepared to support one "Single House" and one "Ancillary Dwelling" up to 100m² area.

Clause 4.15.1.3 - Parking

Onsite car parking is required to be provided in accordance with Table No.2 of TPS2.

The provision of car parking is summarised as follows:

Use	Rate	Required	Provided
Place of Worship	1 bay per 4 persons accommodated (based on 400 persons)	100 bays	105 (including 2 accessible bays and 1 service bay)
Reception Centre	As above - the Reception Centre is not to be used at the same time as the Temple	100 bays	
Guest dwelling (1)	1 bay, as per Ancillary Dwelling, R Codes Vol 1	1 bay	4
Priest's dwellings (2)	1 bay, as per Ancillary Dwelling, R Codes Vol 1	2 bays	4
Total		**103**	**113**

Comments

Intensity of Use

The application proposes a number of buildings of a significant scale which gives rise to concerns about the proposed intensity of the development.

The intensity of the land use will vary, being moderate most of the time (typically up to 100 worshippers per day during the week, and up to 300 per day in the weekends), but increases significantly with the festivals (up to 450 people per day on a weekend) and wedding events (400 people). While festivals and weddings are less frequent events, being monthly and bi-monthly respectively, every second month there will be a special Hindu festival day as well as a Hindu wedding held on the property.

As a result of the range of activities, the potential noise impact is a concern, as the proposed uses will operate within night time noise hours in addition to day time hours. As mentioned, in order to mitigate activity noise, careful management is required as well as a structural response in the form of a noise barrier. While it may be possible to prepare a Noise Management Plan to address some of the noise concerns, an 89m long noise barrier is not supported from a rural amenity perspective.

Amenity

Amenity is defined in the Deemed Provisions as '*all those factors which combine to form the character of an area and include the present and likely future amenity*'.

For the purpose of this assessment, the 'locality' is considered to include the surrounding properties from the south across Folly Road though to the east and as far north of the site so as to include lots on Young Road, as it is this land that the application has the potential to impact the greatest due to its operation and visual impact.

The properties within the locality are small scale rural and semi-rural land uses, that include a range of uses such as hobby farming and rural–residential development, some small scale rural industry and commercial horticultural uses. Buildings on the land in the locality are often clustered and well screened by remnant vegetation.

It can be expected that the rural amenity will change with the introduction of the non-traditional land uses provided as part of this application. The volume of traffic entering and leaving the site, and the increase in the number of people utilising the site is considered to be significantly greater than the surrounding rural properties and what is to be expected in a rural context. The operation of the development is considered to be out of context for the area and is likely to impact the existing amenity of the locality.

The amenity of the adjacent owners is likely to be impacted by a lack of effective screening, (both across the site as a result of the APZ, and along the northern boundary where there is limited space for screen planting) and location of the proposed buildings relative to the northern property boundary.

In essence, the narrow width of the property being 114m, means that there is limited opportunity to effectively place the buildings on site in a way that will not adversely affect the amenity of the adjoining owners.

Visual Impact

It is proposed to mitigate the visual impact of the development by clustering the religious buildings and screening them behind the existing trees on the site, and supplementing this with additional tree planting to substantially screen views of the buildings from Folly Road.

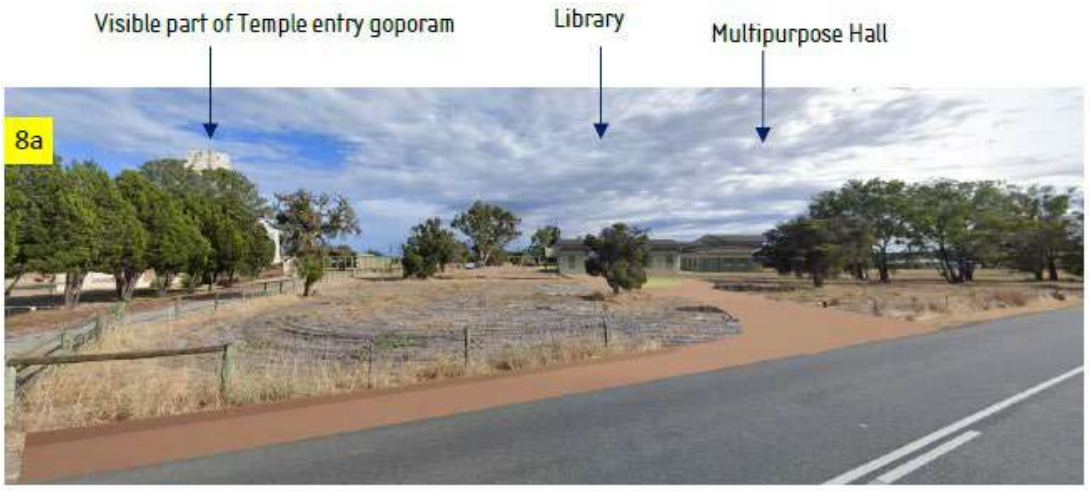
Building height across the development is predominantly two storey scale or less, which is consistent with the prevailing built form in rural areas.

The religious buildings (Temple, Kitchen, Toilet and Priests dwellings) will be mostly screened from the surrounding streets by vegetation (existing and proposed), when the proposed tree plantings mature.

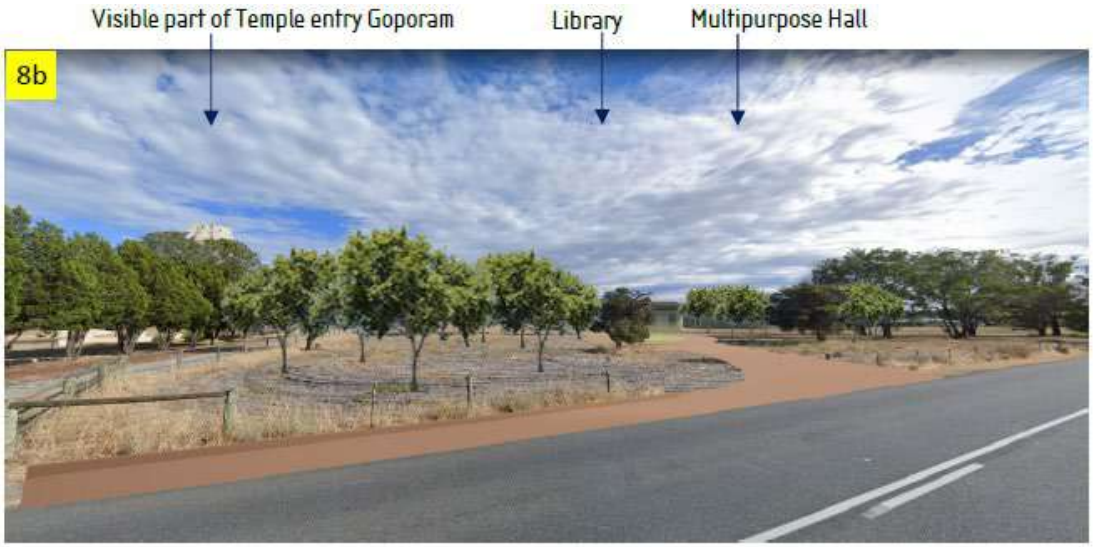
The Temple facades and entry 'Gopurams' (of which there are five, up to 14.77m high on the Temple building) will be clad in part with rendered limestone, and the sculptural carvings will be painted in monotone colours to match the limestone. The roof will be concealed behind parapets, and doors ornately framed in timber, giving a rustic look.

The vertical 'Gopuram' elements on the Temple are architectural features that are generally consistent in scale with existing structures in the Rural zone, however, they are not typical building forms in this rural area, and therefore are in contrast.

The secular buildings (ie Multi-purpose Hall, Dining Hall, Library and Guest Accommodation dwelling) are proposed of a more traditional architectural vernacular, consistent with the prevailing surrounding rural building form.



11. Photo Montage - View from Folly Road without Landscape Plantings



12. Photo Montage - View from Folly Road with Landscape Plantings

While the City generally supports these design principles, it also has concerns that relate to:

- The APZ requirements to manage the screening vegetation, as this would open up the development to views from the public domain and from the land to the north, and increase the visual impact accordingly. This is unresolved.
- The set back of the buildings from the northern boundary, as the landscape screening on the northern side of the site is considered unlikely to be effective due to spatial constraints, fire break and APZ requirements.
- The installation of an acoustic barrier 89m long is inconsistent with the expectations for structures the Rural zone. The acoustic barrier required to mitigate noise on Lot 923 Young Road, Baldivis, is considered to adversely impact visual amenity when viewed from land to the north of the site; Young Road adjoining the site to the east, and potentially from Folly Road to the south.
- The extent of filling is currently unknown but is assumed to be up 1m above ground level to provided adequate separation from the base of the waste water system to maximum ground water level. In the event groundwater levels are observed to be higher when the geotechnical investigations are undertaken in the future, then additional filling will be required, which may significantly impact on the landform, and consequently, visual amenity.

View from possible future dwelling towards Temple and car park

13. Photo Montage - View from Lot 923 Young Road with Landscape Plantings

View from possible future dwelling towards Multi Purpose Hall and Dining Hal

14. Photo Montage - View from Lot 923 Young Road with Landscape Plantings

Conclusion

The application is considered to be inconsistent with the objective of the Rural zone and inconsistent with the City's Rural Land Strategy.

While the majority of the buildings can be entertained, the three proposed dwellings are prohibited in the Rural zone.

The extent of the proposed development is not considered to be in keeping with the reasonable community expectations for a Place of Worship the Rural zone.

While a Place of Worship may be allowed in the Rural zone, the scale and activity associated with this development is significant compared to other Places of Worship in the City.

The scale of the development is considered to be out of context for the area and is likely to impact the existing amenity of the locality by virtue of the proposed operational arrangements and visual implications.

It is considered that the application is unlikely to provide effective screening of the development, given the size of the proposed APZ; time required for planted trees to mature, and limited screening opportunity along the northern property boundary.

The proposed acoustic wall recommended for noise mitigation is considered to adversely impact visual amenity as it is not a rural fencing form expected in a Rural zone, and generally, the structure in itself is not akin to a rural setting.

Having due regard to the relevant planning considerations, including public submissions raising amenity concerns, and the objective for the Rural zone, this proposal is not considered to be compliant with TPS2 and refusal is recommended.

City of Rockingham

Design Review Panel Meeting Notes

Notes of the Design Review Panel held on 30 May 2022

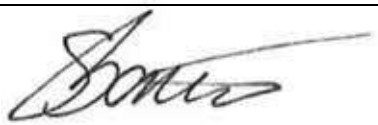
Panel Members:	Mr Sam Klopper Mr Trent Woods Mr Tom Griffiths
City Officers:	Mr David Banovic - A/Manager Major Planning Projects (Chair) Mr Mike Ross - Manager Statutory Planning Mr David Waller - Coordinator Statutory Planning Mr Chris Parlane - Senior Planning Officer Mrs Casey Gillespie - Senior Planning Officer
A/Panel Coordinator:	Mrs Melinda Wardle - EA to Director Planning and Development Services
Proponents:	Item 2 - Mr Gorki Bogdanich and Mrs Lynette Chew-Bogdanich (Archetype Design Studio)
Declarations of Interest:	Nil
Agenda Item 2	
Proposed Development	Hindu Temple (Place of Worship)
Property Address	Lot 53 (No.67) Folly Road, Baldivis
Proposal	The Applicant had submitted a Development Application for a proposed Hindu Temple and associated structures at Lot 53 (No.67) Folly Road, Baldivis (the subject land). The following development was proposed: Ÿ A Hindu Temple building (975m²), Kitchen (27m²) and Toilet buildings (66m²); Ÿ A Chariot Store (an existing shed 55m²); Ÿ A Multipurpose Hall (1,046m²); Ÿ A Dining Hall (334m²); Ÿ A Library Building (243m²); Ÿ An Ancillary Guests Accommodation Dwelling (100m²); Ÿ A Priest's dwelling (266m²); Ÿ Seven (7) water tanks are provided for potable water, grey water and water for firefighting purposes; Ÿ A 4m wide fire break is proposed around the property boundaries; and Ÿ Site landscaping is proposed utilising strategic tree planting in an attempt to screen the development.

Background	Ÿ On 9 December 2021, a Development Assessment Panel (DAP) application seeking Development Approval was lodged with the City for a proposed Place of Worship (Hindu Temple). Ÿ On 2 March 2022, revised plans and reports were received. Ÿ 255 submissions were received during the submission period, of which 72 objected, including the surrounding property owners. Ÿ On 26 April 2022, Council resolved to endorse the City's Responsible Authority Report **(Attachment 1, note: attachments accessible via 'Objective Connect')** to refuse the application for the following reasons: 1. The proposed development is not consistent with the City's Town Planning Scheme No.2 Objective of the Rural Zone (Clause 4.11.1), which is to preserve land for farming and foster semi-rural development which is sympathetic to the rural character of the area. 2. The proposed development is not consistent with the strategic intent for Planning Precinct 2A under the City of Rockingham Planning Policy 3.3.1 - Rural Land Strategy, as it has not been sufficiently demonstrated that the development will protect and enhance the visual character of the rural area. 3. The intensity of the proposed development exceeds what could reasonably be expected within this rural area, based on the number of people likely to attend the site. 4. The proposed development has not demonstrated that the existing or proposed landscaping treatments, intended to visually screen the development, can be retained in its entirety and maintain compliance with State Planning Policy 3.7 - Planning Bushfire Prone Areas. 5. The acoustic barrier required to mitigate noise on Lot 923 Young Road, Baldivis is considered to adversely impact visual amenity when viewed from land to the north of the site; Young Road adjoining the site to the east, and potentially from Folly Road to the south. 6. The proposed development includes 'Grouped Dwellings' which is a prohibited ('X') land use in the Rural zone, under the City's Town Planning Scheme No.2. 7. The proposed development is contrary to orderly and proper planning principles. Ÿ On 3 May 2022, in the lead up to the DAP meeting the Applicant submitted amended plans and additional information in an attempt to address the reasons for refusal. Ÿ On 9 May 2022, the DAP resolved to defer the application pending the Applicant liaising with the City and providing a further response in order to address the following issues, and to give the City an opportunity to re-assess the revised application: 1. Landfill requirements for stormwater management and effluent disposal; 2. Hours of operation as it affects environmental noise measures 3. Bushfire management requirements as they affect landscaping and screening;

	4. Housing accommodation proposed on site. Ÿ On 19 May 2022, the applicant, after meeting with the City, submitted amended plans which are contained in **Attachment 2**. Ÿ It is these plans that are presented to the DRP for consideration. Ÿ The City notes reasons for deferral do not necessitate the need for further design and site layout deliberation.
Proponent deputation to the Panel	Mrs Lynette Chew-Bogdanich, Archetype, provided an overview of the site in terms of site selection and context, development concept and design elements.
Officer presentation to the Panel	Mr Chris Parlane provided an overview of the planning assessment of the proposed development.

‘Design Quality Evaluation’		
		Supported
		Pending further attention
		Not supported
Design Principles		
Principle 1 ***Context and Character***		*Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*
		Ÿ Well considered contextual analysis response. Ÿ The ancillary buildings integrate well. Ÿ The Temple is a necessarily distinctive building. Ÿ Consider communicating with the local community. Ÿ The northern property interface needs to be well resolved - reconsider car parking locations. Ÿ The scale is commensurate with other buildings. Ÿ Clustering of buildings is consistent with surrounding land. Ÿ Size and scale of no real concern. Ÿ The materials pallet is good and generally appropriate. Ÿ Effort required to make sympathetic to context; screening vegetation to be carefully considered.
Principle 2 ***Landscape Quality***		*Good design recognises that together, landscape and buildings cooperate as an integrated and sustainable system, within a broader ecological context.*
		Ÿ Tree retention and overall landscape strategy with early tree planting is supported. Ÿ Enhance water sensitive urban design landscaping to carparks, with more shade trees. Ÿ Consider more landscaping surrounding library and hall structures. Ÿ Landscape strategy/BAL staging is good. Ÿ Consolidate car parking and provide more landscaping to the northern boundary. Ÿ Future opportunity for wetland landscaping. Ÿ Landscaping - engage neighbours to be involved.
Principle 3 ***Built Form and Scale***		*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.*
		Ÿ Temple form and scale is ameliorated by retained trees. Ÿ The secular buildings are appropriate to local context. Ÿ The buildings fit the surrounding context. Ÿ The spaces between buildings work well. Ÿ Location of the car parking near the northern boundary is not supported and should be relocated. Ÿ Two storey house scale works well with the Temple. Ÿ Demonstrate how car headlight glare can be mitigated.

Principle 6 ***Amenity***		*Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.*
		Ÿ Access point seems logical and works well. Ÿ Courtyards, spaces around buildings are good outcomes. Ÿ Must be respectful to the peaceful enjoyment of the northern properties. Ÿ Rural repair project - could be great amenity for the neighbours. Ÿ Noise/light glare to north is the weakest part of the application. Demonstrate how to manage properly. Ÿ Suggest reconfiguration of 15 car bays near the northern boundary so they face internal buildings. Ÿ Possibly consider a low wall to screen headlight glare.
Principle 10 ***Aesthetics***		*Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.*
		Ÿ No problem with the aesthetics. Ÿ Engaging with the local Baldivis community would be helpful.
Summary (Key Issues)		Ÿ Reconfiguration/relocation of the northern car parking area. Ÿ Plant trees in car parking area/s at a rate of one tree for every three bays.
Panel Recommendation		**The design is supported.**

Meeting Close	1:07pm
Chair Signature	
Date	2 June 2022

D22/95032

SRI BALAJI TEMPLE DEVELOPMENT
67 FOLLY ROAD, BALDIVIS

CONTENTS

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A02 SITE PLAN 1:1000

A03 SITE PLAN 1:500

A04 TEMPLE + PRIESTS RESIDENCES
GROUND FLOOR PLAN

A05 TEMPLE + PRIESTS RESIDENCES
ELEVATIONS

A06 MULTI-PURPOSE HALL, DINING HALL + LIBRARY
GROUND FLOOR PLAN

A07 MULTI-PURPOSE HALL, DINING HALL + LIBRARY
ELEVATIONS

A08 GUEST ACCOMMODATION
GROUND FLOOR PLAN + ELEVATIONS

A09 LANDSCAPE PLAN

A10 BUSHFIRE APZ STRATEGY PLAN

A11 STAGING PLAN

A12 DENSITY DIAGRAM

A13 VIEW SHEDS

A14 VIEW SHEDS

A15 VIEW SHEDS

A16 RENDERS

archetype
|design studio|

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2. Do not scale from these drawings. Dimensions shown on larger scale drawings take precedent over smaller scaled drawings
4. The contractor shall check and verify all dimensions on site, both new and existing, prior to commencement of any phase of the building work or ordering any materials
5. In case of any discrepancy whatsoever, the contractor shall check with the architect prior proceeding
6. Contractor shall carry out works in accordance with Council Building License and conditions stipulated thereon
7. Contractor shall carry out works in accordance with requirements of Western Power with respect the easements on the site.
8. Contractor is advised that the site is a Registered Aboriginal Heritage Site to which the Aboriginal Heritage Act and all its lega requirements apply.
9. Contractor is to strictly adhere to Recommendations made in the Anthropological Report prepared by De Gand Pty Ltd May 2011

Revision	Description	Date
REV 0	DEVELOPMENT APPLICATION SUBMISSION	DEC 2021
REV 1	AMENDMENTS IN RESPONSE TO COUNCIL + PUBLIC QUERIES/COMMENTS	FEB 2022
REV 2	AMENDMENTS IN RESPONSE TO RESPONSIBLE AUTHORITY REPORT	MAY 2022
REV 3	AMENDMENTS IN RESPONSE TO MOJDAP	MAY19TH 2022
REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31ST 2022
REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
CONTENTS

Scale :
Status: #Project Status

Drawing N0

00

Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1

LOCATION PLAN 1:2000 (@ A1)

archetype
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REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
LOCATION PLAN

Scale :
Status: #Project Status

Drawing N0
01

Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1

SITE PLAN: TOTAL LOT 1:1000 (@ A1)

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REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31st 2022
REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
SITE PLAN 1.1000

Scale :
Status: #Project Status

Drawing N0
02

Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1

LEGEND

- EXISTING TREES
- NEW TREES
- FULLY ENCLOSED COVERED AREA
- VERANDAH UNDERCOVER
- EXTERNAL PAVING
- BITUMENISED ROAD/CAR PARKING
- 4m WIDE FIREBREAK

SCALE

0m 10m 50m

N

PROPOSED DEVELOPMENT EAST OF MID TREE LINE 1:500 (@ A1)

archetype
|design studio|

architecture - interiors - feng shui
level 12, 68 St Georges Terrace Perth WA 6000
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REV 0	DEVELOPMENT APPLICATION SUBMISSION	DEC 2021
REV 1	AMENDMENTS IN RESPONSE TO COUNCIL + PUBLIC QUERIES/COMMENTS	FEB 2022
REV 2	AMENDMENTS IN RESPONSE TO RESPONSIBLE AUTHORITY REPORT	MAY 2022
REV 3	AMENDMENTS IN RESPONSE TO MOJDAP	MAY19TH 2022
REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31ST 2022
REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

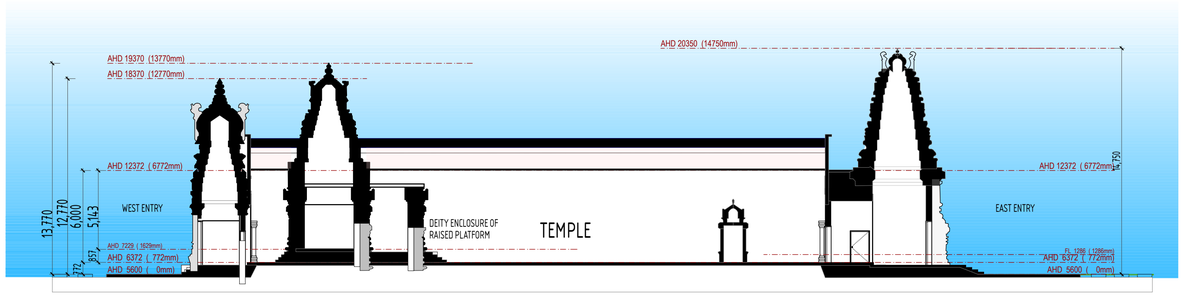
Drawing Title:
SITE PLAN 1.500

Scale :
Status: #Project Status

Drawing N⁰
03

Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1

PRIEST RESIDENCES UPPER FLOOR PLAN 1:200



TEMPLE LONGITUDINAL SECTION AA 1:200

LEGEND

- EXISTING TREES
- NEW TREES

TEMPLE PLAN, PRIESTS QUARTERS + TOILET BLOCK 1:200 (@ A1)

SCALE
0m 5m 25m

N

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REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31st 2022
REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

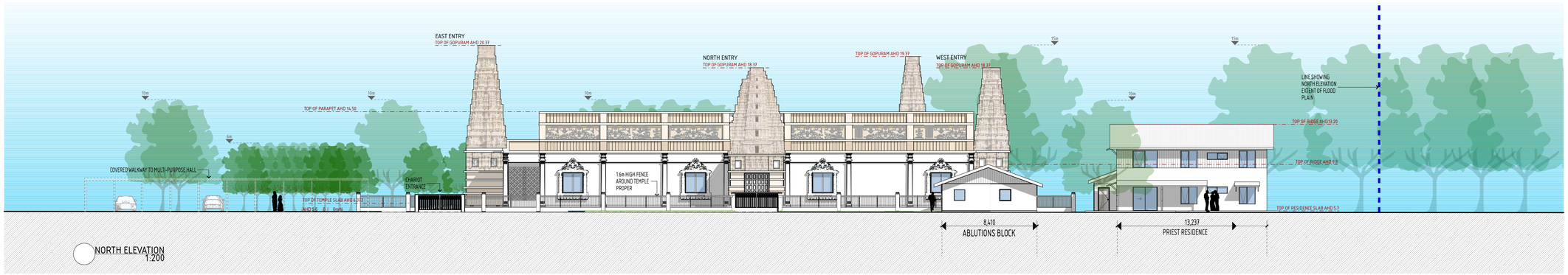
Client :
JAPA PTY LTD.

Drawing Title:
TEMPLE PLAN

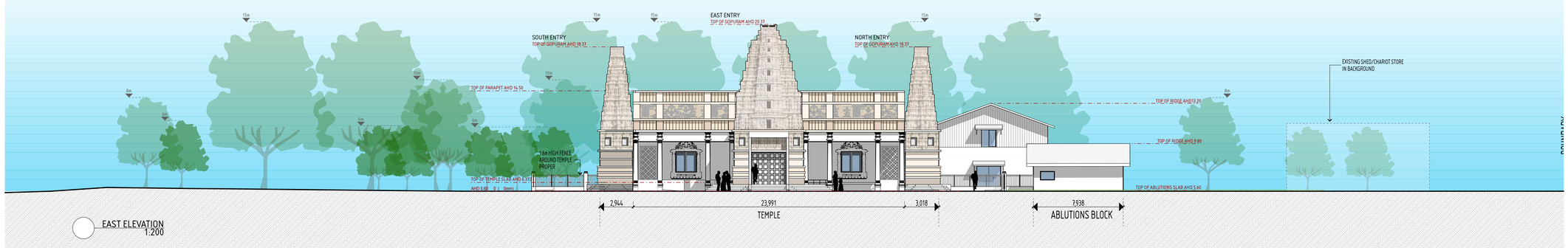
Scale :
Status: #Project Status

Drawing N⁰
04

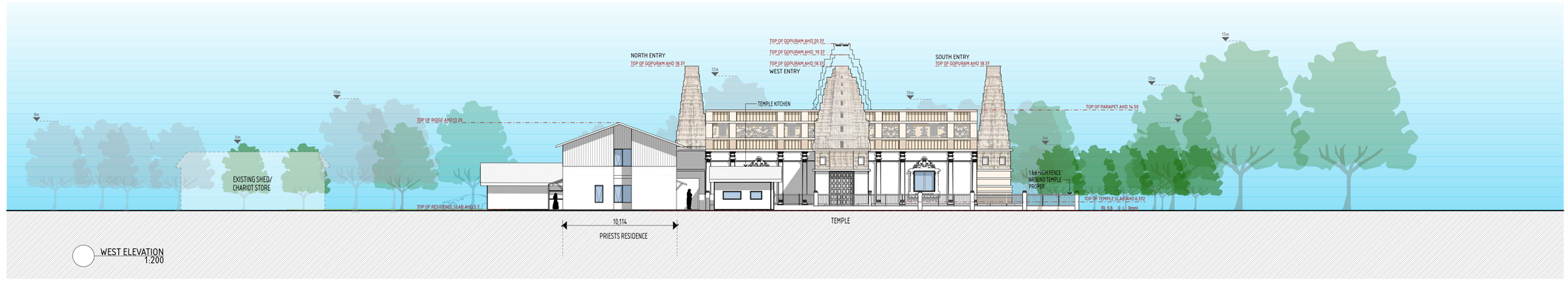
Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1



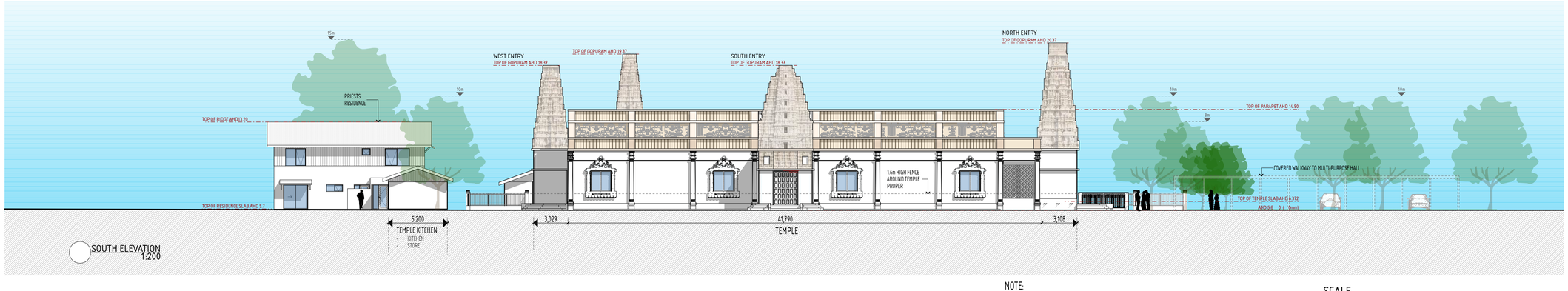
NORTH ELEVATION
1:200



EAST ELEVATION
1:200



WEST ELEVATION
1:200



SOUTH ELEVATION
1:200

ELEVATIONS 1:200 (@ A1)

NOTE:
ALL EXISTING TREES ARE DEPICTED AND DRAWN TO SCALE IN CORRECT POSITION. NEW TREES NOT SHOWN

SCALE
0m 5m 25m

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|design studio|
architecture - interiors - feng shui
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REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31st 2022
REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

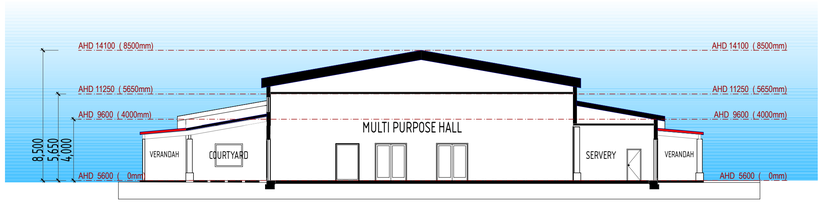
Client :
JAPA PTY LTD.

Drawing Title:
TEMPLE ELEVATIONS

Scale :
Status: #Project Status

Drawing N0
05

Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1



MULTI-PURPOSE HALL CROSS SECTION BB 1:200

LEGEND

EXISTING TREES

NEW TREES

FIREBREAK

FIRE WATER 75,000L

BIN ENCLOSURE

BUSHFIRE FIGHTING 50,000L

GREY WATER TANK 90,000L

POTABLE WATER TANK 90,000L

EXISTING SHED/ CHARIOT STORE

PRIEST'S HOUSE PARKING 4 CAR BAYS

65 CAR PARKING BAYS (INCL. x2 DISABLED BAYS)
(INCL.x2 PRIEST'S BAYS)
BAYS 2.5 x 5.5m
6m WIDTH DRIVEWAY
RED BITUMEN

FIRE WATER 75,000L

ZEBRA CROSSING

COVERED WALKWAY

COURTYARD

VERANDAH

DINING HALL AHD 5.6

SERVERY

FURNITURE STORE

DRY STORE

COOL ROOM

KITCHEN

VERANDAH AHD 5.6

ENTRY COURTYARD AHD 5.514

FOUNTAIN

VERANDAH AHD 5.6

MULTI PURPOSE LIBRARY AHD 5.6

BOOKS

BOOKS/MOBILE SHELVING

BOOKS/MOBILE SHELVING

BOOKS

16 CAR PARKING BAYS
INCL x1 SERVICE BAY
AHD 5.5

REVERSING BAY

NORTH COURTYARD

21 CAR PARKING BAYS
BAYS 2.5 X 5.4M, 6M WIDTH DRIV

REVE B

B

VERANDAH

COOL ROOM

KITCHEN

DRY STORE

SERVERY

FURNITURE STORE

GREEN ROOM MALE

MALE

FEMALE

HANDWASH

AHD 5.6

AHD 6.5

VERANDAH

RAMP

AHD 5.6

LOBBY AHD 5.6

MULTI PURPOSE HALL AHD 5.6

STAGE AHD 6.5

UP

UP

COVERED ENTRYWAY AHD 5.6

DISABLED

AUDIO VISUAL

FIRST AID STORE

CHANGE ROOM

SHR

GREEN ROOM FEMALE

FURNITURE STORE

MEETING ROOM

TEMPLE ADMIN

COURTYARD

VERANDAH

B

MULTI-PURPOSE HALL, DINING + LIBRARY PLAN 1:200 (@ A1)

SCALE

0m 5m 25m

N

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REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31ST 2022
REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
MULTI PURPOSE HALL, LIBRARY + DINING HALL GF PLAN

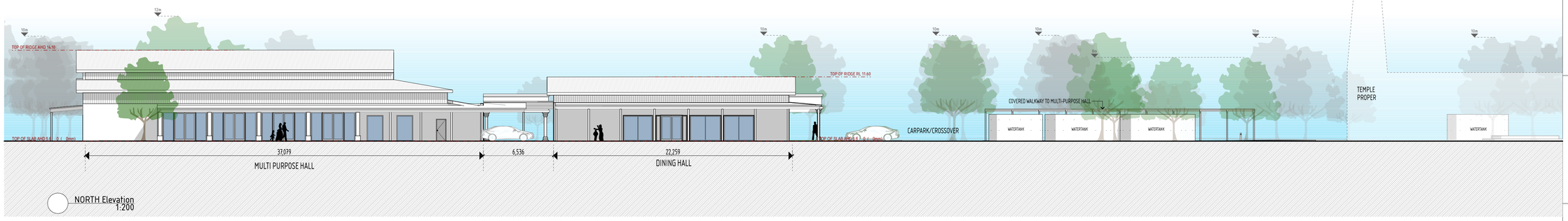
Scale :

Status: #Project Status

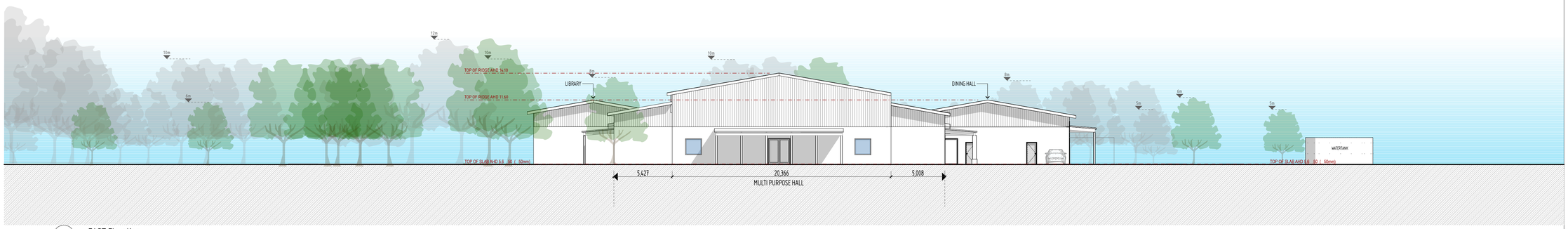
Drawing N0

06

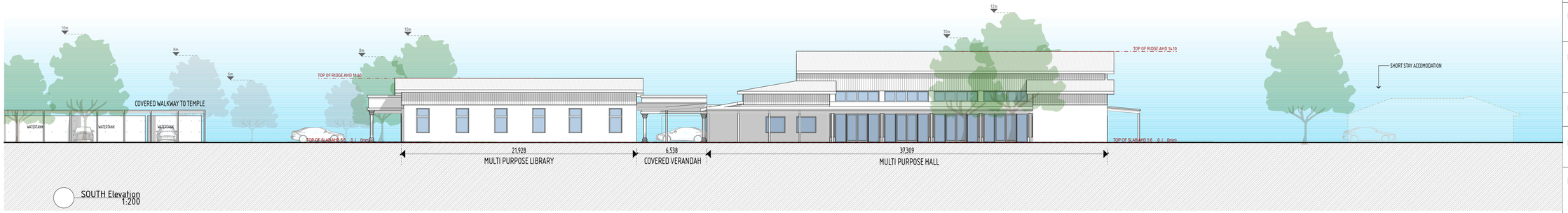
Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1



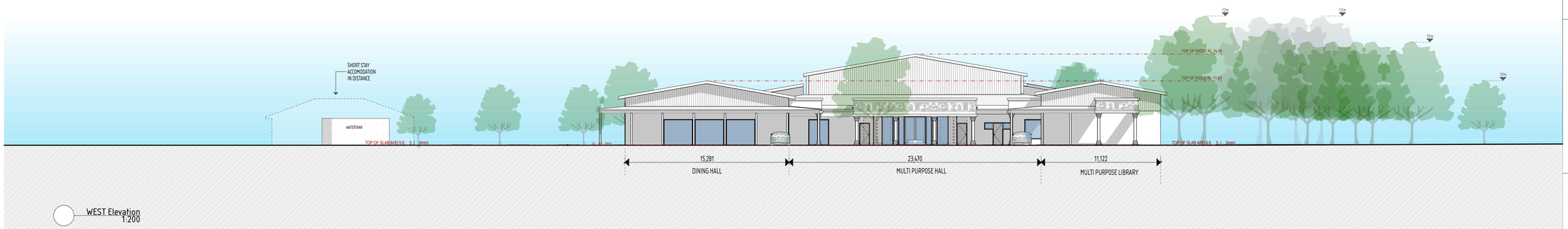
NORTH Elevation
1:200



EAST Elevation
1:200



SOUTH Elevation
1:200



WEST Elevation
1:200

MULTI-PURPOSE HALL, DINING + LIBRARY ELEVATIONS 1:200 (@ A1)

NOTE:
ALL EXISTING TREES ARE DEPICTED AND DRAWN TO SCALE IN CORRECT POSITION. NEW TREES NOT SHOWN

SCALE
0m 5m 25m

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Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
ELEVATIONS

Scale :
Status: #Project Status

Drawing N0
07

Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1

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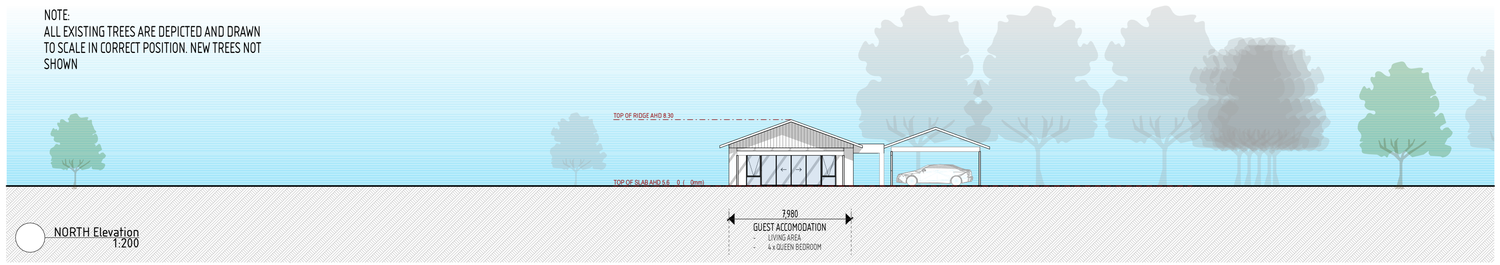
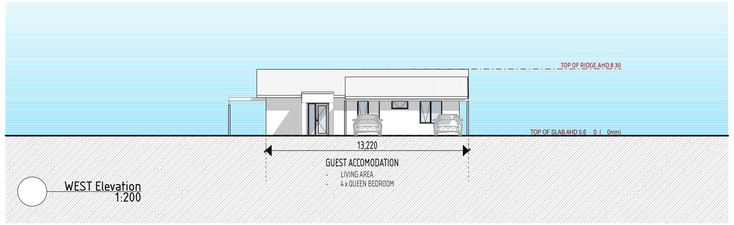
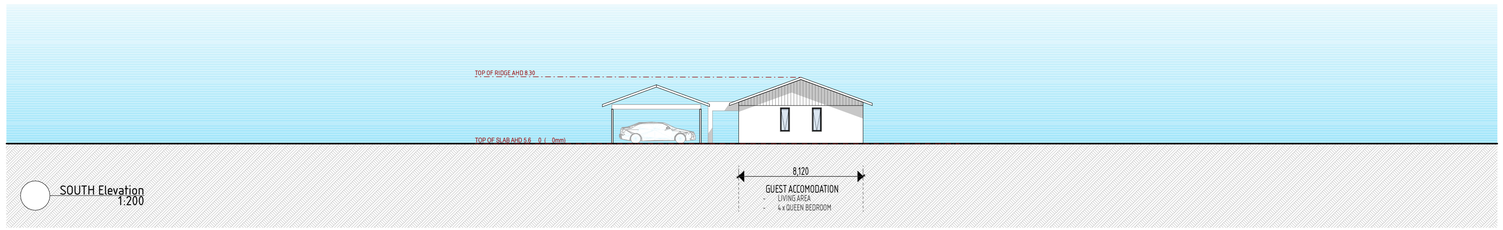


NORTH Elevation
1:200



WEST Elevation
1:200

EAST Elevation
1:200



SOUTH Elevation
1:200

GUEST ACCOMMODATION PLAN + ELEVATIONS 1:200 (@ A1)

SCALE
0m 5m 25m

N

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REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
ACCOM PLANS + ELEVATIONS

Scale :
Status: #Project Status

Drawing N0

08

Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1

VISUAL LANDSCAPE STRATEGY

The proposed planting combination of trees and understory shrubs and bushes along the boundary of the proposed APZ, provides continuous natural planted screening and as such, obscures buildings, cars, people and activities at the temple development. The planted screening along all four sides of the development and improves the visual amenity of the proposal from both the roads and neighbouring properties.

LEGEND

Ai Combination planting consisting of:
- native trees > 5m height (ranging 6m-20m height) Type T1-T7
- native trees < 5m height Type T8
- native shrub < 2m height

Aii Tree planting to obscure view of temple from Folly Road approach

Aiii Managed hedge, single row excludedfrom APZ.
Dense mature hedge to prevent car headlights projecting onto neighbouring property + screen visual sight-lines into development

Aiv Mature dense hedge planted in naturalistic manner to prevent car headlights projecting onto neighbouring property + screen visual sight-lines into development

Ci Planting around the immediate vicinity of Temple into planter beds located within the temple perimeter 'fence'. Lower ornamental flowering shrubs and hedge bushes will be selected

Cii Planting of shrubs organically at outside perimeter of East side 'fence' of Temple and wrapping around to the south of the covered walkway on main carpark. Some smaller native trees will be incorporated.

Ciii The courtyard North of the main Temple will have an organically structured planted perimeter and grassed open space. A large water feature is also part of this garden experience and its location and symbol holds sacred value to this development. It will be chlorinated and moving water.

Cv Main courtyard of secular buildings is proposed as grass. A small water feature is proposed

Cvi Planting in the north aspect of the Multi-purpose hall to beautify the outlook will use grass and edge planting to create some sense of containment to the open space.

Cvii Planting at the entry and to the north aspect of the Guest Accommodation to create a sense of enclosure and privacy

PROPOSED TREES (> 5m in height)
New tree canopies will not exceed 15% of APZ area at maturity
New tree canopies will be minimum 5m clear between each tree
Trunks will be kept at minimum 6m clearance from buildings
Branches at maturity will not reach or overhang buildings

PROPOSED SHRUB (0.5m - 5m in height)
Will not be located under trees or within 3m of buildings
Will not be planted in clumps greater than 5m²
Clumps of shrubs will be 10m clear between each clump

PROPOSED HEDGE (max 2m height)

EXISTING TREES (OVER 5m HEIGHT)

TREES TO BE REMOVED

PROPERTY BOUNDARY
EXTERNAL PAVING
VERANDAH UNDERCOVER
GRAVEL, LASERITE ASPHALT ROAD/CARPARK
FULLY ENCLOSED COVERED AREA
FIREBREAK
GARDEN BEDS AND EDGE PLANTS
GROUND COVERS/GRASS
CARPARK SWALE
EXTENT OF ASSET PROTECTION ZONE (APZ)

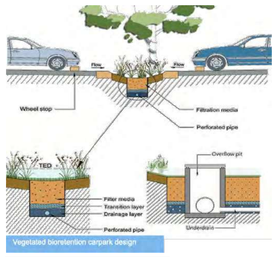
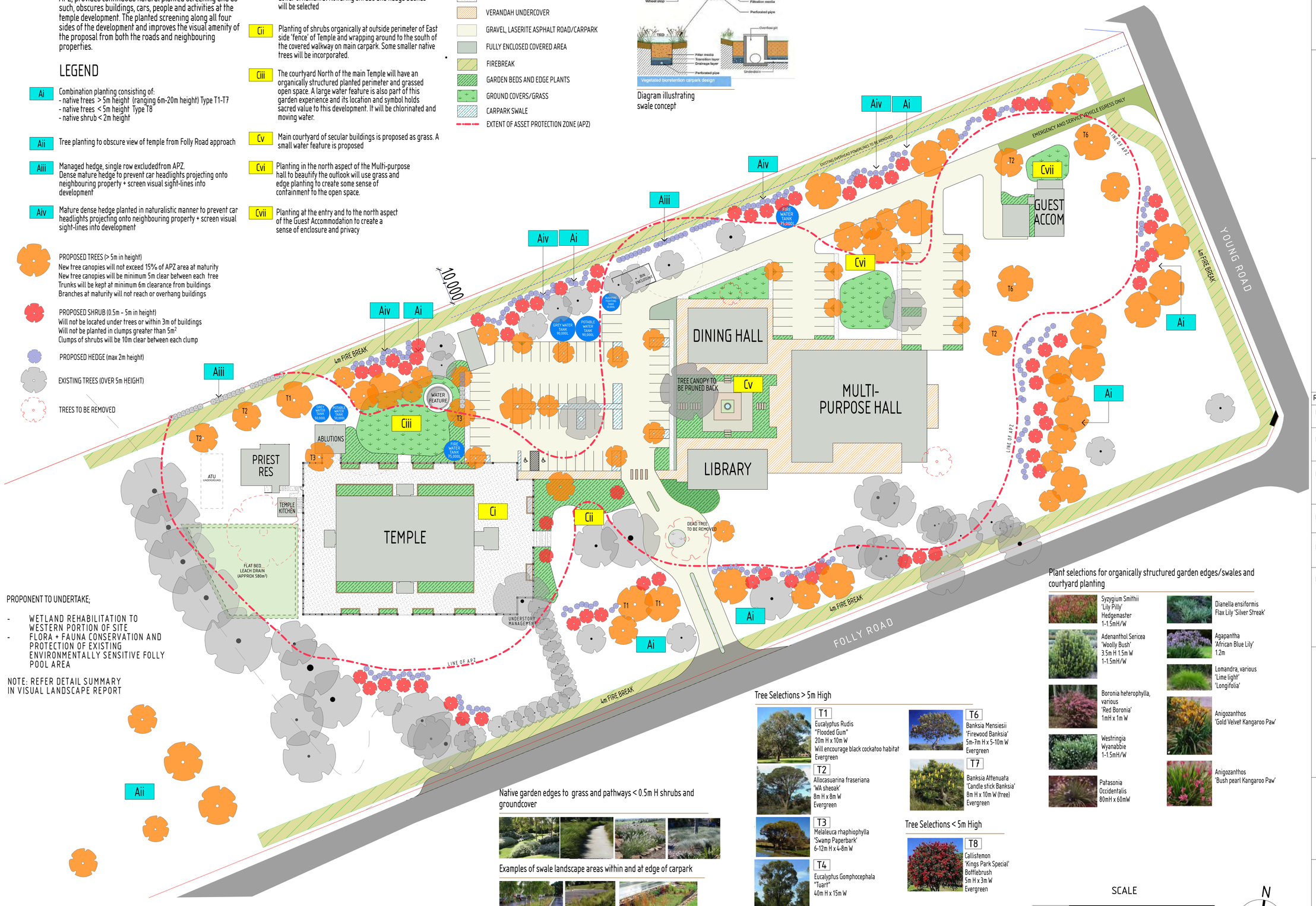


Diagram illustrating swale concept



PROPONENT TO UNDERTAKE;

- WETLAND REHABILITATION TO WESTERN PORTION OF SITE
- FLORA + FAUNA CONSERVATION AND PROTECTION OF EXISTING ENVIRONMENTALLY SENSITIVE FOLLY POOL AREA

NOTE: REFER DETAIL SUMMARY IN VISUAL LANDSCAPE REPORT

LANDSCAPE PLAN 1:500 (@ A1)

Native garden edges to grass and pathways < 0.5m H shrubs and groundcover

Examples of swale landscape areas within and at edge of carpark

Tree Selections > 5m High

T1 Eucalyptus Rudis "Flooded Gum" 20m H x 10m W Will encourage black cockatoo habitat Evergreen

T2 Allocasuarina fraseriana 'WA sheoak' 8m H x 8m W Evergreen

T3 Melaleuca rhaphiophylla 'Swamp Paperbark' 6-12m H x 4-8m W

T4 Eucalyptus Gomphocephala "Tuart" 40m H x 15m W

T5 Eucalyptus Marginata "Jarrah" 40m H x 15m W

T6 Banksia Mensiesii 'Firewood Banksia' 5m-7m H x 5-10m W Evergreen

T7 Banksia Attenuata 'Candle stick Banksia' 8m H x 10m W (tree) Evergreen

Tree Selections < 5m High

T8 Callistemon 'Kings Park Special' Bottlebrush 5m H x 3m W Evergreen

Plant selections for organically structured garden edges/swales and courtyard planting

Syzygium Smithii 'Lily Pilly' Hedgemaster 1-1.5mH/W

Adenanthol Sericea 'Woolly Bush' 3.5m H 1.5m W 1-1.5mH/W

Boronia heterophylla, various 'Red Boronia' 1mH x 1m W

Westringia Wyanabbie 1-1.5mH/W

Patasonia Occidentalis 80mH x 60mW

Dianella ensiformis Flax Lily 'Silver Streak'

Agapantha 'African Blue Lily' 1.2m

Lomandra, various 'Lime light' 'Longifolia'

Anigozanthos 'Gold Velvet Kangaroo Paw'

Anigozanthos 'Bush pearl Kangaroo Paw'

SCALE

0m 10m 50m

N

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|design studio|
architecture - interiors - feng shui
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REV 3	AMENDMENTS IN RESPONSE TO MOJDAP	MAY19TH 2022
REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31st 2022
REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
LANDSCAPE PLAN

Scale :
Status: #Project Status

Drawing N⁰
09

Date issued: Thursday, 9 June 2022
Time 2:27 pm Revision : 1

1 EXTENT OF ASSET PROTECTION ZONE (APZ)

Boundary of APZ

The APZ has been located 21m from all habitable buildings

For the duration of the development, all vegetation on site will be maintained to a low threat standard, in accordance with Section 2.2.3.2 of AS 3959.

Management should include (but is not limited to):

i. Clearing / modification of vegetation.
ii. regular removal of weeds and built up dead material (such as fallen branches, leaf litter etc).
iii. Low pruning of trees (i.e. removal of branches less than 2 metres in height).
iv. Application / re-application of ground surface cover (such as mulch or non-flammable materials as required.)
v. Where grass is present, this should be regularly cut so that grass is maintained at or below 100mm in height.

GROUND COVERS (< 0.5m in height)
Will be kept 3m from windows or doors if >100mm in height

GRASS
Will be kept < 100mm in height

FUEL LOADS
Maintained at less than 2T per hectare

2 % OF CANOPY WITHIN APZ < 15%

APZ area	19,047 m2
Existing Tree Canopy Area	1,471 m2
Proposed New Canopy Area	751 m2
Total Tree Canopy Area at maturity	2,222 m2

% TOTAL Tree Canopy Cover (inside APZ) **11.7%** (of 15% permissible)

3 MANAGED UNDERSTORY

Existing tree canopy which intrudes into the APZ will fall under managed understory

4 SINGLE ROW HEDGE TO NORTHERN BOUNDARY

2 x zones of single row excluded, managed dense hedge (2m height) are located within the APZ to the northern boundary for the purposes of screening views into the property from adjoining neighbours and obscuring night-time car headlights

PLANTING WITHIN APZ

PROPOSED TREES (> 5m in height)
New tree canopies will not exceed 15% of APZ area at maturity
New tree canopies will be minimum 5m clear between each tree
Trunks will be kept at minimum 6m clearance from buildings
Branches at maturity will not reach or overhang buildings

PROPOSED SHRUB (0.5m - 5m in height)
Will not be located under trees or within 3m of buildings
Will not be planted in clumps greater than 5m²
Clumps of shrubs will be 10m clear between each clump

PROPOSED HEDGE (2m in height)

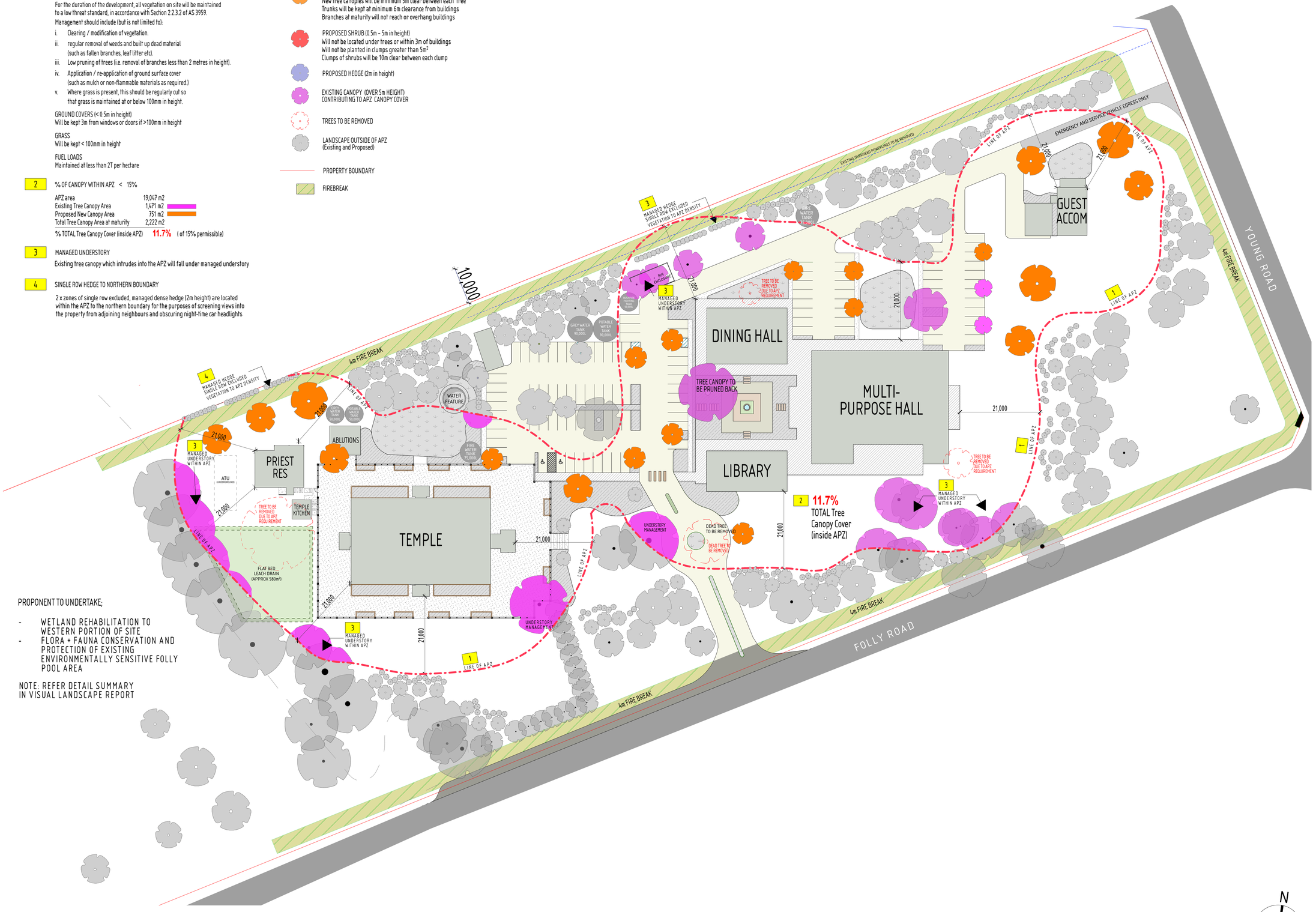
EXISTING CANOPY (OVER 5m HEIGHT) CONTRIBUTING TO APZ CANOPY COVER

TREES TO BE REMOVED

LANDSCAPE OUTSIDE OF APZ (Existing and Proposed)

PROPERTY BOUNDARY

FIREBREAK



PROPONENT TO UNDERTAKE;

- WETLAND REHABILITATION TO WESTERN PORTION OF SITE
- FLORA + FAUNA CONSERVATION AND PROTECTION OF EXISTING ENVIRONMENTALLY SENSITIVE FOLLY POOL AREA

NOTE: REFER DETAIL SUMMARY IN VISUAL LANDSCAPE REPORT

BUSHFIRE APZ STRATEGY PLAN 1:500 (@ A1)

N

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REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
BUSHFIRE APZ STRATEGY PLAN

Scale :
Status: #Project Status

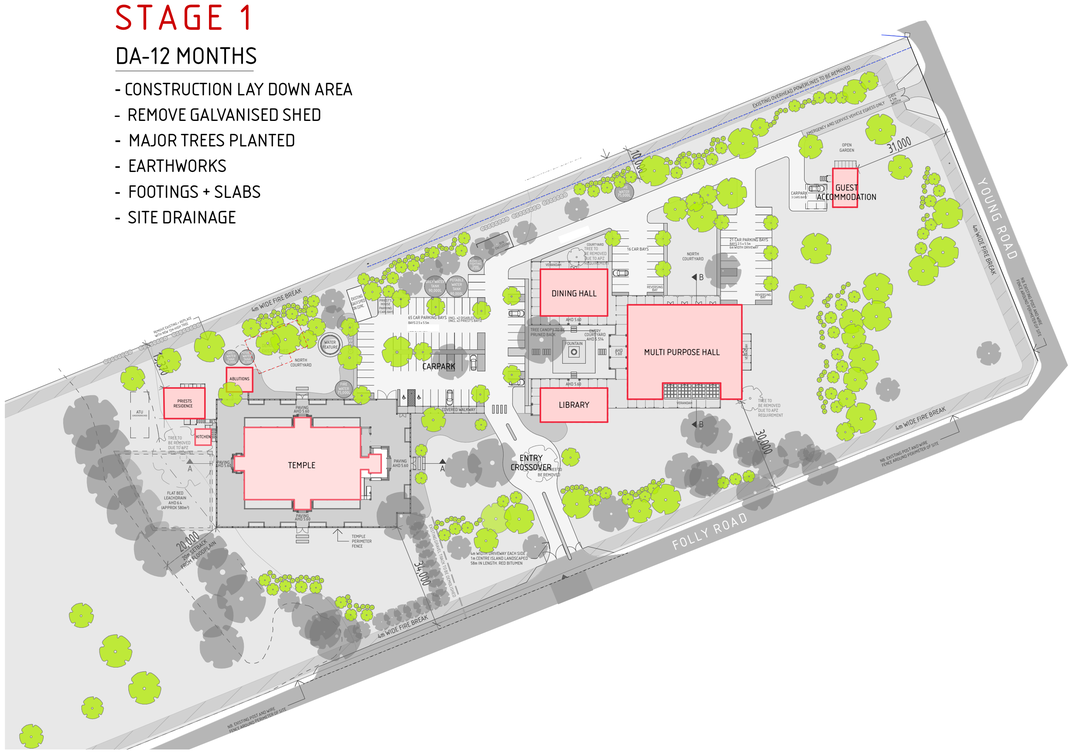
Drawing N⁰
10

Date issued: Thursday, 9 June 2022
Time 2:28 pm Revision : 1

STAGE 1

DA-12 MONTHS

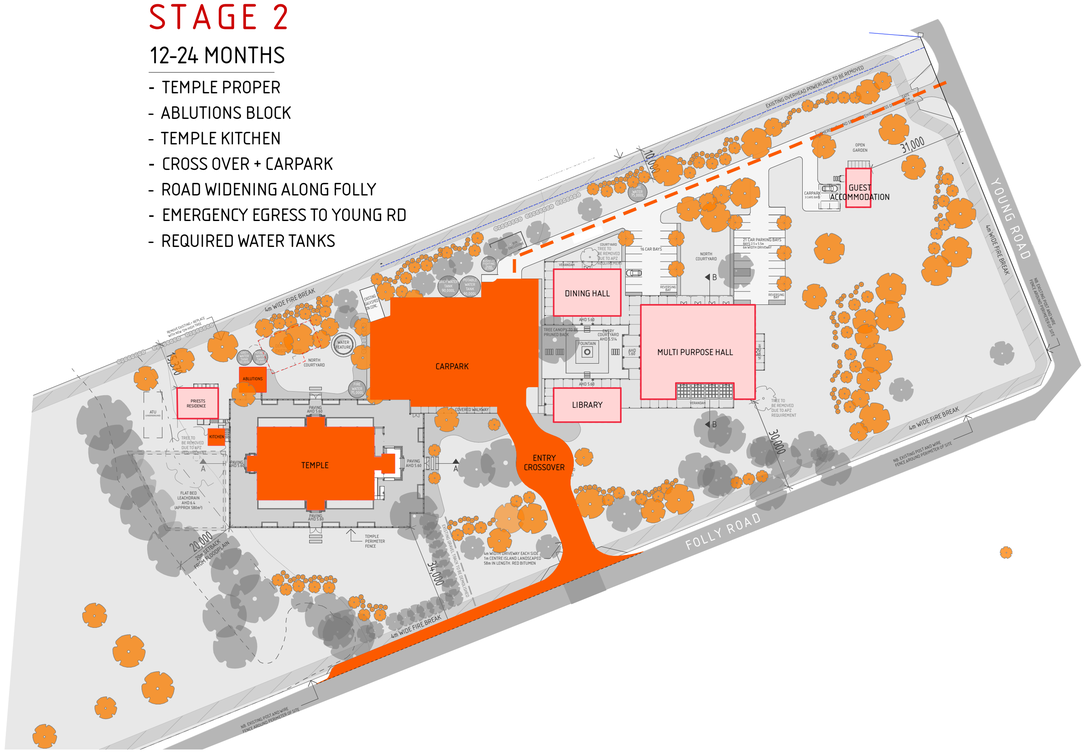
- CONSTRUCTION LAY DOWN AREA
- REMOVE GALVANISED SHED
- MAJOR TREES PLANTED
- EARTHWORKS
- FOOTINGS + SLABS
- SITE DRAINAGE



STAGE 2

12-24 MONTHS

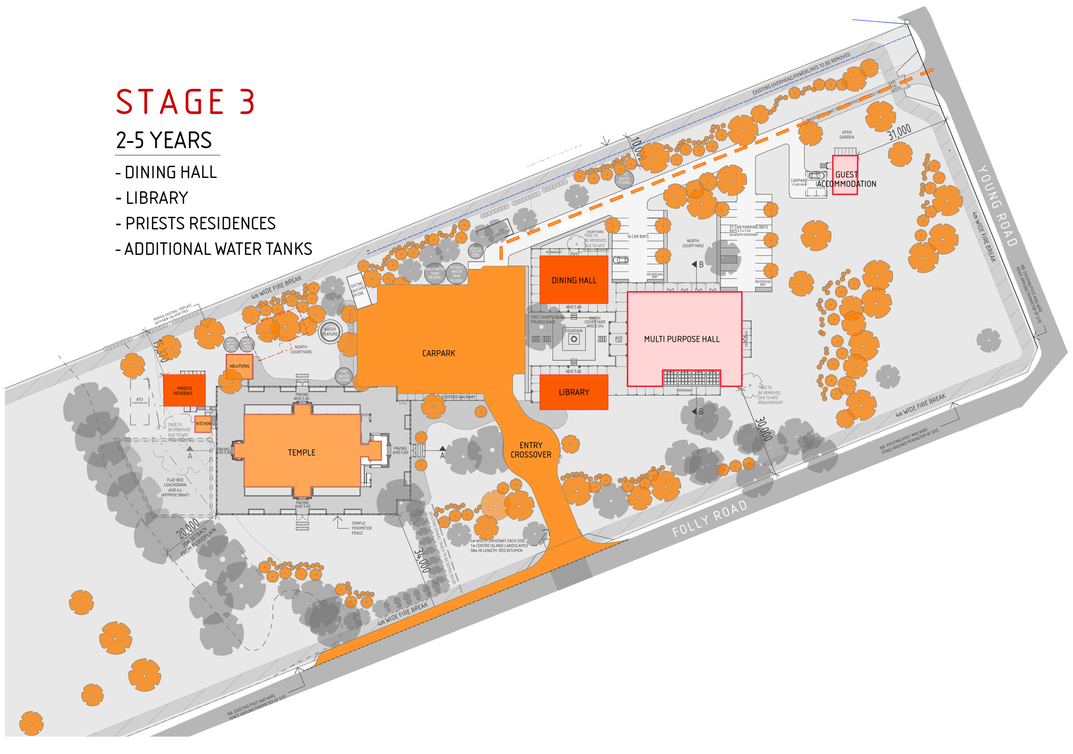
- TEMPLE PROPER
- ABLUTIONS BLOCK
- TEMPLE KITCHEN
- CROSS OVER + CARPARK
- ROAD WIDENING ALONG FOLLY
- EMERGENCY EGRESS TO YOUNG RD
- REQUIRED WATER TANKS



STAGE 3

2-5 YEARS

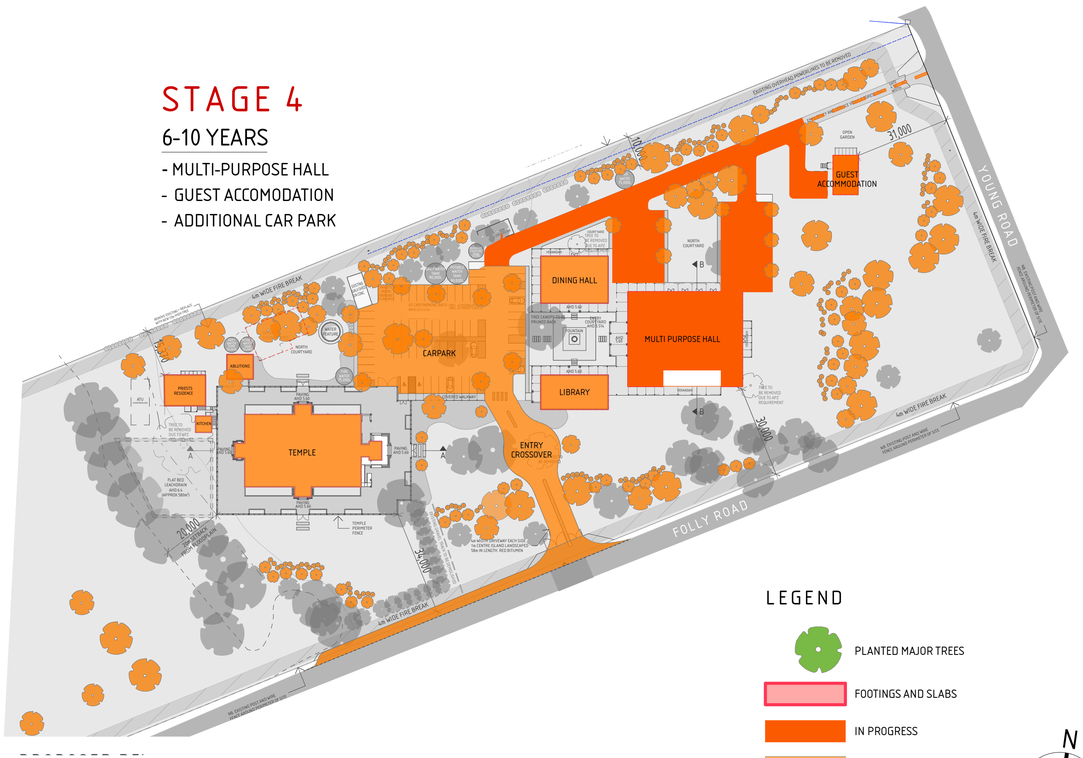
- DINING HALL
- LIBRARY
- PRIESTS RESIDENCES
- ADDITIONAL WATER TANKS



STAGE 4

6-10 YEARS

- MULTI-PURPOSE HALL
- GUEST ACCOMODATION
- ADDITIONAL CAR PARK



LEGEND

- PLANTED MAJOR TREES
- FOOTINGS AND SLABS
- IN PROGRESS
- COMPLETED WORKS
- DEMOLITION

N

STAGING DIAGRAM

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Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

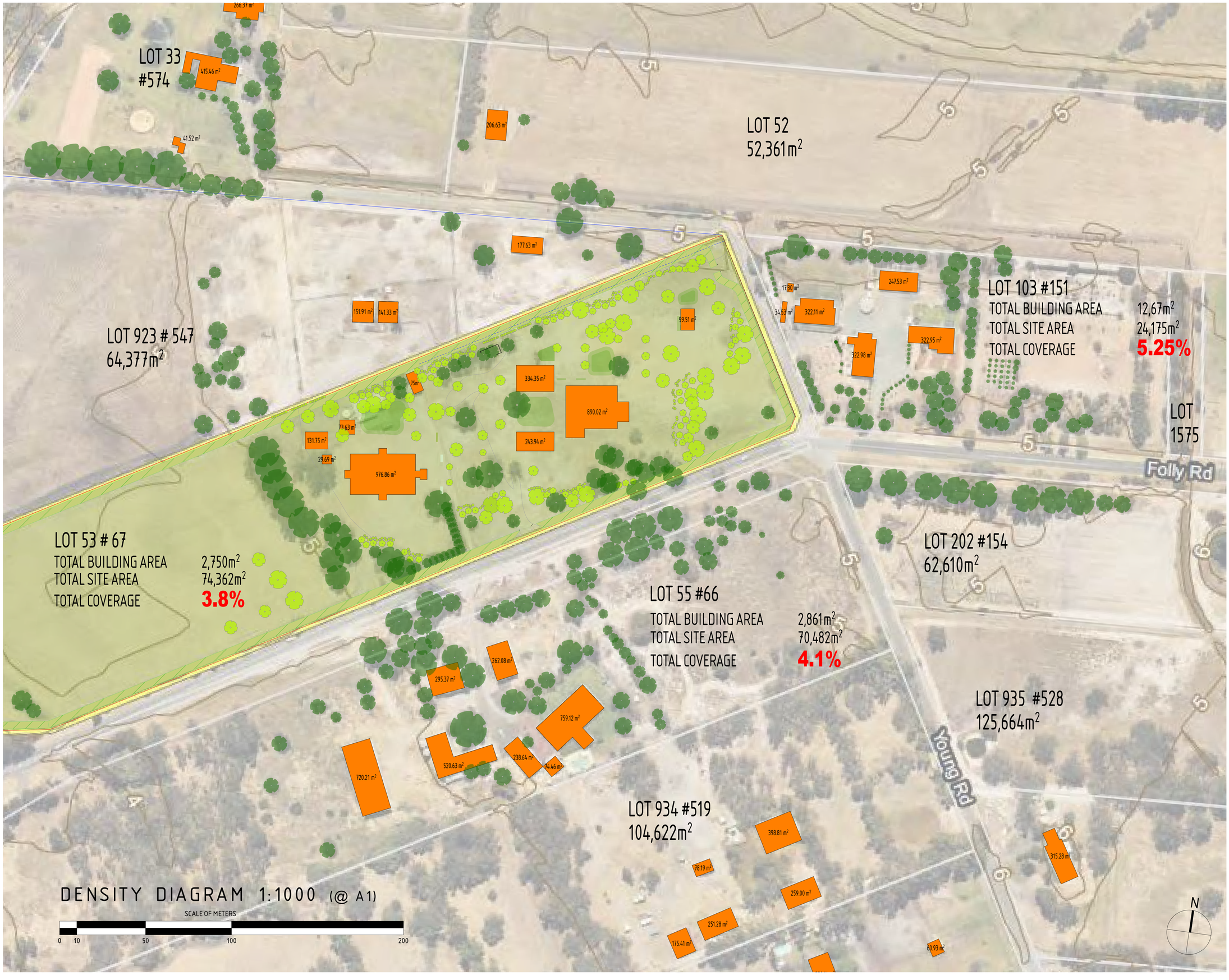
Client :
JAPA PTY LTD.

Drawing Title:
STAGING DIAGRAM

Scale :
Status: #Project Status

Drawing N0
11

Date issued: Thursday, 9 June 2022
Time 2:28 pm Revision : 1



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Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
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Client :
JAPA PTY LTD.

Drawing Title:
DENSITY DIAGRAM

Scale :
Status: #Project Status

Drawing N⁰
12

Date issued: Thursday, 9 June 2022
Time 2:28 pm Revision : 1

1 VIEW PRE-DEVELOPMENT

(no additional landscaping)

VIEW AT COMPLETION OF BUILDINGS

(new landscaping at limited growth)

VIEW POST-DEVELOPMENT

(new landscaping at maturity)

2 VIEW PRE-DEVELOPMENT

(no additional landscaping)

VIEW AT COMPLETION OF BUILDINGS

(new landscaping at limited growth)

VIEW POST-DEVELOPMENT

(new landscaping at maturity)

3 VIEW PRE-DEVELOPMENT

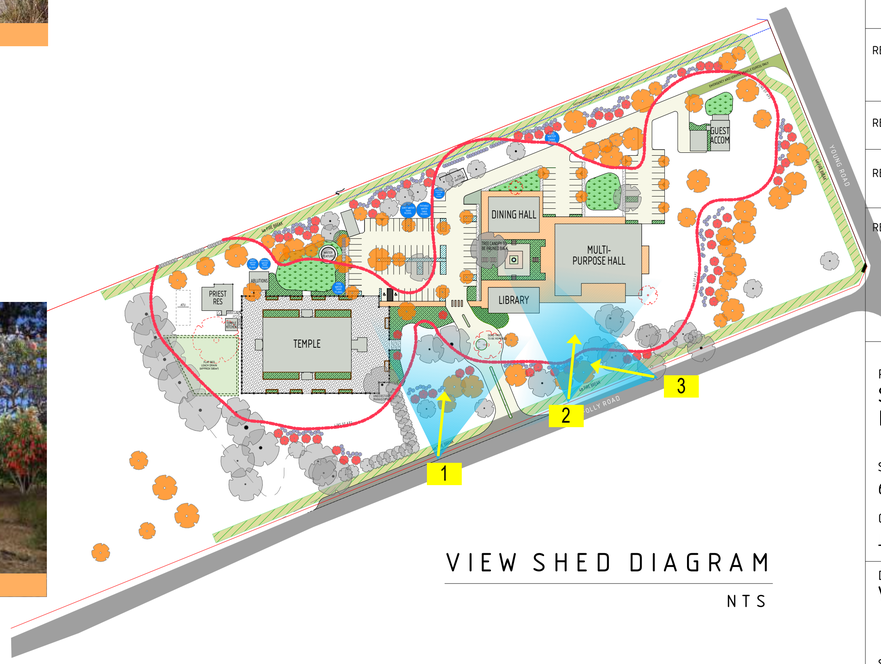
(no additional landscaping)

VIEW AT COMPLETION OF BUILDINGS

(new landscaping at limited growth)

VIEW POST-DEVELOPMENT

(new landscaping at maturity)



VIEW SHED DIAGRAM

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VIEW SHEDS

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Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
VIEW SHEDS

Scale :
Status: #Project Status

Drawing N0
13

Date issued: Thursday, 9 June 2022
Time 2:28 pm Revision : 1

4 VIEW PRE-DEVELOPMENT
(no additional landscaping)

VIEW AT COMPLETION OF BUILDINGS
(new landscaping at limited growth)

VIEW POST-DEVELOPMENT
(new landscaping at maturity)

5 VIEW PRE-DEVELOPMENT
(no additional landscaping)

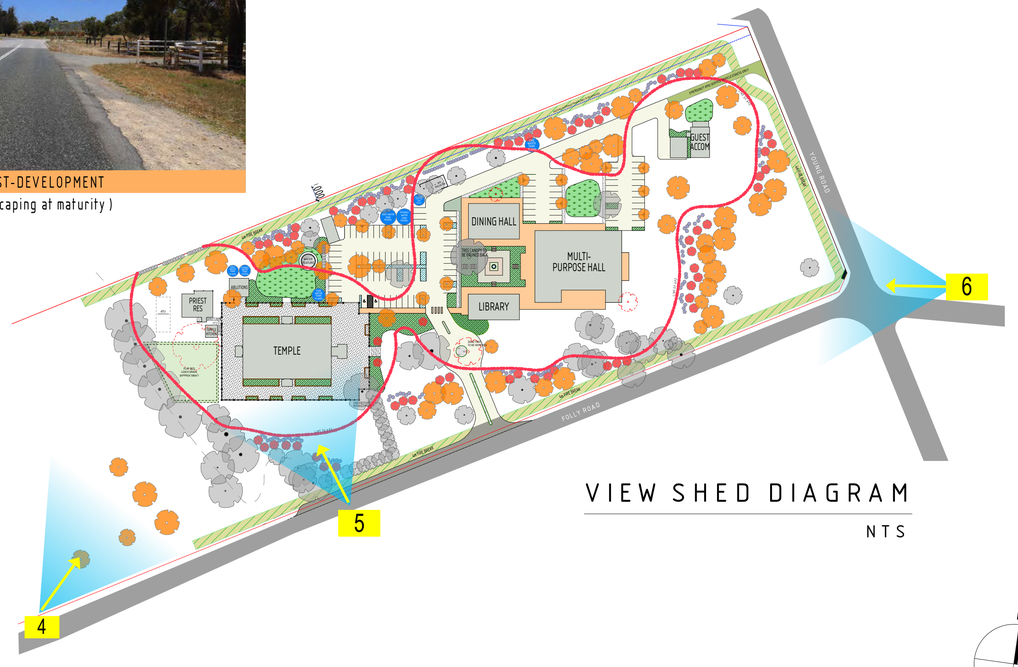
VIEW AT COMPLETION OF BUILDINGS
(new landscaping at limited growth)

VIEW POST-DEVELOPMENT
(new landscaping at maturity)

6 VIEW PRE-DEVELOPMENT
(no additional landscaping)

VIEW AT COMPLETION OF BUILDINGS
(new landscaping at limited growth)

VIEW POST-DEVELOPMENT
(new landscaping at maturity)



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Client :
JAPA PTY LTD.

Drawing Title:
VIEW SHEDS

Scale :
Status: #Project Status

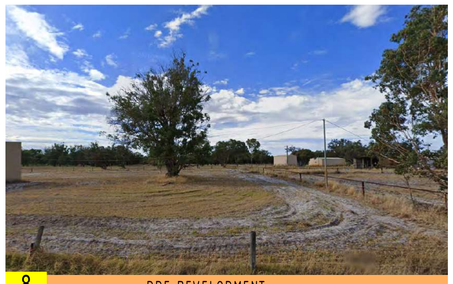
Drawing N0
14

Date issued: Thursday, 9 June 2022
Time 2:28 pm Revision : 1

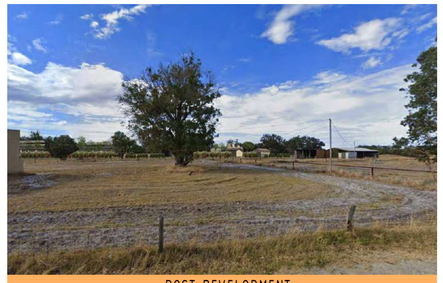
7 PRE-DEVELOPMENT
(no additional landscaping)

POST-DEVELOPMENT
(new landscaping at limited growth)

VIEW POST-DEVELOPMENT
(new landscaping at maturity)



8 PRE-DEVELOPMENT
(no additional landscaping)



POST-DEVELOPMENT
(new landscaping at limited growth)

POST-DEVELOPMENT WITH LANDSCAPE STRATEGY
(new landscaping at maturity)

9 PRE-DEVELOPMENT
(no additional landscaping)

POST-DEVELOPMENT WITHOUT ADDED LANDSCAPE
(new landscaping at limited growth)

VIEW POST-DEVELOPMENT
(new landscaping at maturity)

VIEW SHED DIAGRAM

NTS

VIEW SHEDS

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Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
VIEW SHEDS

Scale :
Status: #Project Status

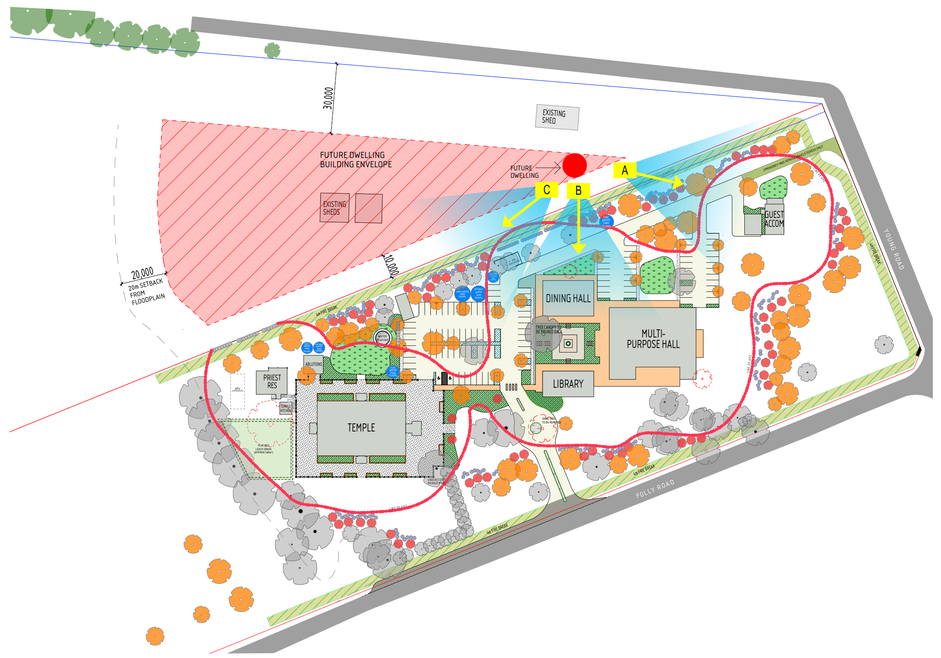
Drawing N0
15

Date issued: Thursday, 9 June 2022
Time 2:29 pm Revision : 1

NOTE:

PLANTING SHOWN AT MATURITY

- SHRUBS 5m GROWTH
- HEDGES 3m GROWTH
- TREES 6m-10m GROWTH



VIEW SHED DIAGRAM

NTS

VIEW SHEDS FROM POSSIBLE NEW RESIDENCE ON LOT 923

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Drawing Title:
VIEW SHEDS

Scale :
Status: #Project Status

Drawing N0
16

Date issued: Thursday, 9 June 2022
Time 2:29 pm Revision : 1

VIEW OF TEMPLE

VIEW OF TEMPLE FROM CENTRAL COURTYARD

VIEW INTO CENTRAL COURTYARD FROM CARPARK

AERIAL VIEW

RENDERS

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1. All works are to comply with The Building Code of Australia, all relevant Australian Standards, Worksafe requirements & all relevant Local Authority By-Laws
2. Do not scale from these drawings. Dimensions shown on larger scale drawings take precedent over smaller scaled drawings
4. The contractor shall check and verify all dimensions on site, both new and existing, prior to commencement of any phase of the building work or ordering any materials
5. In case of any discrepancy whatsoever, the contractor shall check with the architect prior proceeding
6. Contractor shall carry out works in accordance with Council Building License and conditions stipulated thereon
7. Contractor shall carry out works in accordance with requirements of Western Power with respect the easements on the site.
8. Contractor is advised that the site is a Registered Aboriginal Heritage Site to which the Aboriginal Heritage Act and all its lega requirements apply.
9. Contractor is to strictly adhere to Recommendations made in the Anthropological Report prepared by De Gand Pty Ltd May 2011

Revision	Description	Date
REV 0	DEVELOPMENT APPLICATION SUBMISSION	DEC 2021
REV 1	AMENDMENTS IN RESPONSE TO COUNCIL + PUBLIC QUERIES/COMMENTS	FEB 2022
REV 2	AMENDMENTS IN RESPONSE TO RESPONSIBLE AUTHORITY REPORT	MAY 2022
REV 3	AMENDMENTS IN RESPONSE TO MOJDAP	MAY19TH 2022
REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31ST 2022
REV 5	RE-SUBMISSION TO COUNCIL	JUNE 10TH 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
RENDERS

Scale :
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Architectural and Visual Landscape Report

Proposal: **Sri Balaji Temple Development**
67 Folly Road Baldivis WA

Client: **Jeeyar Educational Trust (JET) Australia Foundation**
58b First Avenue, Claremont, WA

Prepared By: **Archetype Design Studio**
041 236 9191

Date: 13 June 2022
Issue: **04 – Updated Design**

03 - Amendment (Correction Operating Hours)	(23 March 2022)
02 - Amendment	(02 March 2022)
01– Original Design Submission	(09 Dec 2021)

We acknowledge the Traditional owners and Custodians of this land, the Binjareb and Whadjuk, Nyoongar peoples and their Elders, present, past and emerging. We wish to acknowledge and respect their continuing cultures and connection to the land, waters and community, as well as the contribution they make to the life of this city and this region.

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1.0 INTRODUCTION

This Architectural and Visual Landscape Report has been prepared by Archetype Design as part of a Development Application for a new proposed Sri Balaji (Hindu) Temple Development located at 67 Folly Road, Baldivis in the City of Rockingham.

Rockingham Council Planners have requested a *Visual Landscape Evaluation and Assessment* as a component of this development application to consider how the proposal will be seen and its character consistency with the local area.

1.1 Jeeyar Educational Trust (JET) Australia Foundation

The Jeeyar Educational Trust (**JET**) Australian Foundation has purchased this plot of land on the eastern side of the freeway at Baldivis.

A summary of the **JET** community principles and activities are as follows:

- An Australian not for profit and Hindu religious organisation registered in Australia in 2008 with Centres in Brisbane, Sydney, Melbourne, Adelaide and Perth
- Key Principles of JET : Worship Your Own and Respect All
  Serve All Beings As Service To God
- Community based with dedicated volunteers young and experienced people, both professional and non-professional, motivated to serve the community and promoting equality, gratitude, harmony and peace through various activities such as:
  Social : Blood Donation, Covid relief activities, Health Awareness
  Religious : Universal peace and harmony through individual and community practices
  Educational: Structured value based Scripture education for children
  Environmental: Tree Planting, Recycling plant visits
- Perth JET Community has 500 + families with 900 subscribed members in database since 2010.

Most of the families in the JET community live south of the river, in Baldivis, Rockingham and nearby suburbs and therefore have identified the proposed site as ideal for their development. The JET community are proposing a development that can provide the following amenity for their families:

- Place of worship of Lord Venkateshwara, otherwise known as Lord Balaji.
  As such this will be a Hindu Temple.
  One of the oldest and holiest Hindu Temples dedicated to Lord Balaji is situated in the country side at the foot of a range of hills in the state of Andhra Pradesh in India. It is traditional for Temples around the world dedicated to Lord Balaji to be situated in a rural context facing the hills towards the East. For this reason, the property situated at 67 Folly Road in Baldivis represents an ideal site for the first Balaji Temple in Perth, being located on the Eastern side

of the freeway, where the site is bordered by rural landscapes and is facing the eastern foothills.

- Place to teach human value- based education classes to uphold the Vedic traditions
- Place to practice and teach yoga and meditation
- Establish a community kitchen to prepare food for distribution to the needy
- Place to gather as families to support each other, especially after prayer
- Place to be able to hold Hindu traditional weddings and gatherings
- Library for holding spiritual texts and resources
- Place offered to stay for visiting guests of the Temple
- Place to practice environmental preservation, tree planting and land sustenance activities

The JET community are proposing to develop a cultural centre alongside the Temple on this site, to provide the above amenities for its community including a Multipurpose Hall, A Dining Hall, Library and Guest Accommodation. The Temple will also have some ancillary buildings including Priest Residences, a small Temple Kitchen and an Ablutions building. All necessary practises of best design have been incorporated to ensure the Temple building and its supporting secular buildings are absorbed and blended into the site so as not to disrupt the visual amenity of this rural area, but in fact enhance the site by way of new landscaping and architectural typology that is familiar and characteristic of the region.

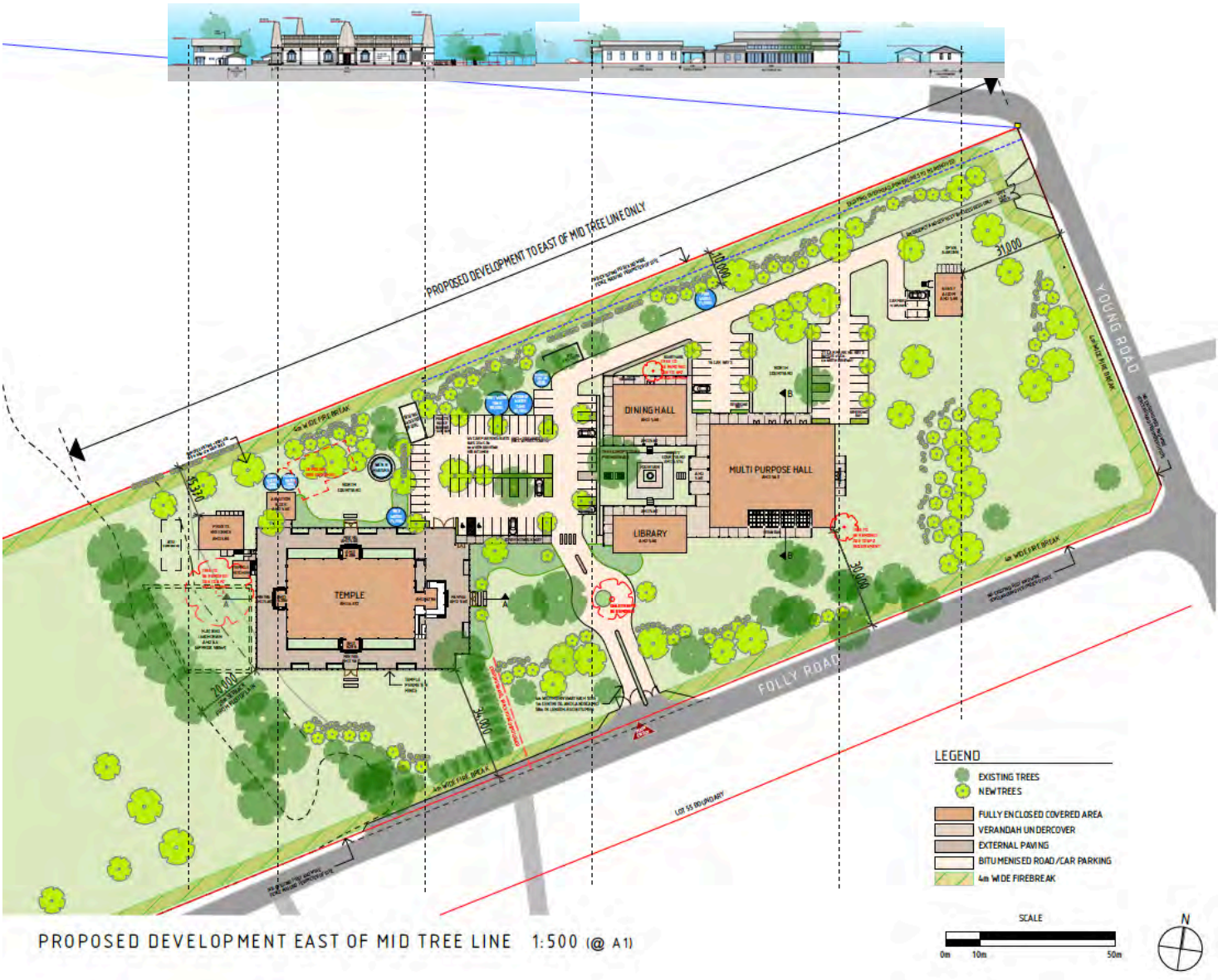
The subject site and proposed development is immediately situated on the freeway 'off ramp' on Folly Road and as such affords convenient immediate access for JET community members without commuting throughout the adjacent rural neighbourhood.

The Report that follows describes the new development proposal in terms of the architectural elements of building, use, and staging followed by the more specific Visual Landscape Evaluation and Assessment, which highlights further the strategies used to both absorb and blend the development into the site.

2.0 ARCHITECTURAL OUTLINE OF THE PROPOSED DEVELOPMENT

See Architectural Drawings A01 to A17 for full description of the development

01	Location Plan	10	Bushfire Strategy Plan
02	Site Plan 1:1000	11	Staging Diagram
03	Site Plan 1:500	12	Density Diagram
04	Temple Plan	13	View sheds 1
05	Temple Elevations	14	View sheds 2
06	Multipurpose Hall, Library and Dining Hall Plan	15	View sheds 3
07	Multipurpose Hall, Library and Dining Hall Elevations	16	View sheds 4
08	Accommodation Guest Plans and Elevations	17	Renders (Perspectives)
09	Landscaping Concept		



PROPOSED DEVELOPMENT EAST OF MID TREE LINE 1:500 (@ A1)

2.1 Facilities of Proposed Development

Facilities proposed in the development are 'divided' into 2 types:

a) **Religious buildings** being the main Temple, with the ancillary buildings of Temple Kitchen, Priest Residences and Ablutions

The main Temple will serve the JET community as a place of prayer and worship.
The form of this building reflects an architecture typology typical of Indian Temples. This main building is essentially a large rectangular prayer hall with sculptured 'Goporams' (entry 'gateway' features) at the four cardinal entry points into the building.

.

The Temple Architecture is designed according to the principles of Vastu Shastra, an ancient Indian body of knowledge which provides guidance on siting and design. The Temple entry must face East and preferably be sited parallel to cardinal directions. The decoration of the Temple building will be provided by professional artisans who richly and sacredly adorn the Goporams and façades with sculptural relief and motifs.

The Temple, with a recognisable Hindu Temple aesthetic, has been purposefully located at a cleared area of the site that is surrounded by existing tree lines and hedges thus obscuring it from people that are driving past the site on Folly Road, or approaching the site from Young Road.

As will be shown in the Visual Management Strategy, the Temple building has been sited strategically to be mostly 'non evident'. Materials and colours of the Temple will be selected to enhance the 'blending' aspect of the building into the rural landscape, such as with the use of locally resourced limestone cladding, bronze and timber details and earthy limestone renders together with a corrugated roof.

The Temple requires an important independent boundary fence to establish the energy rectilinearly around this sacred building. As the Temple is sited back from the road, out of public view, this fence is proposed as a series of decorated columns 1.6m high with discreet infill panels that will be very visually permeable. There is a 5m paved perimeter around the Temple building which allows a 'chariot' to be wheeled around the Temple on particular festival days.

ii) **The Temple Kitchen** is a small ancillary building that has a kitchen used only by the Priests of the Temple to make food offerings used in the ceremonies. These food offerings are for the deities in the Temple and are very low in volume. The kitchen is located close to the Temple for practical reasons. A store area for pantry goods and Temple ceremonial items is also included in this building.

iii) The Ablution block is located close to the Temple for functional practicality. Male, Female and Disabled toilets are included as well as a shower and change room, which is often used as part of religious ceremonial washing.

iv) The Priests' Residence is located close to the Temple in order that the Priest can have ease of access. A single double- storey house is proposed, given that there are at least 2 Priests in attendance at the Temple. Often the Priest has a family as well, so the residence has been designed up to a maximum of 6 people..

The above ancillary buildings to the Temple are located as a small **cluster** of buildings on the North West corner of the Temple, generally 'not evident' from Folly Road. A Courtyard entry to this hub affords a sense of both connection and separation for the Priests who will reside there. The living areas of the residences face North for better living amenity.

The form of the ancillary Temple buildings are simple rectilinear masonry construction, lightweight panel second storey and colourbond pitched gable roofs. Simple awning structures provide shade to the windows. A lean-to verandah gives shade to the living areas. This simple aesthetic is characteristic of other rural homesteads in the area.

v) The Chariot Store is an *existing* smaller shed structure on the northern boundary. This will house a small 'chariot', a wheeled cart used in the religious festivals and is wheeled around the Temple, used a maximum of twice per year.

b) **Secular buildings** including a Multipurpose Hall, Dining Hall, Library and Guest Accommodation

i) The Multipurpose Hall can facilitate gatherings of up to 400 people seated at tables, designed primarily for cultural performances, weddings and other activities for the JET community.
The Hall has a commercial kitchen that can prepare food for patrons as well as cater for Hindu weddings from a servery area within the hall. A raised stage is provided for cultural performances and for staging the bridal party in weddings. Green rooms (used for preparation of the bridal party) and storage space adjoin the stage. Male, Female and Disabled toilet facilities are provided within the building for convenience, but can be also accessed from the covered walkway from the Dining Hall and the Library. A northern garden is proposed for the Hall.

ii) The Dining Hall operates during lunch and dinner on Fridays and the weekend to serve those in the JET community that wish to stay for a meal after attending worship at the Temple. It is café style, where food is prepared in a commercial standard kitchen. The dining hall can serve about 80 people seated.

iii) The Library is a space where structured value based scripture education for children can be taught in flexible sized spaces. Room dividers will be used to allow the space to be opened up for larger group learning. The JET community will hold a collection of religious texts and resources to be kept in the library and available for loan or use in the space. The library will also cater for small group learning of yoga classes, Sanskrit language and other cultural learnings.

The **Multipurpose Hall, Dining Hall and Library** are clustered around a large entry courtyard and are in close proximity to the parking area. A covered walkway connects these secular buildings to the Temple building. The architectural forms of these building are designed to blend into the rural character of the immediate surrounds. Designed as simple rectangular buildings arranged around a courtyard reflect the clustering of buildings in the neighbouring properties. Colourbond pitched gable roof forms, post and beam verandah systems and a general linearity of building expression are highlighted in these secular buildings which are the visible aspect of the development. The scale of each of the buildings is also akin to the large shed structures on other rural properties in the area. Colours and materials will be a combination of mass wall (limestone and rendered brick), limestone cladding and render, timber post and beam, painted Hardie panel gable ends and dark colourbond roof to enhance the blending of the buildings into the landscape.

viii) Guest Accommodation is located closer to Young Road. A simple 'homestead' with 4 rooms to accommodate up to 8 people, this will provide short stay accommodation for visiting religious speakers and extended overseas community members. The rooms will share bathrooms and a have a small kitchen and living space allowing for visitors to relax and connect with each other. Covered parking for 3 cars is proposed access from the main car entry off Folly Road. This building being visible to both Folly Road and Young Road is designed to 'blend' architecturally into the landscape.

2.2 Access

The existing entry road and cross over will *not* be retained for the development.

A *new* crossover and entry road, including slip lane access, is proposed for the development, located further East on Folly Road, where it does not interfere with the access crossovers to the opposite neighbouring property on Folly Road. It is also proposed to have a low key roundabout at the entry road which is setback 30m from Folly Road boundary.

An emergency and service vehicles egress road is proposed for exit onto Young Road. This exit will only be utilised by FESA and Water Delivery trucks when necessary.

2.3 Parking

Onsite parking providing bays for are based on a maximum of 400 people on site at any one time. Wedding or cultural functions in the Multi Purpose Hall *will not* be held concurrently with Temple functions.

General Bays 100 x car bays including 2 disabled parking bay

Priest Residence 2 bays

Short Stay Accommodation 3 x covered car bays

TOTAL **105 car bays** (Required 103 Bays)

Conceptually, the main parking area (65 bays) is located between the Temple and the secular buildings, very well set back from Folly Road (average 62m). Existing trees together with new planting, and a walkway from the Temple to secular buildings will blend vision of the car park even more. Additional parking is located behind the Dining Hall and Multipurpose Hall out of lines of site from main view sheds along Folly and Young Roads.. Water tanks and bin storage walls have also been located to screen car headlights into the adjacent property on the north.

The secondary carparks (16 bays + 21 bays) have been located set back from the north boundary. Mature stock dense native hedges (1.6m high) will be planted along the northern boundary to screen the adjacent property from car headlights Guest accommodation parking (3 bays) is located adjacent that building.

2.4 Times of use and Activities

The main activity at the site will be morning and evening prayer sessions. Other activities include weekday yoga classes, weekend scripture classes, special Hindu Festival Days and Hindu Weddings.

Hindu prayer sessions are relatively unstructured and so attendance is generally spread out over the session.

Note 1: Hindu weddings *will not* occur on the same day as a special Hindu festival day so the maximum numbers of people at any one time would be 400 people on the development site.

Note 2: Strictly *no alcohol* will be consumed on site at any time being a religious requirement.

Note 3: If a house is built on Lot 923 adjoining on North, times below will change as per acoustic report.

A summary of the expected activities, hours and attendance numbers are outlined below:

•	Weekday Prayers (Mon-Fri)	25 - 50 people (morning session)	7am – 1pm
		25 –50 people (evening session)	5pm - 9 pm
	Weekday Yoga Classes (2 per week)	20 people	6pm – 7pm
•	Saturday/ Sunday Prayers	100 - 150 people (morning session)	7am - 1pm
		100 –150 people (evening session)	5pm – 9pm
	Saturday/Sunday Scripture Classes	50 - 75 people(included in the above)	3pm – 6pm
•	Special Hindu Festival Days occurring on average once per month		
	If on a weekday	50 – 75 people (morning session)	7am – 1pm
		200 – 250people (evening session)	5pm – 9pm
	If on a weekend day	200 people (morning session)	7am - 1pm
		200 – 250 people (evening session)	5pm – 9pm
•	Hindu Weddings occurring on average 6 times per year only on Friday nights or weekends		
		300 – 400 people (*usually less*)	9am – 11pm

2.5 Water Tanks

Watertanks providing water for the site will use neutral colour bond colours and be landscaped to blend the tanks into the site. These tanks are located at northern boundary and mostly out of view of passing traffic.

2.6 Lighting

Lighting of the builldings will be sensitive and architectural to articulate way finding around the development. Lighting of the carpark area will be low level, sensitively located so as to not spill onto adjoining properties or draw attention to the development from the roads. Only the Temple East façade main entry will be architecturally up lit, the remaining entry statements will no be uplit, and will remain obscured from Folly and Young Roads.

2.7 Staging Of The Development *See also Staging Diagram A11 (shown below).*

Stage 1 **DA -12 Months**

Construction lay down area
Remove galvanised shed
Major trees throughout and mature hedges to north boundary planted
Earthworks
Footings and slabs

Stage 2 **12 - 24 months**

Main Temple Proper (Note this building is predominantly non evident)
Ablutions block
Temple kitchen
Cross over and Carpark
Road widening along Folly Rd (slip lane)
Emergency egress to Young Road
Required Water Tanks

Stage 3 **2 – 5 Years**

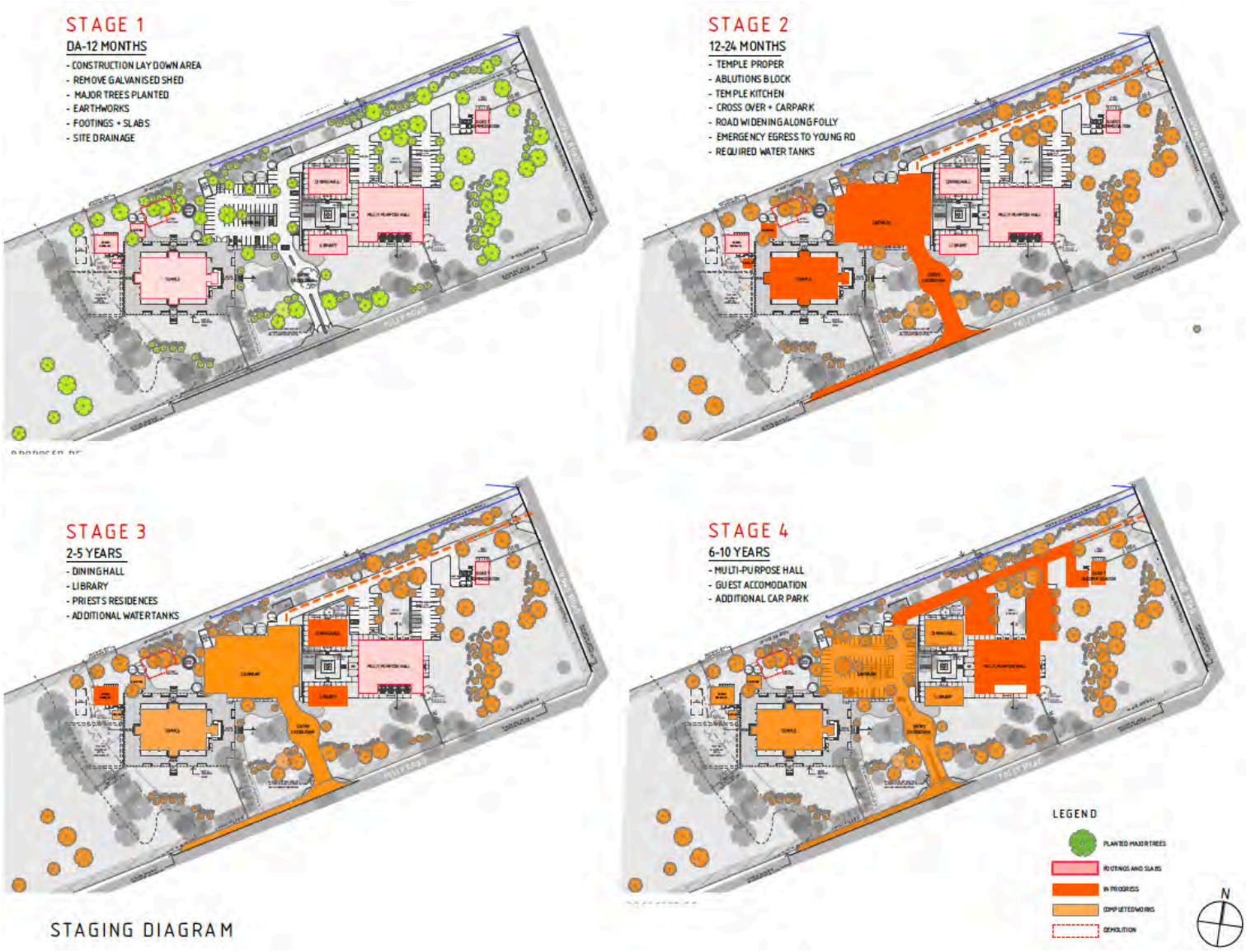
Dining Hall
Library
Priest Residence
Additional Water Tanks

Stage 4 **6-10 Years**

Multipurpose Hall
Guest Accommodation
Additional Car Park

2.8 Staging Of The Development Plan *(Refer A11 for larger format)*

- Proposed Temple and associated religious functions (Temple kitchen/ ablutions built **first** together with main carpark. All landscape trees and hedges to be planted so as to be well established by end of project.
- Dining Hall and library to be constructed **2- 5 years** after approvals
- Multipurpose hall to be constructed between **6 to 10 years** after approvals allowing for perimeter landscape to have 6 years of growth minimum.



2.9 Materials and Colours

All selections of the proposed buildings will be sensitively chosen to ensure that the buildings will blend into the surrounding natural and built character of the locality.

The **religious buildings** are screened by existing mature trees and so mostly non-evident. The mass elements of facades and entry gopoprams of the Temple will be clad in part by limestone facings as well as rendered to match. Limestone is a locally acquired material of this Baldivis area. The sculptural carvings will be painted in monotones to match the neutral and natural colours of limestone. Windows will be dark bronze powdercoat aluminium and Roof will not be visible, behind a decorative parapet. Timber detail will be incorporated on the large entry doors which will enhance the rustic feel. At the main entry on the east, large powdercoat aluminium screens in dark bronze colours will screen the shoe area.

The perimeter fence to the Temple building will be as discreet as possible, given the functional requirement to the Vastu Shastra tradition. It is proposed to render the columns of the localised fence dark so as to recede their appearance. The infill panels will be very visually permeable. It is currently proposed to be a simple vertical wrought iron fenestration that from a distance and through the dense existing hedging, will not be perceived.

The **secular buildings** are conventional in construction: rendered masonry walls, lightweight custom orb pitched roof, sheet panelled gables and lightweight post verandahs. These buildings will adopt a palette of both limestone cladding and render to tonally match in with neutral stone colours and contrast with dark gables, and roof colours used to 'sit' the buildings into the site. Timber posts of the verandah walkways and timber decorative door details will bring a connection to the Temple building and a rustic rural feel to these buildings.

The **road and carparks** are proposed in a gravel/ laterite asphalt that will blend in with the natural surrounding of the bush becoming eventually a dark brown colour. No kerbing is proposed to maintain the low key appearance of the entry. Edge planting and the median strip will form a swale in the carparks.

Example palette of proposed materials and finishes

2.10 Landscaping

The proposed development is located such that all remnant vegetation is retained, other than x 4 trees, one of which is in poor health and largely dead, and the others which will be too close to the new Temple and anciliiary buildings for safe fire distances.

The Landscape concept proposed for the development has been developed as part of the Visual Management Strategy to both reduce the impact of the built forms on the natural landscape as well as enhance the experience and amenity for both the public, who will see the development and those that visit and use the facilities at the site.

New native landscaping is strategically located to assist in screening the buildings and carpark from view. Local native trees are proposed for biodiversity. The proposed landscape also enhances attractive outlook and extension from the buildings or courtyards with native garden edging proposed to the northern sides of the buildings and to act as paving and carpark swales. The concept of large open spaces with some protected, natural and organically defined edges where the community can enjoy nature and the landscape are envisaged.

The attached landscaping plans are conceptual and specific selections will be developed as the design development progresses. In concept, plant will comprise native and or waterwise species to reduce irrigation demand as well as fertiliser and pesticide use. The landscaping plans consists of the following areas (Refer also **Landscape Concept Plan** p16)

2.10.1 A. Landscape to South and East sides of buildings (along Folly and Young Roads)

Native trees and shrubs are proposed to further screen and blend the buildings into the natural landscape. These areas will emulate planting in a natural unstructured way and predominantly follow the building forms along Folly Road and Young Road. The site corner at Young Road and Folly Road has been left as the existing large grassy clearing to maintain the openness of the site and locality. (See Figure 1 below for selections)

i) Planting along the slip lane at Folly Road, consisting of native shrubs and trees to further screen the development.(*Melaleuca rhaphiophylla*)

ii) Planting of larger native trees to screen and blend the view of library and multi-purpose hall. These trees will emulate the cluster of existing trees on Folly Road and provide a continuous 'natural' flow of vegetation along the road thus enhancing the visual amenity of the site. Trees will include *Eucalyptus rudis and Melaleuca rhaphiophylla* which are both native to this area and already growing on site.

iii) Planting of larger native trees to screen and blend the view of multi-purpose hall. These trees will emulate the cluster of existing trees on Folly Road and provide a continuous 'natural' flow of vegetation along the road thus enhancing the

visual amenity of the site. Trees will include *Eucalyptus rudis and melaleuca rhaphiophylla* which are native to this area and already growing on site.

iv) Planting of native trees around guest accommodation to screen the building from view lines along Folly and Young Roads

Figure 1: Native tree selections for Area A around the site boundary providing fauna habitat opportunities in addition to screening the buildings and enhancing the visual amenity of the area.

Eucalyptus rudis
'Flooded Gum'
6-20m H
Will encourage black cockatoo habitat
Evergreen

Allocasuarina fraseriana
'WA Sheoak'
10m H x 6m W
Evergreen

Melaleuca rhaphiophylla
'Swamp Paperbark'
6m H x 3m W

Banksia Attenuata
'Candle stick Banksia'
2m-3m H x 2W
Evergreen

Banksia Menziesii
'Firewood Banksia'
5 – 10 m H x 5-10m W
Evergreen

2.10.2 B. Landscape to Carparks

i) Main Carpark will have central trees to provide shade over cars as well as perimeter trees to screen cars and provide further shade.

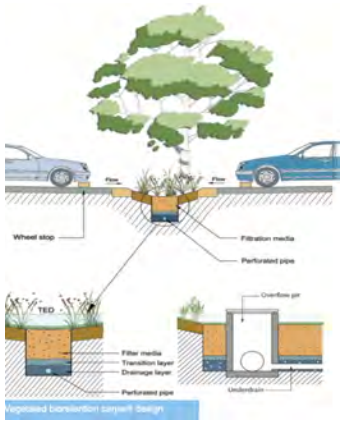
ii) Linear carpark behind Dining Hall to have further trees planted to extend the existing wind row on the north and assist shading cars and parking area

iii) Carpark behind Multi-purpose hall to have some trees and edge shrubs to assist in screening cars

The use of strategic landscaped swales areas to hold and infiltrate the larger rainfall events will be proposed to collect and infiltrate the stormwater at the surface. Garden edge swales at the carpark will serve this function. Examples of swale carpark edging and median strips below. (Fig 1)

Fig 1: Examples of Swale landscape areas within and at edge of carpark

Fig 2: Carpark and paved areas and diagram showing swale concept



The selection of trees for the Carpark areas are proposed as a combination of native Banksia (Attenuata, Menziesii) together with some strategically located Eucalyptus Rudis and Allocasuarina Fraseriana to provide shade in the long term.

Fig 3: Tree Selections in carpark and closer to building courtyards:

Banksia Menziesii
'Firewood Banksia'
5 – 10 m H x 5-10m W
Evergreen

Allocasuarina fraseriana
'WA Sheoak'
10m H x 6m W
Evergreen

Banksia Attenuata
'Candle stick Banksia'
4m-10m H x 3- 8mW
Evergreen
Allocasuarina

Eucalyptus rudis
'Flooded Gum'
6-20m H
Will encourage black cockatoo habitat
Evergreen

2.10.3 C. Landscape to Courtyards

Native trees and shrubs are proposed to beautify and enhance courtyard areas and perimeters close to buildings.
See Fig. 4 + 5 for example selections and concepts.

i) Planting around the immediate vicinity of the Temple in planter beds located within the temple perimeter 'fence'. Feature trees with lower ornamental flowering shrubs and hedge bushes will be selected

ii) Planting of shrubs organically at outside perimeter of East side 'fence' of Temple and wrapping around to the south of the covered walkway on main carpark. Some smaller native trees will be incorporated.

iii) The courtyard North of the main Temple will have an organically structured planted perimeter and open space. Native grass will be explored. A large water feature is also part of this garden experience and its location and symbol holds sacred value to this development. It will be chlorinated and moving water.

iv) The courtyard to the Priest Residences and Temple kitchen will have some native shrubs to create a sense of place, privacy, and enclosure for the occupants.

v) Planting of the main courtyard around which the secular buildings cluster. This will consist of different layers of plants to create a sense of nurtured garden providing a tranquil entry arrival space to these buildings. A small water feature is proposed to the central paved area.

vi) Planting in the north aspect of the Multi-purpose hall to beautify the outlook will explore native grass and edge planting to create some sense of containment to the open space.

vii) Planting at the entry and to the north aspect of the Guest Accommodation to create a sense of enclosure and privacy, as well as screening of their car bays.

Fig. 4 Organically structured native garden edge to minimal contained areas of grass (native lawn to be explored) and pathways

Fig. 5 Plant Selections for organically structured garden edges/ swales and courtyard planting.

Adenanthol Sericea
'Woolly Bush'
3.5m H 1.5m W
1-1.5mH/W

Syzygium Smithii
'Lily Pilly' Hedgemaster
1-1.5mH/W

Boronia heterophylla, various
'Red Boronia'
1mH x 1m W

Westringia Wyanabbie
1-1.5mH/W

Patasonia Occidentalis
80mH x 60mW

Dianella ensiformis, various
flax lily 'Silver Streak'

Agapantha
African Blue Lily
1.2M

Lomandra, various
'majestic pal'/Lime Light
'longifolia'

Anigozanthos
'Gold Velvet Kangaroo Paw'

Anigozanthos
'Bush pearl Kangaroo Paw'

2.10.4 D. Landscape to Northern Boundary

Native trees and shrubs are proposed to further screen and blend the buildings into the natural landscape. These areas will emulate planting in a natural unstructured way along the northern boundary prior to the firebreak. The planting will consist of varying combinations of shrubs and trees, to provide screening of views to buildings from adjacent properties.

Mature stock of dense native hedging (planted at 1.6m high) will provide instant screening to car headlights and will be managed as single row excluded planting for Fire safety where required (when it falls within the APZ.

2.10.5 Hydrozoning

The planting zones and layers will utilize hydrozoning to maximize watering efficiency.

Area A: Native trees to Folly Road and Young Road elevations See Fig 1

Minimal watering zone requiring reticulation at the outset in the hotter months as the young trees becomes established. The intention is to engage the community in a service activity whereby more established natives will be donated by each family and then a roster system will be established to hand water the trees when first planted. Reticulation will also be implemented. This activity will happen in Stage 1 to establish the trees along the road elevations of the development which will assist in blending the buildings as they are constructed. It is intended to time the planting of the young trees close to the winter months so as to require less watering whilst trees become established.

Area B: Carpark Planting

Minimal watering zone requiring minimal reticulation in the hotter months as the young trees become established. The community will be engaged in the process as above. The carpark trees will be established after the carpark asphalt is put down in each stage. Planting in stages will be undertaken in order to strategically establish trees prior to the building stage.

Area C: Courtyard and Close to Building Planting

Secondary zone gardens requiring moderate watering will happen in Area C and will be sub surface drip irrigation connected to Water tank.

Area D: Northern Boundary Planting

Minimal watering zone requiring reticulation in the hotter months as the young trees becomes established.

2.11 Landscape Concept Plan See A09 Landscape Plan PDF for Larger format

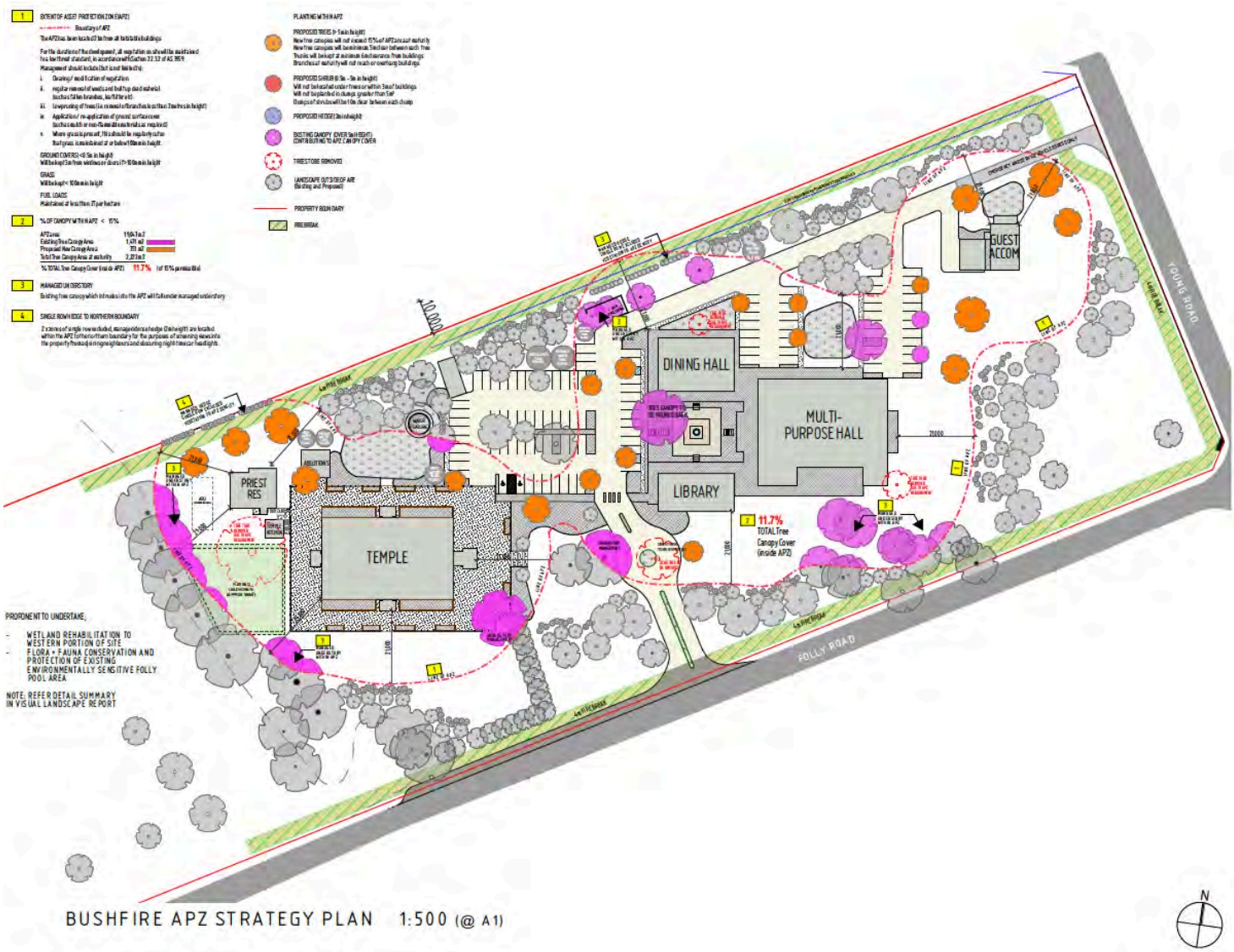
2.12 Bushfire and APZ Strategy

See **Envision Bushfire Management Plan;**
Bushfire APZ Strategy Plan and **Landscape Plan**

- An Asset Protection Zone (APZ) of 21m will be established around all habitable buildings to enable unrestricted landscaping to occur *outside* of the APZ. (ie, a 'forest' can be planted outside the boundary of APZ to achieve visual screening)
- The proposed landscape planting combination of native trees, understorey shrubs and bushes along the boundary of the proposed APZ provides continuous natural planted screening and as such, obscures and screens proposed buildings, cars, people and activities at the temple development. There will be planted screening along all four sides of the development.
- A 15% (stratum) tree canopy, and understorey management, can be facilitated *within* the APZ (compliant with the standards for APZ) which has enabled the retention of mature trees on the site whilst ensuring the BAL at the habitable buildings will not exceed BAL-29. The understorey of these trees will be managed to avoid shrubs under overhanging canopies whilst providing a consistent screen of headlight glare from the carpark into the adjacent property.
- An excluded single row of 2m dense hedge will be managed and provide this screening of carpark and activity from northern neighbours. (See Point 4 in Bushfire Strategy Plan)
- Native tree species that are taller will be strategically positioned to screen the gopurams (entry statements) of the Temple.
- Staging of Landscape planting will occur at the beginning of the project in order to enable the boundary screening to establish before all buildings are constructed.
- Many of the native tree species nominated are fast-growing and mature stock will be purchased/ planted where possible. There is flexibility to interchange the nominated species in the 'forest' zone outside the APZ to adapt to stock availability. Forestry tubes of native stock will be supplemented to the planting.
- Mature dense native hedge plant stock (25/35L at 1.6m H) has been confirmed to be readily available and so eye-level screening with strategic hedges can happen immediately, in order to preserve visual amenity for neighbours from cars/headlights, people and activities on site.
- Reticulation will be installed to ensure watering of newly planted stock of young trees in hot weather occurs during the first few years until the trees are established.

2.13 Bushfire and APZ Strategy Plan See A10 PDF for larger format

- Red dotted line indicates boundary of APZ, 21m from all buildings
- New and existing planting outside the APZ (indicated in grey) is unrestricted and can screen buildings from view
- New (and existing) Planting within APZ (indicated in pink) is less than maximum tree canopy permitted (11.7% of permissible 15%)
- Single row excluded hedges occur on northern boundary to further screen buildings from northern neighbour



3.0 VISUAL LANDSCAPE EVALUATION

3.1 Scope and Context of Evaluation

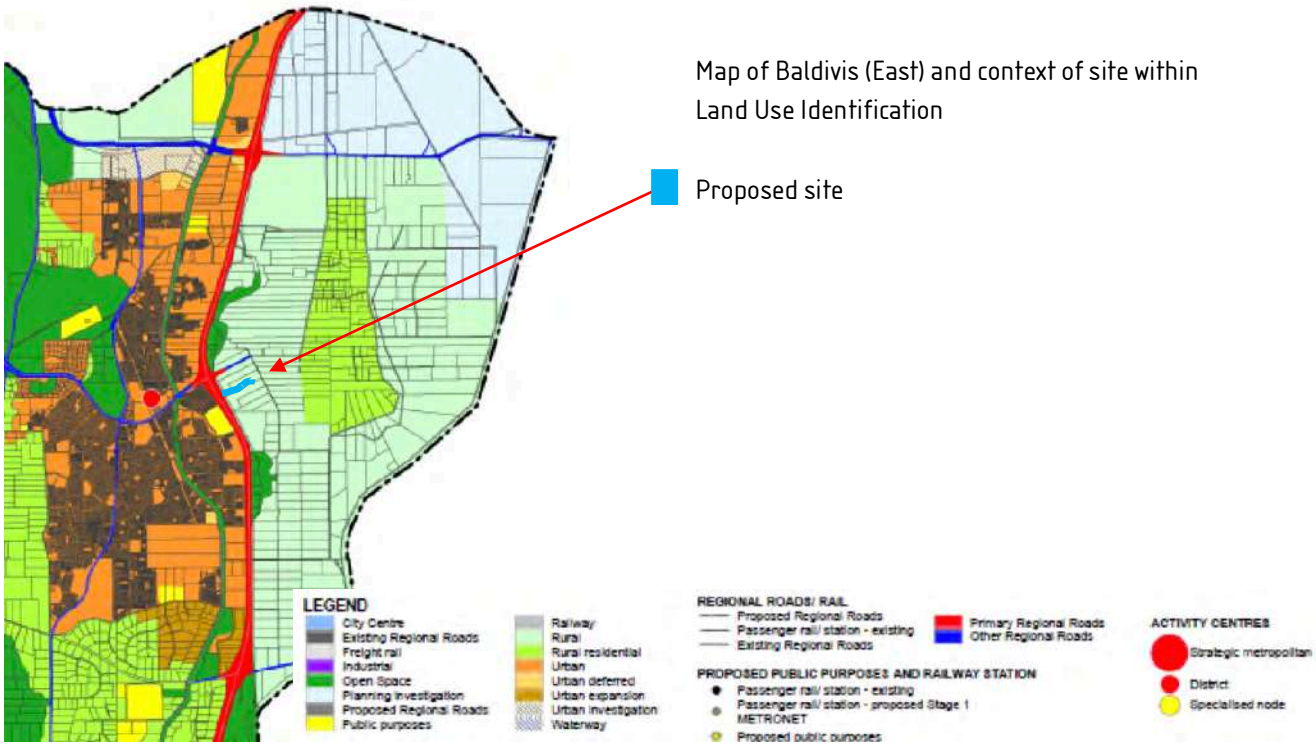
Guidance for undertaking a Visual Landscape Evaluation and Assessment is provided by the State Planning Authority, Department of Planning and Western Australian Planning Commission within the published manual *Visual Landscape Planning in Western Australia: A Manual for Evaluation, Asssessment, Siting and Design*; 2007 (VLPWA)

The Visual Landscape Evaluation has been an important tool used to understand what gives the landscape in the vicinity of the site its particular character and what forms the visual amenity experienced by those living and working in the area. The Visual Landscape assessment has become a useful tool in viewing and assessing the impact of this development on the landscape and to ensure that the development is sympathetic to the overall landscape, its character and values.

This report has been undertaken in accordance with the principles set out in the VLPWA including:

- Site Survey and analysis by a team of experienced professional consultants
- Desktop study of cartographic and photographic material
- Analysis of photographs of approaches to the subject site along the road corridors

The image locations selected within this report are views taken from the public realm and represent generally the possible viewpoints of the development site. These locations serve as a general statement of the site, its surrounds and their associated character and potential views offered.



Map of Baldivis (East) and context of site within Land Use Identification

Proposed site

3.2 Regional Context Evaluation

Refer **Planning Report** prepared by Peter Webb & Associates,
2.1 State Planning Framework, p7-10 and
2.2 Local Planning Framework, p26

The Visual Landscape of the regional context of the subject site can be understood in terms of its location with respect to the Kwinana Freeway.

Land **west** of the freeway comprises medium density residential suburbs with single housing subdivisions, schools and infrastructure for suburban life. **See Figure 1 + 2.**

Figure 2: Regional Context Aerial Photo

- Subject site is adjacent Freeway, and located immediately in vicinity of urban development on other side of freeway.
- Subject site is located on Freeway off ramp into the Rural district East being Folly Road, a transport corridor extension of Safety Bay Road
- Subject site is located on 'fringe' of the Rural district, which has broad pattern of land use, tenure and settlement.

SUBJECT SITE
URBAN DEVELOPMENT
BUSH FOREVER SITE
FREEWAY ENTRY ONTO FOLLY ROAD

VIEW NORTH

VIEW EAST

VIEW WEST

Adjacent to the freeway **east** is the Peel Main drain and the Conservation Wetlands including Folly Pool. The visual experience of the region east of the freeway is a view of large rural properties of open pastures and grasslands dotted with remnant native vegetation consisting of trees and bushes. The built forms in the landscape conjure rural land type uses, farming sheds and homesteads.
See Figure 2 + 3

Strategic studies prepared by City of Rockingham on and in the vicinity of the proposed site determined there was no land suitable for *priority agricultural pursuits* in this locality due to the low land capabilities of the area. This area (including the subject land) is instead recognised in the City's Rural Land Strategy for its environmental significance and visual amenity.

As can be seen on the **Regional context aerial photograph between freeway, Mundijong and Karnup Roads** and the **Regional context of the proposed site (Figure 2 + 3),** land clearing and buildings clearly follow the road network, which is distinctly along Folly Rd, Young Rd and St Albans Rd. Cleared areas of land have more built up combinations of dwellings and outbuilding sheds. Many shed structures throughout this region are significantly sizable. Dwellings and sheds can often be seen clearly from the road or may be obscured by remnant native tree and bush vegetation.

*The visual management strategy adopted for siting the development can be seen in **Figure 4**, where the buildings are being proposed to the East of the property such that they are located in the cleared and filled area of the site and as such also locate within the similarly developed areas of the region along the road network.*

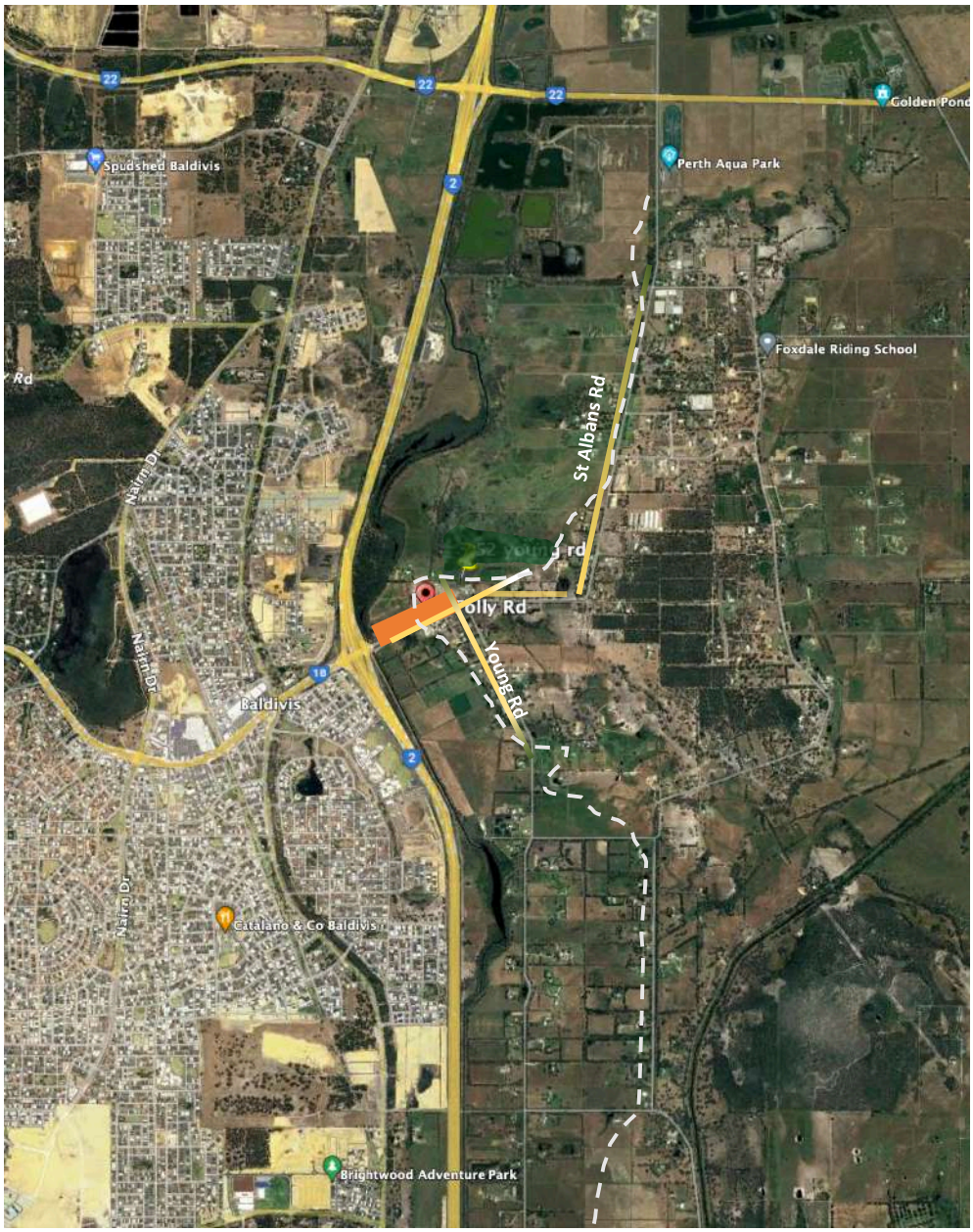


Figure 3 **Regional Context between Freeway, Mundijong and Karnup Roads**

Proposed Site:
Located on Folly Road at Freeway Entry/ Exit, the property being on the physical 'fringe' of this rural area, but still within the 'cleared' area of the region which follows the road network of Folly, Young and St Albans roads indicated east of the dotted line

Area to east of dotted line is where cleared areas are and where buildings and remnant vegetation are located. Note how the cleared area follows the road network.

Figure 4 **Regional Context of Proposed Site**

Proposed Site: Development Area
This part of the proposed site is already cleared and filled to above the flood plain level with scant remnant vegetation. This is the area within where the buildings of the development are proposed.

Proposed Site: Flood Plain Area
This part of the proposed site is also flat, subject to flooding and the western end (close to Freeway) adjoins a conservation wetland.
No development is proposed on this part of the site.

Area to East of Dotted line is where cleared areas within this region now exist within which buildings and remnant vegetation are located. Note how the cleared area follows the road network.

3.3 Local Context Evaluation

The rural character of the surrounding properties of the proposed site can be evaluated in terms of built forms and vegetation of the neighbouring properties both adjacent and in the immediate vicinity.
*The following descriptions can be correlated with the **Aerial Photo** below.*

3.3.1 Built Forms

Generally, on any typical property, the neighbouring buildings are clustered into hubs consisting of one or two homesteads and a few sheds. The hub is located around car movement and access from the street, and many of these clusters have large expanses of bitumen or gravel around which the buildings sit.

i) Sheds

Buildings on the surrounding properties are predominantly rectangular sheds, mostly very large, and built of custom orb sheeting. They are used for storage and utility functions of rural industry and farm use. Many are plain metallic zincalume, others colourbond sheeting in wheat and beige colours, a few in 'green' to 'blend' the shed into the landscape.

ii) Homesteads

Neighbouring properties A, B and C have combinations of homestead buildings and sheds on the property with people living on the property.
Properties D and E do *not* have any residential homestead buildings at present.
As described below, the homestead buildings are typically lightweight framed walls with painted 'Hardie' cement sheet panel cladding. Roofs are colourbond sheeting with gable end or hip pitched roofs of about 10 degrees.

3.3.2 Vegetation

i) Remnant Vegetation

All properties neighbouring the proposed site have been cleared of remnant vegetation where the buildings have been located. Clumpings of natural remnant vegetation still exists along Folly and Young Road and throughout the properties typically away from buildings. Remnant vegetation is also located at entry points on some of the properties.

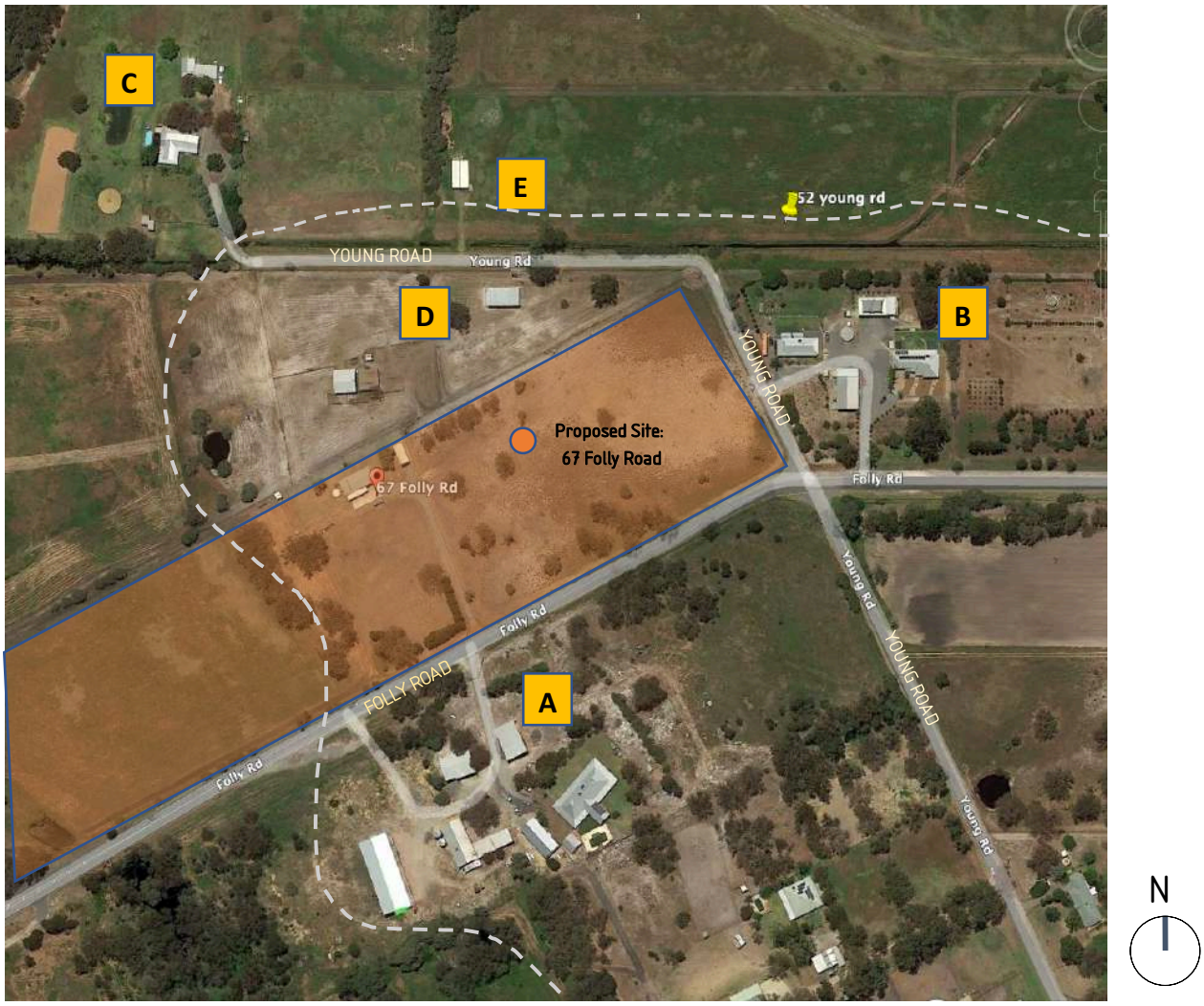
ii) New Landscaping

Typically, new trees and landscaping have been planted around neighbouring building hubs to create protection, shade, screening and enhancement of the properties. A combination of native trees/ bushes as well as introduced species of plants have been used.

3.3.3 Neighbouring Properties

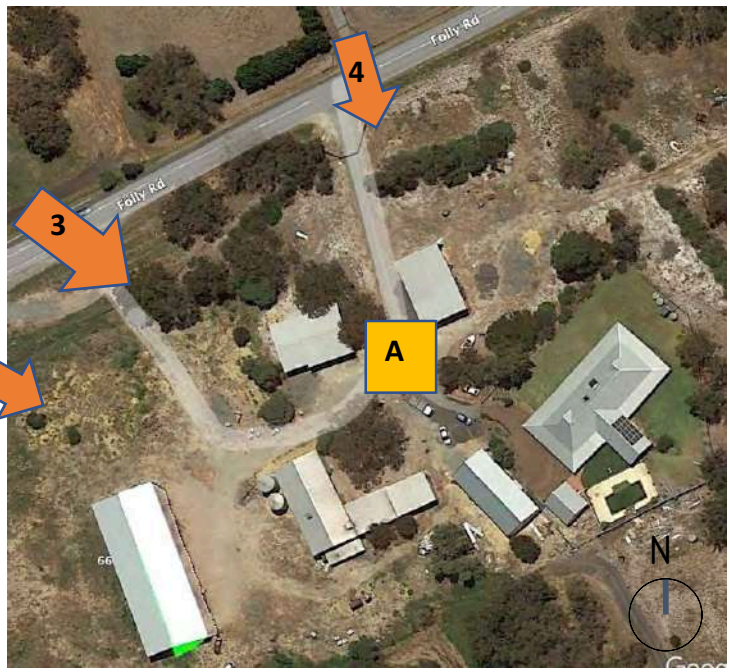
Aerial Photograph

Below is an Aerial Photograph of the proposed site in context with the immediate neighbouring properties.
A description of each property in terms of its built form and vegetation follows.



3.3.3 Local Context Evaluation: Neighbouring Properties

A **66 Folly Road**
(Opposite Site on Folly Road)



1. Aerial photo

This property has a hub of buildings consisting of large sheds of various sizes together with a rural homestead.
There are 2 x Entry points from Folly Road, and the buildings are located around the driveway network.

2 **Large visible Shed from Folly Road.**

The largest shed on this property and in complete view of Folly Road is located about 61m from the road and is approx. 17m width x 42m length x 6-8m height.
Colourbond (Green) clads walls and roof.
The adjacent shed is 14m width x 20m length x 6-8m in height. It is zincalume metal sheeting. Large visible watertanks/ silos sit alongside the shed.

3 **The first entry from Folly Road**

is low key although a large kerbside gravel/ bitumen crossover/ turning circle is prominent on Folly Road outside the property fenceline, The fence is simple timber post and wire.

4 **The second entry from Folly Road**

is more established with bitumen driveway and crossover, and timber fencing.

3.3.3 Local Context Evaluation: Neighbouring Properties

B **151 Folly Road**
(Opposite Site on Young Road)

1. Aerial photo

This property has a hub of buildings consisting of large sheds of various sizes together with rural homesteads.
There are 2 x Entry points to the property, one from Folly Road, and one from Young Road. The buildings are located around the large area of bitumen driveway.

2 **Homesteads seen from intersection of Folly and Young Roads**

The homestead which can be seen is about 12m from road edge and measures about
12m x 24m.
A large shed measuring 13m x 24m is also seen closer to the intersection, about 28m from Young Road

3 **Main Entry from Young Road**

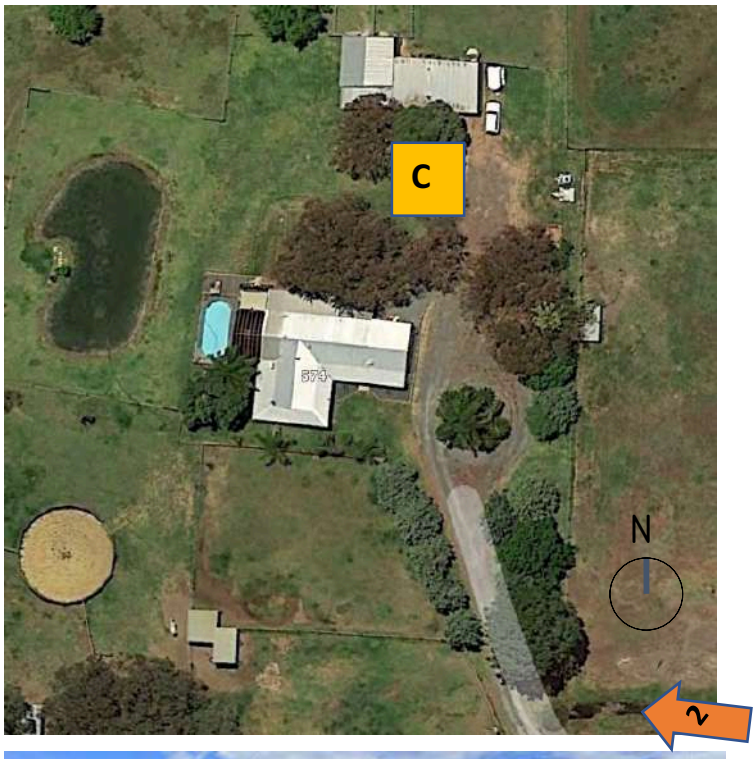
shows extensive loose bitumen driveway and wire gate.
The residence has a colourbond roof with lightweight cement sheet panels for walls.
A 'typical' verandah with steel posts surrounds the home, the roof of the verandah being continuous to main roof but changed into a lesser pitch.
The adjacent shed is 14m width x 20m length x 6-8m in height. It is zincalume metal sheeting. Large visible water tanks sit alongside the shed.

4 **Second Entry from Folly Road**

is also well established with a wide entry bitumen crossover and simple painted timber fence.
Palm trees form the landscaped entry statement.

3.3.3 Local Context Evaluation: Neighbouring Properties

C **574 Young Road**
(Behind Proposed Site on Young Road)

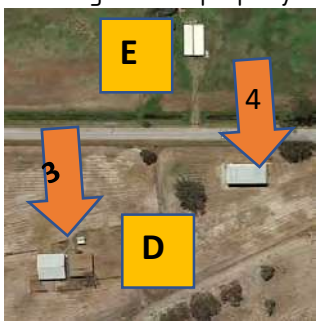


1. Aerial photo

This property has a hub of buildings out of view consisting of sheds of various sizes together with a rural homestead.
The buildings are located around a gravel driveway which is interspersed with landscape and trees.

Entry from end of Young Road

The homestead is not visible from the road, screened by established trees. A small lean to shed is visible. The gate and entry fencing is a simple cross member style timber fence. Other post and wire fencing is can be seen marked throughout the property.



D **Lot 52 Young Road + Lot 923, 547 Young Road**
(Property behind and immediately adjacent north of proposed site)

A beige colourbond shed on left and Large rectangular beige container shed located on right.

Visible Shed

No residential on this property, only highly visible sheds such as this large colourbond container shed, 20m x 5m, located 10m from road edge.

Visible Shed

No residential on this property, only highly visible sheds such as this open post and metal roof shed

3.4 SITE CONTEXT EVALUATION

The subject site is located in Baldivis, in the City of Rockingham.
The property is located on Folly Road which begins as a primary regional road into this sector of Baldivis from the Kwinana Freeway. Folly Road then becomes an 'Other regional road' as it runs along the length of the site. The clients have selected this site with the view that whilst it is at the entry to the Baldivis (east) Rural district, it is also on the 'fringe', and not deeply established in the rural area.

The *land use* for this area is primarily rural dwellings and sheds, both large and small with acreage for small agricultural and livestock farming, although the City of Rockingham in it's Rural Strategy have identified that there was no land suitable for *priority agricultural pursuits* in this locality due to the low land capabilities of the area.

The landscape of the area is of a rural scene with remnant mature trees, planted wind rows of trees, bush clumpings and non-native plantings by local property owners.

The built characteristics of the area are rural dwellings and buildings clustered together around driveway access. Large shed structures also characterise the area.

3.4.1 Topography

For a more detailed site description see the Environmental Consultant's Report
The total land area of the site is 74,362m2, (7.4Ha) which includes more than half the site being open field adjacent to the Conservation Wetland.
The site has a primary southern frontage to Folly Road of approximately 664m and a frontage to the side street Young Road of 114m. The proposed 'development' area of the site, from the mid wind row of trees on the site has a length along Folly Road of 270m which is less than half the length of the entire site.
The northern boundary of the site abuts another private property (547 Young road) on which some outbuilding sheds are located.
The land is relatively flat, with a gradual fall towards the western conservation wetlands. (See Survey)
The site has an existing crossover and access road which will not be retained as a new main entry is being proposed.

3.4.2 Visual Landscape Character of the Site

See Aerial Photo Description of Site (Figure 4) and accompanying character unit list to follow.

3.4.3 Natural Landscape Character of the Existing Site Also Refer Figure 5

a) The subject site is located immediately East of a Bush Forever site.

b) The freeway and its buffer vegetation is located to the west end of the site. Views across to the site from the freeway are very limited to a driver concentrating on the road.ie. The site is protected from view of approaching drivers from the Freeway

c) A conservation wetland comprising Folly Pool as part of Manjedal Brook comprise the western end of the site. These areas are largely untouched by any previous development.

d) A large grassy open flat field of flood plain lies between Folly Pool and the dividing mid line of trees which would have been planted as a wind row. This large part of the site is often under water in winter.

e) This mid site wind row of trees naturally divides the site into the 'developed area' and the floodplain area. This wind row consists of melaluka ranging in height between 8m and 10m. There are no nesting tree hollows in the trees. Vison through these trees is moderate.

f) The land to the east of these trees has effectively been cleared and filled over time, leaving remnant vegetation clusters, single mature trees and planted wind rows which intersperse larger areas of grassy open clearings.

g) A strong wind row of 6m trees form a strong hedge at the existing entry of the site. Vision through the hedge is minimal.

h) A large clump of 10-12m high trees are located on Folly Road, providing a vegetation feature on Folly Road.

i) An established wind row of trees of about 5-8m height has been planted on part of the northern boundary, just in from the firebreak.

j) Individual remnant trees are in varying states of health.

k) Sandy, filled and compacted clearings are already completed to achieve the minimum RL above the 100 year Floodplain level

3.4.4 Built Landscape Character of Existing Site

l) A couple of large sheds exist on the northern boundary of the site, set well back from Folly Road.

m) They reflect the same structure and materials of other sheds on adjacent properties, with roof and wall construction in metal colour bond and have attached flat roof awning structures. Only the smaller shed is intended to be retained for use in the development.

n) The site has a timber post and wire perimeter fence (approx. 1.0 m high) running along the entire length of Folly Road boundary, Young Road boundary and northern boundary to neighbouring property.

o) A firebreak runs along the entire perimeter of the site

p) A straight crushed limestone/ bluemetal access way strongly divides the property into East and West sides. The crossover itself is unsealed pea gravel.

P A straight crushed limestone/blue metal access way strongly divides the property into east and west sides

F All land east of the mid wind row of trees has been cleared and filled over time, leaving remnant vegetation clusters, single mature trees and planted wind rows which intersect larger areas of grassy open clearings

D A large grassy open field of flood plain lies between folly pool and the dividing midline of trees, often underwater in winter

I Wind row of existing trees about 6m in height planted on part of the northern boundary, in front of the firebreak

H Large clump of trees 10-12m high located on southern site boundary, providing a vegetation feature on Folly road

C Conservation wetland comprise the western end of site. This area is largely untouched.

L Existing shed on northern boundary are well set back from Folly road

M 151 Young road - built characteristics of area are rural dwelling, buildings + shed with buildings clustered together around driveway access

K Sandy compacted clearings indicate historical car access to existing site

A Subject site situated to the immediate east of bush forever site

M Folly road - Built characteristics of area are rural dwelling, buildings = shed with buildings clustered together around driveway access

B Entry into Baldivis east onto Folly road from freeway. Buffer vegetation protects site from views. Approaching drivers on freeway and off ramp at Folly road are unable to see into site at all.

J Individual remnant trees are in varying states of health

E Mid site wind row of trees 13-15m high naturally divides site into 'developed area' and flood plain area

G Strong wind row of 6m trees form dense hedge at existing entry of site. Vision through hedge is minimal

Figure 5: VISUAL LANDSCAPE CHARACTER OF SITE

4.0 VISUAL ASSESSMENT AND VIEWS

The following assessment describes how the visual landscape character of the existing site is viewed, experienced and valued and then describes the impact that the proposed development will have on that visual landscape character.

The landscape character of the site is predominately experienced by the public from Folly Road driving East and West. Another view shed is experienced from Young Road travelling towards the site from South to North.

The visual experience of the **existing site** arriving into the area from the Freeway onto Folly Road is a view shed of large open grassy clearing of the lower lying land adjacent to the conservation wetland, followed by views of the densely planted mid area of existing mature wind rows of 12-15m trees and 6m trees that obscures vision into the site in that area, followed again by a view shed across the site of open grassy clearings interspersed by mature trees and bushes. A large clustering of mature trees is located along Folly Road mid-way between the dense hedge of 6m trees and Young Road which again distracts the view line from going deep into the site. The eastern end of the site is very open and clear.

The visual experience going westwards back to the freeway along Folly Road is of a site that is quite exposed, open and grassy at the eastern end with little tree cover and unoccupied paddocks. The informal firebreaks are clearly visible and simple post and wire fencing are in close proximity to Folly and Young Roads given very little verge depths.

The visual experience along Young Road north towards the site and intersection of Folly Road is of a significantly large sized area of cleared, open grassy site. The property across the road from the site on 151 Young Road exhibits a vegetative density along Young Rd with non-native palms and bushes obscuring the homestead clustering on that property which is only 10m set back from the Young Road boundary.

Generally, the road and traffic conditions in the greater area allow speeds of 70km per hour. There is no footpath and pedestrian access along these roads does not happen.

4.1 Proposed Development and Impact on Visual Landscape Views, Experience and Value

The visual experience of the **proposed development** is intended to use elements of design and siting to both *absorb* the buildings into the site as well as *blend* the buildings with newly proposed landscape. The photographs below show the viewshed and describe:

- Pre-development: the existing view
- Completion of buildings: the view of all buildings with landscaping at limited growth
- Post Development: the view after the development is finished with new landscaping at maturity

4.1.1 PHOTOGRAPH VIEWS X, Y + Z: EXITING FREEWAY ONTO FOLLY ROAD

4.1.1 a) VIEW X+Y: Approach from Freeway off ramp along Folly Road Eastwards. Proposed site on LHS in both images. Roadside remnant vegetation and the protected wetland vegetation alongside the freeway obscures view completely of the site for the traveller on the road that is entering into this rural region.

4.1.1 b) VIEW Z: Approach along Folly Road Eastwards. View into clearing of Floodplain area of site (LHS of road)

i) View of existing site with evidence of water from winter rains on site. Wind row 15m trees in view shed in distance.

ii) View of proposed development behind existing row of 15 m trees. Both the Temple and Priests' residence are heavily screened from view by existing trees. The Temple Goporams are non-evident given the density and height of the existing trees.

4.1.2 VIEW 4 : FOLLY ROAD TRAVELLING EAST

- Closer view looking across open grassy clearing of site with mid-line wind row of trees in view. Existing shed structures on site screened by wind row (centre of photo). Shed structures of adjacent property also

- View of site with proposed Temple and Priest residences heavily screened and highly absorbed into site (non- evident), screened by dense wind row of existing trees. Temple Goporams non- evident in

- Mature trees once established provide further screening of Temple and Priest residence.

4.1.3 VIEW 5: APPROACH EAST ALONG FOLLY ROAD LOOKING INTO DEVELOPMENT

Existing shed on site

5 VIEW PRE-DEVELOPMENT

VIEW AT COMPLETION OF BUILDINGS

(new landscaping at limited growth)

Temple South Goporam glimpse view only through trees

- Temple building screened from view by existing trees and further planting of native bushes and hedges.

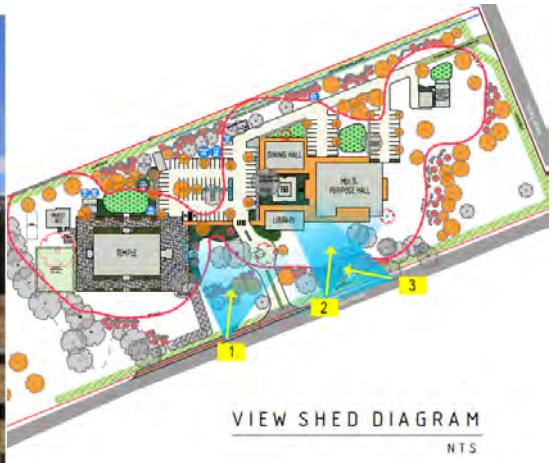
VIEW POST-DEVELOPMENT

(new landscaping at maturity)

- As planted scrub and hedges become established the Temple building is completely screened from view.

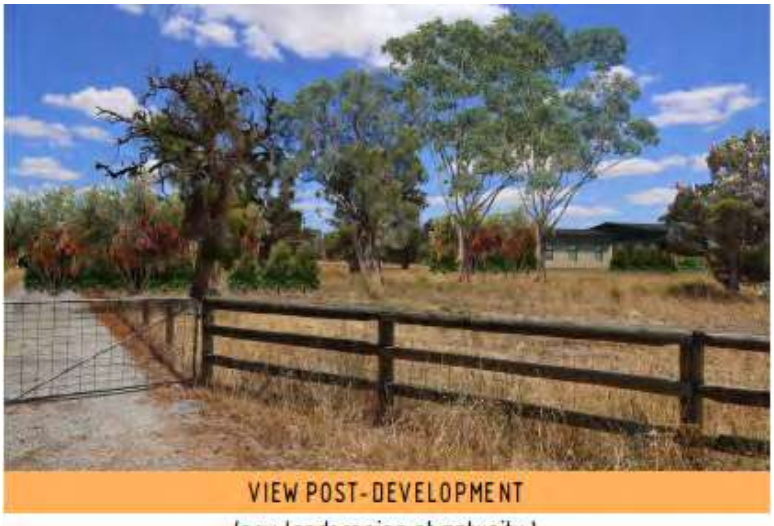
4.1.4 VIEW 1: FOLLY ROAD TRAVELLING EAST

Existing crossover and gate from Folly Road



Proposed Library and Multipurpose Hall

- **Note:** Existing crossover and gate from Folly Road Road will be removed at beginning of construction



- **Note:** Existing crossover and gate from Folly Road Road will be removed at beginning of construction

4.1.5 VIEW 2 : FOLLY ROAD TRAVELLING EAST

(no additional landscaping)

(new landscaping at limited growth)

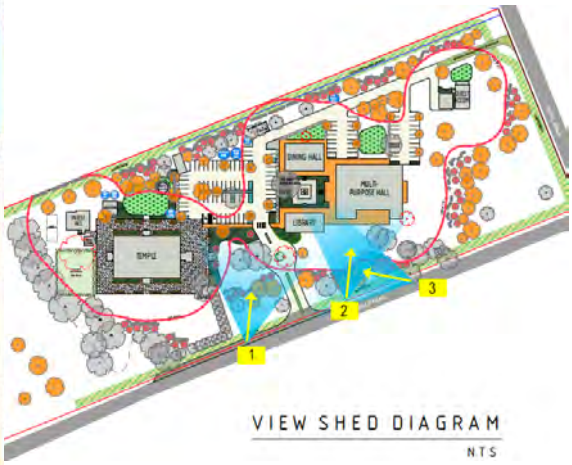
- Multipurpose Hall seen through existing trees and new landscaping of mature native hedge and native planting

(new landscaping at maturity)

- Multipurpose Hall completely screened by new landscape at maturity

4.1.6 VIEW 3: FOLLY ROAD TRAVELLING WEST TO FREEWAY

View from Folly Road travelling West to freeway. Existing sheds on neighbouring site in view at RHS.



Goporam peak obscured by existing trees

Proposed multipurpose hall partially screened by developing new planting

Fire break at boundary in view.

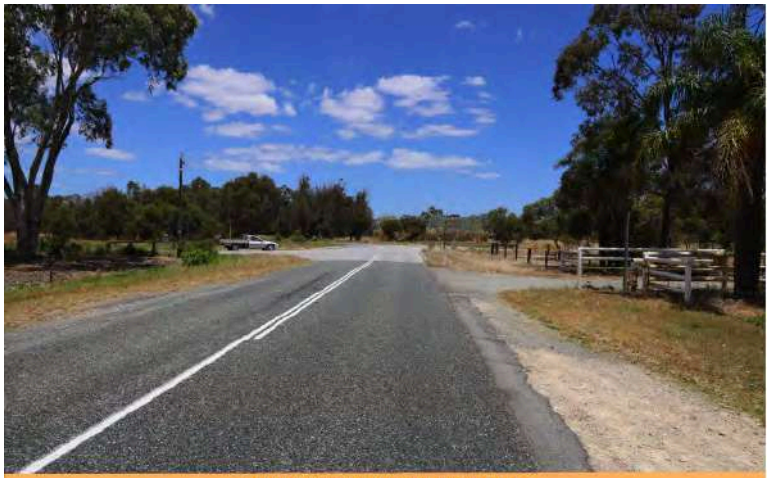
- Mature planting screening all development

4.1.7 VIEW 6: VIEW OF DEVELOPMENT FROM FOLLY ROAD TRAVELLING WEST TOWARDS SITE AND YOUNG ROAD INTERSECTION

VIEW PRE-DEVELOPMENT
(no additional landscaping)

VIEW AT COMPLETION OF BUILDINGS
(new landscaping at limited growth)

- Proposed Multipurpose Hall screened by existing trees and new planting



VIEW POST-DEVELOPMENT
(new landscaping at maturity)

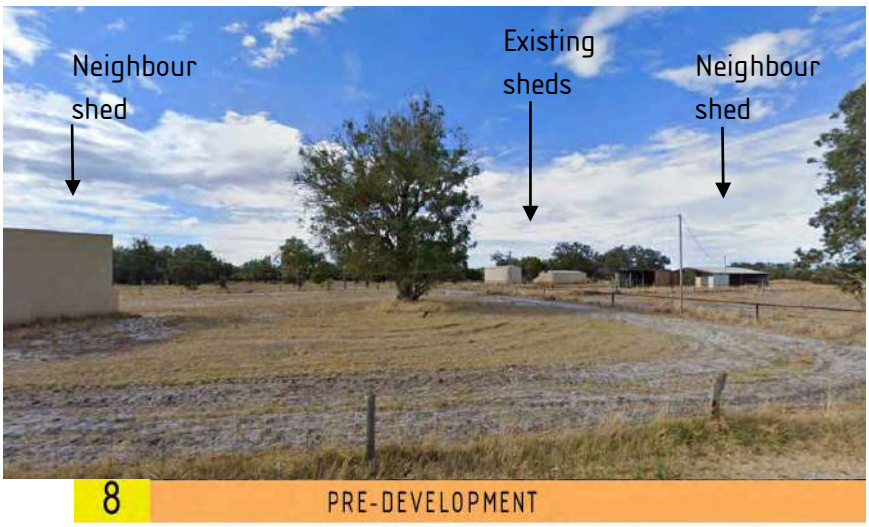
- Proposed Multipurpose Hall fully screened by existing trees and new planting at maturity

4.1.8 VIEW OF DEVELOPMENT FROM NORTH EAST BEND AT CORNER OF YOUNG ROAD VIEW 7

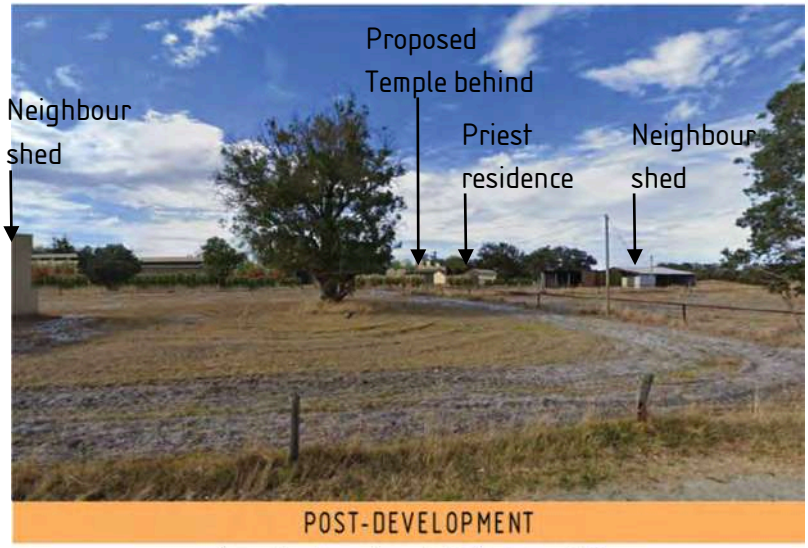
- New native mature hedging planted together with native trees and shrubs to screen development from northern neighbours
- Existing Firebreak

- Established planting further screens development

4.1.9 VIEW OF DEVELOPMENT FROM CENTRAL NORTH ON YOUNG ROAD VIEW 8



(no additional landscaping)



(new landscaping at limited growth)

- Glimpse view of Temple in distance behind
- Proposed chariot shed in existing shed structure
- Priest residence partially visible above native hedges (will be planted as mature stock)

(new landscaping at maturity)

- Existing sheds visible in foreground
- Temple and Priest residence screened from view by established planting

4.1.10 VIEW 9: VIEW OF DEVELOPMENT FROM NORTH WEST END ON YOUNG ROAD *(Edge of Lot 33)*

Neighbour shed

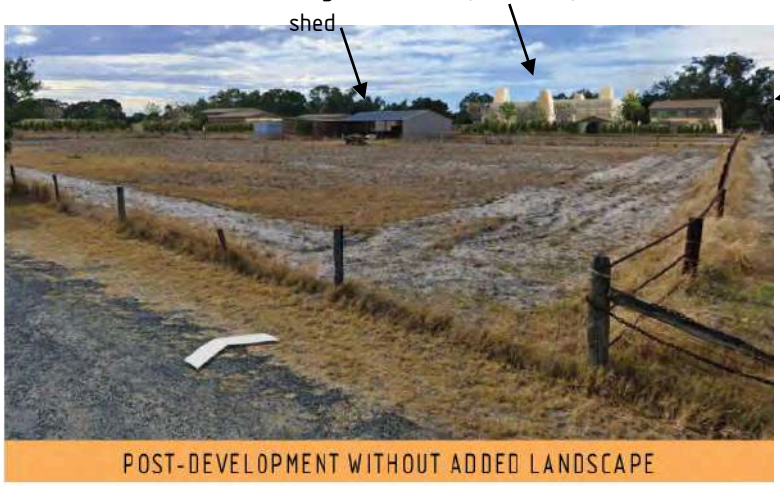
Existing Shed on property

9 PRE-DEVELOPMENT

(no additional landscaping)

Neighbour shed

Proposed Temple



Proposed Priest residence

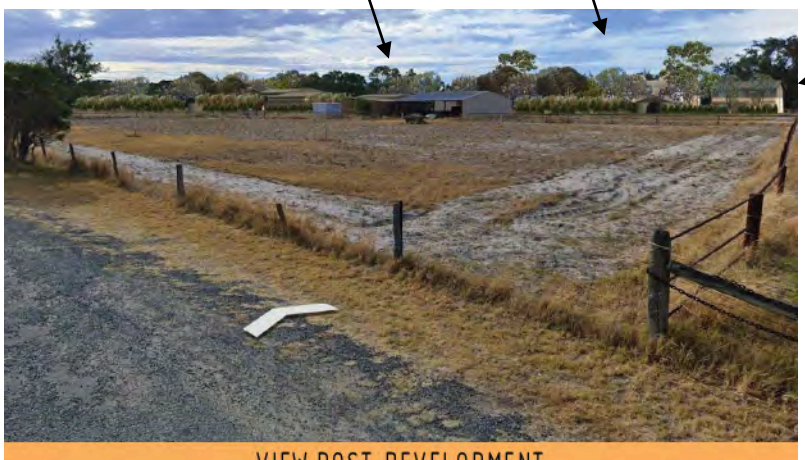
POST-DEVELOPMENT WITHOUT ADDED LANDSCAPE

(new landscaping at limited growth)

- Mature native hedge stock will be established along northern boundary at Stage 1 of development.
- With perspective, the scale of the Priest residence and the Temple is comparative to the existing sheds on the neighbouring property as highlighted.

Neighbour shed

Proposed Temple



Proposed Priest residence

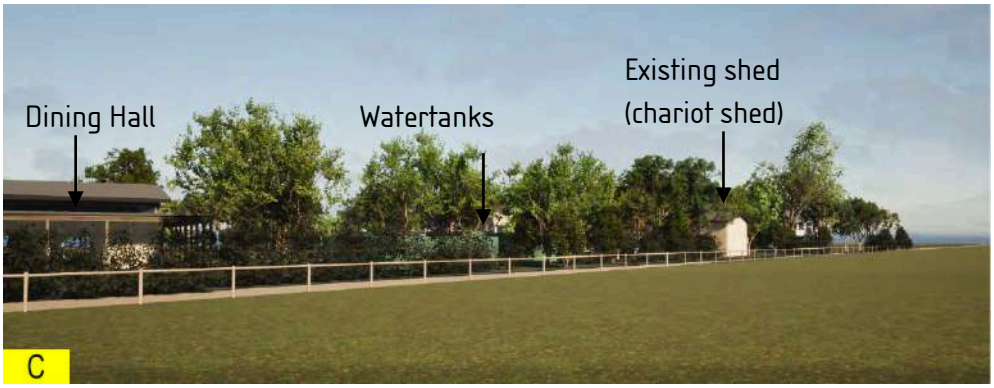
VIEW POST-DEVELOPMENT

(new landscaping at maturity)

- Mature established planting screens most of the development.

4.1.11 VIEWS FROM *POSSIBLE* NEW RESIDENCE ON LOT 923 (PROPERTY ADJOINING DEVELOPMENT PROPERTY):

- VIEW A, B AND C
- RED DOT indicates owner of adjacent lot's preferred location of possible house on Lot 923
- RED HATCHED AREA is area within which NEIGHBOUR'S house can *potentially* be located with respect to setbacks etc



4.1.12 VIEWSHED 4: YOUNG ROAD TRAVELLING NORTH TOWARDS SITE AND FOLLY ROAD INTERSECTION VIEW 11

a) View 11

View travelling north along Young Road approaching existing site and Folly Road intersection. Note the large brown shed of property behind proposed site is in view on LHS

11a View travelling west along Folly Road approaching site with Guest accommodation in view line. Large brown shed of neighbouring property behind proposed site is still in view. (No additional landscaping shown)

iii) View travelling west along Folly Road approaching site with Guest accommodation in view line *but with proposed landscaping shown in view*. Large brown shed of neighbouring property behind proposed site is still in view.

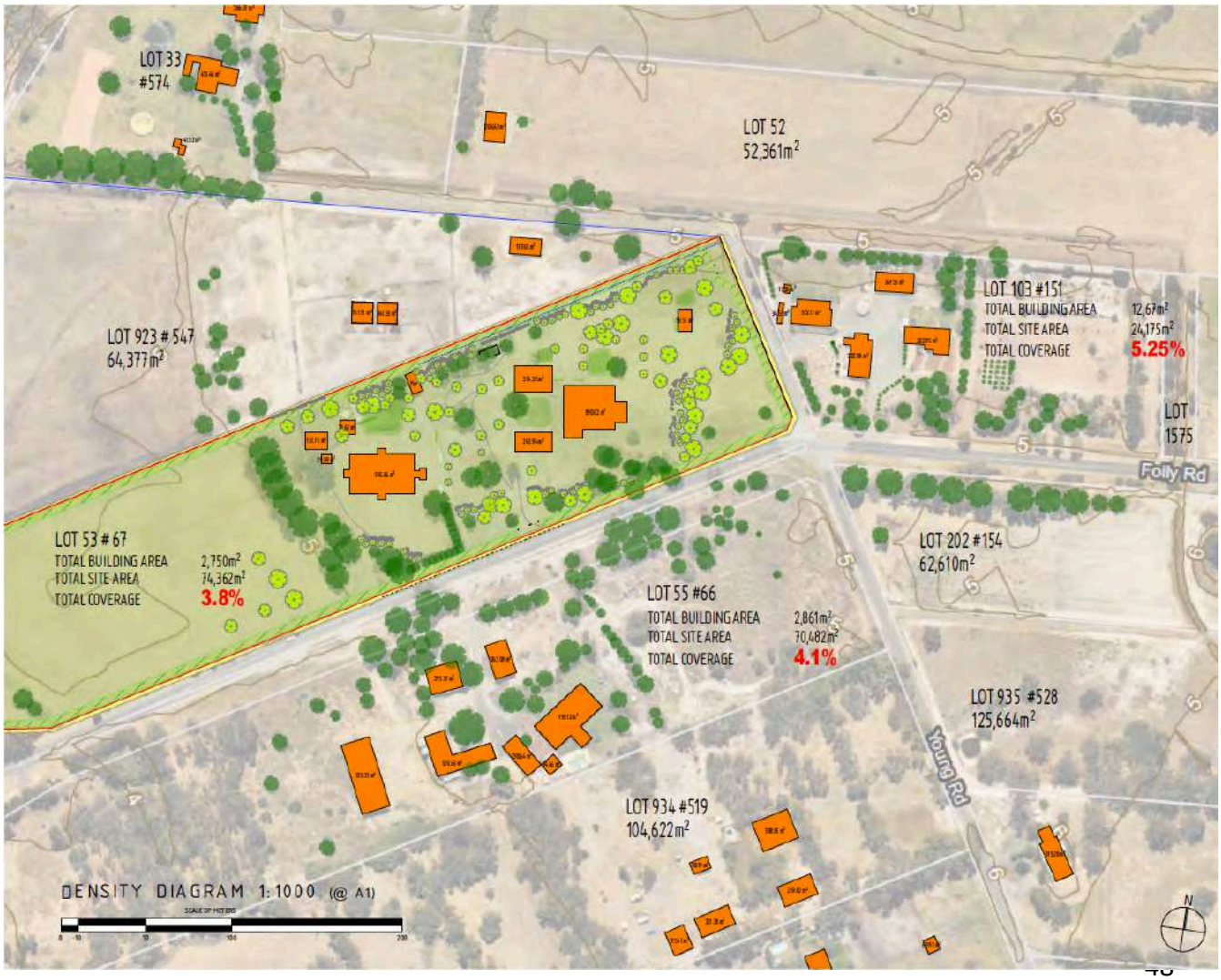
4.2 Scale of Buildings/ Clustering

The Scale of Buildings as a comparative is illustrated in the plan and table below.
(Built up area and Number of buildings) *Ref Dwg A12*

The City has stated in its RAR that the application proposes a number of buildings of a significant scale which gives rise to concerns about the proposed intensity of the development.

- 'Density Diagram' (Drawing 12), illustrates the density of the Temple and associated buildings in visual form. It shows that the density of the proposed building footprint is not out of character with adjoining Rural properties and uses, in fact it has a lower total overall built up building area than the property to the south, and a lower overall site coverage than both property to the south and east.

Property	Description	No of Buildings	Total Area Buildings	Site Coverage
Lot 537	Proposed Temple	9	2,825 sqm	3.8%
Lot 55	Commercial and Residential.	7	2,861 sqm	4.1%
Lot 103	Commercial and Residential	5	1,267 sqm	5.25%



5.0 STRATEGIES FOR MANAGING VISUAL LANDSCAPE CHARACTER

In summary, the strategies adopted for maintaining the perceived visual landscape amenity of the proposed development on the site are as follows:

Generally, the visual management strategy adopted for siting the *entire development* can be seen in **Figure 2**, where the buildings are being proposed to the East of the property such that they are located in the cleared and filled area of the site and as such also locates it within the similarly developed areas of the region along the road network.

5.1 **The Temple** proper, where the typology of the architecture reflects the traditional form of a Hindu Temple with tall sculptured entry Goporams and is aesthetically connected to the culture and practices of the JET community, has been located in such a way as to be mostly perceived as 'Non Evident' and absorbed into the site by:

i. Keeping the building well set back from Folly Road, (46m to main wall and 52m to Goporam from Folly Road boundary)
ii. 'Obscuring' the building behind the existing mid wind row of trees (12-15m high) on western side, and the dense hedge of trees along Folly Road (6m high) so that viewsheds from Folly Road to the Temple are mostly obscured.
iii. Colours and materials of the Temple will 'blend' with the colours of 'natural landscape' – claddings of limestone (natural to Baldivis and Coastal region), renders of natural stone colours, highlights of timber detailing and framework, accents of brass and dark metals.
iv. Maintaining a height for the Goporam at the main front Entry of 14.7m which sits adjacent a large existing tree of 10m. Vision of the form of the Goporam and the top will be obscured in perspective of drivers along Folly Road. (See Section)
v. The sculptured facades will be created by artisans in traditional methods which as an expression of art is aligned with rural arts and crafts and as such is located comfortably in this rural setting.

5.2 **The Priest residences, Temple Kitchen and ablutions** have been set well back from Folly Road behind the Temple as a cluster of buildings and mostly non evident from Folly Road travellers. Nevertheless, these buildings take on an aesthetic character that reflects the pitched metal roof, gable ends, awning structures and clustering around a courtyard of ancillary buildings.

5.3 **The Secular buildings** (Multipurpose hall, Dining Hall, Library and guest accommodation) are architecturally expressed using forms, colours, and materials that are characteristic of this rural area and will 'blend' and maintain the visual amenity of the area. These character elements are:

i. **Clustered** rectangular buildings rather than one larger building that reflects the size and proportions of other clustered buildings on neighbouring properties. See A12 for visual plan.

ii. Pitched roofs of 15 degrees, gable ends and dark custom orb finish to 'sit' the roofs into the landscape.

iii. Verandah post and beam simplicity across the façades of the buildings to facilitate covered walkways but also used to break the wall elevation down to a lesser scale and to reflect the simplistic typology of a typical rural 'homestead' or building.

iv. The buildings are quite linear, a visual characteristic of other homestead buildings of the rural region.

v. The secular buildings are on an East/West axis such that the facades are receding from the Folly Road axis. As such, the minimum setback of 30m is on the corner of the Multipurpose Hall, the rest of the secular buildings being well set back from Folly Road.

vi. Entry into the buildings, community gathering spaces, children's playground are located in courtyards and gardens out of street view such that groups of people are not visible.

vii. The guest accommodation is located well into the north east corner of the site and is proposed as a singular 'homestead' which is in keeping with its eastern neighbour aesthetically.

5.4 **Access Crossover and road** to the development is relocated further East so as to separate the entries from the opposite neighbour (66 Folly Rd) thereby reducing the impact of traffic access on Folly Road. A slip lane to the new property entry and low key roundabout set within 30m of the boundary on Folly Road has been incorporated to ease and slow traffic impact. No kerbing is proposed to maintain the low key appearance of the entry.

5.5 **Parking** has been located between the Temple and the secular buildings proposed to be built deep into the site (60m) so as to minimise vision of cars. A lightweight post and beam covered walkway connects the Secular buildings and the Temple further screening the cars. New landscaping is proposed to screen and blend the main carpark. The secondary carpark is located on the northern boundary, well behind the buildings so as to reduce its impact. The road and carparks are proposed in a gravel/ laterite asphalt that will blend in with the natural surrounding of the bush becoming eventually a dark brown colour.

5.6 **Existing Landscaping** consisting of remnant natural characteristic mature trees, wind rows, shrubs and tree hedges are all being maintained for the development except for 4 x trees which will need to be removed for fire safety (1 is very unhealthy/ dead)

5.7 **New Landscaping** is located strategically to *blend* the proposed buildings and further enhance the site and visual amenity of the development. It is proposed that new native planting will happen early in the staging of the development so as to allow maximum establishment of trees and bushes. **See Concept Landscaping Plan**

5.8 **Staging of the development** has been considered in such a way as to maintain visual amenity and least disruption to the locality. The first part of construction will be largely unseen behind the wind rows of trees. Landscape will be planted as a first stage to ensure trees and shrubs are established as the future stages commence so as to minimize visual impact of new buildings.

6.0 CONCLUSION

The existing natural character of this area is one of large open grassy clearings interspersed with remnant vegetation, singular mature trees, roadside bushes and wind rows of trees. There are areas of non-native plantings, particularly around entry access points to properties. Post and wire fencing and cleared fire breaks characterise much of the street verge view.

The existing built character of this area is predominantly clustered rectilinear buildings with pitched custom orb roofs and timber post verandahs creating a linear horizontal aesthetic. The metal shed structures in the area can be sizable, and coloured in various powdercoat custom orb. Planted vegetation screens many of these existing structures.

The Sri Balaji Temple development in its entirety, sits comfortably within the above described natural landscape and the buildings are of a scale and nature that can align with the locality's characteristic built forms. As such, the proposed development does not impact negatively on the visual landscape character of the area, using a combined method of siting the proposed religious buildings of this development behind mature existing trees and wind rows, making those parts of the development fairly 'non-evident', whilst 'blending' the secular buildings of the proposal by adopting scale, forms, colours and materials that are recognised and characteristic of the built form in the locality. The proposed main car park is well set back from Folly Road and the secondary car park is nestled behind the secular buildings out of view. Additional new planting strategically located will assist to screen all the buildings as well as car park and further enhance the visual amenity of the site and area.

View of main Temple in the Sri Balaji Temple Development from within the property.

PLANNING REPORT

DEVELOPMENT APPLICATION

PROPOSED SRI BALAJI (HINDU) TEMPLE DEVELOPMENT

Lot 53 (No. 67) Folly Road, Baldivis

PLANNING REPORT

Lot 53 (No. 67) Folly Road, Baldivis

Proposed Sri Balaji (Hindu) Temple Development

Prepared by:

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Job Number: C2457
Version/Date: V11/13 June 2022

Prepared for:

JEEYARS ACHARYA PEETTAM AUSTRALIA (**JAPA LTD**)
ABN: 648 960 874

EXECUTIVE SUMMARY

This is to advise that *Peter Webb and Associates* (PWA) acts in association with *Archetype Design Studio* (**Project Architect**) for the *Jeeyars Acharya Peettam Australia Ltd* (**JAPA Ltd**) in regard to the proposed development of the Sri Balaji Temple and Cultural Centre at 67 Folly Road, Baldivis.

JAPA Ltd is a Non-Profit Organisation. It is a religious multicultural organisation of the Hindu community, which provides a place for spiritual worship; spaces for religious education and guidance in the learning of the Ancient Vedic Scriptures; for celebration; and outdoor space for peaceful reflection.

This Planning Report is prepared in support of the Development Application which seeks approval to commence the development of a Place of Worship on the subject site.

The proposed development has an estimated construction cost of $5 million and is elected to be determined by JDAP. Accordingly, the Application package includes the completed and signed Development Application Form, MRS Form 1 and DAP Application From.

The land and project details for this Application are described in the following Summary Table (**Table 1**). The following report details the relevant background, design, and planning justification in support of this development proposal.

TABLE 1: SUMMARY TABLE	
Landowner:	Patricia Annette Byers (Under contract for sale to JAPA LTD)
Property Description:	Lot 53 (No. 67) Folly Road, Baldivis
Area:	7.4362 ha
Certificate of Title:	Volume 2793, Folio 800
Local Authority:	City of Rockingham
Local Planning Scheme:	Town Planning Scheme No. 2
Zoning:	Rural
Proposal:	This Application seeks approval for the development of a Place of Worship, together with incidental land uses, and the associated on-site car parking facility required to support the development. The development is contained to the eastern portion of the site, being sufficiently setback from the western portion of the land, which area forms part of a floodplain.
Vehicle Access:	*Existing crossover to be relocated and upgraded:* The existing crossover on Folly Road is proposed to be relocated 35m to the east of the existing crossover and upgraded to provide the main vehicle entrance to the Temple. The new access will include the construction of a slip lane on Folly Road. *New crossover proposed:* A new crossover for emergency and service access purposes only is proposed on Young Road.

1.0 LOCATION AND SITE PARTICULARS

The landholding the subject of this Application is listed in the following Table 2: Land Details, together with the current Certificate of Title Volume and Folio details and approximate land area. (Refer to **Annexure 1**: Certificate of Title.)

TABLE 2: LAND DETAILS		
LAND DESCRIPTION	**CERTIFICATE OF TITLE**	**LAND AREA**
Lot 53 (No. 67) Folly Road, Baldivis	Volume 2793, Folio 800	7.4362 ha

The subject site is located on the northern side of Folly Road and to the east of the Safety Bay Exit Ramp of the Kwinana Freeway. The land has a southern primary frontage to Folly Road of 645.08 metres; and a secondary eastern frontage to Young Road of 114.16 metres. The rear northern boundary has a width of 621.11 metres, which boundary is shared with a rural property comprising of rural farming sheds and open fields. Its western side boundary has a length of 94.68 metres, which it shares with land reserved as 'Parks and Recreation' under the *Metropolitan Region Scheme* (**MRS**) (and preserved as a Bush Forever site). Folly Pool is contained within this adjacent reservation, which extends along the eastern side boundary of the Kwinana Freeway and to the immediate west of the land. (Refer to **Figure 1: Location Plan**.)

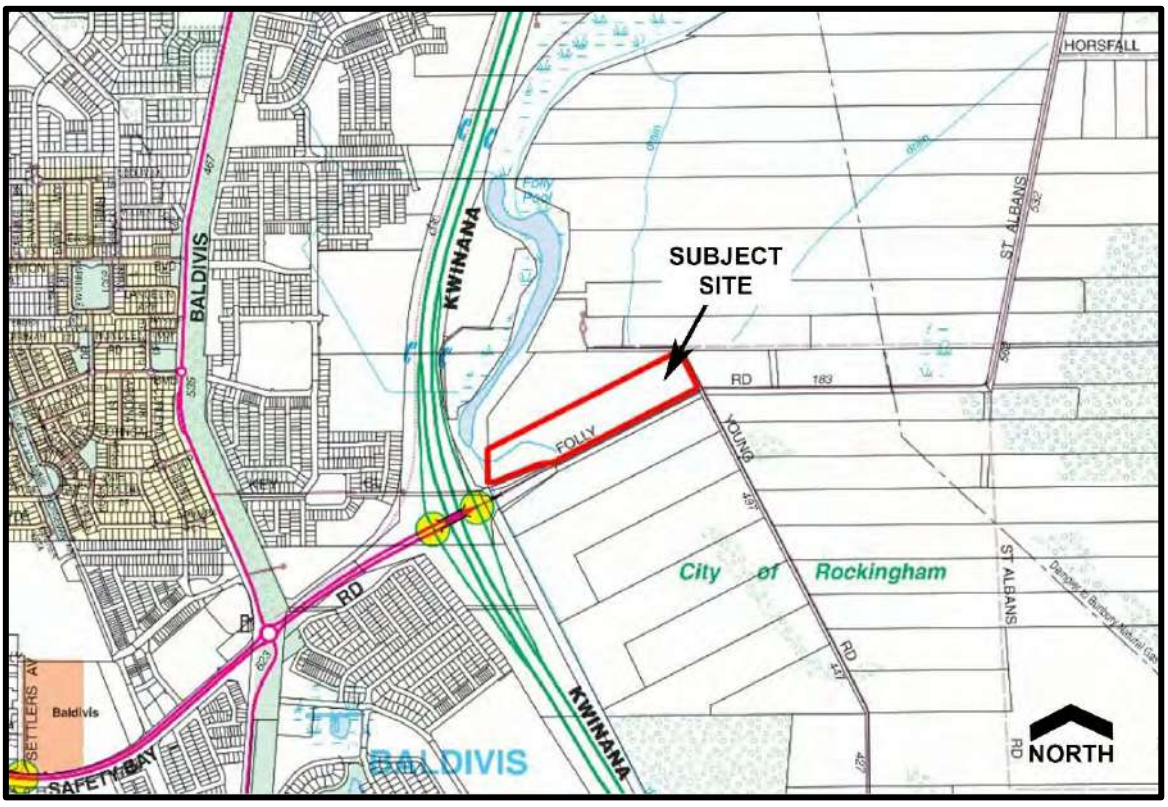

Figure 1: Location Plan *(source: intramaps)*

The topography of the land comprises of a relatively consistent ground level. It is low lying and subject to inundation, with levels rising from 4.8m AHD at the eastern extent of the Floodplain to 5.37m AHD adjacent to the boundary of the secondary frontage of the land to Young Road. The

existing sheds are situated at the highest ground level on the land, being 6.1m AHD. This is the proposed site for the building footprint for the Temple and Caretakers Dwellings.

Figure 2: Aerial Photograph *(source: slip, 2021)*

The site is accessed by an existing pea gravel crossover from its primary frontage to Folly Road. (Refer to **Figure 2: Aerial Photograph**.)

The subject land shares only a single boundary with privately owned rural land. The remaining boundaries of the site are bound by the regional, local road network and parks and recreation reservation adjacent to the Kwinana Freeway. The physical separation of the land by the bounding road and freeway network coupled with its severely limited capability for productive agricultural pursuits makes it well suited for the proposed Temple. (Refer to **Photographs 1, 2** and **3**.)

Photograph 1: Standing on the southern side of Folly Road, looking west towards the Kwinana Freeway and western end of subject site. (Note: all vegetation shown is to be retained.)

Photograph 2: Standing on Young Road, looking south towards intersection with Folly Road. Subject site is to the right of the photograph.

Existing improvements on the land include two (2) rural sheds, together with a septic tank and a water tank. (Refer below to **Photographs 3 and 4**.)

Photograph 3: Standing on the southern side of Folly Road, looking in a north easterly direction towards area proposed for the development footprint. (Note existing substantially sized rural sheds and associated structures on the land are clearly visible from this main view point on Folly Road.

Photograph 4: Standing on the southern side of Folly Road, directly opposite subject site, looking in a northern direction across the floodplain portion of the land. (Note clear visibility of large rural sheds from view point on Folly Road.)

The rural property to the north of the site at Lot 923 (No. 547) Young Road also contains rural sheds. No residential dwelling is located on this adjacent landholding. Overhead power lines run within the subject property along this northern common boundary shared with the neighbouring property. (Refer below to **Photograph 5**.)

Photograph 5: Standing on Young Road, looking in a western direction towards the common boundary of the land shared with the adjacent rural property.

A residential property which contains two (2) residential dwellings and substantially sized outbuildings is situated to the east of the subject land on the opposite (eastern) side of Young Road. These dwellings have a primary crossover to Folly Road and a secondary crossover on Young Road. (Refer to **Photographs 6 and 7**.)

Photograph 6: Standing at the road bend on Young Road looking in an eastern direction towards rural property containing two (2) residential dwellings located on the opposite site of the road to the subject land.

Photograph 7: Looking in a southern direction across secondary frontage of site to Young Road. A rural property with residential dwellings and an operating business (RCT Haulage) is located to the left of the property, on the eastern side of Young Road.

Other land uses located in the immediate vicinity include a variety of rural and semi-rural type uses, including West Coast Chaff (Stockfeed, Fodder & Supplements) which is directly opposite the subject site on the southern side of Folly Road. It is relevant to note that the substantially sized rural sheds and silo bins of West Coast Chaff are also clearly visible from Folly Road, as shown in **Photograph 8**.

Photograph 8: Standing on Folly Road, looking south towards visible built form on land located directly opposite the subject site.

2.0 PLANNING FRAMEWORK

The subject lot is zoned 'Rural' under the *Metropolitan Region Scheme* (**MRS**); and 'Rural' pursuant to the *City of Rockingham* (**City**) *Town Planning Scheme No. 2* (**TPS 2**).

The land has a primary frontage to Folly Road, which is subject to a resolution under **Clause 32** of the MRS. This means that this Application, which abuts land reserved in the MRS for the purpose of a regional road (which is subject to Clause 32), is required to be referred to the WAPC for transport related comments and recommendations. The (western) section of Folly Road adjacent to the subject site is identified in the MRS as being within the Primary Regional Road Reservation. The remaining majority of Folly Road which extends along most of the frontage of the property is identified in the MRS as being within the Other Regional Road Reservation (classified as a category 2). A category 2 road classification means that frontage access from the Other Regional Road Reservation may be allowed subject to approval. As the development proposal seeks to retain the existing crossover to Folly Road as the main vehicle entrance to the Temple, referral to the WAPC is required in accordance with *Del 2017/02 – Powers of Local Governments and Department of Transport MRS.*

2.1 STATE PLANNING FRAMEWORK

Perth and Peel @3.5million - South Metropolitan Sub-Regional Framework

The subject land is identified in the *Perth and Peel @3.5million* as part of an area identified for rural purposes.

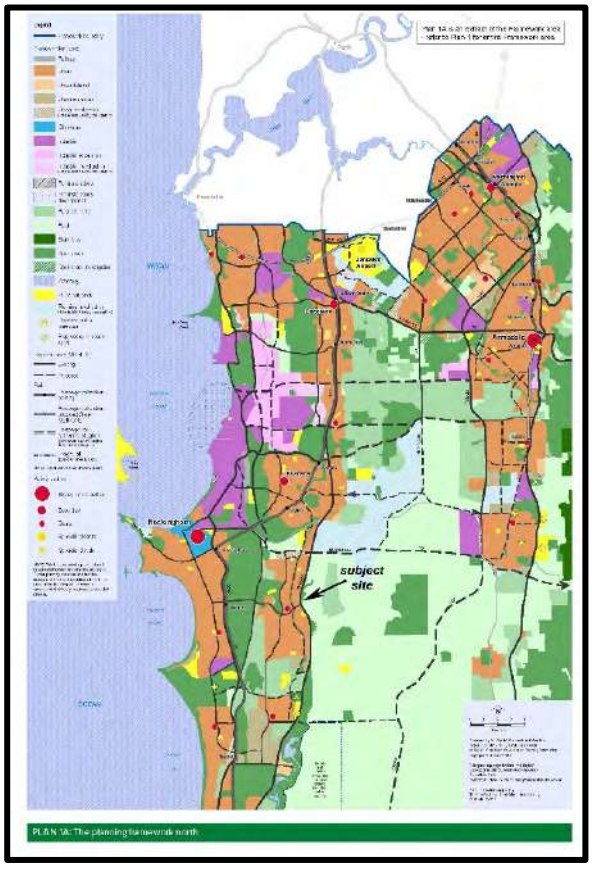

Figure 3:
Sub-Regional Planning Framework

The *South Metropolitan Sub-Regional Framework* further refines the strategic direction for this location, identifying the area and the subject land for rural land use type purposes. The classification of this area east of the Freeway was determined based on the land size characteristics of the general location.

More detailed strategic studies were then undertaken by the City to determine whether any of the rural classified land located within its local government boundaries should be identified and protected as 'priority agricultural land'. This included an assessment of the land identified as Rural to the east of the Kwinana Freeway, including the subject land. The outcome of the investigation by the City determined there was no land suitable for priority agricultural pursuits in this locality due to the low land capabilities of the area.

This area (including the subject land) is instead recognised in the City's *Rural Land Strategy* for its environmental significance and visual amenity. Alternative development and land use in this area is therefore able to be considered for approval in accordance with the requirements of the City's Local Planning Framework in a manner which ensures the environmental qualities of the area are protected and the visual amenity is maintained and enhanced.

This development proposal meets with this objective. The proposed Temple and Cultural Centre is an alternative development and use proposal capable of being considered for approval in the Rural zone (pursuant to TPS 2). This development is sensitively designed to ensure the ecological values of the site and the wider area are protected and that the built form outcome visually absorbs into the site in a manner which does not detract from the semi-rural character of this location.

STATE PLANNING POLICIES (SPP):

SPP 2.1: Peel-Harvey Coastal Plain Catchment

The subject land is located within the catchment area of the Peel-Harvey Estuarine System and is therefore subject to the policy requirements of SPP 2.1. It is recognised that the WAPC has prepared a new water planning policy (*draft SPP 2.9 – Planning for Water and Planning for Water Guidelines)*, which is currently out for advertising. Once gazetted, this new SPP 2.9 will replace SP 2.1. Further detail relating to SPP 2.9 and the specific requirements relating the development proposal the subject of this Application are provided below at **Table 4**.

In regard to the currently operative SPP 2.1, the proposed development is designed in a manner which ensures it will not result in any environmental damage to the Peel-Harvey Estuarine System. In addition to this, the environmental qualities of the land will be protected and nurtured by the Hindu community, as it is a fundamental value and teaching of the followers of this particular aspect of Hinduism.

The compliance of the development with the operative SPP 2.1 is detailed below at **Table 3**.

TABLE 3: COMPLIANCE WITH POLICY MEASURES of SPP 2.1	
SPP 2.1 REQUIREMENT	***PLANNING JUSTIFICATION***
5.1 *Except in accordance with this policy, land shall not be rezoned for urban purposes (which includes special residential but not rural residential or special or special rural) unless certification is received from the Water Authority that arrangements have been made so that connection to an adequate sewerage service, or alternative system satisfactory to the EPA and Health Department, will be available to all lots in the subdivision.*	The proposed development and land use does not require the land to be rezoned. The proposed land use of Place of Worship is capable of being considered for approval in the 'Rural' zone, following completion of the advertising process, in accordance with the requirements of TPS 2. **Requirement is therefore not applicable.**
5.2 *Proponents shall ensure that proposed changes to land zonings take account of land capability/suitability criteria with regard to the net effect that such changes are likely to have on the nutrient load discharging from that catchment into the Peel-Harvey Estuarine System.*	The proposed development and land use does not require the land to be rezoned. **Requirement is therefore not applicable.**
5.3 *Land used for intensive agriculture, which is likely to drain towards the Peel-Harvey Estuarine System shall be managed to reduce or eliminate nutrient export from the land.*	This Application does not propose to use the land for intensive agriculture. The proposed development and land use as a Place of Worship provides a suitable development alternative for this ecologically sensitive site which will result in no nutrient runoff into the Peel-Harvey Estuarine System. **Requirement is therefore not applicable.**
5.4 *The retention and rehabilitation of existing remnant vegetation is to be encouraged.* *A catchment target of 50% of land area established to deep rooted perennial plants, preferably local indigenous species but including high water using and suitable exotic species, shall be attempted. Remnant vegetation shall be retained along watercourses, or the margins shall be replanted to higher water-using vegetation, to maintain the stability of banks and exert some control on sediment and nutrient movement.*	The proposed development retains and rehabilitates the existing remnant vegetation on the land. The existing vegetation located within the western (floodplain) portion of the site is to be retained, which area sits outside the development footprint. The few remnant trees scattered around the eastern portion of the site (the area proposed for the development) are to be retained with additional vegetation proposed. A Landscape Master Plan prepared by the Project Architect is included with the Application which identifies the existing vegetation to be retained and the proposed vegetation to be planted, together with the identification of the selection of native and waterwise species. **Compliance achieved.**
5.5 *Subdivision proposals shall make provision for a drainage system, which maximises the consumption and retention of drainage on site. Biological wetland filters, or other means of drainage water retention or treatment approved by the EPA, will need to be incorporated into the drainage design possibly by amendment of the soils in drainage basins or by the provision of wetland filters with nutrient retentive soil amendments in accordance with drainage management to the satisfaction of the State Planning Commission and EPDA. Conservation reserves are not appropriate as biological wetland filters. Development near conservation reserves may require special constraints to protect and preserve them.*	This Application does not propose the subdivision of the property. **Requirement is therefore not applicable.**

***(cont.)* TABLE 3: COMPLIANCE WITH POLICY MEASURES of SPP 2.1**	
SPP 2.1 REQUIREMENT	***PLANNING JUSTIFICATION***
***5.6** Open space recreation areas should be carefully designed to retain native vegetation and water, and plant with water using vegetation to minimise the need to apply fertilizer and water. The treatment of open space soils with nutrient retentive soil amendment should be undertaken where phosphorus retention is low and the necessity for this soil amendment should be identified in nutrient management plans prepared by developers. Drainage should be designed to retain nutrients on site in most years; direct drainage off-site will not be permitted unless to the satisfaction of local government.*	The open space areas of the land are designed to retain the remaining native vegetation. The *Water Management Strategy* (**WMS**) prepared by *Waterinsights* details the proposal to retain as much stormwater on site as possible to ensure stormwater is managed to pre-development flow conditions. This is described in the WMS as a 'disconnected' drainage network which minimises the use of pipes and underground infiltration. The design is to rely on source surface infiltration and storage. This will involve, *inter alia*: the use of rainwater tanks to capture roof runoff for potable water supply and plumbing to toilet facilities; the use of greywater; raingardens; landscaped treatments; open swales; and tree pits. The plant species introduced to the eastern part of the site (outside of the floodplain area) will comprise of native and waterwise plant types in order to reduce irrigation demands and remove the need for fertiliser and pesticide use. **Compliance is achieved.**
***5.7** The Commission may consider upon the advice of the Water Authority, the Health Department and the EPA, small-scale subdivisional developments with alternative wastewater treatment and effluent disposal systems for evaluative purposes. The onus of proof will rest with the subdivider to provide sufficient technical and engineering evidence that alternative systems or site modifications remove any adverse effects on public health, water resources or the environment while not detrimentally impacting on the character of the area.*	This Application does not propose the subdivision of the property. **Not applicable.**
***5.8** Local Government is responsible for the supervision and management of alternative effluent systems, particularly Aerated Treatment Units (ATUs).*	This development proposal will be serviced by ATUs (now termed: secondary treatment units with nutrient removal system) on site, as reticulated sewer has not yet been extended to service this location. The size and location of the ATUs and the flatbed leach drain are illustrated on the attached drawings and detailed in the WMS. The system, location and overall design is confirmed as compliant with the relevant environmental regulations. **Compliance is achieved.**
***5.9** Approvals will be required from the Water Authority with regard to water supply from bores, wells, rivers in proclaimed water management areas and WAWA drains and for connection of private and local authority drains to WAWA drains. The limited availability of water may constrain some types of development.*	An unlicenced bore exists on the land. There are no available licences in the area. The bore is therefore limited for use to irrigate an area of 2000m^2 only, until such time that a licence becomes available. The bore is also capable of providing additional provision for firefighting purposes. **Compliance is achieved.**

SPP 2.8: Bush forever

The subject land is not identified as being within a Bush Forever site.

It is situated to the immediate east of Bush Forever Site 418. (Refer to **Figure 4**: Adjacent Bush Forever Site 418.)

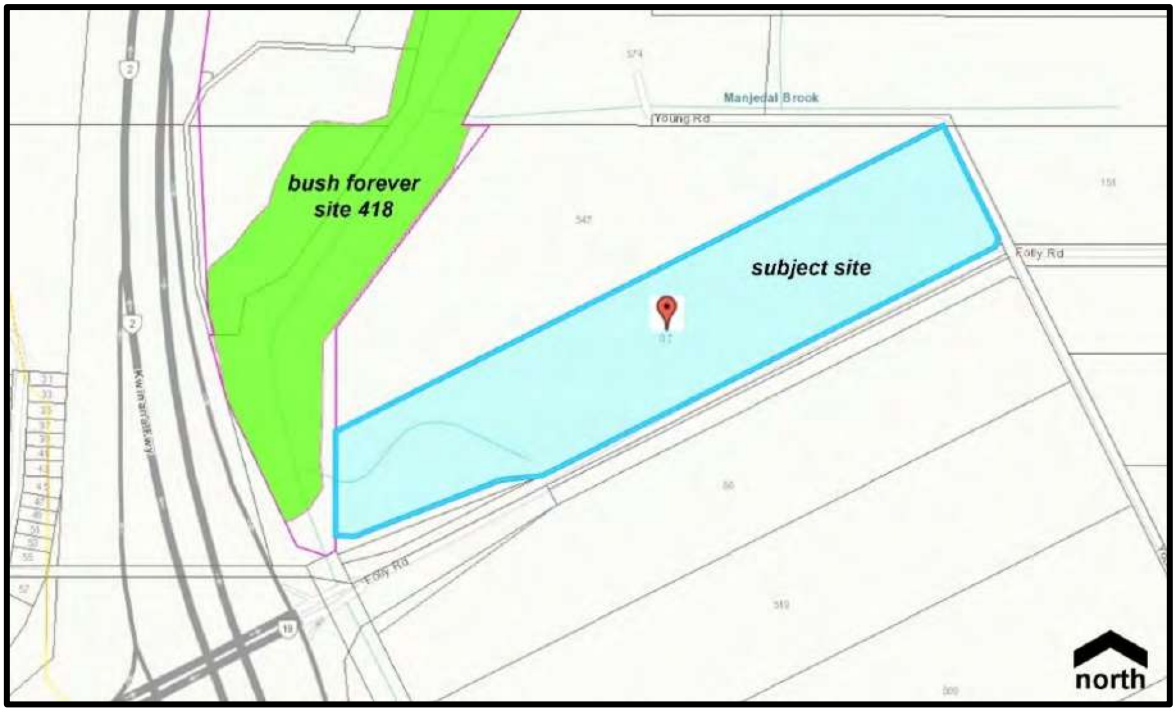

Figure 4: Proximity of subject land in relation to Bush Forever Site 418 *(source: PlanWA)*

The development proposal is therefore not subject to the requirements of SPP 2.8.

It is however acknowledged that the subject land shares its western side boundary with the Bush Forever Site 418, which boundary has formed part of the early design considerations for the proposed development. In this regard, the substantial set back of the development footprint to the area outside of the Floodplain ensures the protected vegetation of the Bush Forever Site will not be in any way impacted by the proposed development and use on the eastern part of the land.

SPP 2.9: Draft Planning for Water

In the event that SPP 2.9 is gazetted in accordance with the advertised version of the document, the development and use have been considered and appropriately designed to meet with each of the overarching requirements. The compliance of the development with the draft SPP 2.9 is detailed at **Table 4**.

TABLE 4: COMPLIANCE WITH REQUIREMENTS OF SPP 2.9	
SPP REQUIREMENT	***PLANNING JUSTIFICATION***
7.1 General measures *a) Water resources should be considered at the earliest possible stage of the planning process and all subsequent stages in accordance with the Guidelines.* *b) Proposals are to be accompanied by sufficient information to demonstrate appropriate protection and management of water resources relating to relevant policy outcomes. The information provided should be in accordance with the Guidelines, which specify instances where a Water Management Report is required and what it must contain.* *c) Proposals and supporting information should be referred to relevant agencies and licensed water service providers in accordance with the Guidelines.* *d) Proposals should consider water resource related issues associated with climate change.* *e) Planning decisions (except development applications) should consider cumulative impacts on water resources. Where the cumulative impact is considered significantly detrimental, the proposal should not be supported.*	The WMS provides the necessary information which confirms compliance is achieved with the general requirements of SPP 2.9. The WMS has been prepared in accordance with best management practice as defined in *Better Urban Water Management Guidelines.* It incorporates a range of water management strategies which ensure the water resources of the locality are protected, including water conservation and the effective management of stormwater on site. The outcome being that the land being used for this purpose will have no detrimental impact on the environment. **Compliance is achieved.**
7.2 Environmental, social and cultural values ***Wetlands and waterways*** *Proposals should, in accordance with the Guidelines:* *a) identify wetlands and their buffers and waterways and their foreshore areas and/or reserves;* *b) facilitate the transfer of wetland buffers and waterway foreshore areas to public ownership, where appropriate;* *c) retain and/or restore vegetation important for the long-term health of water resources within wetlands buffers and waterway foreshore areas with the restoration of vegetation should preferably using endemic species;* *d) where possible, maintain and restore ecological linkages;* *e) identity appropriate wetland buffers and foreshore areas to protect public health from mosquito borne diseases;* *f) identify and protect sensitive water resources;* *g) where possible, protect and enhance vegetation within sensitive water resource areas deep-rooted native and endemic species; and* *h) ensure that land uses that have the potential to significantly alter the hydrological regime are managed to protect water resources and associated ecological and aquatic values.* ***Water quality*** *Proposals should, in accordance with the Guidelines:* *i) minimise export of nutrient and non-nutrient*	An *Environmental Assessment Report* (**EAR**) has been prepared by *Coterra Environment* in support of the proposed development. The EAR provides the following information to achieve compliance with Section 7.2 of SPP 2.9. a) The ERA identifies the location of the adjacent Folly Pool *Conservation Category Wetland* (**CCW**). The ERA identifies the location of the Floodplain. b) The CCW is not located within the boundaries of the subject land. No wetland buffers are required to be transferred to public ownership. c) The existing vegetation is to be retained, expect for four (4) trees. One (1) of the trees has been identified as being unhealthy and poses a risk to human safety. This tree is identified on the plan for removal. The remaining three (3) trees are to be removed for bushfire safety purposes. The Landscaping Plan illustrates the proposed planting of native tree species over the site to assist in the maintaining the long-term health of the nearby water resources, including Folly Pool. d) No ecological linkages are required to be restored or maintained within the boundaries of the site. e) Mosquito management recommendations are contained in the EAR.

contaminants entering water resources *j) avoid adverse effects on the natural and built environment and/or human health when undertaking subdivision and development of land containing acid sulfate soils or contaminated sites;* *k) be located on land where nutrient export to sensitive water resources can be effectively managed, when they involve:* - *agriculture-intensive (particularly annual horticulture)* - *animal husbandry - intensive* - *animal establishments or rural pursuits involving stocking rates that exceed recommended stocking rates* *Flexibility to this measure may be applied where the proposal is located within priority agricultural land. In areas where nutrient export cannot be effectively managed, closed agricultural systems are encouraged; and* *l) demonstrate that infrastructure and site management practices are in place to manage contaminants, particularly within sensitive water resource areas and public drinking water source areas.* *Local planning schemes and local planning policies should, in accordance with the Guidelines:* *m) include site-specific measures where relevant to manage the potential impacts on water quality and protect water resources.* ***Social*** *Proposals should, in accordance with the Guidelines:* *n) maintain or enhance safe public access to water resources, except where at the detriment of ecosystem health and/or public drinking water source protection; and* *o) maximise opportunities for water in the landscape to enhance amenity, senses of place, liveability and contribute to urban greening and mitigation of urban heat.* ***Cultural*** *Proposal should, in accordance with the Guidelines:* *p) identify, protect and, where appropriate, promote Aboriginal and other historic cultural heritage places and values.*	f) The Folly Pool CCW is identified and it is confirmed in the EAR that the development is sufficiently set back and outside of the floodplain area to ensure the protection of the wetland and its buffer. g) The EAR provides suitable recommendations for the proposed planting of native vegetation species, which has guided the selection of species identified on the proposed Landscaping Plan. h) The WMS ensures that the natural hydrological regime is maintained with minor and major rainfall events managed on-site, with no flooding caused by the development as a result of the strategy measures. ***Water quality*** i) The WMS proposes management of the development to ensure no contaminants are exported from the site. j) The subject site is identified on the *Acid Sulfate Soils* (**ASS**) Risk Mapping prepared by DWER as being located within 'Category 2', being that the site has a *'moderate to low risk of ASS occurring within 3.0m of the natural soil surface but 'high to moderate' risk of ASS beyond 3.0m of the natural soil surface.'* An ASS self-assessment form will be completed and an ASS investigation undertaken, should it be determined through that process that there is potential for ASS to be impacted. These processes are confirmed in the SSE as being able to be satisfactorily addressed as conditional requirements of the development approval. k) The development proposal does not involve any of the land uses identified. l) The WMS and the *Site and Soil Evaluation* (**SSE**) prepared by *Waterinsight* demonstrates that water is able to be appropriately managed to ensure the development will not result in any adverse impact on the nearby water resources and the ecological values. m) The Application accords with the relevant requirements of the Local Planning Scheme and Local Planning Policies, as demonstrated in the technical investigations prepared in support of this development proposal and this Planning Report. ***Social*** n) The proposal does not include any community access to the Floodplain area. This section of the site is to be protected from development and no entry into this area will be permitted by the Temple community to ensure the sensitive

	environment surrounding Folly Pool is protected. o) The proposed development and use ensure the protection of Folly Pool and the associated floodplain. Additional features of the design also provide opportunities for water in the landscape, including the proposed fresh water (chlorinated) water feature. p) The subject land is located within the Gnaala Karla Booja country. There are no Aboriginal sites recorded on the subject land. The natural environmental values of the site are protected. There are no listed European Heritage sites within the boundaries of the site. **Compliance is achieved.**
7.3 Riverine flooding *The following measures apply to flood prone areas that are dominated by riverine processes. Coastal storm surge and other inundation associated with water bodies dominated by tidal processes is to be addressed in accordance with State Planning Policy 2.6 State Coastal Planning. Where there are any inconsistencies between this policy and the flood measures in Section 5.2 of State Planning Policy 3.4 Natural Hazards and Disasters, this policy shall prevail.* *Proposals should, in accordance with the Guidelines:* *a) identify flood prone areas;* *b) not rezone, subdivide, or propose additional development that intensifies land use within a defined floodway;* *c) maintain the free passage and temporary storage of floodwaters;* *d) incorporate minimum habitable floor level of 0.5 metres above the expected 1 percent annual exceedance probability flood event (or alternative height above the defined flood event as defined in an endorsed floodplain development strategy);* *e) consider the flood risk management principles when replacing existing development within a floodway; and* *f) be informed by advice from the Department of Water and Environmental Regulation, if flooding is likely and no flood mapping exists.*	a) The portion of the land contained within the Floodplain is identified on the Site Plan. b) The development is setback from the 1 in 100-year flood line by 20 metres. The proposed development therefore does not propose any land use within the floodplain area. c) The area within the floodplain is maintained in its natural state to ensure it continues to function as the floodplain associated with Folly Pool CCW. d) The development is proposed to meet the required 0.5m separation distance between the finished floor level and the defined 1:100 year flood level identified in the *North-East Baldivis Flood Modelling and Drainage Studies* (DoW 2015). e) No development exists or is proposed within the floodplain area. f) The flood mapping for the area is defined in the *North-East Baldivis Flood Modelling and Drainage Studies* (DoW 2015). **Compliance is achieved.**
7.4 Infrastructure and supply ***Water demand and supply*** *Proposal should, in accordance with the Guidelines:* *a) minimise future water demand by ensuring that development is designed to conserve and use water efficiently; and* *b) demonstrate secure, sustainable, and fit-for-purpose drinking and non-drinking water supply for domestic consumption, public open space irrigation and industry. This should*	***Water demand and supply*** a) The WMS includes a water conservation strategy which is designed to ensure the site conserves both potable water and groundwater. b) The development proposes water conservation measures such as rainwater tanks to reduce the amount of potable water carted to the site, the use of water efficient fixtures and fittings; rainwater tanks are to be plumbed to the toilet facilities, the use of

include consideration of future rainfall projections that incorporate climate change and, where a licence is required, within water allocation limits.	waterwise landscaping and efficient subsoil drip irrigation design, the use of greywater, and signage being posted around the development to remind guests to conserve water.
Dams, crossings, and rural drains	***Dams, crossings and rural drains***
	This section is not applicable. The proposal does not propose the construction of a dam, crossing or rural drain on the property.
Stormwater and groundwater	***Stormwater and groundwater***
Proposals should, in accordance with the Guidelines:	
f) ensure stormwater and groundwater management systems are designed and constructed in accordance with the Decision process for stormwater management in Western Australia, Stormwater Management Manual for Western Australia and the Australian Rainfall and Runoff Guidelines, and in consultation with the relevant water management agency and/or infrastructure manager(s).	f) The development proposal is supported by the WMS, which is designed in accordance with established practices as detailed in *Better Urban Water Management Guidelines* (WAPC, 2008); *Floodplain Management Water Facts 14* (Water and Rivers Commission, 2000); Government Sewerage Policy (WAPC, 2019); and *Stormwater Management Manual for Western Australia* (DoW 2004 – 2007).
g) provide for the retention, detention, conveyance, and treatment (where required) of stormwater and manage groundwater inundation, including treatment of groundwater discharges, which also protecting and enhancing environmental functionality, local amenity, and liveability: and	g) The WMS describes the objectives for stormwater and groundwater management to ensure that the development does not result in flooding or increase the risk of flooding to external properties. This management involves a proposal to create a 'disconnected' drainage network which minimises the use of pipes and underground infiltration. The strategy is to create surface infiltration and storage at the source in order to replicate the current hydrological regime. The other management strategies described in the WMS include the retention of the existing vegetation and ensuring the development achieves the required clearance from the natural surface to the groundwater levels is achieved (i.e., a minimum clearance of 0.5m).
h) incorporate water sensitive design, in the early stages of the planning process. This should include setting aside sufficient land for drainage areas as part of an integrated stormwater drainage system.	h) The MWS provides a conceptual strategy which focuses on water sensitive design, as required.
Wastewater	***Wastewater***
i) Proposals are required to connect to or provide for reticulated sewerage where: *i. Deemed reasonable;* *ii. Required on planning grounds; or* *iii. The decision maker determines that the absence of reticulated sewerage will pose an unacceptable risk to public health, the environment or water resources.*	i) This development seeks approval for the site to utilise on-site wastewater disposal. The attached SSE report has determined that the proposed development is capable of servicing with a secondary treatment system with nutrient removal in order to treat wastewater prior to being disposed via leach drains.
Refer to the Guidelines for details on the assessment of these criteria; *j) Proposals for on-site wastewater disposal may be considered where the decision maker is satisfied that:* *i. Reticulated sewerage is not required in accordance with measure 7.4(l) of this policy;* *ii. The highest groundwater level is greater than 0.5m from the natural ground surface for rezoning proposals to create unsewered lots less than 1 hectare in size;*	j) The following justification is provided in support of the development being capable of servicing via an on-site disposal system. i. The City's TPS 2 does not mandate the requirement for the site to be connected to reticulated sewerage. ii. The development does not propose rezoning or the creation of unsewered

iii. Each lot can accommodate on-site wastewater disposal in accordance with AS/NZS 1547:2012 On-site domestic wastewater management where relevant; *iv. The site requirements for on-site wastewater disposal outlined in the Guidelines can be met; and* *v. Development will be serviced by an appropriate on-site wastewater system that will manage risk to the environment and public health were relevant.* *k) Proposals are, in accordance with the Guidelines, encouraged to incorporate the beneficial use and re-use of wastewater; and* *l) Local planning schemes should in accordance with the Guidelines require the provision of reticulated sewerage where appropriate.*	lots less than 1 hectare. This requirement is therefore not applicable. It should however be noted that the treated wastewater is to be disposed in an area with at least 1.5m separation to the maximum groundwater levels. The WMS states that a slightly raised (less than 0.5m) effluent disposal area will be required to provide adequate clearance to groundwater from the natural surface. iii. This proposal does not involve the creation of new lots. This requirement is therefore not applicable. iv. The WMS confirms that the site requirements for on-site wastewater disposal in the Guidelines are achieved. v. A secondary treatment system with nutrient removal capabilities is to be used on site. The effluent land application areas are to be located to the west of the Temple (flatbed leach drain) and the Priest residence (ATU), which ensures adequate buffers are maintained to the Water Corporation drains, flood plain area as well as the groundwater levels. k) The WMS proposes the inclusion of a greywater recycling system as part of the water conservation strategy. l) The City's TPS 2 does not require reticulated sewerage for this site. **Compliance is achieved.**
7.6 Specific area measures: Peel-Harvey coastal plain catchment *In addition to all other measures contained in this policy, specifically 7.2 water quality, the following measures apply to planning proposals in the Peel-Harvey coastal plain catchment (identified on the policy map of Peel-Harvey Coastal Plain Catchment). Proposals should, in accordance with the Guidelines:* *a) have regard to the water quality objectives contained in Environmental Protection (Peel Inlet – Harvey Estuary) Policy Approval Order 1992 for the Peel Harvey estuarine system;* *b) protect remnant vegetation and maintain or increase deep-rooted perennial vegetation coverage to improve water quality;* *c) protect and revegetate waterways and drains with endemic plant species to improve the values to the Peel-Harvey estuarine system and/or engineer and manage rural drains to reduce nutrient export; and* *d) manage nutrient export when they involve:* *– agriculture – intensive* *– animal husbandry – intensive* *– animal establishments or rural pursuits that exceed recommended stocking rates*	***7.6 Specific area measures: Peel-Harvey coastal plain catchment*** a) The proposal includes an SSE and WMS which recommend strategies to ensure the development adheres with the water quality objectives of the Peel Harvey Catchment. b) The proposal seeks to retain the remnant vegetation on the land and increase the deep-rooted perennial vegetation coverage to ensure the water quality is protected and improved. c) No waterways exist within the development area. No agricultural use is proposed as part of this proposal. **Compliance is achieved.**

SPP 3.7: Planning in Bushfire Prone Areas

The subject land is designated within an area identified as bushfire prone by the *Fire and Emergency Services Commissioner*. Refer below to **Figure 5** which illustrates the extent to which the Map of Bush Fire Prone Area covers this location.

Figure 5: Map of Bush Fire Prone Area, FESA *(source: SLIP, 2021)*

Accordingly, the Application is supported by a comprehensive *Bushfire Management Plan* (**BMP**) and *Emergency Evacuation Plan* (**EEP**) prepared by *envision*.

The BMP confirms that the development satisfies the relevant requirements of SPP 3.7. The proposal demonstrates that the habitable buildings are located with a BAL level which does not exceed BAL 29; and that the site provides its main access to the primary street (Folly Road) and an emergency services and service vehicles (including, the water truck) access only road and crossover from the secondary road frontage (Young Road).

The BMP includes specific measures to meet the requirements of SPP 3.7, including but not limited to:

1. Two (2) standalone water tanks with minimum capacities of 75,000L and 50,000L are to be maintained on site for exclusive firefighting purposes, in accordance with Schedule 2, of the SPP 3.7 Guidelines. These tanks are to be made accessible to the emergency access road and appropriately sign posted.
2. An *Asset Protection Zone* (**APZ**) being established around each habitable building, which allows for enhanced landscaping to be incorporated in the areas outside of the APZ to provide for further absorption of the built form within this semi-rural setting, as well as offering further screening from headlight glare from vehicle movements in the car park, which might occur on occasion.

3. The APZ is to be maintained to satisfy the requirements of the APZ Standard as described in *Element 2, Schedule 1 of the SPP 3.7 Guidelines, including a canopy stratum up to 15% and a managed understory avoiding the placement of shrubs under a tree canopy.*
4. Firebreaks are to be installed around the periphery of the site and maintained to the standards and specifications of the City.
5. An emergency access service road is to be constructed and maintained in accordance with Element 3, Table 6 of the SPP 3.7 Guidelines.
6. The primary driveway section and car park is to be constructed to a public road standard and the remaining private driveway areas are to be constructed in accordance with Table 6, Column 4 of the SPP 3.7 Guidelines. The provision of directional signage is also stated as a requirement.
7. A notification, pursuant to Section 70A of the *Transfer of Land Act 1893* is to be placed on the Certificate of Title for the land with a Bushfire Attack Level of 12.5 or above, advising of the existence of a hazard or other factor. The notification is to state the following:
8. *'This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and is subject to a Bushfire Management Plan. Additional planting and building requirements may apply to development on this land.'*
9. The adoption of the EEP, which plan is attached to the BMP submitted with this Application.

SPP 5.4: Road and Rail Noise (September 2019)

The subject land is partly located within the specified trigger distances of the Kwinana Freeway (classified as a 'strategic freight or major traffic route') and Safety Bay Road (classified as an 'other significant freight/traffic route'), as defined by SPP 5.4. (Refer to **Figure 6**.)

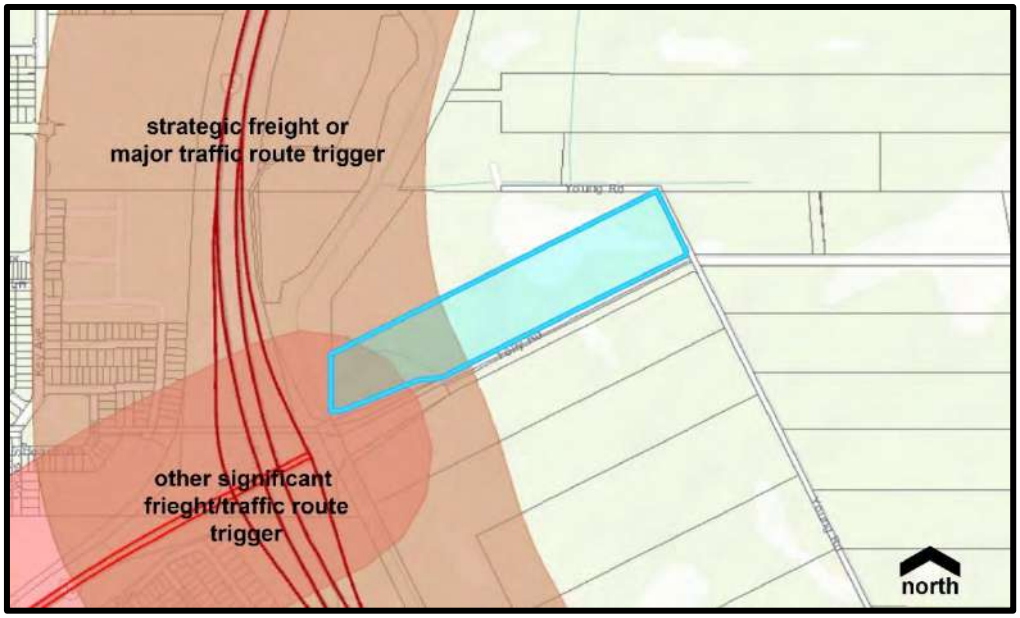

Figure 6: Road and Rail Noise Trigger Distance *(source: PlanWA, 2021)*

At clause 4.1.2 of SPP 5.4, it is stated that any lot which is partly affected by a trigger distance is required to be assessed against the requirements of the policy to determine the extent to which the land might be affected by traffic generated noise and whether any form of mitigation is required.

In accordance with the requirements of SPP 5.4, an initial screen assessment has been undertaken by PWA in accordance with *Table 2: Noise Exposure Forecast* of the associated SPP 5.4 Guidelines. The outcome of this assessment is detailed below in **Table 5**.

TABLE 5: SPP 5.4 – NOISE EXPOSURE FORECAST

TRANSPORT CORRIDOR CLASSIFICATION	**NUMBER OF LANES** *(Both directions, including bus/priority lanes and entrance/exit ramps.)*	**FORECAST NOISE EXPOSURE CATEGORY** *(Based on lot distance(m) from edge of nearest main road carriageway (not entrance/exit ramps.)*	**FORECAST EXCESS NOISE LEVEL, dB/ POLICY REQUIREMENTS**
Strategic freight/major traffic route (Kwinana Freeway)	9 to 10 lanes	Distance from edge of main road carriageway of Freeway to edge of Floodplain and nearest edge of the development footprint: 460m	0 or less/No further measures.
Other significant freight/traffic routes (Safety Bay Road)	Urban Region Scheme areas 60-80 km/hr: 1 to 2 lanes	Distance from the nearest edge of Safety Bay Road to the edge of Floodplain on the property: 430m	0 or less/No further measures.

This assessment confirms that the development area of the site, which is proposed to the east of the floodplain, will not be impacted by traffic noise from the Freeway or Safety Bay Road to the extent that mitigation is necessary.

Government Sewerage Policy (September 2019)

The subject site is identified as being within a 'sewerage sensitive area' due to its location being within the Estuary catchments of the Swan and Scott Coastal Plains and being within 1 kilometre of a significant wetland.

The site is **not** located within a public drinking water source area.

The following **Table 6** confirms the compliance of the development with the relevant requirements of the *Government Sewerage Policy* (**GSP**).

TABLE 6: COMPLIANCE WITH POLICY MEASURES OF THE GSP

REQUIREMENT	***PLANNING JUSTIFICATION***
5.1 – Reticulated sewerage *Requirement to connect to reticulated sewerage* *Planning proposals are required to connect to or provide for reticulated sewerage:* *1. Where the provision of reticulated sewerage is required by a local planning scheme or a policy, strategy or plan endorsed by the Western Australian Planning Commission;*	The SSE and the WMS confirm that the site can support the proposed development with effluent disposal being managed by an on-site waste disposal system in accordance with the requirements of the GSP. As the site is located within the Peel-Harvey Catchment and is identified as being within a Sewerage Sensitive Area, the site is required to be serviced by a secondary treatment unit with

2. *When any stage or part of any future or proposed subdivision or development is already connected to reticulated sewerage;* 3. *Where the responsible authority determines any future or proposed subdivision or development can be reasonably connected to reticulated sewerage;* 4. *Where the responsible authority determines that the absence of reticulated sewerage will jeopardise future land uses provided for in:* a. *A proposed or approved local planning scheme or scheme amendment; or* b. *In a proposed or endorsed Western Australian Planning Commission policy, strategy, or plan;* 5. *Where the responsible authority determines that the absence of reticulated sewerage will prejudice, physically or financially, the ability to provide sewerage to the local area; or* 6. *Where the responsible authority determines that the absence of reticulated sewerage will pose an unacceptable risk to public health, the environment or water resources. This includes instances where:* a. *The minimum site requirements for on-site sewage systems (as defined in section 5.2) cannot be reasonably met;* b. *The impact of on-site sewage disposal is deemed likely to have a detrimental impact on the water quality of public drinking water source area, sewage sensitive area or other waterway or wetland. Where approval of any future or proposed application without connection to reticulated sewerage is likely to set a precedent for similar proposal in the local water catchment, the cumulative impact will be considered; and* c. *Urban, industrial, or commercial subdivision is proposed in Priority 3 public drinking water source areas; or* 7. *Where land is being rezoned for the creation of lots less than one hectare and the highest groundwater level is less than 0.5m below the natural ground level.*	nutrient removal system prior to disposal via leach drains. The site-specific requirements for this system are detailed in the *Waterinsight* reports submitted with this Application. Further reference to the findings of these technical investigations in support of on-site effluent disposal systems for this development is provided below in response to 5.2. **Compliance is achieved.**
5.2 – On-site sewage disposal *Where the provisions of 5.1.1 do not apply, on-site sewage disposal may be considered where the responsible authority is satisfied that:* • *Each lot is capable of accommodating on-site sewage disposal without endangering public health or the environment; and* • *The minimum site requirements for on-site sewage disposal outlined in this section and Schedule 2 can be met.* ***5.2.1 Lot sizes*** *The provisions of this part of the Policy relate to minimum site requirements for on-site sewerage disposal.*	***5.2 – On-site sewage disposal*** The technical investigations undertaken by *Waterinsight* confirm that the proposed development is capable of being serviced by on-site sewage disposal without endangering public health or the environment. Further, the proposal meets the minimum site requirements for this method of sewage disposal in accordance with this section of the GSP and Schedule 2. ***5.2.1 Lot sizes*** The proposal meets with the minimum lot size requirement defined at 5.2.1 of the GSP as being 1.0 hectare. The subject land has a total area of 7.4361ha. The development footprint and

In sewage sensitive areas, the minimum lot size requirement is one (1) hectare. It is noted that smaller lot sizes in sewage sensitive areas can be considered for non-residential, commercial, and industrial subdivision on a case-by-case basis.	sewerage treatment system are contained within the eastern portion of the site, being setback from the defined floodplain. The portion of the site proposed for the development has a total approximate area of 3.2 hectares.
5.2.2 Separation from water resources *An on-site sewage system is not to be located within:* • *A wellhead protection zone or on Crown land within a reservoir protection zone;* • *100 metres of the high water mark of a reservoir or 100 metres of any bore used for public drinking water supply where:* – *A wellhead protection zone or reservoir protection zone has not been assigned; or* – *Where existing lots would be rendered undevelopable by the wellhead protection zone;* • *30 metres of a private bore used for household/drinking water purposes;* • *100 metres of a waterway or significant wetland and not within a waterway foreshore area or wetland buffer. The separation distance should be measured outwards from the outer edge of riparian or wetland vegetation;* • *100 metres of a drainage system that discharges directly into a waterway or significant wetland without treatment; or* • *Any area subject to inundation and/or flooding in a 10 percent Annual Exceedance Probability (AEP) rainfall event.*	***5.2.2 Separation from water resources*** The attached WMS and SSE confirms that: 1. The effluent disposal system is **not** located within a wellhead protection zone or on Crown land. 2. The proposed system is **not** located within 100 metres of the high-water mark of a reservoir or 100 metres of any bore used for public drinking water supply. 3. The system is **not** to be located within 30 metres of a private bore used for household/drinking water purposes. 4. The systems are to be located at least 100 metres from the nearest waterbody. 5. The systems are to be located at least 100 metres from the drainage system that discharges into the nearest waterbody. 6. The systems are to be located outside of the area subject to inundation.
5.2.3 Separation from groundwater *The discharge point of the on-site sewage system should be at least the following distances above the highest groundwater level, taking into account the range of seasonal groundwater conditions in the context of long term variability and possible groundwater rise following development:* • *Two metres in public drinking water source areas;* • *1.5 metres in sewage sensitive areas; and* *Where the use of fill is proposed to achieve separation distances, proponents may be required to provide additional information to demonstrate that solutions are effective, do not impact on other lots through water diversion, are not cost prohibitive and will not compromise amenity or landscape values.*	***5.2.3 Separation from groundwater*** The WMS confirms that the treated wastewater can be disposed in an area on the land with at least 1.5m separation distance to the maximum groundwater levels. Further, it is indicated that a slightly raised (approximately 950mm) disposal area will be required to provide the adequate clearance to groundwater from the natural surface.
5.2.5 Type of on-site treatment system required *Secondary treatment systems with nutrient removal will generally be required in public drinking water source areas and sewage sensitive areas.*	***5.2.5 Type of on-site treatment system required*** The SSE and WMS recommend the use of secondary treatment systems with nutrient removal, in accordance with the Department of Health requirements.

In all other instances, secondary treatment systems should only be required to address site-specific physical or environmental constraints (refer to Schedule 2). *In rural and remote areas, determination of the type of treatment system required should consider the availability of maintenance personnel required to service secondary treatment systems in accordance with Department of Health requirements.*	**Compliance is achieved.**
5.3 – Information to support planning proposals *The method of sewage disposal should be determined at the earliest opportunity in the planning process.* *Information outlined in Schedule 1 should be provided in support of a planning proposal to demonstrate that the long-term sustainable sewerage servicing needs of the area and possible future intensification of development have been taken into consideration. The information required is to be commensurate to the scale and nature of the proposal.* ***5.3.1 Site and soil evaluations*** *Where required, site and soil evaluations should be provided in accordance with AS/NZS 1547 On-site domestic wastewater management. The requirements of the site and soil evaluation may be varied, based on existing site information or where health or environmental impacts are considered minimal.*	This proposal includes the necessary information required to consider the sewage disposal method. The SSE and the WMS attached to this Application provide this information to achieve compliance with this specific requirement. **Compliance is achieved.**

SPP 7.0: Design of the Built Environment

The proposed development form is highly articulated, incorporating detailed design features and materials which ensure the built form fits within and connects to the surrounding rural amenity.

The design comfortably meets with each of the overarching Design Principles of SPP 7.0, as detailed below at **Table 7**.

The City sought expert advice from its appointed *Design Review Panel* (**DRP**) on the architectural design, site layout and landscaping of the development and its overall compliance with the design principles of SPP 7.0. This meeting was held on 30 May 2022. The Project Architects presented to the DRP to provide an overview of the proposal and explained the proposed additional measures undertaken to respond to the four (4) items listed by JDAP as requiring resolution prior to the Application being presented for final determination, which includes landfill requirements, hours of operation, bushfire management regarding landscaping and screening; and the proposed dwelling accommodation.

The expert advice provided by the DRP unanimously confirmed support for the development in response to each of these items.

The development as presented to DRP and again to JDAP continues to address each of the ten (10) fundamental design principles in achieving a 'good design' outcome for this site, as noted in **Table 7**.

TABLE 7: COMPLIANCE WITH DESIGN PRINCIPLES OF SPP 7.0

DESIGN PRINCIPLE	***PLANNING JUSTIFICATION***
1. Context and character *Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*	The design sensitively addresses and visually connects with the surrounding natural environment through the proposed use of traditional building materials and colours for the buildings and the clustering of the built form. The design of the buildings with sweeping verandahs and pitched roofs further connects the development to the semi-rural character of this location.
2. Landscape quality *Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*	A Landscape Master Plan has been prepared, which is designed to strengthen the connection of the community with the surrounding environmental features of the rural landscape. This is achieved by through the proposed strategic planting of native trees and shrub species over the site in a way which ensures no increased bushfire threat whilst encouraging a stronger physical and spiritual connection is created between the community and the natural environmental features of this rural landscape.
3. Built form and scale *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.*	The built form and scale of the Temple and its associated structures are appropriate to its function and minimised in form and scale to ensure the important environment values of the setting are protected and enhanced.
4. Functionality and build quality *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.*	The buildings are to be constructed using traditional construction materials comprising of rendered walls with limestone cladding, timber framing for the interconnected verandahs and colorbond roof sheeting. These durable materials and finishes are compatible with the rural landscape and will ensure the built form is resilient to wear and tear and is climate responsive.
5. Sustainability *Good design optimises the sustainability of the built environment, delivering positive environmental, social, and economic outcomes.*	The design of the built form maximises its connection with the surrounding natural environment to ensure a positive environmental, social, and economic outcome. The measures include: restoring the vegetation, planting additional native trees and shrubs, incorporating water as a feature of the design, protecting the floodplain, and removing the risk of nutrient loads to nearby water resources.
6. Amenity *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.*	The design of the Temple includes a range of supporting religious activities, which encourages a multipurpose use of the site which extends beyond worship practices. This ensures that the internal and external amenity is optimised for the Hindu community as well as welcoming the local residents to engage in the activities which are to be held at the site.

***(cont.)* TABLE 7: COMPLIANCE WITH DESIGN PRINCIPLES OF SPP 7.0**	
DESIGN PRINCIPLE	***PLANNING JUSTIFICATION***
7. Legibility *Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.*	The buildings incorporate clear connections and identifiable external elements to provide external and internal direction.
8. Safety *Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*	The design of the land maximises opportunities for casual surveillance over the site.
9. Community *Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.*	The Temple and its associated activities are specifically designed to cater for the new and existing members of the local community who practice the Hindu faith. The design aims to encourage the community to visit for worship at the Temple as well as engage in other religious activities and celebrations; as well as informal gatherings within the open space areas.
10. Aesthetics *Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.*	The Temple Proper and the associated buildings are architecturally designed. The proposed development is the result of a detailed design process which has produced a high-quality design of strategically placed individual buildings with connecting spaces. The built forms are carefully designed to fit with the rural character and arranged and linked to encourage movement and connection between the Temple Proper and the cultural spaces. The environmental qualities of this location are enhanced through the community's encouragement to move in quiet reflection between the buildings on the land, providing the community with continual engagement of the senses with the natural landscape.

DEVELOPMENT CONTROL (DC) POLICIES:

DC Policy 5.1: Regional Roads (Draft, January 2018)

The frontage of the subject site to Folly Road is described in the draft *DC Policy 5.1 – Regional Roads* as a 'Regional Road', as this section of Folly Road is partly reserved under the MRS as a 'Primary Regional Road', with the remaining section being reserved as 'Other Regional Roads'.

The compliance of the vehicle access proposal for the development to and from the Regional Road network is detailed in the following **Table 8**.

TABLE 8: COMPLIANCE WITH *draft* DEVELOPMENT REQUIREMENTS OF DC POLICY 5.1	
REQUIREMENT	***PLANNING JUSTIFICATION***
3.3.1 *– In considering applications for access on regional roads, the effects of the land development proposals on* ***traffic flow*** *and* ***road safety*** *will be the primary consideration. The more important the regional road in the road hierarchy, the greater the importance attached to these factors. In general, the WAPC will seek to minimise the creation of new driveways on regional roads and rationalise existing access arrangements.*	The land has a primary frontage to Folly Road, which is subject to a resolution under **Clause 32** of the MRS. The section of Folly Road which extends along most of the frontage of the subject property is identified in the MRS as being within the 'Other Regional Road' Reservation (classified as a category 2 road). A category 2 road classification means that frontage access from the 'Other Regional Road' Reservation may be allowed subject to approval (following referral to the WAPC for transport related comments and recommendations). The existing crossover to Folly Road is positioned in the area identified as forming part of the 'Other Regional Road' Reservation. This crossover is to be rationalised with it being proposed to be shifted further east and upgraded as the primary vehicle access and exit point for the Temple. The relocated crossover remains within the section of Folly Road identified as an 'Other Regional Road'. **This approach is consistent with the requirements of draft DC Policy 5.1**.
3.3.2 *- Where regional roads are constructed or planned to freeway standards, no access to frontage development is permitted. On regional roads not constructed or planned to freeway standards, there is a general presumption on traffic and safety grounds against the creation of new driveways or increased use of existing accesses to these roads. Where alternative access is or could be made available from side or rear streets or from rights-of-way or laneways, no access shall be permitted to the regional road unless special circumstances apply.*	The *Traffic Impact Assessment* (**TIA**) prepared by *Shawmac* concludes that the volume of traffic generated by the proposed development is capable of being accommodated within the capacity of the road network. The TIA also confirms that the crash history for Folly and Young Roads does not indicate any major road safety issues with the road network. Further, there is no indication that the proposed development would increase the risk of crashes. **Compliance is achieved.**
3.3.3 *- An arrangement whereby adjoining owners enter into cross-easement agreements to provide reciprocal rights of access across adjacent lots may be required as a means of rationalising access to the regional roads.*	**Not applicable.**

***(cont.)* TABLE 8: COMPLIANCE WITH *draft* DC POLICY 5.1**	
REQUIREMENT	***PLANNING JUSTIFICATION***
3.3.4 *- The types of development that would be allowed access to a regional road include large traffic generators such as major shopping, recreation, or community centres. These would justify either a neighbourhood connector or access road, leading from an intersection with the regional road to car parks servicing the centre.*	The proposed development of the Temple and Cultural Centre is consistent with the land use definition of a community centre, being a larger traffic generator. The access road leading to the carpark to service the Temple and the Cultural Centre, from an intersection with Folly Road, is therefore capable of approval. **Compliance is achieved.**
3.3.5 *- In determining applications for development involving the formation, laying out or alteration of a means of access to regional roads, the following must be considered:* *i) the effects of the development on traffic flow and safety, the character and function of the road, the volume and speed of traffic, the width of the carriageway and visibility; and* *ii) the ultimate volume and type of traffic generated by the development.*	The TIA confirms that the volume of traffic generated by the development is capable of being accommodated within the capacity of the road network; adequate site distance is achieved; and that there is no risk to traffic flow or safety. The attached TIA contains the details of the traffic generation. **Compliance is achieved.**
3.3.6 *- Where access is permitted, conditions may be imposed prescribing the location and width of the intersection or driveway to ensure adequate visibility and to provide for the safe and convenient movement of vehicles both entering and leaving the traffic stream. In determining design requirements for junctions and driveways, the WAPC has regard to standards recommended by both the AUSTROADS and Main Roads Western Australia.*	The TIA recommends the provision of a Basic Left (BAL) turn treatment which is a widened shoulder. **Compliance is achieved.**

DC Policy 4.3: Planning for High-Pressure Gas Pipelines (Draft)

The eastern portion of the subject site is located within the trigger distance of the Dampier Bunbury Pipeline. (Refer to **Figure 7**: DBP-A616 Trigger Distance)

Figure 7: Dampier Bunbury Pipeline – Trigger Distance *(source: PlanWA, 2021)*

The design of the development is set back from Young Road by 31.0m. Most of the development is situated outside the setback area of the pipeline. The ancillary accommodation for guests of the Temple (which is accommodation provided for occasional use only) is located within the defined trigger distance area of DC Policy 4.3.

At section 3.2 – Exemptions of this draft DC Policy 4.3, it is stated that the policy requirements do not apply to development on land that is not intersected by a pipeline and not zoned for a 'Sensitive', 'Industrial', 'Heavy Industrial' or 'Common Infrastructure Corridor' purpose. The term 'Sensitive' is defined in the Guidelines of DC Policy 4.3 as meaning: *'development for which the consequences of a pipeline failure may be increased because its purpose is for parts of the community who may be unable to protect themselves from the consequences of a pipeline failure. Sensitive development includes schools, hospitals, aged-care facilities, and persons, but* ***not residential*** *development.'* (Our emphasis.)

The portion of the development included within the trigger distance of the Pipeline is the single storey ancillary accommodation. This accommodation is provided for occasional guests of the Priest and the Temple. These visitors stay for up to one (1) week and are no different to guests visiting and temporarily staying at a typical private residential property on a Rural zoned property. It is therefore considered that the proposal is exempt from the requirements of DC Policy 4.3.

2.2 LOCAL PLANNING FRAMEWORK

CITY OF ROCKINGHAM TOWN PLANNING SCHEME NO. 2 (TPS 2)

The subject site is zoned 'Rural' pursuant to the provisions of the City's TPS 2.

Rural Zone

At clause 4.11.1, the objective of the Rural zone under TPS 2 is:

> '*to preserve land for farming and foster semi-rural development which is sympathetic to the particular characteristics of the area in which it is located, having due regard to the objectives and principles outlined in the Rural Land Strategy 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*.'

The proposed development meets with the overarching objective and general intent of the Rural zone. This landholding is identified in the *Rural Land Strategy* as being an area which is not suitable for priority agricultural use. The land is identified as containing sensitive environmental attributes which must be protected as part of any future development. The proposed development ensures that the environmental values of the land are protected and that the built form within the development footprint is separated and dispersed over the eastern portion of the land. In this way, the visual impact of the development form is minimised and the open field landscape of the land is maintained and improved.

The proposed development is compliant with the relevant general provisions of the Rural zone, which compliance is detailed at **Table 9.**

TABLE 9: COMPLIANCE WITH GENERAL PROVISIONS OF RURAL ZONE

PROVISION	***PLANNING JUSTIFICATION***
4.11.2 General Provisions *On all land zoned Rural in the Scheme Area, unless otherwise recommended in the Rural Land Strategy: -*	
a) Setbacks: All development, including the clearing of land, shall be setback a minimum of 30 metres from the primary street and 10 metres from all other boundaries, other than for the purpose of providing a fire break or vehicular accessway.	The individual buildings which comprise the development on the land are setback as follows: **Primary Street (Folly Road):** - **Temple proper:** *Paved courtyard: setback ranging between 54.0m (south west corner) and 34.0m (south east corner).* *Temple building: setback ranging between 59.0m (south west corner) and 44.0m (south east corner).* - **Multi-purpose hall:** *setback ranging between 43.0m (south west corner) and 30.0m (south eastern corner).* - **Library**: *setback ranging between 47.0m (south west corner) and 39.0m (south eastern corner).* **Secondary Street (Young Road):** - **Ancillary Accommodation:** *setback ranging between 31.0m (north eastern corner) and 34.0m (south east corner) of dwelling accommodation.*

	- **Multi-purpose hall:** *setback ranging between 80.0m (north eastern corner) and 91.0m (south eastern corner).* - **Car park (20 bays):** *setback ranging between 60.0m (north eastern edge) and 80.0m south eastern edge).* **Rear Boundary (north western side boundary):** - **Bin compound:** *setback of 10.0m* - **Priest residence:** *setback ranging between 15.3m (north western corner of dwelling) and 19.0m (north eastern corner dwelling).* - **Dining hall:** *setback ranging between 24.0m (western corner of building)/21.0m (western corner of nearest verandah post) and 33.0m (northern corner of building)/30.0m (northern corner of verandah post).* - **Temple proper:** *Setback ranging between 24.0m (to western corner of paved courtyard and open style fencing around Temple proper)/31.0m (to western corner of building) and 46.0m (to the northern corner of the paved area) and 50.0m (to north eastern corner of wall of Temple proper).* - **Water tanks and ablution building**: *12.0m (western most positioned tank) and 14.0m (northern most positioned tank), ablution building behind tanks being 16.0m (western corner) 20.0m (northern corner).* - **Main carpark:** *north western edge of car park is setback ranging between 13.5m (western most) and 17.5m (northern most).* **Side (south western) boundary:** - **Priest's residence:** *Setback ranging between 22.0m (south western corner of dwelling) and 25.0m (north western corner of dwelling) to the floodplain.* - **Temple proper:** *setback ranging between 20.0m (south western corner of paved courtyard of Temple to edge of floodplain) and 31.5m from the south western corner of the building to the floodplain) and 39.0m (north western corner of paved courtyard to the floodplain) and 48m (north western corner of building to floodplain).* *The development footprint is setback more than 300m from the south western lot boundary.* **Compliance is achieved.**
b) Clearing of Vegetation: No native or remnant vegetation shall be removed or cleared unless approved by the local government, and other than for the purpose of a fire break, fire protection within an asset protection zone, dwelling, outbuilding, fence, and vehicular access or where such vegetation is dead, diseased, or dangerous.	Most of the native remnant vegetation on the land is to be retained. Only four existing (4) trees on the land are required to be removed. One (1) of these trees is unhealthy and a potential hazard) is required to be removed. The remaining three (3) trees are to be removed in order to achieve compliance with the bushfire management requirements. Extensive planting of native plant species is proposed around the site to assist in providing further softening of the built form and to improve the overall rural character of this setting. **Compliance is achieved.**

***(CONT.)* TABLE 9: COMPLIANCE WITH GENERAL PROVISIONS OF RURAL ZONE**	
PROVISION	***PLANNING JUSTIFICATION***
c) Agricultural Pursuits: Agriculture - intensive or rural pursuits, and the breeding and keeping of animals for commercial gain, shall not be permitted without the prior approval of the local government. The local government will only grant approval after being satisfied that the character and amenity of the site will not be adversely affected and the land is capable of supporting the activities when the land management practices to be implemented by the applicant will be considered. *The local government may, in granting approval, impose limits on stocking, having due regard to the Stocking Rate Guidelines provided by the Department of Agriculture and Food, and any other condition it sees fit to maintain the environmental quality, landscape character and amenity of the site and locality.*	**Not applicable.**
d) Rural Subdivision: The subdivision of rural land will only be supported by the local government where the subdivision does not result in an increase in lot density in the case of a boundary realignment. Such subdivision shall not impinge on the ability of adjacent lots to achieve further subdivision.	**Not applicable.**
e) Peel Harvey Coastal Plain Catchment: In accordance with the provisions of clause 5.1, the local government shall be guided by the objectives and provisions of the policy statement contained in the Environmental Protection Policy (Peel-Harvey Estuarine System) 1991 and the State Local Planning Policy No. 2.1 - Peel-Harvey Coastal Plain Catchment, in determining applications within the subject area.	Refer to **Table 3** of this report, which details the compliance of the proposed development with the SPP 2.1. **Compliance is achieved.**
f) Serpentine River and Peel Drains: The local government shall be guided by the recommendations of the Serpentine River Flood Study, administered by the Department of Water and Environmental Regulation, in determining applications adjacent to the Serpentine River or the network of secondary Peel Drains.	The WMS confirms that there are no waterways or drains located on the site. The southern extent of Folly Pool and the Peel Main Drain are located adjacent to the western side boundary of the land. The WMS notes that the Peel Main Drain flows in a southerly direction and discharges into the Serpentine River at Keralup Pool, approximately 10km south of the site. The development of the site is contained within the eastern part of the site, approximately 350m from Folly Pool and setback 20m from the floodplain. This ensures that the development is restricted to the area of the land which does not flood. **Compliance is achieved.**
g) Swan Coastal Plain Lakes: In accordance with the provisions of clause 5.2, the local government shall be guided by the objectives of the Policy Statements contained in the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992, in determining applications within the subject area.	Not applicable. This policy has been repealed. **Compliance is achieved.**

Proposed Land Uses

Place of Worship (Predominant Land Use)

The proposed development comprises of a temple for religious worship (Hindu faith) purposes as its primary use, which use fits within the land use category of 'Place of Worship', which is described as meaning:

> *'a premises used for religious activities such as a chapel, church, mosque, synagogue or temple.'*

At Table 1 – Zoning Table of TPS 2, the land use permissibility of a 'Place of Worship' is identified as being an 'A' use on land which is zoned Rural.

This means that the development and land use can be considered for approval by the City following the outcome of the public consultation period in accordance with Clause 64 of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

The development includes a range of ancillary uses to the Temple proper for use by the Hindu community, including: a **multipurpose hall**, **dining hall** and **library**. These ancillary buildings provide space for a variety of activities, including teaching and reading of Vedas literacy, meditation classes, dancing, yoga, and self-development. These buildings are best described as religious activities associated with the Temple and therefore also fit within the land use category of a 'Place of Worship'.

Reception Centre (Incidental (IP) Land Use)

The main hall is proposed to be used occasionally for wedding celebrations for members of the Temple community. These wedding are religious ceremonies, conducted by the Temple Priest. The occasional nature of the use of the facilities as a 'Reception Centre' is proposed as incidental to the predominant use of Place of Worship.

Priest's residence (Single House – permitted (P) Use)

A two (2) storey residential dwelling is proposed on the land.

This dwelling is to provide permanent living accommodation for Priests and family, who provides a caretaker role for the Temple.

This proposed dwelling is defined under the land use category of 'single house' in the Zoning Table of TPS 2. A 'Single House' is identified as a permitted (P) land use in the Rural zone and is therefore able to be approved by the City.

The proposed dwelling has been designed to accord with requirements of *State Planning Policy 7.3 - Residential Design Codes of WA*.

In particular, the dwelling is compliant with the height limits as stated at Category B, Table 3 of the R Codes, as noted below.

- maximum height of wall is proposed at 5.6m (which more than comfortably complies with the 7.0m maximum limit of the R Codes)
- maximum total building height of a pitched roof is 7.4m (which is well below the stated 10.0m total building height limit of the R Codes)

Ancillary Accommodation (Incidental (IP) Land Use)

A separate single storey dwelling is proposed adjacent to the Young Road frontage of the land, which offers short term accommodation for occasional visitors to the Temple. These guests of the Temple include international visitors and specialist Priests invited to stay in order to attend specific Hindu ceremonies. The guests also provide other volunteer services to the Temple, including (but not limited to): distributing food (free of charge) to the community prepared in the kitchen on site; giving presentations to the community; gardening; and general grounds maintenance.

This accommodation is incidental to the predominant use of Place of Worship, as the accommodation is offered to members of the religious community who provide volunteer services to the Temple on the land for short period of time. The typical length of stay for a guest is around five (5) days.

It is considered that the use of this dwelling is best described under the land use category of 'Ancillary Accommodation', which is identified as an 'IP' use in the Rural zone. This means that the land use is capable of being considered on the land, should it be deemed to be incidental to the predominant use of the land.

The ancillary accommodation has been designed with a total floor area of 100m^2, in response to the position of the City that it is prepared to approve this dwelling up to this specified area.

The height of this dwelling accommodation is single storey, with a wall height of 2.7m and a total pitched roof height of 4.2m.

Car Parking Requirements

At Table 2 – Car Parking Table of TPS 2, the minimum parking requirements are specified. The following **Table 10** details the parking provisions required for the proposed uses on the site.

TABLE 10: COMPLIANCE WITH CAR PARKING REQUIREMENTS			
		Required	**Provided**
Place of Worship	1 bay per 4 persons accommodated	100 (based on maximum capacity of 400 persons)	100, including two (2) accessible bays
Reception Centre	1 bay per 4 persons accommodated	As above. The reception centre is not to be used at the same time as the Temple.	As above. The reception centre is not to be used at the same time as the Temple.
Ancillary Accommodation	*1 bay, in accordance with C3.1 – Location B, SPP 7.3 – Residential Design Codes Volume 1.*	1	3
Single House	*2 bays, in accordance with C3.1 – 2 plus bedroom dwelling, Location B, SPP 7.3 – Residential Design Codes Volume 1.*	2	2
TOTAL		**103**	**105**

Notwithstanding that the required number of car bays are provided on site to support this use, it is important to highlight that the Temple will **not** utilise the full capacity of the car park on a regular basis. This is because there are no set days or times for worship at a temple in the Hindu faith.

The Temple proper is a spiritual place for the Hindus. Worship mostly takes place in the domestic home. Hindus are not called to prayer. Hindus instead visit the Temple of their own accord to make offerings to the murti (shrine).

The only occasions whereby the car parking bays provided on site are anticipated as possibly being utilised closer to capacity are during the Hindu festival and in association with the occasional wedding. These occasions are likely to occur on 12 days in a calendar year.

PLANNING POLICY 3.1.1 - RURAL LAND STRATEGY

The subject site is located within Policy Area 2 of the City's Planning Policy No. 3.1.1 – *Rural Land Strategy* (**RLS**). The following **Table 11** details the requirements and the compliance with the proposed development with the requirements of the RLS.

TABLE 11: COMPLIANCE WITH GENERAL STANDARDS of RLS	
REQUIREMENT	***PLANNING JUSTIFICATION***
Where no building envelopes are required, all development, including the clearing of land, (except for firebreaks), shall comply with the following setbacks, unless otherwise specified in TPS No.2: - *50 metres from the Kwinana Freeway reservation.* - *30 metres from other subdivisional roads (primary setback).* - *10 metres from all other boundaries.*	The development footprint is fully compliant with the setback requirements of the RLS: - The nearest building (the Temple proper) is setback approximately 450m from the Kwinana Freeway reservation. - The nearest building (multipurpose hall) to Folly Road (Primary Setback) is setback at a distance of 30.0m (at its closest point). - The nearest building (ancillary accommodation) to Young Road is setback at a distance of 31.0m. - No development is located within 10.0m from the shared boundary (to the north), being the rear boundary of the land. The development is set back further than the two (2) existing rural sheds on the land, which are set back at a distance of 8.0m from this boundary. One (1) of the existing sheds is proposed to be demolished as part of this Application. The other shed will be retained. **Compliance is achieved.**
No clearing being permitted without the specific approval of the City.	The land is not required to be cleared. The EAR describes the site as comprising of grazed land with some scattered mature trees. The mature trees are to be retained, expect for four (4) trees. One (1) of the trees is required to be removed as it is not in good health and is therefore deemed too dangerous to retain. The other three (3) trees are required to be removed to achieve compliance with the bushfire management requirements. The trees to be removed are identified on the attached Landscape Plan and proposed to be removed as part of this Application. **Compliance is achieved.**
On-site effluent disposal servicing development on the lots shall be to the satisfaction of the City.	The proposed secondary treatment system with nutrient removal capacity is detailed in the attached WMS and the location and size of the system and its associated flatbed leach drain is illustrated on the drawings.

***(cont.)* TABLE 11: COMPLIANCE WITH GENERAL STANDARDS of RLS**	
REQUIREMENT	***PLANNING JUSTIFICATION***
All buildings and outbuildings are to be sympathetic in design, materials, and colour to compliment surrounding landscape elements and be sited away from focal points and located where screening vegetation or landform can be utilised.	The buildings are specifically designed to fit within and maximise connection with the surrounding rural environment. The buildings are positioned in a cluster formation with open fields and additional landscaping being proposed between the buildings on the land and across the site to ensure the built form absorbs into the land, to a similar extent that the existing rural structures on the land blend with the rural setting. The use of traditional rural building materials of limestone and timber posts with colorbond roofing material further assists in ensuring the built form of the Temple and the associated buildings complement within the rural character of this semi-rural location. **Compliance is achieved.**
Strategic revegetation priority areas along Millar Road, Doghill Road, St. Albans Road, Telephone Lane, Folly Pool, Maramanup Pool and the Serpentine Main Drain and the Peel Drain.	The development is not located within a revegetation priority area. **Compliance is achieved.**
A 50m landscaped buffer is required along the Kwinana Freeway reservation.	The land is buffered to the Kwinana Freeway Reservation by a Parks and Recreation Reserve which contains a Bush Forever Site and the Folly Pool CCW. Therefore, this requirement for a landscape buffer is not applicable, nor required, given the parks and recreation reservation provides a substantial buffer of protected vegetation between the land and the Freeway. **Compliance is achieved.**
Compliance with State Planning Policy No .2.1 - Peel-Harvey Coastal Plain Catchment.	Refer to **Table 3** of this report, which details the compliance of the proposed development with the SPP 2.1. **Compliance is achieved.**
The City shall be guided by the recommendations of the Department of Water report, 'Hydrological and Nutrient Modelling of the Peel-Harvey Catchment' (February, 2011), in determining suitable land uses (and soil types) within the Peel-Harvey Environmental Protection Policy area.	Refer to **Table 3** of this report, which details the compliance of the proposed development with the SPP 2.1. **Compliance is achieved.**
Bushfire Management to be addressed in accordance with the WAPC Guidelines for Planning in Bushfire Prone Areas.	Refer to Section 2.1 of this report, SPP 3.7 which details the BMP and bushfire management requirements. **Compliance is achieved.**

***(cont.)* TABLE 11: COMPLIANCE WITH GENERAL STANDARDS of RLS**	
REQUIREMENT	***PLANNING JUSTIFICATION***
Assessment of planning proposals (except for conventional agricultural or rural pursuits) in the vicinity of the Dampier to Bunbury Natural Gas Pipeline and the Parmelia Gas Pipeline to be guided by WAPC Planning Bulletin 87 - High Pressure Gas Transmission Pipelines in the Perth Metropolitan Region and any relevant provision in TPS No.2.	The proposal has been considered against the requirements of draft DC Policy 4.3. The section of the development which is located within the trigger distance of the Pipeline is the residential component. This land use (residential) is identified as being exempt from the requirements of this policy. **Compliance is achieved.**
Buffer requirements to sensitive uses to be guided by State Planning Policy No. 2.5 – Rural Planning and/or the Department of Health Guidelines for Separation of Agricultural and Residential Land Uses (2012).	The land is sufficiently separated from agricultural land uses to ensure there will be no land use conflict as a result of the proposed use. The residential component of the land use is classed as a 'sensitive land use' in accordance with the *EPA Guidance Note No. 3 – Separation Distances between Industrial and Sensitive Land Uses (2005)*. In regard to nearby agricultural uses, the nearest land use is the West Coast Chaff which is a stock feed, fodder and supplement provider. The generic buffer distance stated in Table 1 of the EPA Guidance Note indicates a generic buffer distance of 500 metres for 'animal feed manufacturing' industry uses. The proposed ancillary accommodation is located in the north eastern corner of the site, adjacent to Young Road. This location is adjacent to the residential dwellings located on the eastern side of Young Road. These existing dwellings are located closer to West Coast Chaff when measured from the frontage of West Coast Chaff to Young Road than the proposed accommodation included with this Application. The proposed separation distance to this business is therefore adequate to comply with this requirement. **Compliance is achieved.**
With respect to Precinct 2A, to ensure adequate flood protection for dwellings: *(a) A minimum building floor level of 0.5 metres above the 1:100 year flood level in areas of inundation is required and sand pads shall be graded and landscaped to the City's satisfaction; and* *(b) No development is permitted within 20 metres of the 1:100 floodway.*	The proposed finished floor levels of the individual buildings are identified on the attached plans as: Temple: RL 6.37 Priest Dwellings: RL 5.60 Hall, Dining and Library: RL 5.60 Ancillary Accommodation: RL 5.60 These levels ensure the floor level of each building achieves the required 0.5m separation distance to the groundwater level. The development is set back a minimum of 20m from the 1:100 year flood line. **Compliance is achieved.**

***(cont.)* TABLE 11: COMPLIANCE WITH GENERAL STANDARDS of RLS**	
REQUIREMENT	***PLANNING JUSTIFICATION***
Within Precinct 2A land uses other than a single house that are permitted or may be permitted by the City pursuant to TPS No.2 shall only be permitted when the City is satisfied following consultation with the Department of Water and Environmental Regulation that the land use does not involve excessive nutrient application or the clearing of the land.	The proposed development of the land as a Place of Worship is capable of being considered for approval pursuant to TPS 2. The proposed development will not result in excessive nutrient application nor will it result in clearing of the land. The design is environmentally friendly with a focus on sustainability through water conservation and revegetation. **Compliance is achieved.**
With respect to Precinct 2A, refer to TPS No.2, Schedule No.4 for standards relating to the following: - *Potable water.* - *Stocking rates.* - *Fencing.* - *Stormwater.* - *Groundwater extraction.*	The subject land is not identified as being within a Special Rural area. **This requirement is therefore not applicable.**

The key elements of *Precinct 2A - Baldivis (East)* are identified in the RLS. These elements highlight the environmental significance of the location and the need to ensure that it is preserved.

The desired future character for this area further demonstrates the need to support development and land use in this location which by its nature will nurture and protect this sensitive natural environment from further damage, as stated below:

> *Notwithstanding the flat, low-lying nature of the area, the Baldivis (East) precinct contains multiple overlapping ecological values and linkages that need to be protected from the adverse impacts of development. These areas of environmental significance are fundamental to the remaining visual character and amenity of the area and their ongoing preservation is a key strategic objective of the RLS.*

The key elements vulnerable to development pressures are identified in this Policy, which are listed below.

- ***Clearing of remnant vegetation would have a major detrimental impact upon areas of environmental and landscape significance with resultant adverse impacts upon the visual character and amenity of the area.***

The proposed development will not result in the clearing of any remnant vegetation.

- ***Clearing along road frontages would have a major detrimental impact upon the visual character and amenity of the area.***

The development does not propose to clear vegetation along the road frontages. The Landscape Master Plan included with this Application illustrates the proposal to plant additional native

vegetation across the land in order to improve and enhance the existing rural character and semi-rural amenity of this location.

- ***Loss of Banksia woodland.***

The proposal does not result in the loss of banksia woodland.

- ***Loss of Carnaby's Cockatoo habitat.***

A tree survey was undertaken for the land in order to identify any habitat trees suitable for use by the endangered Carnaby's Black Cockatoo, as detailed in the EAR. Of the seven (7) trees observed as containing hollows, the EAR determined that none of these hollows were suitable for use by the Black Cockatoo species for nesting.

- ***Loss of LNAs.***

The proposed development does not result in the loss of an LNA.

- ***Loss of ecological linkages.***

The proposed development does not result in the loss of any ecological linkage.

- ***Potential for CCWs, REWs, PECs, associated vegetation, and buffers to be compromised by development.***

The proposed development will not in any way compromise the CCW or the associated vegetation and buffer. The development is set back approximately 250m from the Folly Pool CCW.

- ***Potential for the Bush Forever sites, Peel Main Drain and Serpentine River to be compromised by development.***

The development is sufficiently setback from the adjacent Bush Forever site and Peel Main Drain to ensure these environmental elements are protected and in no way compromised.

The Hindu community seeks to manage this property for its religious purposes in a manner which nurtures the natural environment. The development ensures the remnant vegetation on the land is retained and proposes to plant additional native species in order to enhance the visual character and amenity of this semi-rural location. The care and management of the land by the Temple and its community will ensure the land is protected from environmental damage into perpetuity.

3.0 PROJECT DESCRIPTION

The proposed development is illustrated on the attached architectural drawings prepared by the Project Architect. Further detailed description of the architectural design (to the summary provided below) is contained in the separate document titled *Architectural and Visual Landscape Report* prepared by the Project Architect and submitted with this Application.

The proposal seeks approval for a Sri Balaji Temple together with the associated uses on the land for worship and other related religious activities.

The following land use categories are relevant to the consideration of this Application:

1. Place of Worship (Predominant)
2. Reception Centre (Incidental)
3. Residential dwelling (Single House) for Priests and family (Permitted)
4. Ancillary Accommodation for Temple Guests (Incidental)

The design of the development involves the clustering of the built form with vast areas of open field being maintained between each grouping of built form. A primary focus of the design is to preserve the natural beauty and ecological value of this site. It proposes to retain the native vegetation on the land and introduce additional native plant species to the site as a way of enhancing the visual amenity of the rural location and to ensure the built form visually absorbs into the site, when viewed from the bounding road network.

The design seeks to ensure that the post-development drainage is retained to pre-development levels, with NIL nutrient runoff to the Folly Pool wetland or swale drains occurring from this development operating on the land.

The development is proposed to utilise secondary treatment systems with nutrient removal capabilities. The treated wastewater is to be disposed in an area with at least 1.5m separation to the maximum groundwater levels. The design and location of the disposal area is detailed in the WMS and illustrated on the Site Plan.

The development and land uses proposed for this site present the City with an opportunity to support, and JDAP to ultimately grant approval for a land use and development which will protect the ecologically sensitive values of this land and maintain these qualities into perpetuity.

The architectural and operational details of the development and the use of each of the buildings are described in the following sub-sections.

3.1 Architectural Considerations

The intrinsic, essential design details of the Sri Balaji Temple

The subject land proposed for the Sri Balaji Temple development has been specifically selected for its location.

The site is ideally located on the fringe of a semi-rural area with direct vehicle access to the site from the Kwinana Freeway and the regional road network, so as not to cause any traffic impact on the local road network.

The site retains a strong connection to nature and is valued for its ecological importance.

The semi-rural setting and the desire to nurture and protect the ecological values of the site are some of the key elements of design for a Hindu temple.

The architectural design focuses on the Hindu philosophy of combining the essential energies of water, air, fire, earth, and space in order to create harmony and balance in life.

A connection to the natural environment as well as providing the community with a Temple which is located in a setting which provides opportunities for ecological engagement is an essential element of the Hindu faith and worship.

Fencing:

The development proposes traditional timber post and wire fencing around the periphery of the land.

An internal (permeable) fence is proposed to surround the Temple proper, it is to be constructed of limestone pillars and infill panels. The height and materials of the fencing are detailed in the attached Elevations.

Temple Proper

The Temple is a highly articulated built form which incorporates the key elements of nature in its architecture to provide a connection between the physical world of man and the divine world of God.

The Temple is situated to the west of the main entrance driveway. The building form is set back between approximately 44.0m and 59.0m from Folly Road.

The Temple is proposed to be constructed of masonry building materials, rendered and clad in traditional materials of local limestones and timber post details.

The Temple comprises of a single storey built form (it does not contain a second floor level) with an approximate wall height of 8.9m above NGL.

The total floor area of the Temple is approximately 975m^2. A significant portion of the floor space comprises of the entry lobbies, internal permanent deity enclosures and areas reserved for use only by the Priests. The total useable floor area for worship in the Temple is therefore considerably less than the total floor area, arriving at a net area of 550m^2.

The main entrance to the Temple has a decorative statement which extends to a height of 14.8m above NGL.

The remaining three (3) entrance ways are framed with limestone detailing and heights of 12.8m above NGL.

Multi-Purpose Hall, Library and Dining Hall

The multi-purpose hall, library and dining hall are also proposed as single storey built forms.

The proposed hall, library and dining hall are sought for ancillary use by worshipers during their visits to the Temple proper. It is anticipated that worshipers will visit the Temple for prayer and following that, will move to the hall to further develop and engage in the various practices of Hinduism. Such practices include: Vedic chanting, reading of Vedas and Hindu literature, Bhajans, Indian dancing, and Sanskrit communications and yoga.

These incidental uses are not proposed to operate independently to the Temple proper.

The hall and dining hall are also proposed to be used for cultural functions, including use during the festival days.

The three (3) buildings are clustered together and separated from the Temple Proper. These buildings are surrounded with landscaping and open fields, and set back a minimum of 30.0m from Folly Road and a minimum of 80.0m from Young Road. This design is specifically proposed to ensure the bulk of the individual components of the development are low in visual impact and consistent with the existing rural setting.

The buildings are proposed to be constructed using the same range of traditional building materials as the Temple Proper. The design is reflective of the rural character of the locality, through its use of limestone blocks for the building form, together with timber framing and verandah posts and colorbond sheeting for the roofing. The colour scheme for the buildings is to comprise of earthy tones so that the buildings will fit within the surrounding landscape. The roof pitch of these buildings is proposed at 10 degrees, which together with the materials, single storey format and surrounding external verandahs, is reminiscent of the rural homestead architectural characteristics of the area and entirely appropriate as a built form outcome within this semi-rural setting.

The toilets for the Temple community are contained within the multi-purpose building, together with the other back of house rooms required for the use. In addition to this, toilet facilities are provided adjacent to the north of the Temple and screened from the north eastern boundary, by strategically placed water tanks.

The internal layout of the three (3) buildings and the interconnecting verandahs are illustrated on the attached drawings.

Priests Residence

A single Priests residence is proposed to the north of the Temple. This dwelling is designed as a two-storey built form.

The dwelling is to be constructed using traditional building materials, comprising of limestone construction, timber framework and colorbond roof sheeting.

The wall height of the dwelling is 5.6m above NGL.

The dwelling is compliant with the relevant requirements of the R Codes.

Ancillary (Guest) Accommodation

The proposed ancillary accommodation is proposed to be setback 31.0m from Young Road.

This accommodation is proposed for occasional use by guests to the Temple.

The dwelling is proposed to be single storey in form and is designed to complement the surrounding rural character of this location.

Colours and Materials:

A schedule of colours and materials is attached to the Application.

3.2 Operational Considerations

On-site Parking

A total of 100 car bays are provided for the Temple use, including two (2) disabled bays.

In addition, two (2) bays are provided for the Priests residence and three (3) bays are provided for the ancillary (guest) accommodation. A total of 105 bays are provided, which exceeds the required 103 bays. (Refer to **Table 10**: Car Parking Requirements.)

The car parking areas are separated to reduce the visual impact and for functionality reasons. The Landscaping Plan provides details on the additional planting of trees and shrubs within and around the car park to provide further screening of it, when viewed from the north east.

Opening Hours

The Temple and its associated uses are open throughout the week, with the community able to visit the Temple for worship between the hours of 7:00am to 1:00pm and 5:00pm to 9:00pm. Other activities available at the Temple will occur on specific days during certain times. These activities might include yoga classes (6:00pm to 7:00pm), scripture classes (3:00pm to 6:00pm), the occasional wedding (Saturday and Sunday only, 9:00am to 11:00pm) and Hindu festivals (during the hours of 7:00am to 1:00pm and 5:00pm to 9:00pm).

Should a residential dwelling be constructed on the vacant adjoining lot to the north east of the site, the operational hours will be reduced to address the acoustic requirements. The reduction in hours will include the Hindu festivals commencing later in the morning on Sunday and Public Holidays, starting at 9:00am and ending earlier in the evening at 9:00pm. The occasional wedding held on the site will also be further restricted to only being able to occur on Saturdays between the hours of 9:00am and 7:00pm (with no weddings being held on Sundays or Public Holidays).

Acoustics

An Acoustic Report prepared by *Marshall Day Acoustics* has been prepared in support of the proposed development and range of uses, which confirms that the range of uses are compliant with the *Environmental Protection (Noise) Regulations 1997* and noting the above requirement for the hours of operation to be adjusted for certain uses should a residential dwelling be constructed on the neighbouring lot to the north east.

The Acoustic Report provides a range of noise management measures to ensure the use on the land can operate in a manner which will have no adverse impact on the surrounding rural environment.

4.0 CONCLUSION

This Application seeks approval for the Sri Balaji Temple Development at 67 Folly Road, Baldivis.

The proposed development and land use is consistent with the State and Local Planning Framework.

The proposed development and range of incidental land uses are capable of approval under the Rural zoning of the land, pursuant to the City's *Town Planning Scheme No. 2*.

Further, the development as proposed meets with the overarching objectives and general intent of the Rural zone, as described in *Town Planning Scheme No. 2*.

The land is identified in the *Rural Land Strategy* of the City as containing sensitive environmental qualities. It is also recognised in the Strategy as being unsuitable for priority agricultural use.

An alternative, environmentally sensitive development and land use proposal is therefore identified as the preferred outcome for this landholding.

The proposed Temple and its associated uses are carefully designed to specifically ensure the protection of the natural environment, in accordance with the policy requirements of this Strategy.

In this regard, it is noted that the land is not yet able to be connected to the reticulated water and sewer infrastructure system, as it has not yet extended to east of the Kwinana Freeway in this location. This development proposes to adopt specific measures to protect the sensitive environmental qualities of the land and in doing so proposes on-site environmentally sensitive servicing methods to adopt until such time that the servicing infrastructure is extended to this location to enable the development the ability to connect to it.

The approval of this development and land use will remove the current environmental risks associated with the range of agricultural land uses capable of utilising the land and the inevitable nutrient runoff into the surrounding waterways caused by those uses. The development protects the remaining (albeit sparse) remnant vegetation on the land; avoids any adverse impact occurring on the nearby Folly Pool CCW and its associated vegetation; will have NIL adverse impact on the adjacent Bush Forever site, the Peel Main Drain and the Serpentine River; protects the visual character and amenity; and is not a land use proposal resulting in an unacceptable bushfire risk. The proposal is therefore entirely complaint with the strategic intent of the future character sought for the Baldivis (East) Precinct.

This development is a proposal which presents an excellent opportunity for the City to support an environmentally sustainable development outcome on this ecologically sensitive site in a manner which satisfies the key strategic objective of the *Rural Land Strategy*, being to preserve the visual character and amenity of the location.

Accordingly, we respectfully seek the support of the City and the approval of JDAP, with any reasonable conditional requirements which might be attached.

MARSHALL DAY Acoustics

BALAJI TEMPLE AND CULTURAL CENTRE
ACOUSTIC PLANNING REPORT

Rp 001 r05 20210485 | 28 June 2022

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Report No.: **Rp 001 r05 20210485**

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Document Control

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Revision	1	Additional modelling added	01 Mar. 2022	B. Beverley	B. Wilson
Revision	2	Operating hours updated	24 Mar. 2022	B. Beverley	B. Wilson
Revision	3	See revision notes in Section 1.1	10 Jun. 2022	B. Beverley	B. Wilson
Revision	4	Site plan updated only	27 Jun. 2022	B. Wilson	-
Revision	5	Updated carpark movements scenario 2	28 Jun. 2022	B. Wilson	-

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1.0 INTRODUCTION

Archetype Design Studio, on behalf of JAPA Australia Foundation, has engaged Marshall Day Acoustics (MDA) to provide acoustic advice as part of the Development Application (DA) stage for the proposed Balaji Temple development located at Lot 53 Folly Road, Baldivis.

The requested advice is for the following items:

- Freeway noise affecting the building(s)
- Noise emanating from carparks to surrounding residences
- Noise emanating from the temple and multipurpose hall to surrounding residences

This assessment includes details of the site, relevant noise criteria, an assessment of noise levels at the nearest receivers, and preliminary design and noise management recommendations to be developed during detailed design.

A glossary of acoustic terminology used in this report is provided in Appendix A.

1.1 Report revision notes

A previous version of this acoustic report (Rp 001 r02 20210485) was prepared by MDA, which provided an overview of the acoustic issues associated with the Project and included noise modelling predictions for key noise sources.

Project planning has further progressed, with the site layout and proposed operations having been refined to address some concerns raised during the DA process.

This revised report (r05) includes the following key changes:

- Proposed operating hours (see Section 2.2.2)
  - The most notable change in terms of noise from the site is that weddings are now proposed to finish at 2300 hours, rather than the previously proposed midnight finishing time
  - Alternative hours are proposed that would apply if a residence were to be developed at 547 Young Road. The alternative hours would enact further reductions to the operating hours, including restricting weddings to daytime hours only.
- Carparks have been reconfigured to:
  - Reduce the overall number of cars (by 10 bays)
  - Reposition bays closer to the centre of the site (away from the northern boundary)
  - Relocate the bin enclosure, which includes a 2 m high wall around it
- Further information on the carpark noise modelling method used to predict noise levels has been added (see Appendix E)

2.0 SITE DESCRIPTION

2.1 Site location

The Balaji Temple is proposed for Lot 53 Folly Road, Baldivis. An aerial photograph showing the site and surrounds is presented in Figure 1. The nearest noise-sensitive receivers are numbered and described in Table 1.

Figure 1: Aerial photograph of the site and surrounds (Image: Nearmap)

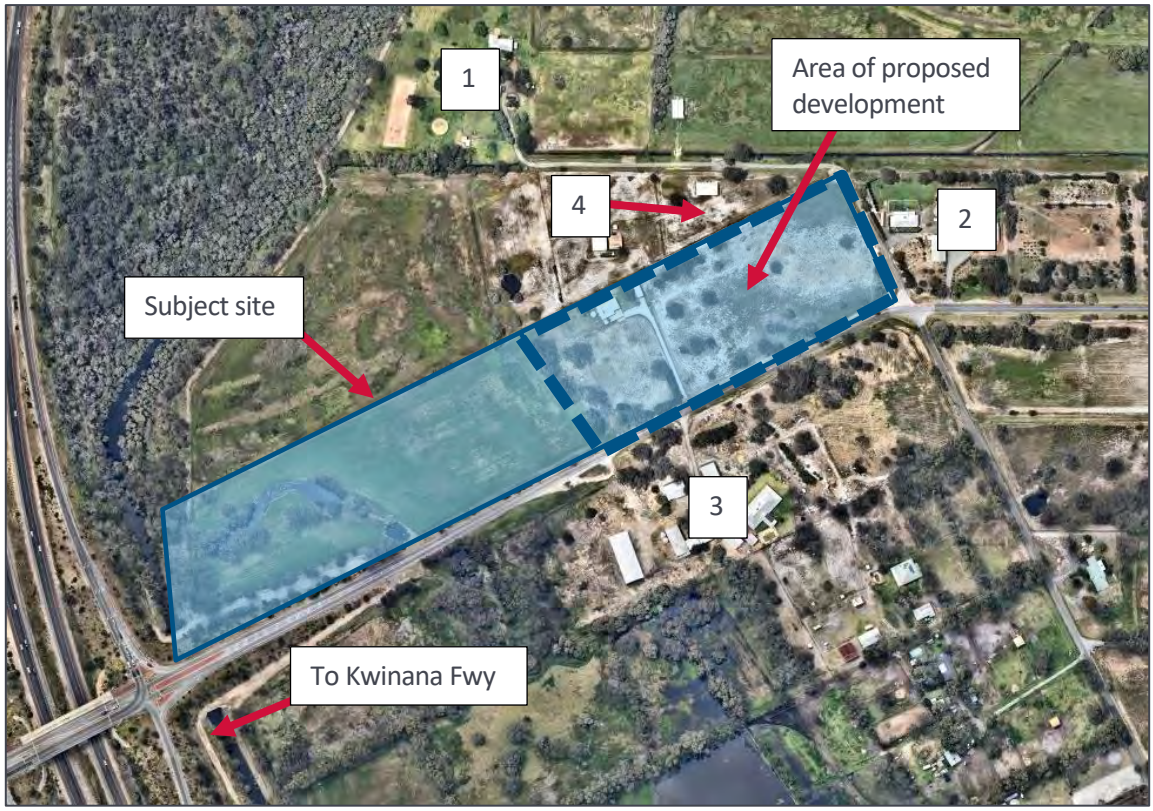


Table 1: Nearest representative receivers

Receiver ID	Address	Description
1	574 Young Road	Residence
2	151 Folly Road	Business and residence
3	66 Folly Road	Residence
4	547 Young Road	Potential future residence (exact location TBC)

The surrounding area is zoned Rural and Special Rural.

A planning map showing the land use zoning is provided in Appendix B.

For the purposes of this assessment the potential future residence at 547 Young Road (#4) has been located approximately 8 m from the boundary (as marked on Figure 1).

2.2 Development description

The proposed development includes the following new buildings and facilities:

- Temple, with kitchen and toilet facilities
- Multipurpose cultural hall
- Dining hall
- Library
- Short stay facility
- Priest residences
- Open air carparking with 104 parking bays.

A copy of the proposed site plan is included in Appendix C.

2.2.1 Proposed uses

The main proposed uses for the new facilities on the site are summarised in Table 2.

Table 2: Proposed uses

Facility	Proposed uses
Temple	Religious practices (e.g. prayer, sermons, devotional singing)
Multi-purpose hall – regular use	Study of scriptures Chanting and Bhajans (devotional singing) Indian classical dance Sanskrit language classes Administration and meetings
Multi-purpose hall – occasional use	Wedding ceremonies and receptions
Priest residence	Residential accommodation
Short stay facility	Visiting guests from overseas
Library	Study of Vedic scriptures and texts
Temple kitchen	Preparation of food offerings at altar

2.2.2 Operating hours

The proposed operating hours for the development are presented in Table 3.

Table 3: Proposed operating hours

Mon – Fri.	(morning)	Prayers	7.00am – 1.00pm
Mon – Fri	(evening)	Prayers	5.00pm - 9.00pm
		Yoga Class	6.00pm - 7.00pm
Sat + Sunday.	(morning)	Prayers	7.00am – 1.00pm
	(evening)	Prayers	5.00pm – 9.00pm
		Scripture classes	3.00pm – 6.00pm
Mon – Sat.	(morning)	Hindu Festival	7.00am - 1.00pm
Mon – Sat	(evening)	Hindu Festival	5.00pm – 9.00pm
Sun + Public Holidays.	(morning)	Hindu Festival	7.00am – 1.00pm
Sun + Public Holidays	(evening)	Hindu Festival	5.00pm – 9.00pm
Saturday		Weddings	9.00am – 11.00pm
Sunday + Public Holidays		Weddings	9.00am – 11.00pm

Noise modelling has indicated that if a residence were to be developed on the adjacent 547 Young Road property, noise from the proposed development could exceed the assigned levels under some scenarios. In recognition of this, the developer is proposing alternative operating hours that will be adopted after a residence is built.

The operating hours after a residence is built on 547 Young Road will be as per Table 4. Changes from the current are highlighted.

Table 4: Proposed operating hours – AFTER residence is built on 547 Young Road

Mon – Fri.	(morning)	Prayers	7.00am – 1.00pm
Mon – Fri	(evening)	Prayers	5.00pm - 9.00pm
		Yoga Class	6.00pm - 7.00pm
Sat – Sunday.	(morning)	Prayers	7.00am – 1.00pm
	(evening)	Prayers	5.00pm – 9.00pm
		Scripture classes	3.00pm – 6.00pm
Mon – Sat.	(morning)	Hindu Festival	7.00am - 1.00pm
Mon – Sat	(evening)	Hindu Festival	5.00pm – 9.00pm
Sun + Public Holidays		Hindu Festival	9.00am – 9.00pm
Saturday		Weddings	9.00am – 7.00pm
Sunday + Public Holidays (evening)		Weddings	Not permitted

2.2.3 Occupancy / vehicle movements on site

The expected levels of occupancy for the various site uses are outlined in Figure 2 below.

Figure 2: Occupancy levels for different site uses

6.1.1 Regular Weekday Attendance:

Activity	Time	Numbers of PP	Numbers of Cars	Average PP/Hr	Average Cars/Hr
Morning Prayer (Weekday)	7am – 1pm (across 6hrs)	25 – 50 pp (across 6hrs)	25 cars (2pp/car)	9pp/hr (across 6hrs)	4 cars/hr (across 6hrs)
Evening Prayer (Weekday)	5pm – 9pm (across 4hrs)	25 – 50 pp across 4hrs)	25 cars (2pp/car)	13pp/hr (across 4hrs)	6 cars/ hr (across 4hrs)
Yoga (twice week only)	6pm – 7pm (twice week only)	20 pp twice/ week	10 cars (2pp/car)	20 pp/ hr twice/ week	10 cars / hr twice/ week

6.1.2 Regular Weekend Attendance: (including scripture class)

Morning Prayer (Weekend)	7am – 1pm (across 6hrs)	100 – 150 pp (across 6hrs)	75 cars (2pp/car)	25pp/hr (across 5hrs)	13 cars/hr (across 5hrs)
Evening Prayer (Weekend)	5pm – 9pm (across 4hrs)	100 – 150 pp across 4hrs)	75 cars (2pp/car)	38pp/hr (across 4hrs)	19 cars/ hr (across 4hrs)

6.1.3 Special Festival Day: (12 x times/ Year ie. Once per month/ one day only in month)
(may occur *either* on Weekday *OR* Weekend not both depending on festival)

Morning Prayer (Weekday)	7am – 1pm (across 6hrs)	50 – 75 pp (across 6hrs)	38 cars (2pp/car)	13pp/hr (across 5hrs)	7 cars/hr (across 5hrs)
Evening Prayer (Weekday)	5pm – 9pm (across 4hrs)	200 –250pp across 4hrs)	125 cars (2pp/car)	63pp/hr (across 4hrs)	32 cars/ hr (across 4hrs)
Morning Prayer (Weekend)	7am – 1pm (across 6hrs)	200 pp (across 6hrs)	100 cars (2pp/car)	40 pp/hr (across 5hrs)	20 cars/hr (across 5hrs)
Evening Prayer (Weekend)	5pm – 9pm (across 4hrs)	200 – 250pp across 4hrs)	125 cars (2pp/car)	63pp/hr (across 4hrs)	32 cars/ hr (across 4hrs)

6.1.4 Hindu Wedding: 6 x time / year ie. Once every 2 x months Members of JET Community
Wedding Ceremony followed by meal after. No Alcohol served.

Saturday	9am – 11pm	300-400pp (usually less)	100 cars (4pp/car)	All arrive and depart as guests at same time
Sunday/ Public Hol	9am – 11pm	300-400pp (usually less)	100 cars (4pp/car)	All arrive and depart as guests at same time

3.0 LEGISLATION AND GUIDELINES

The guidance documents relevant to this assessment are summarised in Table 5.

Table 5: Relevant legislation and guidelines

Document	Status	Relevance to assessment
Western Australian *Environmental Protection (Noise) Regulations 1997* (Noise Regulations)	Statutory requirement	Sets limits for noise from the development, e.g. mechanical plant equipment, patrons and music
State Planning Policy No. 5.4 *Road and Rail Noise* (SPP 5.4)	Planning policy	SPP 5.4 and the associated Implementation Guidelines are referred to with regard to traffic noise to noise-sensitive land uses within the proposed development
AS/NZS 2107:2016 *Acoustics - Recommended design sound levels and reverberation times for building interiors* (AS 2107)	Guideline	AS 2107 is referred to in SPP 5.4 and MDA recommends that the buildings be designed to meet internal noise levels and reverberation time criteria recommended in AS 2107

3.1 Environmental Protection (Noise) Regulations 1997

External noise emission is governed by the *Western Australia Environmental Protection (Noise) Regulations 1997* (the Noise Regulations). The Noise Regulations are a "prescribed standard" under the *Environmental Protection Act 1986*.

The assessment of noise emission under the Noise Regulations is based on external noise level limits that apply at a receiver position. The calculation of the noise level limits takes into account the local road network, the land use in the surrounding area and the time of day. These calculated noise level limits are known as 'assigned noise levels.'

Noise emissions from a proposed development site are assessed over an assessment period which can vary between fifteen minutes and four hours. The assessment period must be appropriate for the assessment of the emission and depends on the type and character of the noise source(s).

The assigned noise levels are defined in terms of statistical A-weighted and Slow-weighted sound pressure levels as follows:

- L_{AS10}, this is the noise level not to be exceeded for more than 10% of the assessment period
- L_{AS1}, this is the noise level not to be exceeded for more than 1% of the assessment period
- L_{ASmax}, this is the noise level not to be exceeded at any time.

In determining the assigned noise levels applicable to the development, reference has been made to the town planning scheme map available from the City of Rockingham Local Planning Scheme provided in Appendix B.

3.1.1 Assigned noise levels

The assigned noise levels applicable to the representative most-affected receivers are presented in Table 6. Full details of the parameters used in the calculation of the assigned noise levels are provided in Appendix D.

Table 6: Summary of assigned noise levels

Type of premises receiving noise	Time of day	Assigned noise level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: highly sensitive area	0700-1900 – Monday to Saturday	45	55	65
	0900-1900 – Sunday and public holidays	40	50	65
	1900-2200 – All days	40	50	55
	2200-0700 – Monday to Saturday, or 2200-0900 – Sunday and public holidays	35	45	55
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80

In addition, the noise emissions must be free of annoying characteristics such as: impulsiveness, modulation and tonality. Adjustments are also applicable where the noise emission is music. These adjustments are presented in Table 7.

Table 7: Adjustments for annoying characteristics

Adjustment where noise emission is not music. These adjustments are cumulative to a maximum of 15 dB			Adjustment where noise emission is music	
Where tonality is present	**Where modulation is present**	**Where impulsiveness is present**	**Where impulsiveness is not present**	**Where impulsiveness is present**
+5 dB	+5 dB	+10 dB	+10 dB	+15 dB

Division 5 of the Noise Regulations states that "Regulation 7 does not apply to community noise". Community noise is defined in Schedule 2 and includes:

> 3. Noise emitted from an assembly convened solely for the purpose of divine worship where —
>
> (a) the noise is not noise of a kind referred to in regulation 15(2); and
>
> (b) the premises or public place on which the worship takes place is land which is referred to in section 6.26(2)(d), (e) or (f) of the *Local Government Act 1995*.

Some activities on the site are considered to be 'community noise' and therefore would not be assessable against the assigned levels.

Other activities proposed for the site would not be exempt and these are also likely to have the highest associated noise levels. Estimated noise levels from these activities are described and compared with the assigned levels criteria below.

3.2 Road noise to the development

The relevant policy for the assessment of road traffic noise in Western Australia is *State Planning Policy No. 5.4 Road and Rail Noise* (SPP 5.4). A screening assessment has been undertaken using the Noise Exposure Forecast table in the SPP 5.4 *Road and Rail Noise Guidelines*. The outcomes are summarised in Table 8.

Table 8: Forecast noise exposure category

Road name	Number of lanes (total)	Vehicles per day	Distance to noise sensitive receiver	Forecast noise exposure	Noise exposure category
Kwinana Fwy	8	>60 000	>300 m*	<53	None

* the receiver location has been taken to be the nearest noise-sensitive building (the priest's residence)

The forecast noise exposure level is below the SPP 5.4 external noise target and therefore no further measures are required to address traffic noise intrusion under SPP 5.4.

The distance and forecast noise levels presented in Table 8 are the furthest distance possible in the SPP 5.4 Noise Exposure Forecast table. The actual separation distance between the Kwinana Fwy and the nearest noise-sensitive buildings proposed for the site is >500 m. As such, external traffic noise levels at the buildings will be lower than 53 dB, particularly at night (noting that the forecast noise exposure levels are daytime levels).

Based on the forecast exposure level, internal noise levels of AS 2107 are expected to be achievable with typical facade designs that allow for natural ventilation.

4.0 EXISTING NOISE ENVIRONMENT

A noise survey of the site has not yet been carried out; however, the noise environment is expected to mainly consist of road noise from the nearby Kwinana Freeway. The average weekday traffic volumes on this section of the freeway are greater than 73,000 vehicles (AADT).

While the Freeway is not close enough to warrant any specific sound insulation requirements for the project, the ambient noise levels at surrounding properties are an important consideration, since they affect how noise will be perceived by neighbours. They also affect how noise is assessed, noting that certain 'annoying characteristics adjustments' depend largely on audibility.

High level noise modelling has been undertaken to estimate noise levels during one of the more sensitive time periods (2300 to 0000 hours on weekends). The predictions are based on hourly traffic data obtained from Main Roads.

A noise contour map is included for reference and can be found in Appendix F6.

We recommend that a logging survey be included during detailed design to confirm the existing environmental noise levels.

5.0 NOISE ASSESSMENT

The following noise sources associated with the operation of the temple have been considered in the noise assessment:

- Noise from the multipurpose hall
- Noise from cars and patrons using the carparks

To estimate potential noise transmission from site activity, a 3-dimensional model of the proposed hall and surrounding environment was created using SoundPLAN proprietary noise modelling software (version 8.2).

Details on the modelling, including source levels, are provided in Appendix E.

5.1 Multipurpose hall

Breakout noise from the multipurpose hall has been modelled for the following two scenarios:

1. Weddings (occasional use) – likely worst-case scenario for noise
2. General activity – presented as the likely range for regular hall uses.

5.1.1 Weddings

For assessment purposes an internal reverberant level of 90 dB L_{A10} has been assumed within the hall. This level is based on survey data obtained by MDA staff from another function venue. The level was measured at the peak of the night and is considered representative of the upper levels that could sometimes occur when the hall is fully occupied with music playing. The noise source includes both patrons and music.

Refer to Appendix E3 for the sound spectra.

The estimated noise levels at the nearest representative receivers are provided in Table 9. The levels are based on the building envelope recommendations provided in Section 6.0 and assume windows and doors to the hall are all closed.

Table 9: Multipurpose hall predicted levels from weddings (dB)

Receiver	Address	Predicted level (L_{A10})	Assigned level (L_{A10})	Compliance	Margin (evening/night)
1	574 Young Road	17	Evening: 40 dB Night: 35 dB	✓	-23 / -18
2	151 Folly Road	25		✓	-15 / -10
3	66 Folly Road	23		✓	-17 / -12
4	547 Young Road	29		✓	-11 / -6

The predicted levels from weddings within the multipurpose hall show:

- Compliance is demonstrated at all existing receivers (#1-3) with margins of at least 15 dB and 10 dB for the evening and night periods respectively
- Compliance is demonstrated to the potential future receiver (#4) at 547 Young Road with margins of 11 dB and 6 dB for the evening and night periods respectively

Under a compliance survey assessment, noise levels measured at nearby receivers would be assessed to determine whether any 'annoying character adjustments' are appropriate. While ambient noise levels at the time would need to be factored in (see discussion in Section 4.0), if the noise was clearly identified to be music, it would typically attract a +10 dB adjustment.

While these are preliminary estimates only at this stage, the following can be determined:

- Music levels during weddings will need to be carefully managed to meet the assigned levels, particularly during night-time hours (i.e. after 2200 hrs)
- Windows and doors will likely need to be closed at times to contain noise. While doors will inevitably need to open and close for ingress and egress, the main entry doors open to a lobby (rather than the main hall), which will help reduce noise breakout via open doors.
- The building envelope design will require careful consideration during detailed design so that the building is capable of sufficiently containing noise when required. See Section 6.1 for preliminary recommendations.
- Should a future receiver be introduced at 547 Young Road, additional noise management controls may need to be included, particularly if music were found to be audible.

The scenario modelled is expected to be the highest noise activity in the multipurpose hall and it has been modelled with doors and windows closed to demonstrate that under a typical worst-case use noise can be controlled, provided that provisions are made in the design.

A noise management plan should be developed so that any operational procedures that are found necessary to achieve compliance are clearly documented for staff to follow.

Preliminary design and management recommendations are outlined in Section 6.0.

5.1.2 General activity

Internal sound levels in the multipurpose hall under regular use are expected to be significantly below those for a wedding. The internal levels will vary depending on the activity, number of patrons, etc. An estimated sound level range between 70-80 dB L_{A10} has been assumed, which is likely representative of most typical uses.

Refer to Appendix E3 for the sound spectra.

For this scenario, the building envelope is assumed to be open (natural ventilation mode). Window locations are not yet known; for simplicity, the modelling assumes all doors around the hall are open (total 32 m^2 openings).

Table 10: Multipurpose hall predicted levels from general activity (dB)

Receiver	Address	Predicted levels (L_{A10})	Assigned level (L_{A10})	Compliance
1	574 Young Road	22-32	Day: 45 dB Evening: 40 dB Night: 35 dB	✓
2	151 Folly Road	30-40		Potential exceedances at night
3	66 Folly Road	28-38		Potential exceedances at night
4	547 Young Road	34-44		Potential exceedances evening and night

The predictions in Table 10 show there is potential for the assigned noise level criteria to be exceeded for some noisier uses, however it must be reiterated that the modelling assumes the hall is in open mode (all doors open). Options to reduce noise include:

- Hall timetabling – scheduling noisier activities for daytime hours
- Reducing sound levels at the source (e.g. lower music levels at night or if natural ventilation is desired)
- Closing some windows and doors during sensitive periods.

Managerial controls are described further in Section 6.0.

With appropriate consideration for these variables, it is expected that noise can be managed, and the venue operated successfully.

5.2 Carparks

The proposed development includes:

- A main carpark alongside the temple with 65 parking bays
- 16 car bays near the dining hall
- 20 car bays near the multipurpose hall
- 3 additional bays near the guest accommodation

5.2.1 Maximum noise levels from carparks

An assessment against the 55 dB L_{Amax} evening and night-time assigned noise level has been undertaken to address short duration sounds from:

- Noise from individual vehicles within the carpark
- Vehicle start-ups, doors being opened and closed
- Voices from car park users

The maximum sound levels would generally be from car door slams. Sound power data used for the calculations is provided in Appendix E. The levels are based on a range of measurements taken by MDA and are considered to represent typical maximum levels from parking bays. Excessive noise resulting from anti-social or non-typical behaviour could generate higher noise levels than those considered in the assessment; however, it is expected that this would be unlikely for this type of development and management procedures could be used to control this if required.

The maximum noise level calculation is conservative, in that the level at each receiver is the highest predicted from any point in the carpark – i.e. it is assumed the maximum noise source occurs at the worst possible location for each receiver.

The predicted noise levels are provided in Table 11.

Table 11: Carpark predicted levels (dB)

Receiver	Address	Predicted level (L_{Amax})	Assigned level (L_{Amax})*	Compliance
1	574 Young Road	37	55	✓
2	151 Folly Road	38	55	✓
3	66 Folly Road	44	55	✓
4	547 Young Road	50	55	✓

The estimated levels show that noise from typical maximum sources in the parking bays nearest the surrounding receivers would meet the assigned levels.

The potential for car door slams to attract a +10 dB adjustment for impulsiveness is noted, although this would not affect compliance to existing receivers. Only the potential future receiver (#4) is within a 10 dB margin for compliance. Furthermore, this adjustment would typically apply to persistent and consistent impulsive noise rather occasional intermittent events.

5.2.2 Overall noise from the carpark

An assessment has also been undertaken of overall noise against the L_{A10} assigned level criteria for potential worst-case scenarios. The modelled scenarios are consistent with the vehicle movement forecasts, as outlined in Section 0.

The scenarios and assumptions are described below.

Scenario 1 – Morning prayer service (weekly)

- Assumes 67 vehicle movements within a 2-hour period (34 movements within 1 hour)
- Vehicles all park in the main Temple car park

It should be noted that this scenario presents noise from vehicle movements that are notably higher than the vehicle movement forecasts in Section 0 indicate will occur in practice (maximum forecast average of 19 movements in 1 hour).

Scenario 2 – Special Hindu festival days (monthly)

- Assumes 200 attendees arrive within a 2-hour period
- 125 vehicle movements (63 movements within 1 hour)
- Vehicles using all available parking bays on site

Scenario 3 – Weddings (6 per year)

- Assumes 200 attendees depart within a 1-hour period
- 100 vehicle movements (100 movements within 1 hour)
- Vehicles using all available parking bays on site

The results for these scenarios are presented as noise contour maps in Appendix F3, Appendix F4 and Appendix F5. The contours are plotted as noise levels that align with the L_{A10} assigned levels; however, it should be noted that not all scenarios modelled will occur during these times.

Comparing the predicted levels for the different carpark scenarios with the proposed operating hours and occupancies, the outcomes in Table 12 are expected.

Table 12: Summary of predicted compliance outcomes

Scenario	Frequency	Day	Evening	Night
1 – Morning prayer service	Weekly	✓	✓	✓
2 – Special Hindu festival days	Monthly	✓	✓	✓
3 – Weddings	6 per year	✓	✓	✓

Note that the "Day", "Evening" and "Night" periods are simplified references to the time periods when different assigned levels apply under the *Environmental Protection (Noise) Regulations 1997*, as shown in Table 6.

As described in Section 2.2.2, if a residence is built at 547 Young Road in the future, alternative operating hours would need to apply. The hours would restrict some of the proposed higher occupancy uses of the site to occur at less sensitive hours, specifically:

- Special Hindu festival days would only be permitted during Day and Evening periods
- Weddings would only be permitted during the Day period

A summary of the outcomes under this potential future arrangement is provided in Table 13. “n/a” indicates the activity would not occur during that time period.

Table 13: Summary of predicted compliance outcomes - AFTER residence is built on 547 Young Road

Scenario	Frequency	Day	Evening	Night
1 – Morning prayer service	Weekly	✓	✓	✓
2 – Special Hindu festival days	Monthly	✓	✓	n/a
3 – Weddings	6 per year	✓	n/a	n/a

General recommendations to help manage carpark noise are provided in Section 6.2.

6.0 RECOMMENDATIONS FOR NOISE MANAGEMENT

The noise assessment detailed above demonstrates that noise from the multipurpose hall and carpark can meet the assigned levels. The design should allow for the provisions outlined below, to be developed during detailed design. Managerial controls will also be an important factor for the successful operation of the site, and these should be developed into a noise management plan to be maintained by the operator.

Preliminary recommendations for the design and management of the site are outlined below.

6.1 Building envelope design

At this stage of the design, the materials and designs for the building envelope are not yet determined. The noise modelling presented for the multipurpose hall is nominally based on:

- Closed and sealed R_w 36 (e.g. 10.38 mm laminated) acoustic glazing. The extents and locations of external windows will need to be factored in when designing the facade. If larger extents are used (i.e. entire facades), higher ratings should be considered. Similarly, smaller windows to more shielded facades could accommodate lower ratings.
- External walls being solid masonry (e.g. precast or double brick), rated around R_w 50. Lightweight facade elements could be considered but should be designed to contain music noise.
- Acoustically rated roof and suspended ceiling build-up (min. R_w 54).
- For external doors, the modelling assumes min. R_w 30.

Doors are weak points acoustically, particularly since they cannot remain closed at all times. For event noise, it would be beneficial if the design allows for the option to close and seal some doors at times (e.g. during any late night hours for events).

It is noted that the main entry doors are located in a relatively shielded position on the building relative to the nearby receivers and open to a lobby/airlock, rather than direct to the hall. This is a good design and should allow greater operational flexibility.

6.2 Carpark design and management

The following general design recommendations are made to reduce car park noise:

- The surface of the carpark should be a low noise asphalt or bitumen type
- Although primarily a safety consideration, vehicle speeds should be restricted to control noise. Signage, line markings and chicanes should be considered in lieu of speed humps, as speed humps can be a cause of nuisance noise
- Loose road coverings such as drains should be avoided

Managerial options that could be implemented include:

- Attendees being made aware of the need to be respectful of residential neighbours, including encouragement not to loiter in the carpark and to depart from site in a quiet manner.
- Directing attendees to park in less sensitive areas on site first and/or restricting access to certain parts of carparks. Although it is noted that carparks nearest the buildings are likely to fill up first and these are also furthest from the residents.

6.3 General operational noise

For managing noise from general operations, the following options will be available and should be considered:

- Hall timetabling, with quieter activities such as scripture and language classes scheduled for more noise sensitive times wherever possible (refer to the assigned levels hours in Table 6)
- Any third parties hiring the hall should be made aware of the proximity of noise sensitive neighbours and their responsibility to manage their activity levels
- Staff and volunteers being informed of noise management responsibilities

While some of these would not typically need to be formalised in a noise management plan, managerial controls related to large events would.

6.4 Event noise

The assessment of event noise demonstrates that noise can be contained within the multipurpose hall when required, provided that music levels are controlled, particularly for any events after 2200 hours.

The assessment is a simplified review and does not account for the variables that would need to be considered in further detail before any large events such as weddings are held on the site.

The following would need to be considered:

- Number of patrons
- Event times / durations
- Proposed music, activities, etc.
- Event layouts

Once these are determined, more specific noise management procedures should be developed to manage noise risks associated with events.

Noise from patrons arriving and leaving from the venue should be controlled through appropriate patron management procedures. Assessment of noise from patrons in the car park has been assessed in Section 5.2.1.

6.5 Additional noise sources

The following additional noise sources on site were identified. These will also need to be considered in the design and managed by the operator.

6.5.1 Mechanical services noise

At this stage of the project, the mechanical services design strategy is not yet confirmed; however, services will need to be designed so that compliance with the Noise Regulations is achieved.

Noise from mechanical services equipment is typically controlled using design and engineering methods such as:

- Plant equipment siting and selection to reduce noise impacts
- Barriers/screens around plant equipment
- Duct attenuators and acoustic louvres

In addition, equipment will need to be appropriately vibration isolated.

Based on the layout, siting of the buildings, and buffer distances to nearby receivers, it is expected that services noise can be adequately controlled using typical noise control approaches.

Noise to within the development itself should also be considered and we recommend the internal noise level criteria of AS 2107 be targeted in the design.

7.0 CONCLUSIONS

This report has been prepared as part of the Development Application (DA) for the proposed Balaji Temple development located at Lot 53 Folly Road, Baldivis.

A previous version of this acoustic report (Rp 001 r02 20210485) was prepared by MDA, which provided an overview of the acoustic issues associated with the Project and included noise modelling predictions for key noise sources.

Project planning has further progressed, with the site layout and proposed operations having been refined to address some concerns raised during the DA process.

The carpark layout has been refined and expected vehicle movements better defined. These have been considered in this assessment and compliance is demonstrated to all existing receivers.

Should a residence be built in future at 547 Young Road, alternative operating hours for the site will be adopted. Compliance is also demonstrated under this potential future scenario.

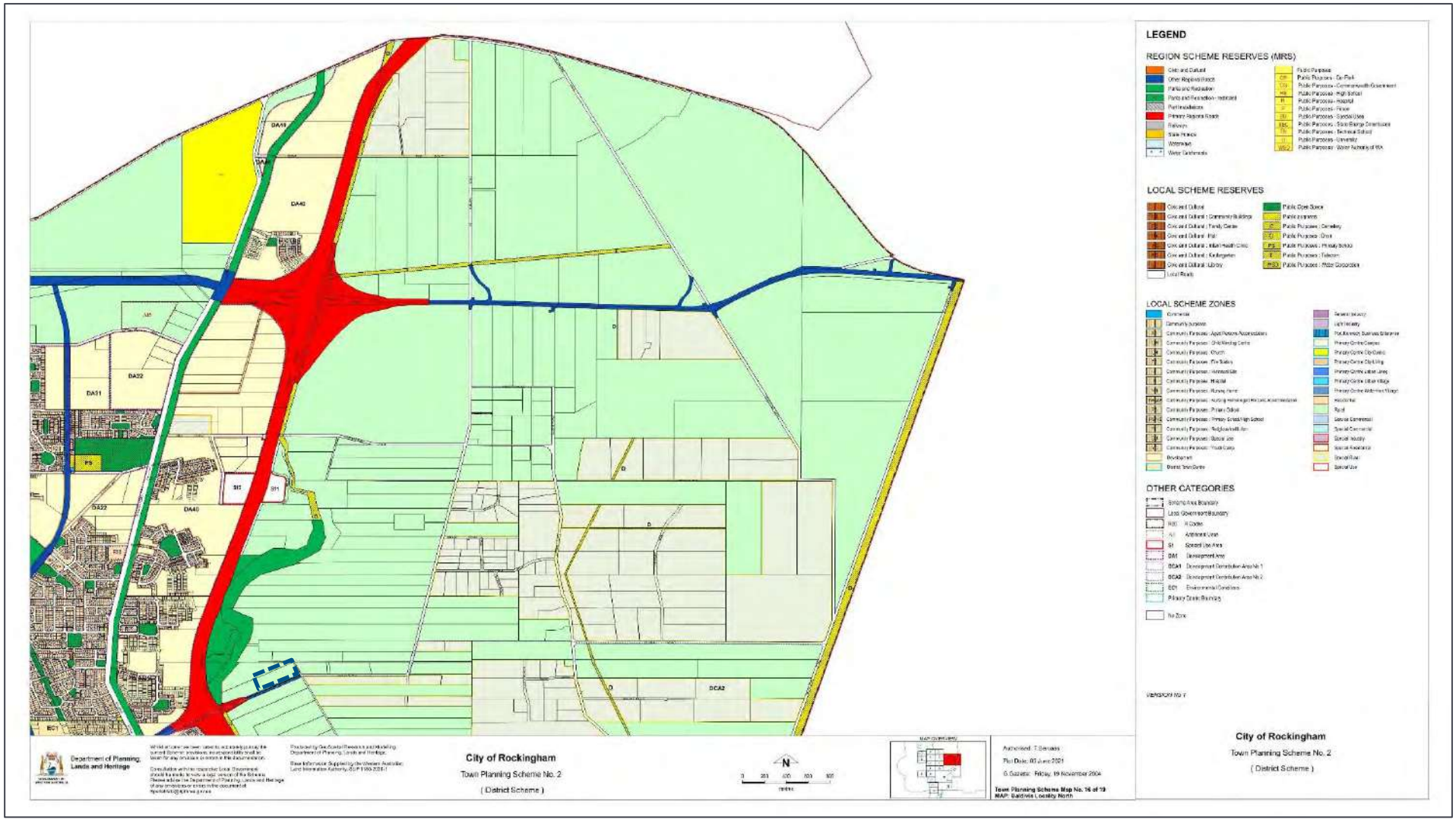
Preliminary recommendations for the design are provided, which should be developed during detailed design. The extent of noise controls that can be incorporated in the design will ultimately determine the scope of any operational noise management procedures that are required.

With appropriate development of the design and implementation of management strategies, the development is expected to meet the relevant noise standards and appropriately function in the surrounding noise environment.

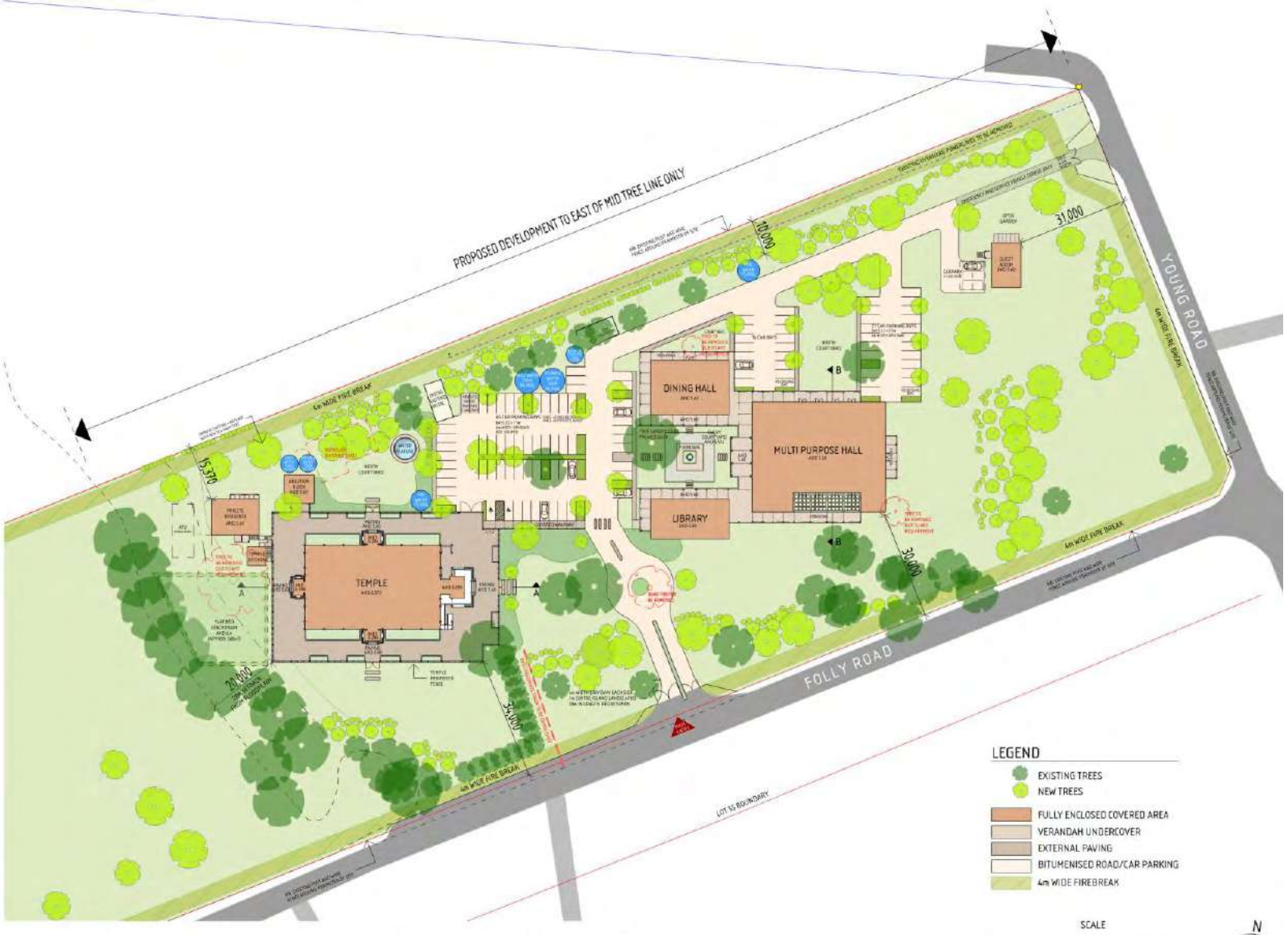
APPENDIX A GLOSSARY OF TERMINOLOGY

A-weighting	The process by which noise levels are corrected to account for the non-linear frequency response of the human ear.
dB	Decibel The unit of sound level. Expressed as a logarithmic ratio of sound pressure P relative to a reference pressure of Pr=20 μPa i.e. dB = 20 x log(P/Pr)
Frequency	The number of pressure fluctuation cycles per second of a sound wave. Measured in units of Hertz (Hz).
Hertz (Hz)	Hertz is the unit of frequency. One hertz is one cycle per second. One thousand hertz is a kilohertz (kHz).
L_{A1}	The noise level exceeded for 1% of the assessment period, measured in dBA.
L_{A10}	The noise level exceeded for 10% of the assessment period, measured in dBA.
L_{Amax}	The A-weighted maximum noise level, measured in dBA.
Octave band	A range of frequencies where the highest frequency included is twice the lowest frequency. Octave bands are referred to by their logarithmic centre frequencies, these being 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, and 16 kHz for the audible range of sound.
SPL or L_P	Sound Pressure Level A logarithmic ratio of a sound pressure measured at distance, relative to the threshold of hearing (20 μPa RMS) and expressed in decibels.
SWL or L_W	Sound Power Level A logarithmic ratio of the acoustic power output of a source relative to 10^{-12} watts and expressed in decibels. Sound power level is calculated from measured sound pressure levels and represents the level of total sound power radiated by a sound source.

APPENDIX B PLANNING MAP



APPENDIX C PROPOSED SITE PLAN



PROPOSED DEVELOPMENT EAST OF MID TREE LINE 1:500 (@ A1)

APPENDIX D ASSIGNED NOISE LEVEL CALCULATIONS

The determination of the Influencing Factor (IF) which affects the assigned levels applicable at the nearest residential receivers is based on the following:

- The number of major and secondary roads in proximity to the receiver
- The area of commercial and industrial zoned land surrounding the receiver

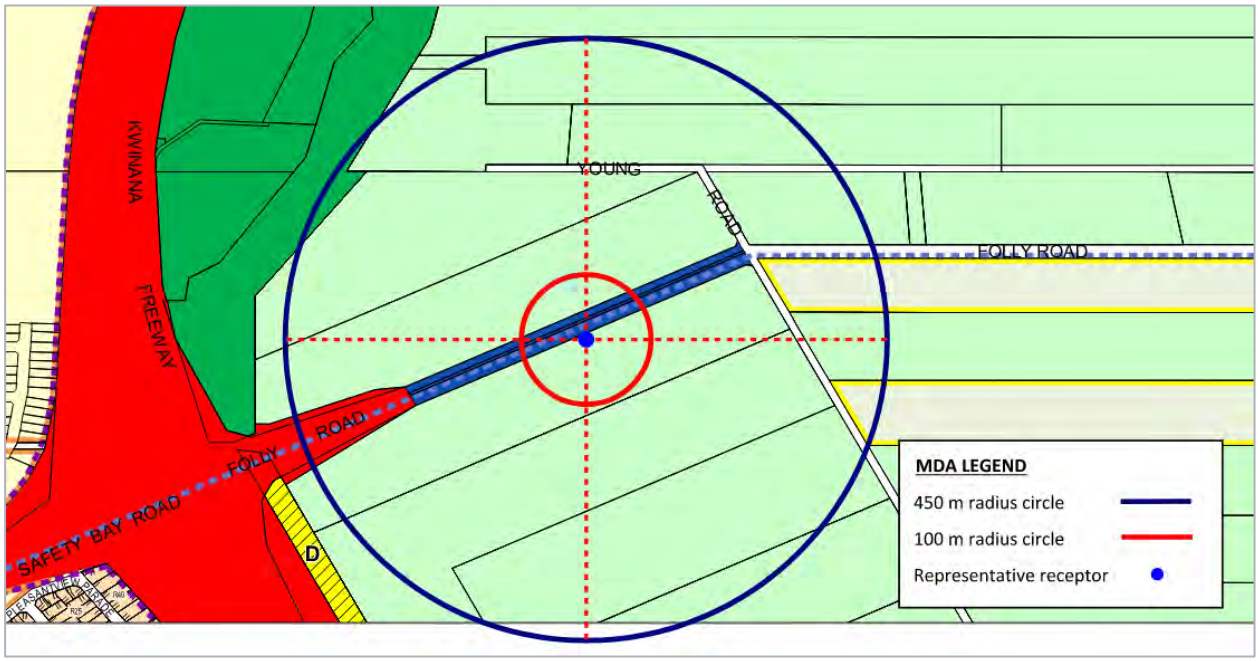
The procedure defined in the Noise Regulations considers the land use and road types with two circles centred on the receiver location, one of 450 m radius, and one of 100 m radius.

The land use has been determined from:

- City of Rockingham Local Planning Scheme (accessed 21/09/2021)

An extract of the City of Rockingham planning map showing the 100 m and 450 m radius circles centred at the nearest sensitive receiver at 66 Folly Road is presented in Figure 3.

Figure 3: Extract of planning map with 100 m and 450 m radius areas used to determine the IF shown



Transport factors of 6 dB and 2 dB apply if there are any Major Roads (a road carrying in access of 15,000 vpd) within the 100 m and 450 m circles respectively. For each Secondary Road (a road carrying in between 6,000 - 15,000 vpd) within the 100 m circle, a 2 dB transport factor applies. The total transport factor that is included in the IF is limited to 6 dB.

Traffic data for the nearby roads obtained from Main Roads is presented in Table 14.

Table 14: Traffic data and classifications for nearby roads (source: Main Roads)

Road	Average weekday traffic volume (AADT/VPD)	Classification
Folly Road (West of Young Road)	2,592 (2020/2021)	-

Based on the data presented in Table 14 and noting that the Kwinana Fwy is more than 450 m away from the nearest noise sensitive receivers, the transport factor is 0 dB.

A summary of the input parameters used to determine the IF is presented in Table 15.

Table 15: Influencing Factor (IF) calculation parameters

	100 m circle	450 m circle	IF
Land use:			
Industrial %	0%	0%	-
Commercial %	0%	>3%	-
Transport Factor:			
Major road	0	0	-
Secondary roads	0	n/a	-
		Influencing Factor:	**0 dB**

Based on the parameters above, the IF is calculated to be 0 dB.

APPENDIX E NOISE MODELLING DETAILS

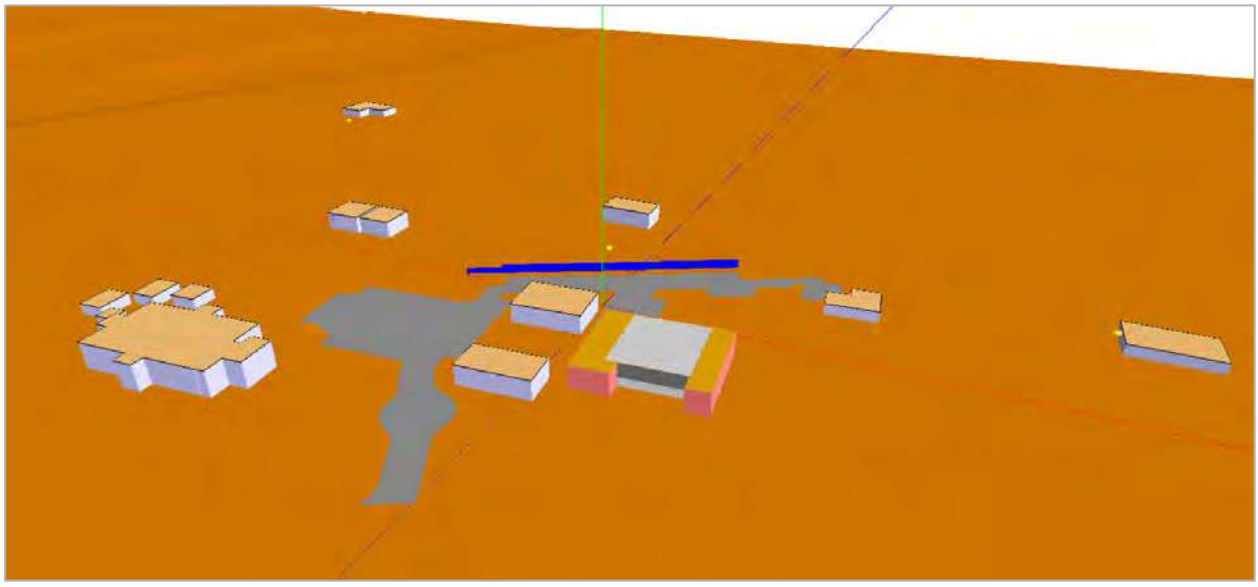
E1 Modelling method

A 3-dimensional model of the proposed building, carpark and surrounding environment has been created using SoundPLAN proprietary noise modelling software (version 8.2).

Geometry data for the model has been sourced from public aerial photography and building heights defined on the basis of standard assumed heights per floor level. The geometries in the model are simplified representations of the built environment that have been configured to a level of detail that is appropriate for noise calculation purposes.

A screenshot from the noise model is shown in Figure 4.

Figure 4: Screenshot from SoundPLAN noise model



The SoundPLAN model has been used to calculate noise levels in accordance with the International Standard *ISO 9613-2: 1996 Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation* (ISO 9613-2). ISO 9613-2 is a general environmental noise calculation standard that has been used extensively throughout Australia, New Zealand, and Europe since its publication in 1996.

The implementation of ISO 9613-2 within proprietary noise modelling software enables multiple sound transmission paths, including reflected and screened paths, to be accounted for in the calculated noise levels.

The ISO 9613-2 predicts noise levels for conditions which favour the propagation of noise. The meteorological conditions assumed in the noise modelling are 10°C with 70% humidity.

Carpark noise

Overall noise from carparks (L_{A10} predictions) are modelled based on the Bavarian[1] prediction method using ISO 9613-2 for the propagation calculation. The Bavarian method defines source levels for different carpark types and is a widely accepted method for predicting carpark noise that is used by acoustic consultants throughout Australia.

The 'visitors and staff' carpark type has been adopted for the predictions. This is considered to be the most suitable category defined in the Bavarian method and is representative of the expected noise levels at the proposed facility.

[1] Bavarian State Agency for the Environment 2007, Parking Area Noise, 6th Edition, Bavarian State Ministry for the Environment, Germany

E2 Noise modelling inputs

Selected key inputs for the noise model are presented in Table 16.

Table 16: Noise modelling inputs

Parameter	Input
Noise source data	Refer to Table 17 below
Topography data	Sourced from Geoscience Australia
Receiver details:	
Height	1.5 m above ground
Location	- 15 m from nearest facade - At the facade of 151 Folly Road (based on proximity to boundary) - Assumed 8 m in from boundary for 547 Young Road
Ground attenuation	G = 0.5 (50% absorptive)

E3 Noise source levels

In order to undertake the acoustic assessment, noise level data has been sourced from the MDA noise database. The MDA noise database is a comprehensive compilation of noise measurements of numerous sources performed by staff at MDA. These measurements have been used to calculate suitable inputs for the noise model.

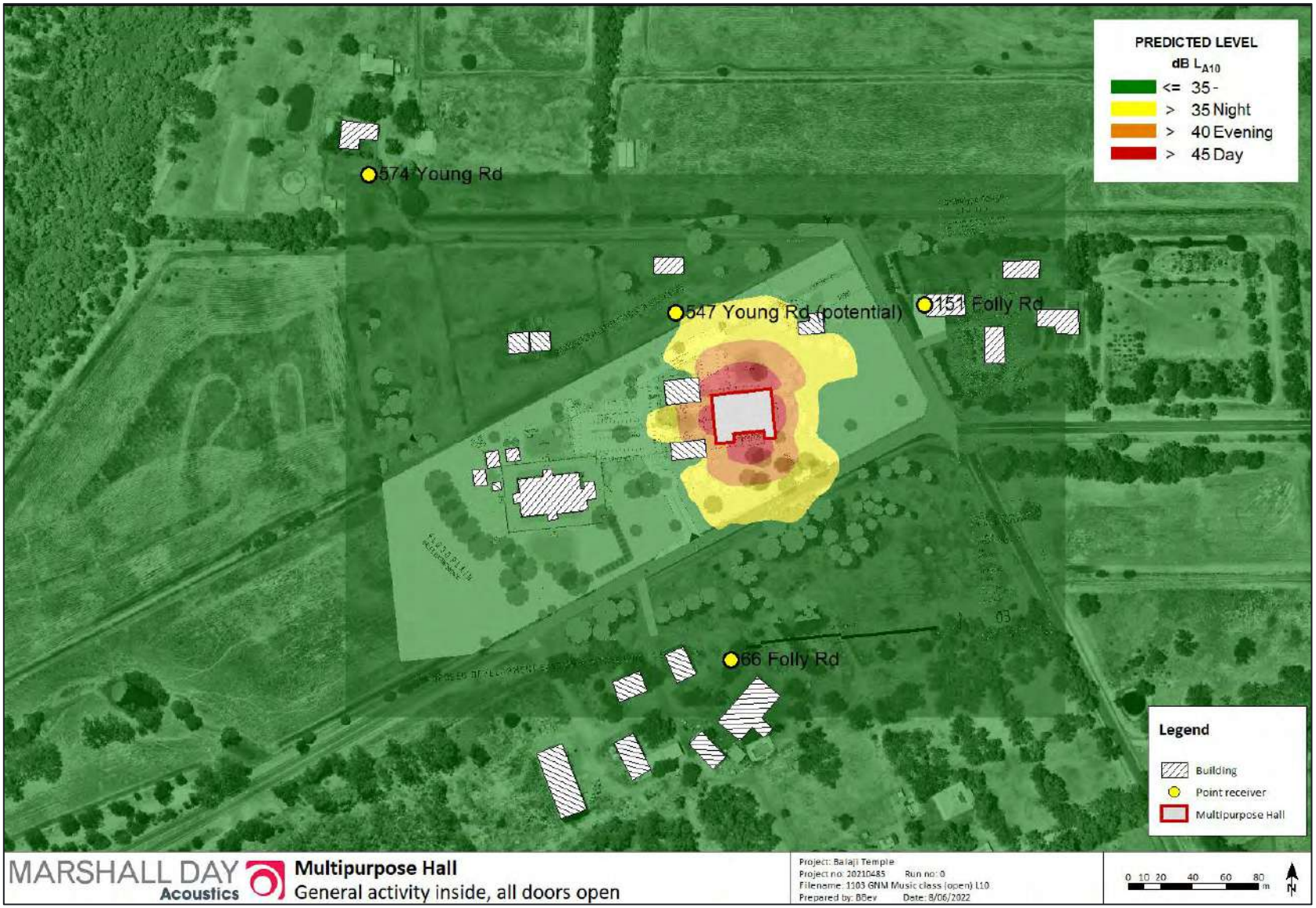
The sound levels presented in Table 17 have been used in this assessment.

Table 17: Sound levels for noise sources used in assessment

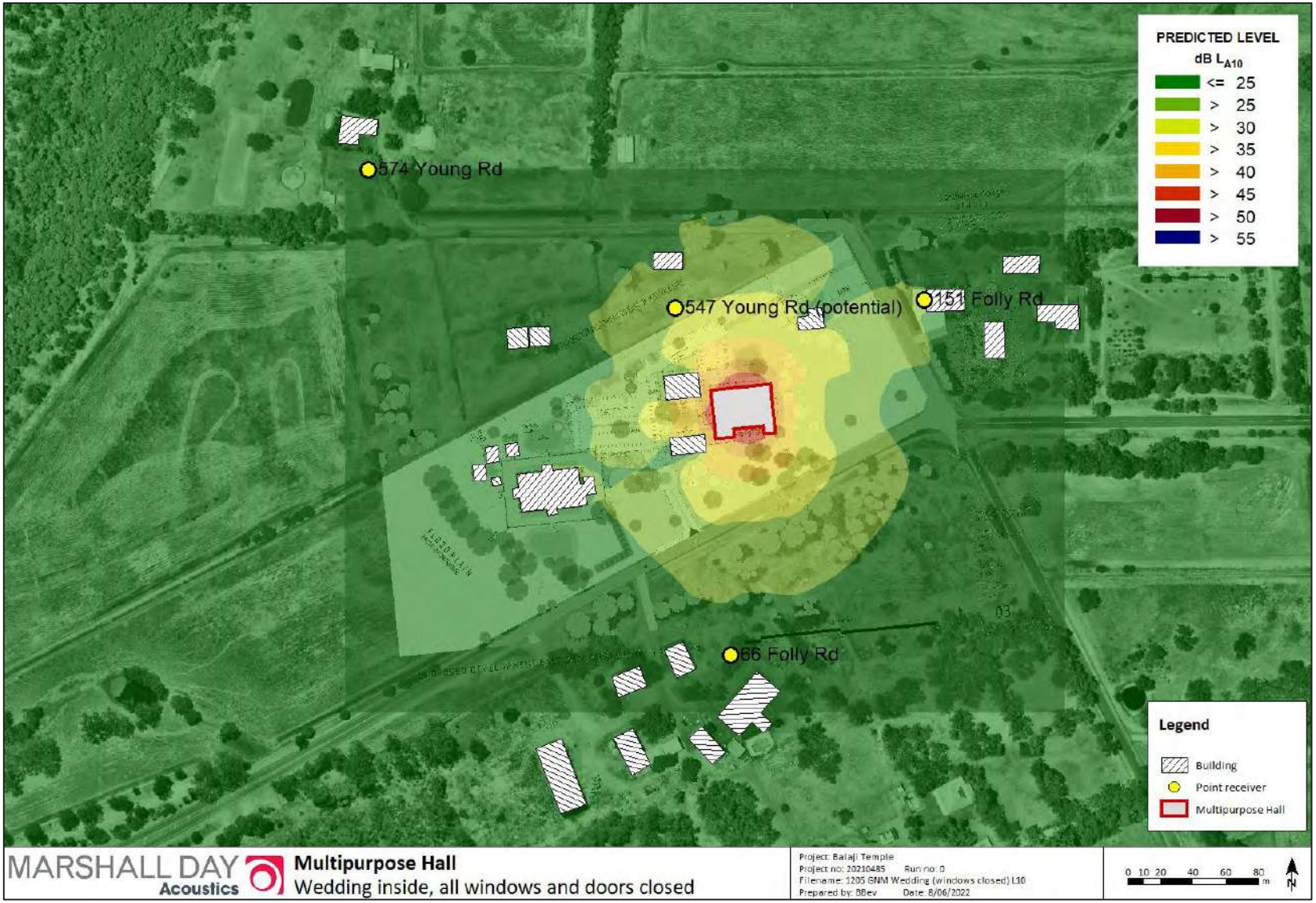
		Octave band centre frequency, Hz (dB)							
Noise source	**Metric**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**dBA**
Car door slam	$L_{wS,Max}$	108	104	94	88	85	83	80	93
Wedding music and patrons	$L_{10,rev}$	88	88	88	83	83	83	83	90
General hall activity (low)	$L_{10,rev}$	51	53	59	68	65	63	58	70
General hall activity (high)	$L_{10,rev}$	61	63	69	78	75	73	68	80

APPENDIX F NOISE CONTOUR MAPS

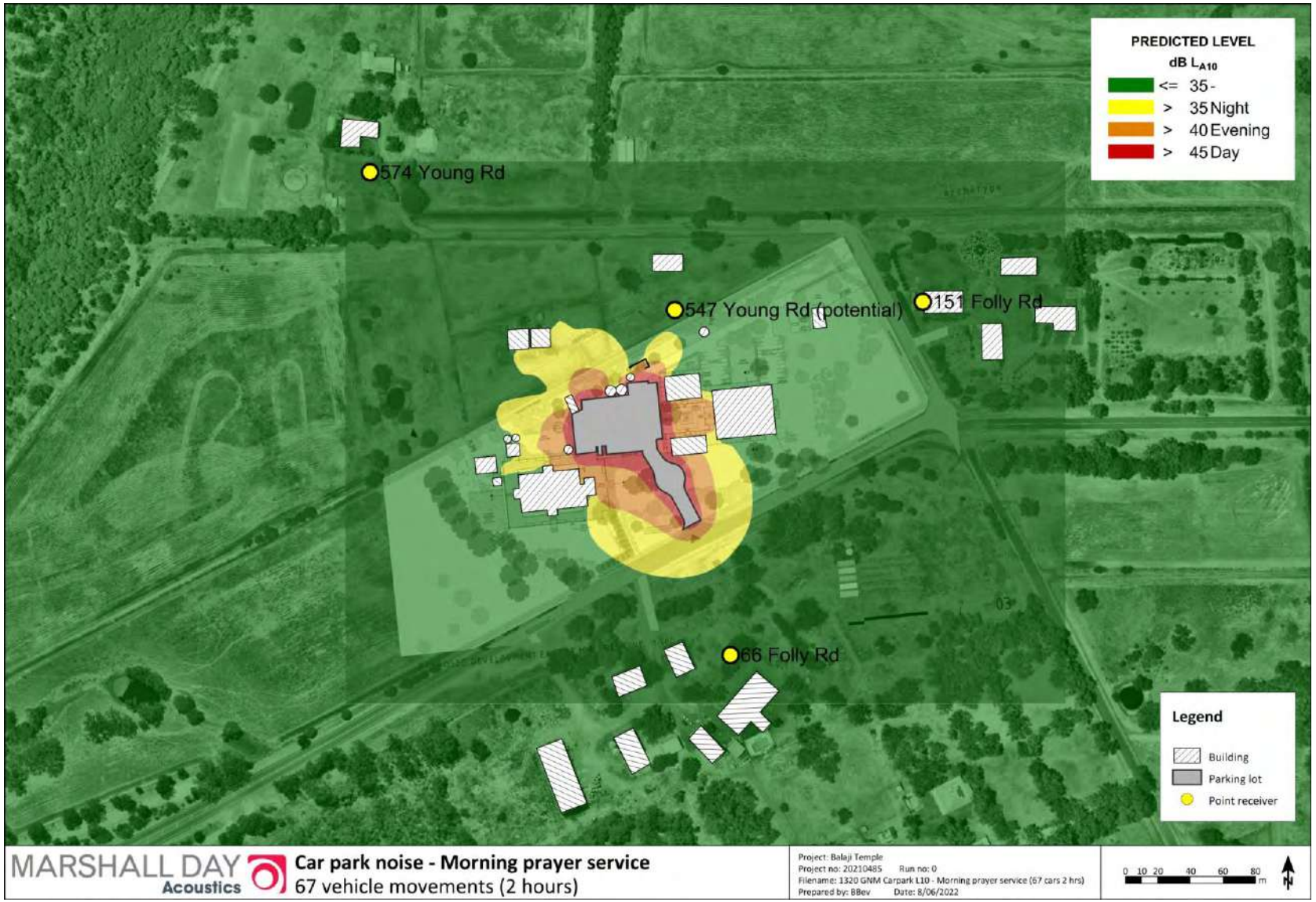
F1 Multipurpose hall noise – General activity (all doors open)



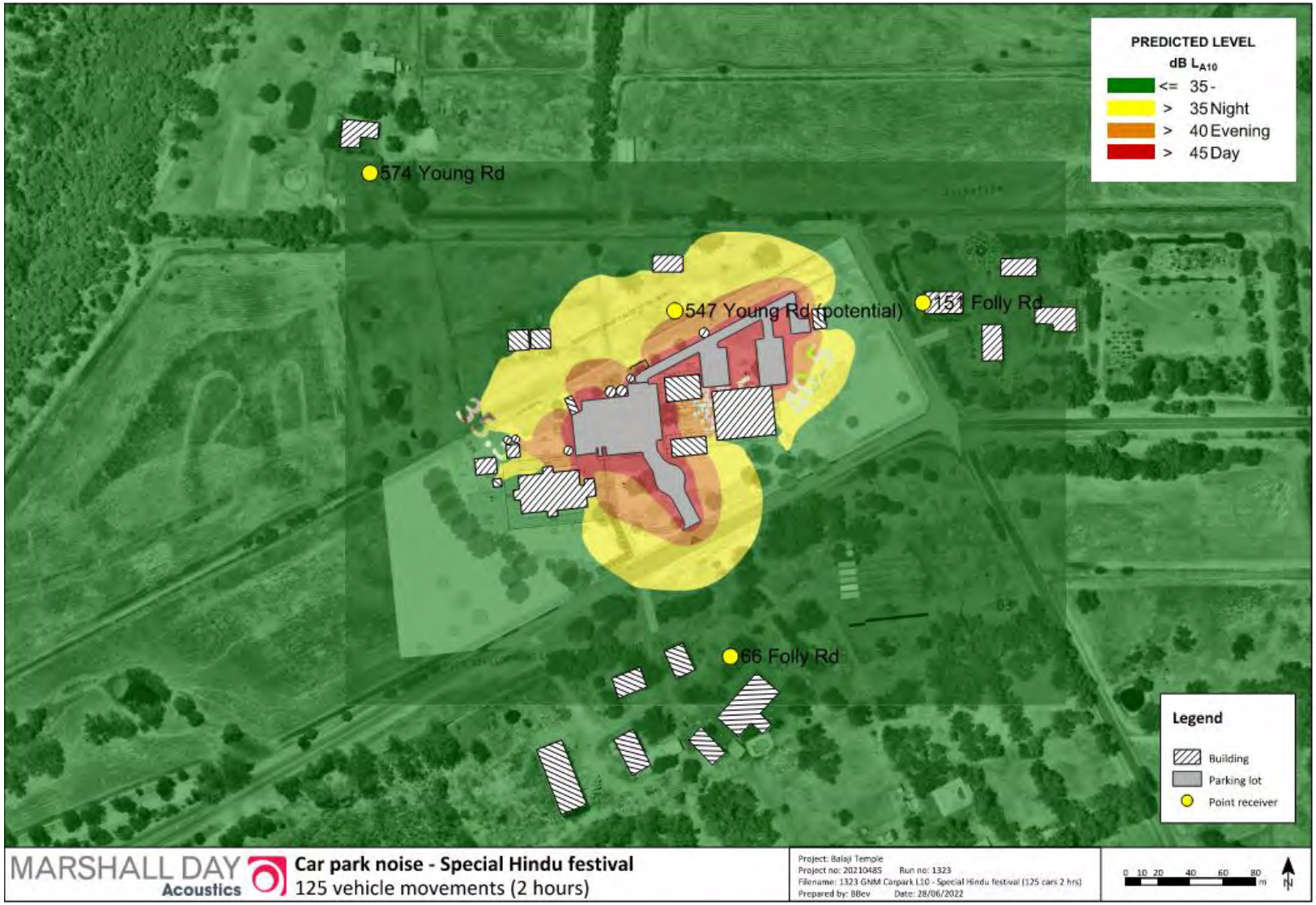
F2 Multipurpose hall noise – Weddings (windows closed)



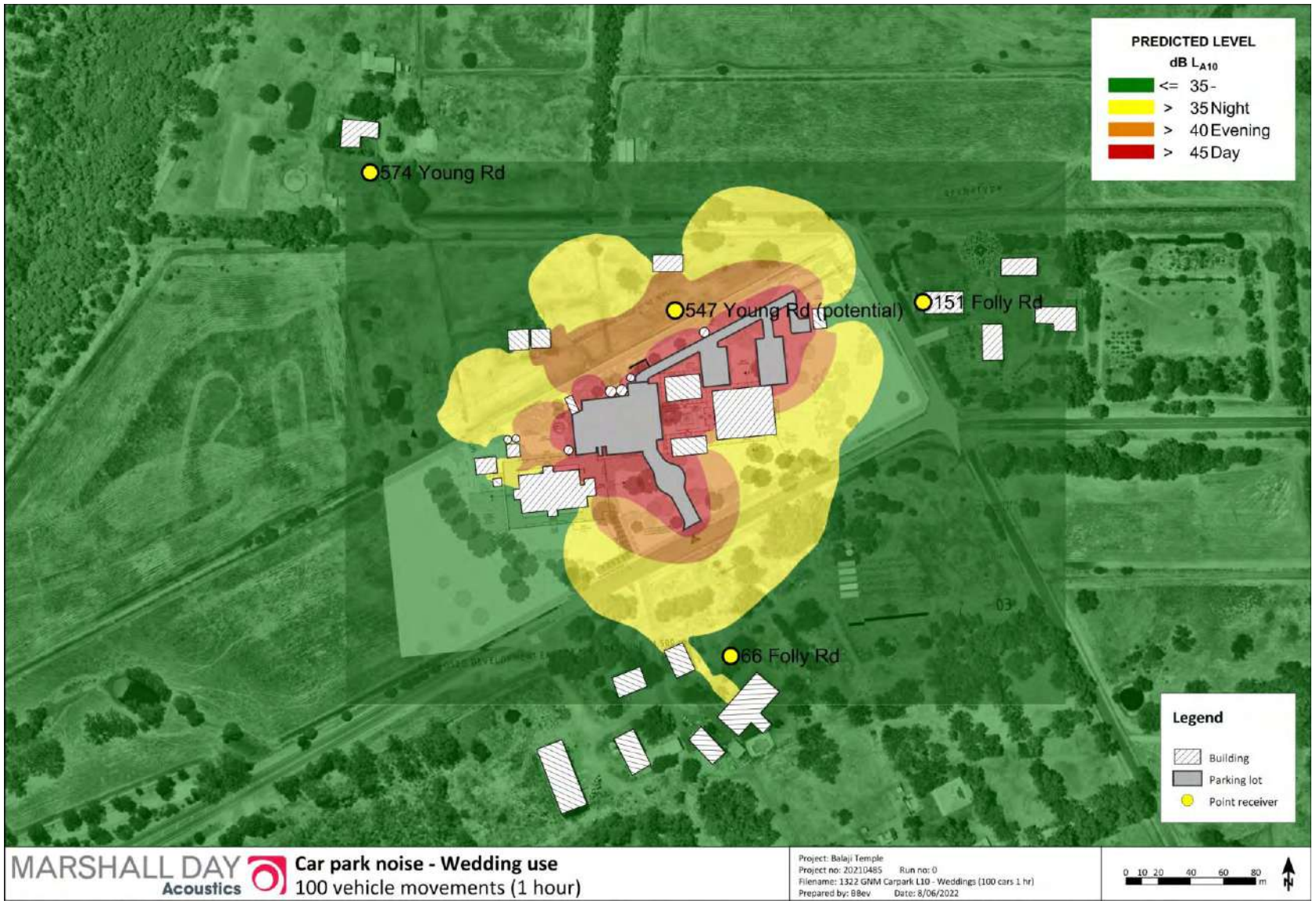
F3 Carpark noise – Morning prayer service (weekly)



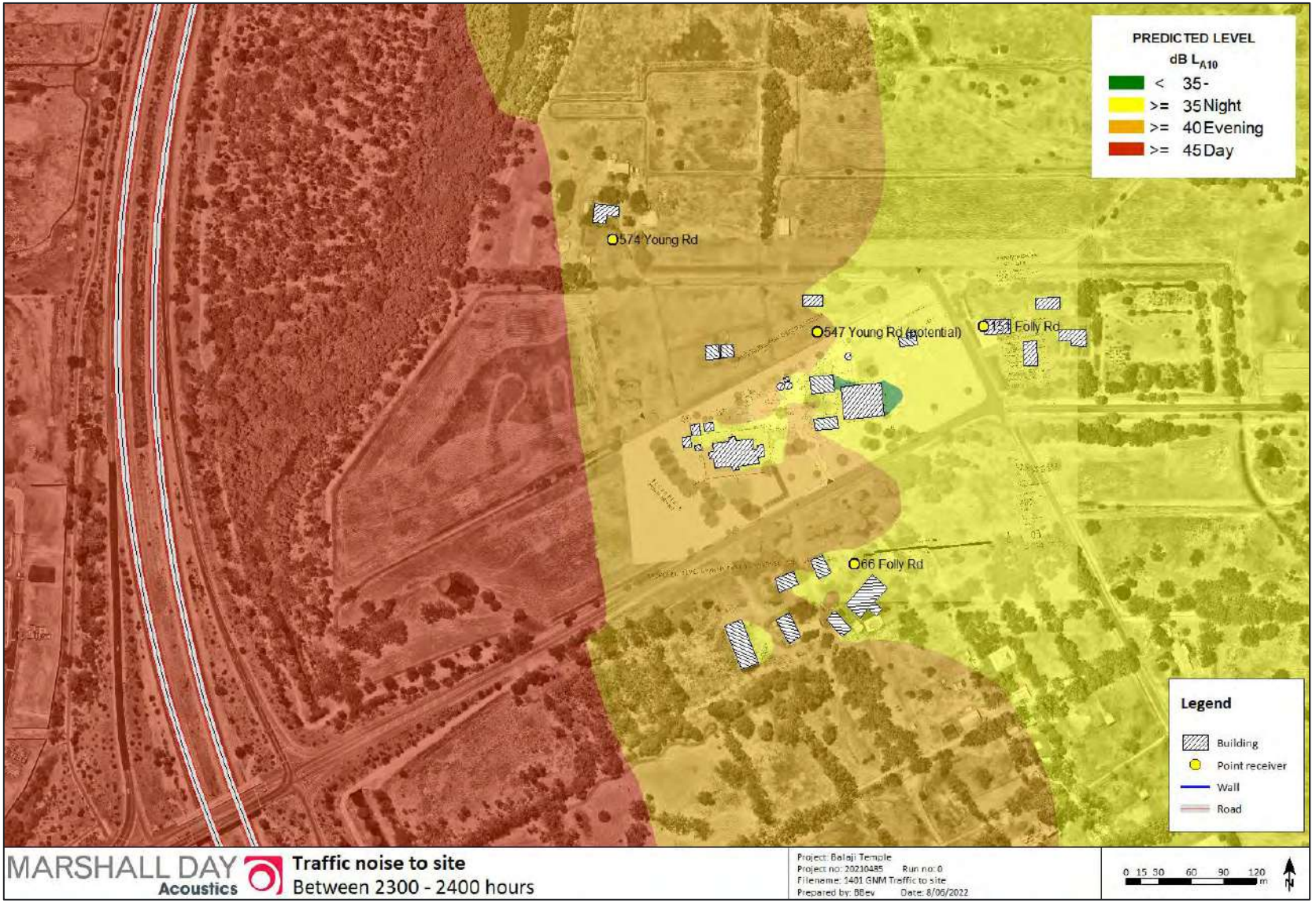
F4 Carpark noise – Special Hindu festival days (monthly)



F5 Carpark noise – Weddings (6 per year)



F6 Traffic noise to site (2300 to 2400 hours weekends)



Bushfire Management Plan

67 Folly Road, Baldivis

Client – Jeeyars Acharya Peetham Ltd

June 2022

envision
bushfire protection

LIMITATIONS STATEMENT

This Bushfire Management Plan ('BMP') has been solely prepared for the Sri Balaji Temple to be located 67 Folly Road Baldivis (**the Site**) within the City of Rockingham.

Envision Bushfire Protection

ABN: 90958370365

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Version Control

67 Folly Road Baldivis			
Version	**Date**	**Author**	
V1	20 September 2021	Anthony Rowe	Draft
V2	29 November 2021	Anthony Rowe	Revised site location
V3	22 February 2022	Anthony Rowe	Revised APZ description
V4.1	18 May 2022	Anthony Rowe	Revised landscape and APZ determination. Updated to the Guidelines v1.4.
V4.2	6 June 2022	Anthony Rowe	Revised landscape arrangement.
V5	11 June 2022	Anthony Rowe	Revised Asset Protection Zone

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Envision Bushfire Protection accepts no liability for the inaction of the owner to provide or maintain the bushfire protection measures identified in this report. Vegetation is dynamic, building materials may distort, and the accumulation and the location of flammable materials near the building may affect the potential for damage or loss of a building to occur.

Failure to maintain the property and/or building to these standards may compromise an insurance policy if currently covering any of your assets or those of any third party that may be consequentially affected due such failure. If not insured, and if you are seeking insurance, this report may not influence the decision of any insurer not to offer cover.

Importantly the measures contained in this report cannot guarantee human safety or an absence of harm or that the building will not be damaged or would survive a bushfire event on every occasion. This is due to the unpredictable nature of fire behaviour (knowledge in this field continues to develop) and the unpredictable nature of extreme weather conditions.

Scope of this report

Envision Bushfire Protection has been engaged to provide expert bushfire safety and planning advice.

The scope of the advice has been to assess the proposal for compliance with the policy measures described in State Planning Policy 3.7 and identify appropriate mitigation measures to be considered by the determining authority. This is described in a Bushfire Management Plan and prepared with regard to the Department of Planning Lands and Heritage templates.

The investigations and mitigation measures identified in the BMP, has, in turn, formed the basis for the preparation of a Bushfire Emergency Evacuation Plan.

Client relationship

I was engaged to provide expert bushfire safety and planning advice. My relationship with the client is a standard commercial contract, and no private, personal, or other matter has influenced the content of the BMP or my findings.

STATEMENT OF CONFORMITY – PLANNING AND DEVELOPMENT ACT 2005

Anthony Rowe Level 3 - BPAD36690

Principal

The signatory declares that this Bushfire Management Plan meets the requirements of State Planning Policy 3.7 and the Guidelines for Planning in Bushfire Prone Areas v1.4.

EXECUTIVE SUMMARY

Preface

The applicant Sri Balaji Temple proposes to establish a place of worship and community centre at 67 Folly Road Baldivis (subject land). The maximum number of visitors to the facility at any time is 400 people.

The subject land is 7.5 ha, but the proposal will only occupy 3.2 ha at the eastern extent (**the site**). The remainder of the subject land is to be retained as pasture.

The site is within a declared bushfire prone area. Accordingly, the proposal is development that is required to be assessed for its compliance with State Planning Policy 3.7 *Planning in Bushfire Prone Areas* ('**SPP 3.7**') and the bushfire protection criterial described in the Guidelines v1.4.

The intent of the policy is: "***to preserve life and reduce the impact of bushfire on property and infrastructure"***. The proposed land-use because it will invite visitation by people unfamiliar with the locality is classified as a 'Vulnerable' development. In addition to addressing the bushfire protection criteria through a Bushfire Management Plan (BMP), the application is to be accompanied by a bushfire emergency evacuation plan (BEEP). Together they address the preservation of life (BEEP) and impact of bushfire on property (BMP).

This BMP has been prepared in accordance with SPP 3.7 and Appendix Five in the Guidelines v1.4 and the Department of Planning Lands and Heritage (DPLH) *BMP Template for a complex development application*.

The following describes the outcome of the investigations, following the arrangement described by the DPLH template.

1. **Proposal details (addressed in Section 1)**

The proposal is to construct a place of worship and community centre comprising the following buildings.

- Temple;
- Multi-Purpose Hall;
- Guest accommodation;
- Library;
- Priest residence
- Dining Hall
- Ablution building;

The site is mostly clear of trees, flat, and has been used for pasture and grazing. The site is vacant except for a centrally located implement shed (to be demolished) and a smaller galvanised shed to be retained.

The site is located on Folly Road which is a through road 164 m from Kwinana Freeway (west) with multiple destination options north, east and south. The site has 104 parking bays with provision for a further 126 parking bays.

The site does not have access to a reticulated water supply, a strategic water supply is not located nearby, and the nearest hydrant is located 970 m south of the site. Standalone water tanks 75 000 L and 50 000 L convenient to the vehicle access, are provided for use only by emergency services.

2. **Environmental considerations (addressed in Section 2)**

No regulated vegetation will be affected by the proposed development. The proposed buildings and carpark will primarily displace an area classed as grassland and have been sited to minimise the removal of trees.

A landscaping plan is proposed with the objective to provide a softening screening of buildings on the site whilst presenting a natural distribution of vegetation when viewed across the site from the outside. An Asset Protection Zone (APZ) of 21 m will be established around all habitable buildings to enable unrestricted landscaping to occur outside of the APZ. A 15% tree canopy(stratum) with understorey management is compliant with the standards for Asset Protection Zones. This will enabled the retention of mature trees on the site whilst ensuring the BAL at the habitable buildings will not exceed BAL-29. The area outside of the APZ (21 m) is unrestricted and will be planted to soften the appearance of the buildings on site and reduce the potential for headlight glare from vehicles within the carpark when viewed from outside the site.

Figure 4 in the BMP has applied forest outside of that has been used in Figure 5 to illustrate the BAL Level at the buildings upon completion (BAL-29).

3. Bushfire assessment results (addressed in Section 3)

A Bushfire Attack Level assessment following Method 1 AS 3959:2018, and the DPLH *Visual guide for bushfire risk assessment in Western Australia*, and using an FFDI of 80, has been undertaken.

The site is predominantly grassland and identified in Figure 3. The assessment has therefore been made upon the completion of development at the site and the revegetation objective described above.

Figure 5 BAL Contour Plan illustrates the bushfire assessment results, and all habitable buildings will be within BAL-29.

4. Identification of bushfire hazard issues (addressed in Section 4)

The site has been identified as potentially subject to a grassland fire run, but unlikely to be subject to ember attack in the event of a fire given the modest extent of forest vegetation adjoining Kwinana Freeway, and the absence of significant stands of forest within 5 km of the site. The APZ, and understory management, has been established to ensure the revegetation of the site from grassland, will not result in a direct flame contact upon the habitable buildings.

The site offers access to multiple destinations in all directions. This provides the opportunity to evacuate the facility and head in a direction away from an advancing bushfire. The locality is also open offering expansive views to take avoidance action from an approaching fire, and to anticipate a fire's arrival at the site.

The site is within mobile network coverage, from transponders located in BAL low areas (Baldivis urban area west of the site). It is anticipated that continuous communication would be maintained throughout a bushfire event to provide guidance for safety.

5. Assessment against the bushfire protection criteria (addressed in Section 5)

The proposal was compared with the four Bushfire Protection Criteria Elements: Location, Siting and Design, Access, and Water.

Acceptable Solution

Element 1 Location - This provision requires a strategic proposal demonstrates upon completion the area will be classified as a low or moderate Bushfire Hazard Level. The site is within an area that is predominantly grassland which is a moderate Bushfire Hazard Level.

Element 2 Siting and Design – This provision requires a planning application should demonstrate the habitable buildings will not be exposed to a BAL greater than BAL-29.

The site is predominantly grassland and flat.

An APZ of 21 m has been provided around all habitable buildings to achieve BAL 29 from the classification of forest. This will provide the opportunity for unrestricted planting outside of the APZ without exceeding BAL-29 at the building. The APZ can be accommodated entirely within the site.

The construction standards in AS 3959:2018 apply to accommodation type building classes (class 1-3) which include the Priest's residence and the Guests accommodation

Other classes are determined by the National Construction Code fire requirements, some of which exceed the performance provided by AS 3959:2018. Where the construction performance would be less than AS 3959:2018, a higher construction standard can be provided at the applicant's discretion. This can be determined upon the finalisation of the building materials, to compare the performance standards of materials with the level required at BAL-29, and in turn follow the higher standard. There is no authority to impose an AS 3959:2018 construction standard upon a Class 4-10 building at this time; it is therefore identified as an advisory consideration in this BMP.

Element 3 Vehicle Access – this provision requires the site has access to a through road to provide alternate routes of escape and access for fire fighters.

The main entry (two way) is from Folly Road with a supplementary egress provided onto Young Street.

The site is large with a number of buildings located further than 50 m from the public roads.

The private driveways (primary vehicle access within the site) will be constructed equivalent to public road standards IPEWA commensurate to the anticipated traffic volume. Other service private driveways will be constructed and maintained in accordance with the technical requirements for private driveways described in Table 6 Column 4.

Directional signage will also be provided within the site to assist the orderly movement of vehicles if evacuation is required and efficiently directing emergency services to firefighting facilities (tankage) within the site.

Fire breaks are required to be maintained to City requirements, affecting the western end of the site.

Element 4 Water – this provision requires the availability of water for firefighting purposes.

The site does not have access to a reticulated water supply or firefighting hydrants. The nearest hydrant is located 950 m west of the site, on Safety Bay Road. A 75 000 L and 50 000 L standalone water tank will be provided for emergency services. A condition of approval is recommended to affirm its reserve for emergency services and the requirement to be fitted with couplings corresponding to the City's technical requirements (schedule 2 in the Guidelines). This is additional to any structural firefighting requirements determined by the Building Act 2011.

Additional Bushfire Management Strategies (addressed in section 5.2)

Additional management strategies, further to the Bushfire Protection Criteria, include the measures to minimise the exposure of visitors to bushfire impacts. This is addressed in the Bushfire Emergency Evacuation Plan. It includes seasonal management to oversee works to ensure the development site is maintained as low threat.

Spatial representation of the bushfire management strategies (Figure Ex 1)

The key features demonstrating compliance with the bushfire protection measures are identified on the *Spatial representation of the bushfire management strategies*.

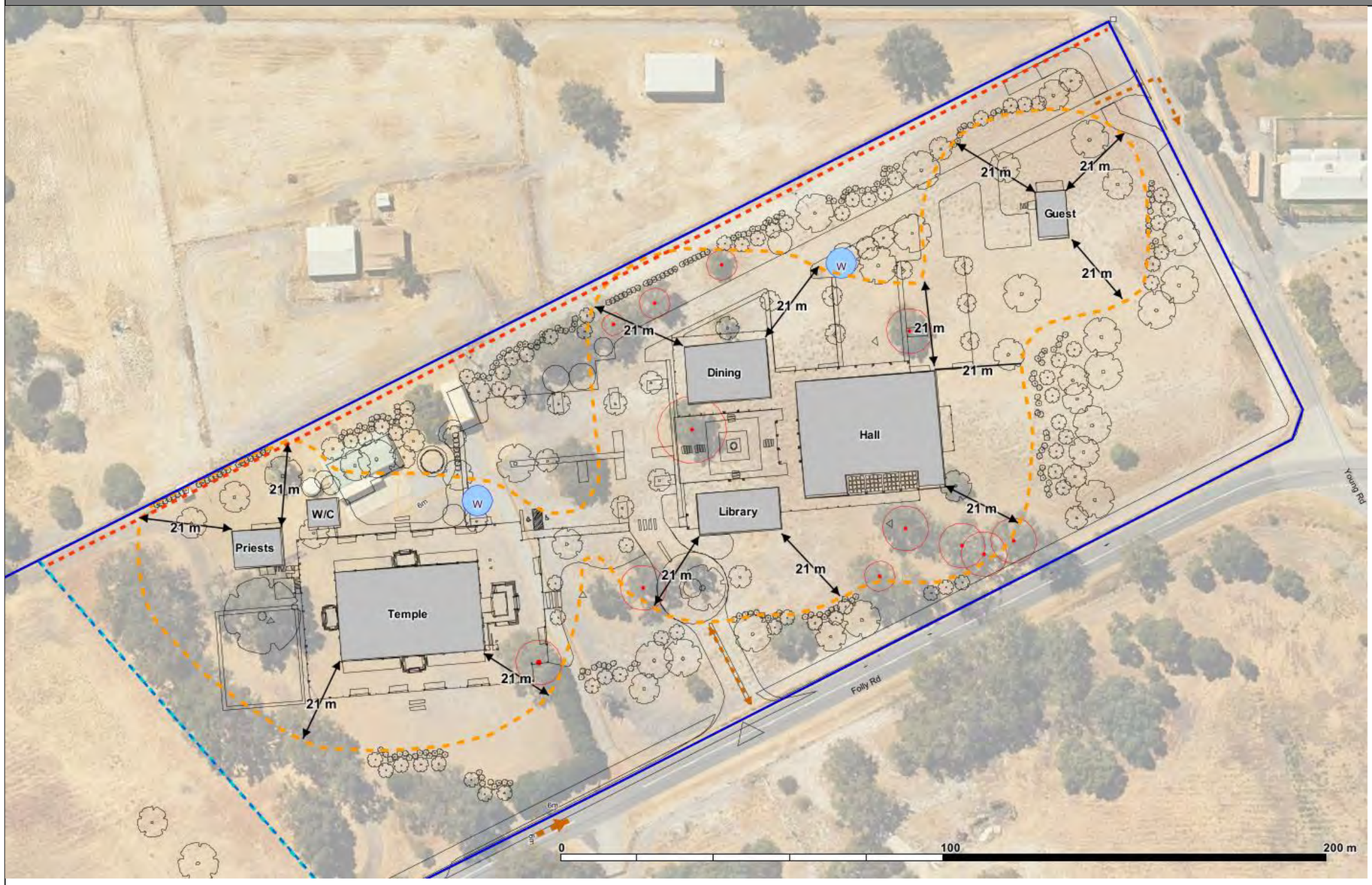
These actions are reflected in the following *Responsibilities for implementation and management of the bushfire measures.*

6. Responsibilities for implementation and management of the bushfire measures

The Owner responsibilities (Guidelines 4.6.3) identify the bushfire management measures necessary to achieve compliance with the bushfire protection criteria.

The *Responsibilities for Implementation and Management of the Bushfire Measures* are addressed in section 6 of the BMP and summarised at Figure EX1. They supersede or are additional to the details included within the development application.

Figure Ex 1 - Spatial representation of the proposed risk management strategies



LEGEND

- Site Boundary
- Asset Protection Zone
- Access throughway
- Fire break
- W — Dedicated water tank (fire)

Property Assessment Details

Prepared by: Anthony Rowe

Accreditation Level: Level 3

Accreditation Number: 36690

Date: 11 June 2022

RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES

1. The development site (extent shown on Fig Ex1), within the area identified as Asset Protection Zone is to be maintained compliant with the Asset Protection Zone Standard described in Element 2, Schedule 1 of the Guidelines v1.4

   This includes;

   - A canopy stratum up to 15%.
   - A managed understorey avoiding the placement of shrubs under a tree canopy.

   Note: Landscaping outside of the Asset Protection Zone is unrestricted for the purpose of soft screening buildings on the site and classified as forest.

2. The Priest residence and Guest accommodation are to be constructed commensurate to the BAL level at their location (BAL-29) anticipating forest outside of the APZ within the site.

3. The internal roads (private driveway and supplementary road (Emergency and Service Access) are to be constructed and maintained in accordance with Guidelines for Planning in Bushfire Prone Areas, Appendices, Element 3 Table 6, Column 4 (private driveway).

4. The primary road access from Folly Road, and the main carparking area it serves, is to be constructed in accordance with public road standard IPEWA, and provided with two-way carriageways and a minimum inner radius of 8.5 m.

5. Two Standalone water supply tanks (75 000 L and 50 000 L) are proposed, (compliant with Schedule 2: Water Supply Dedicated for Bushfire firefighting purposes Guidelines v.1.4) accessible to the emergency and service access, with couplings to City of Rockingham specification and signposted as exclusively for the use by emergency services.

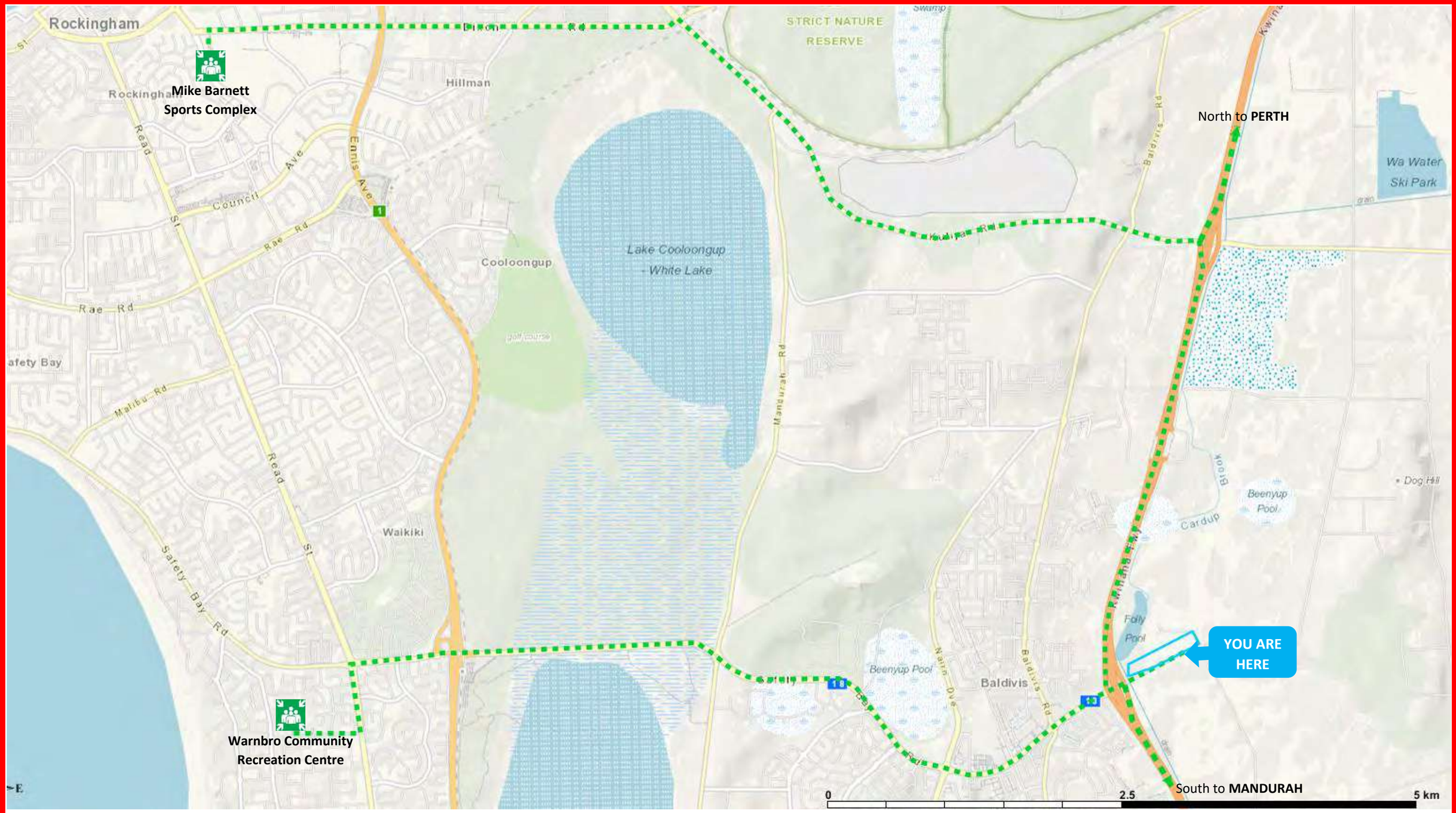
Notifications

1. A notification, pursuant to Section 70A Transfer of Land Act 1893 is to be placed on the certificate(s) of title of the proposed lot(s) with a Bushfire Attack Level (BAL) rating of 12.5 or above, advising of the existence of a hazard or other factor. The notification is to state as follows:
   "This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and is subject to a Bushfire Management Plan Additional planning and building requirements may apply to development on this land"

Advisory Notes

1. For the buildings other than class 1-3 (to be constructed to BAL-29) it is recommended the construction performance is compared to the requirements AS 3959:2018, (section 2 and section 7), to compare the performance standards of the materials with the level required at BAL-29, and in turn ensure the building is comparable to, or exceeds, the BAL-29 standard

EMERGENCY EVACUATION DIAGRAM



Your Location Is **The Sri Balaji Temple 67 Folly Road, Baldivis**

EVACUATE if DFES or Police advise evacuation is required or if you see an uncontrolled fire

Follow instructions from the Emergency Services Incident Controller (the DFES officer managing the fire).

- Assemble at the Temple building closest to the carpark
- Evacuate to destination and via route as directed by Emergency Services either directly or by public announcement.

DO NOT TRAVEL THROUGH FIRE

Monitor Emergency Information: ABC Radio 720AM; DFES information 13 33 37;

Emergency WA - www.emergency.wa.gov.au

SURVIVAL - if it is not safe to leave - advise DFES (ph. 13 33 37) of your location and the number of persons present

- keep fire extinguishers close by
- Soak towels to block smoke ingress
- Monitor the building condition for smoke and heat.
- Keep hydrated and monitor the fire's passing.
- Leave the building when safe to do so and shelter to avoid heat
- Evacuate the site when DFES/Emergency Services confirm a safe route is available

DO NOT STAY IN A BURNING BUILDING

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1. PROPOSAL DETAILS

1.1 Introduction

The purpose of this BMP is to assess the suitability to establish a place of worship and community centre at 67 Folly Road Baldivis. ('**the site**').

The subject land is 7.5 ha in area, but the proposal will occupy only the 3.2 ha east portion **(the site)** with the balance of the subject land retained as pasture grass.

The site is within the administration area of the City of Rockingham Western Australia **(Plate 1)** and is located within a bushfire prone area (OBRM 2019) **Plate 2.**

Development, buildings, and land use, located within a bushfire prone area, are required to demonstrate compliance with the requirements of State Planning Policy 3.7.

The policy intent is ***to preserve life and reduce the impact of bushfire on property and infrastructure***, and compliance is achieved where a proposal incorporates the Acceptable Solutions as described under each Element in the Bushfire Protection Criteria or can satisfy the intent of each Element by performance principle and the Precautionary Principle.

This document presents an assessment of a proposed vulnerable class of development "visitation uses that may involve people who are unaware of their surroundings" with the requirements State Planning Policy 3.7 and *Guidelines for Planning in Bushfire Prone Areas* (WAPC, v1.4 December 2021) including assessment against each of the Bushfire Protection Criteria and the requirement for an Emergency Evacuation Plan.

Purpose of this Plan

The purpose of this BMP is to assess the suitability of the proposal and its location for the intended use and identify the measures to avoid an increase in the threat of bushfire and reduce the vulnerability of people and property (to the degree necessary) from potentially significant adverse bushfire impacts.

Site and Proposal Description

Landowner	Sri Balaji Temple
Address	67 Folly Road Baldivis
Local Government Area	City of Rockingham
Local Planning Scheme Zone	Rural Local Planning Scheme 21
Bushfire Season	1 December – 12 May (precise dates may vary annually)
Development proposal	Place of worship and community centre • Temple; • Multi-Purpose Hall; • Guest accommodation; • Library; • Priest residence • Dining Hall • Ablution building;
Building class	Temple, Multi-Purpose Hall, and Dining Hall = Class 9 b Priest's residence and Guest accommodation = Class 1a
Lot size	7.5ha: development site 3.2 ha
Land description site	Rural

Adjoining Land uses	North	East	South	West
2.5 Km	Rural living (low grass and building)	Rural living (low grass and building	Rural living (low grass and building	Pasture agricultural
5 km	Remnant forest contiguous 5 km	Urban, market gardens 5 km north	Perth urban area contiguous 5 km south	Shrubland contiguous 5 km west
Road Access	Folly Road from Kwinana Freeway			
Water supply	The site does not have access to a reticulated water supply or a hydrant network. The nearest hydrant is 1.4 km west of the main entry on Safety Bay Road.			
Tele communications	The site is within the Telstra 4G network			
Emergency services	The nearest rural fire brigades are • Baldivis VFES, Corner Tranby Dr &, Eighty Rd, Baldivis (5 km) • Kwinana South VBFB 11 Barker Rd, Wellard (11 km)			
Minor Development	N/A			
Unavoidable development	N/A			
Vulnerable Development	Yes			
High risk land use	N/A			

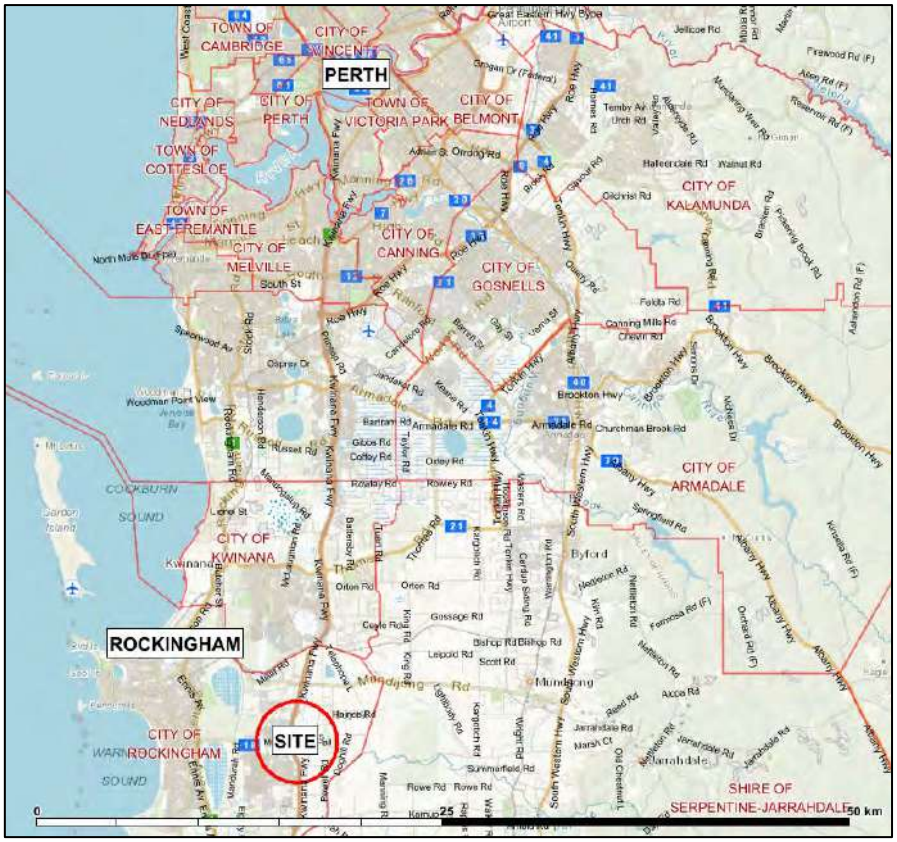

Plate 1:Site in Locality

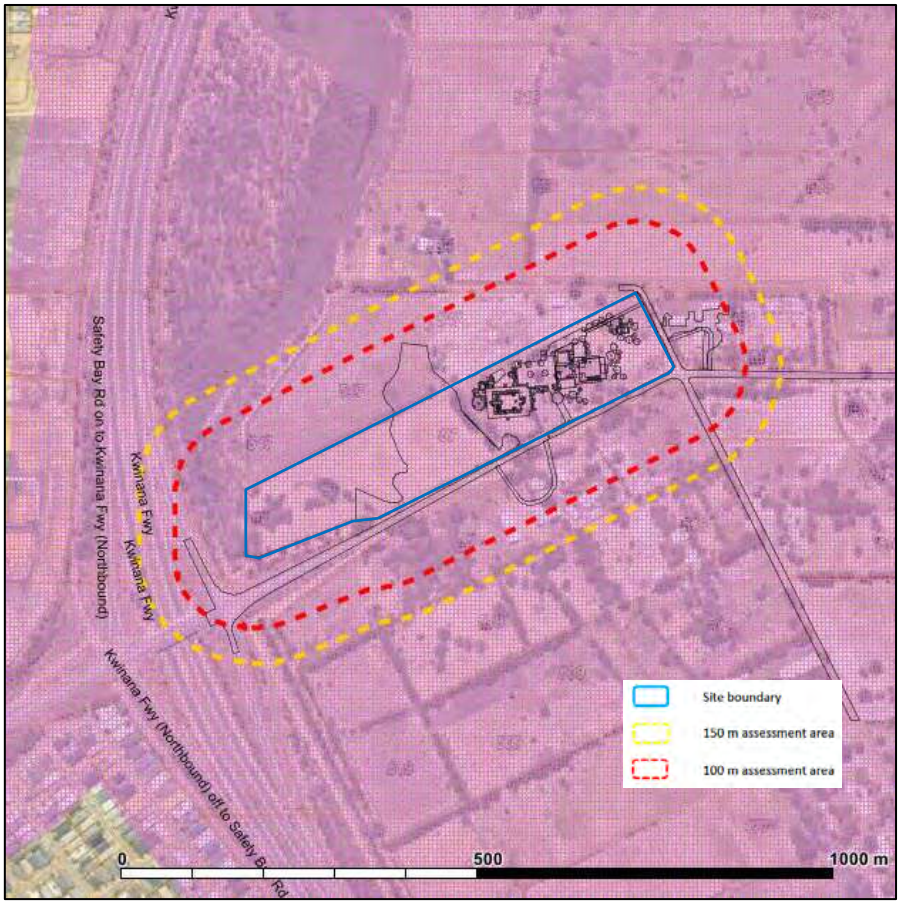

Plate 2: OBRM Bushfire Prone Area (Pink area)

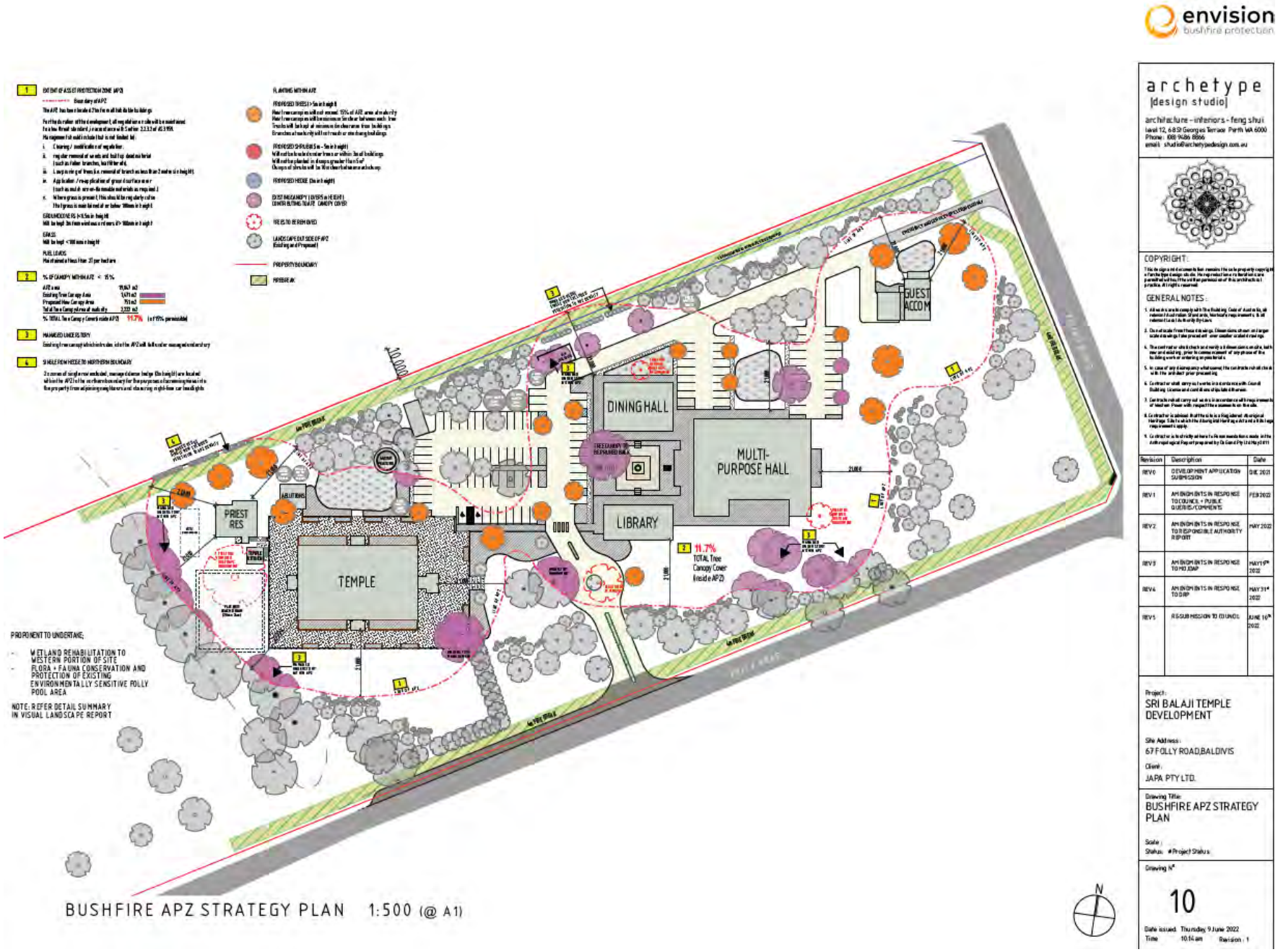

Plate 3: Site Plan

1.2 Regulatory Compliance Requirements

Planning and Development Act 2005 - SPP 3.7

On 7 December 2015, the State Government introduced by Gazette, a state map of Bushfire Prone Areas by order under the *Fire and Emergency Services Act 1998* and introduced development controls in Bushfire Prone Areas through the *Planning and Development Act 2005*. These controls were authorised by State Planning Policy 3.7 (Planning in Bushfire Prone Areas) regulations introduced under Part 10A Schedule 2 of the *Planning and Development (Local Planning Scheme) Regulations 2015* and guided by the *Guidelines for Planning in Bushfire Prone Areas*.

The State Planning Policy, Regulations, and Guidelines now form the foundation for fire risk management planning in WA at a community and land development level. The Policy Intent of SPP 3.7 is ***to preserve life and reduce the impact of bushfire on property and infrastructure***.

Applicable clause from SPP 3.7, addressing subdivision include:

SPP 6.2: A development application within a bushfire prone area has or will, on completion, have a moderate BHL and/or where BAL-12.5 to BAL-29 applies, may be considered for approval. *In this instance the proposal will not exceed BAL 29 refer to Figure 5.*

SPP 6.5: A development application in a bushfire protection area is to be accompanied by an assessment against the bushfire protection criteria contained within the Guidelines, demonstrating compliance within the boundary of the development. *The proposed development requires no imposition beyond its site.*

SPP 6.7: A development that will result in the introduction or intensification of development or land use in an area that has or will, on completion, have an extreme BHL and/or BAL-40 or BAL-FZ will not be supported. *In this instance the proposed development will not exceed BAL 29 refer to Figure 5.*

SPP 6.10: The decision-maker may impose a 'notice on title' advising that the site is located in a bushfire prone area and is subject to a Bushfire Management Plan. *Routinely imposed as a condition of planning approval.*

SPP 6.11: Precautionary Principle if a landowner/proponent cannot satisfy the performance principles of the relevant policy measures (intent) through either the acceptable solutions outlined in the Guidelines, or through the alternative solutions (Performance Principle) the application may not be approved. *The proposal can achieve compliance with the Acceptable Solutions see section 5 of this report.*

Building Act 2011

The proposal is a class 9 building for the purpose of the *Building Act 2011*, which in turn applies the National Construction Code 2019. AS 3959:2018 does not apply to the construction of buildings other than class 1, 2, 3, and 10a, and is only used for the purpose of determining the siting of other building classes. A higher standard of construction can be volunteered. In this instance the Priest Residence and the Guest accommodation are class 1 buildings require to be constructed to BAL-29.

***Bushfires Act* 1954**

Section 33 of the *Bushfires Act 1954* recognises the responsibility of all landowners to prevent the spread of bushfire. The City of Rockingham issues a Fire Control Notice annually. The City can issue a notice upon the landowner to act as and when specified in the notice with respect to anything which is upon the land, and which in the opinion of the local government or its duly authorised officer, is or is likely to be conducive to the outbreak of a bushfire or the spread or extension of a bushfire.

An owner who fails to comply with a notice is guilty of an offence (Penalty: $5,000). The local government may in addition carry out the required works of the notice and recover the costs incurred by application to a Court. *Individual lot owners mutually rely upon the management of the neighbouring land through the Bush Fires Act, to reduce the incidence of bushfire.*

Environmental Regulations (Regulated vegetation)

Environment Protection Act 1986 and Environmental Protection (clearing native vegetation) Regulation 2004

It is an offense to clear native vegetation without the authority of a permit or an exemption. The act of clearing native vegetation, requires a permit from either the Department of Water and Environmental Regulation (DWER) or the Department of Mines, Industry Regulation and Safety (DMIRS), unless an exemption applies.

Exemptions *Environment Protection Act 1986* include:

- Clearing required by local government Section 33 *Bushfire Act 1954.*
- Clearing in accordance with the terms of a subdivision approval.
- Clearing in accordance with a permit under the *Bushfires Act 1954* (prescribed burning) and clearing by a bushfire control officer.

Exemptions *Environmental Protection (clearing native vegetation) Regulation 2004*

- Clearing to the extent necessary to construct an approved building.
- Clearing that is for fire hazard reduction burning.
- Clearing to maintain an area cleared in the last ten years.

(exemptions do not apply in Environmentally Sensitive Areas, and for clearing > than 5 ha)

https://www.der.wa.gov.au/your-environment/environmentally-sensitive-areas

(WA) Biodiversity Conservation Act 2016 and Bio-diversity Conservation Regulations 2018

The *Biodiversity Conservation Act, 2016*, replaces the *Wildlife Conservation Act, 1950*, and the *Sandalwood Act, 1929*, it became operational with the *Bio-diversity Conservation Regulations 2018*, on 1 January 2019.

The Act provides for listing species, threatened ecological communities (TECs), key threatening processes, and critical habitats. It introduces criteria for listing species 'endangered', 'critically endangered' or 'vulnerable,' to align with the Environment Conservation and Biodiversity Conservation Act 1999 (Cth).

The *Biodiversity Conservation Act 2016* recognises that activities approved under the *Environment Protection Act 1986* do not require further approval include clearing of native vegetation that is either exempt or done under the authority of a clearing permit or done in accordance with an implementation decision under Part IV of the *Environment Protection Act 1986*.

Commonwealth Environment Protection Biodiversity Conservation Act 1999

The Commonwealth Environment Protection Biodiversity Conservation Act 1999 provides for the protection of matters of national environmental significance. National environment law does not generally regulate fire prevention measures taken by state and territory governments, but no specific exemptions are provided.

The proposal does not require the clearance of regulated vegetation.

2. ENVIRONMENTAL CONSIDERATIONS

2.1 Native Vegetation – Modification and Clearing

A fundamental consideration in the assessment of development under SPP 3.7 is to avoid instances where bushfire risk management measures would conflict with or be limited by other biodiversity management measures.

In accordance with the Department of Planning Lands and Heritage template (BMP template to support a BAL Contour Assessment) a review of the listed databases has been undertaken as part of this assessment to identify whether restrictions or other specific considerations may apply that would affect the implementation of any bushfire protection initiatives that may otherwise be identified.

Table 1: Ecological database assessment.

Is the land affected by:	**Yes/No/NA**	**If yes - describe**	
Conservation Wetland or buffer (DBCA-019 DBCA-017)	Nearby	A flood prone area is to the west of the development site (3.2 ha eastern extent) but is not listed. The Folly Pool is adjacent the west boundary of the subject Lot and runs north along Kwinana Freeway.	
RAMSAR Wetland (DBCA-010)	NA		
Threatened and Priority Flora (DBCA-036)	NA		
Threatened and Priority Fauna (DBCA-037)	NA		
Threatened Ecological Communities (DBCA-038)	NA		
Bush Forever (COP-071)	NA		
Environmentally Sensitive Area (DWER-046)	NA		
Regionally Significant Natural Areas (DWER-070)	NA		
Conservation Covenant (DPIRD-023)	NA		
Does the proposal require the removal of restricted vegetation?		~~**Yes**~~	**No**

No regulated vegetation will be affected by the proposed development. The mature tree row west of the buildings will be retained. The proposed buildings and carpark will primarily displace an area classed as grassland and have been sited to minimise the removal of trees.

2.2 Re-vegetation/Landscape Plans

Future landscaping of the site proposes to retain the existing trees within an Asset Protection Zone (APZ) area of 21 m around all habitable buildings, with a planned 11 7% the canopy stratum (retention and augmentation) that is less than the maximum 15%.

The APZ Area has been established to enable unrestricted landscaping outside the APZ. The separation provides for a potential revegetation to forest outside of the APZ; based on forest as the highest intensity level requiring the longest separation. This will support a softening screening of the buildings on the site whilst also presenting a natural distribution of vegetation when viewed across the site from the outside.

Tactical landscaping with Shrubs, up to 2 m is also proposed to reduce headlight glare from the carpark to surrounding properties.

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3. BUSHFIRE ASSESSMENT

3.1 Bushfire Attack Level Assessment (Inputs)

The following assessment has applied the methodologies described in AS 3959:2018, the Guidelines, and has used the Fire Protection Association Australia accredited practitioner methodology for the preparation of Bushfire Attack Level (BAL) assessments.

All vegetation within 150 m (context) of the subject building has been classified following Clause 2.2.3 (AS 3959:2018) to determine the predominant vegetation affecting the behaviour at the locality. The Bushfire Attack Level is determined by the predominant vegetation within 100 m of the site boundary (for subdivision), or around the development site (building envelope) or the external face from a habitable building.

AS 3959:2018 prescribes six categories of Bushfire Attack Level (BAL): BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40, and BAL-FZ. In addition, BAL-FZ describes only performance solutions where the separation from classified vegetation (on completion) is less than 10 m. The BAL level is used for determining the siting of development (to be less than BAL-40) and in turn the construction standard that is equivalent to the BAL at the proposed building location.

This assessment has followed the guidance of AS 3959:2018. This includes:

- A recognition of excluded vegetation types described at cl.2.2.3.2 (e) and (f), but the underlying vegetation should still be classed e.g. an orchard may be excluded but not the grassland within it.
- A separate plot is applied if there is a variation in the slope greater than 5.0^0
- For various vegetation classes a representation that is less than 10%, does not constitute the predominant class. Foliage cover referred to in AS 3959:2018 for various classes is based on the foliage cover for that class as a percentage of a ha. (shadow cast is not representative of foliage cover).
- The measurement point and the most influential vegetation class (presenting the highest BAL at the building) is used for the determination of the BAL at the building (Figure 2.2 AS 3959:2018).
- Consideration of the predominant vegetation is to consider the likelihood of regeneration.

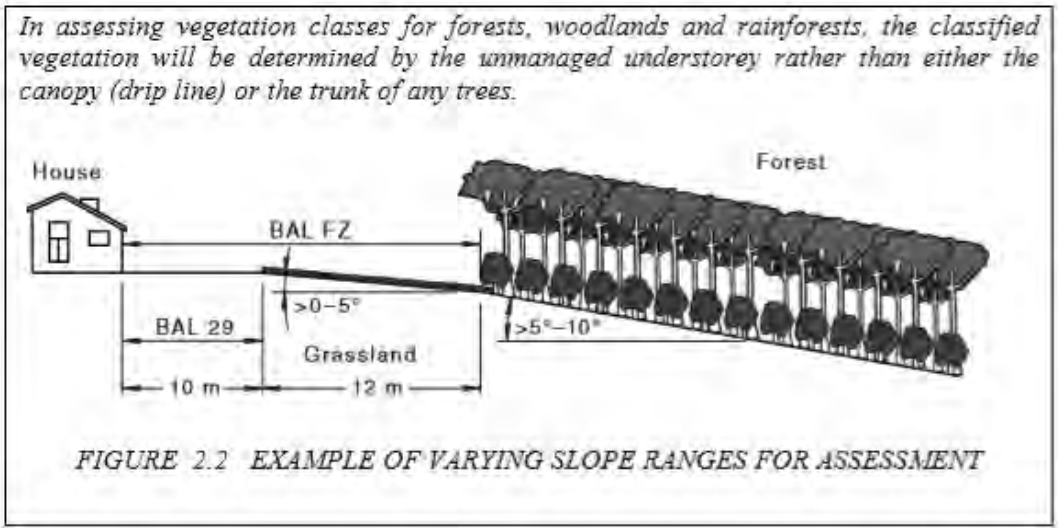


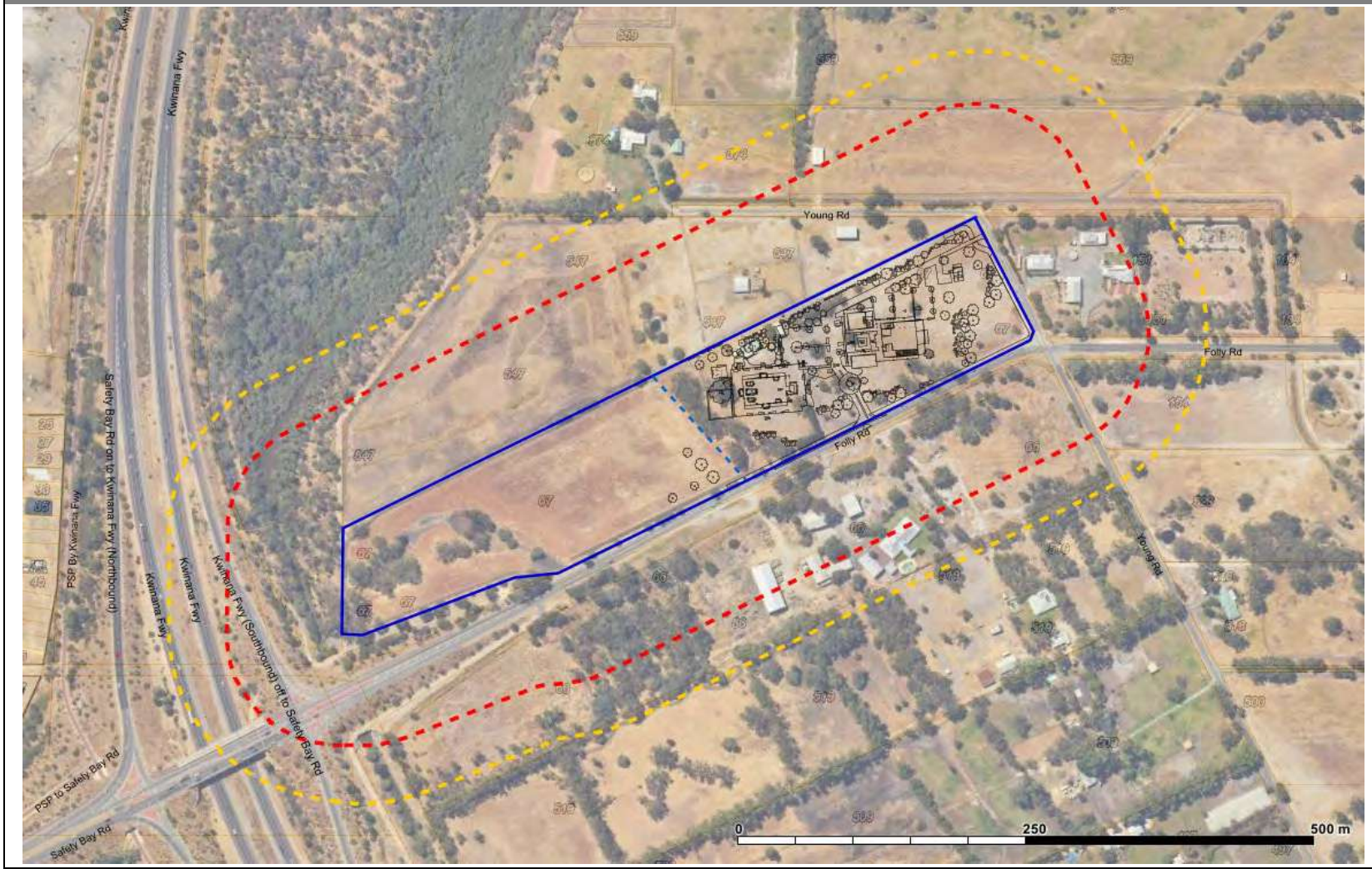
Plate 4: Effective Slope and measurement taken from AS 3959:2018

Effective slope under each vegetation plot was assessed in accordance with the methodology detailed in AS 3959:2018 Construction of buildings in bushfire prone areas (AS 3959) (Standards Australia, 2018 Bushfire Fuels). Slope data was measured on site and cross referenced with Landgate elevation data.

Photo evidence Site Assessment & Site Plans

The assessment of this site / development was undertaken on 5 September 2021 and 22 February 2022 by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959:2018 Simplified Procedure (Method 1).

Figure 1: Location - Sri Balaji Temple 67 Folly Road Baldivis



Site boundary

150 m assessment area

100 m assessment area

Assessment Date: 05/09/2021
Prepared: Anthony Rowe
Accreditation Level: BPAD L3
Accreditation Number: 36690
Accreditation Expiry: Dec 2022
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Figure 2: Topography – Sri Balaji Temple 67 Folly Road Baldivis

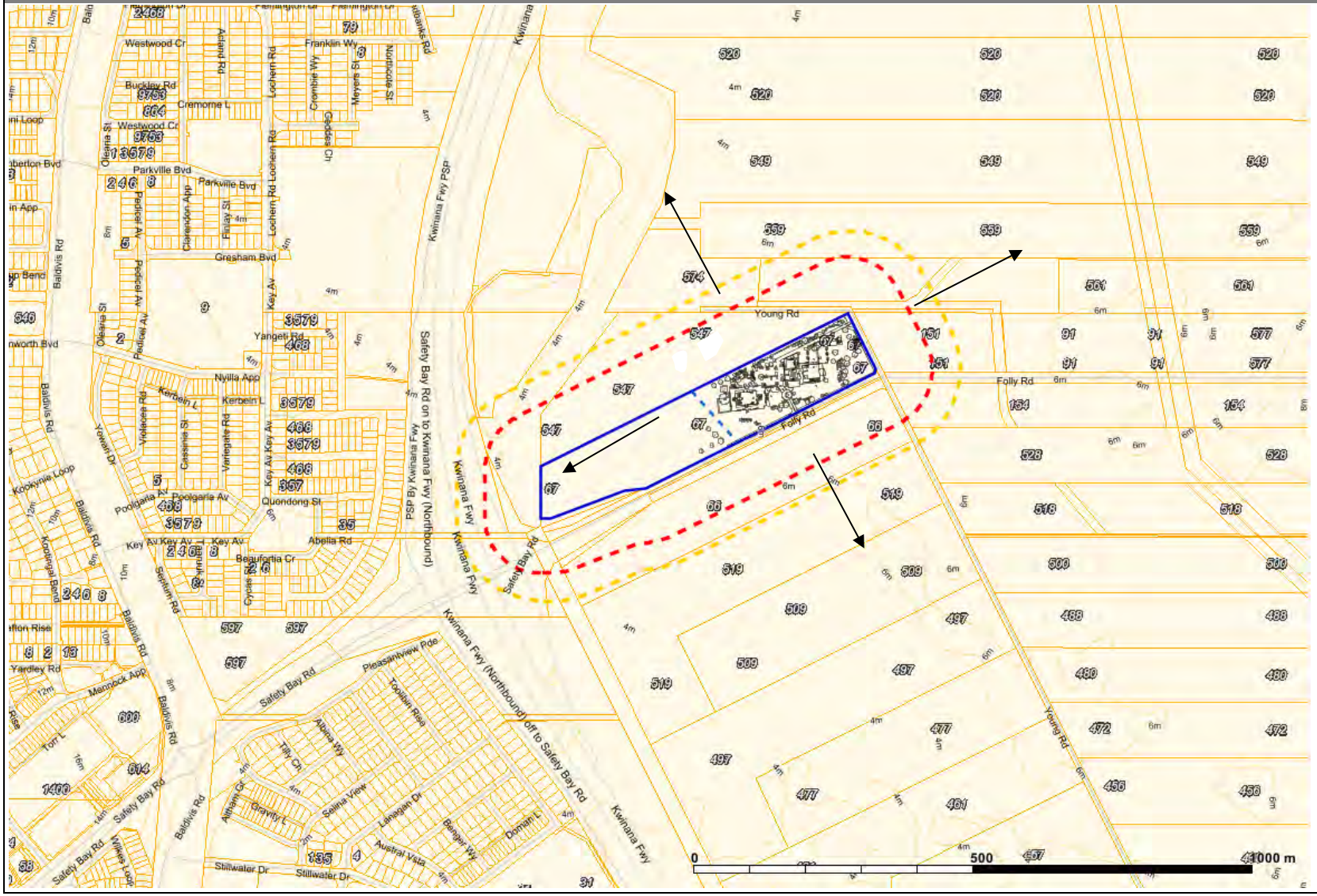

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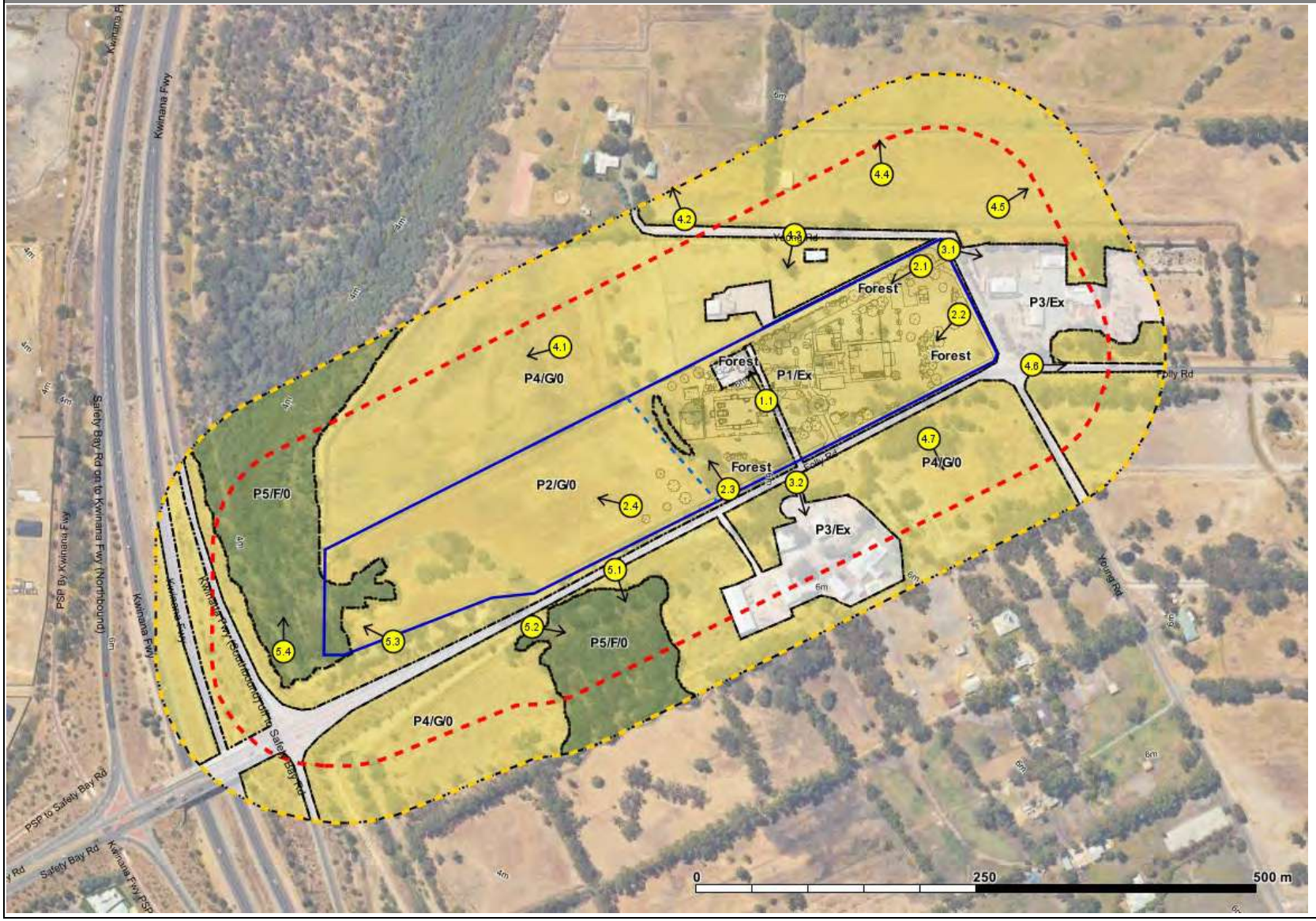
Figure 3: Vegetation Classification - Sri Balaji Temple 67 Folly Road Baldivis



- Site boundary
- 150 m assessment area
- 100 m assessment area
- Class A Forest
- Class B Woodland
- Class C Shrubland
- Class D Scrub
- Class G Grassland
- Excluded
- Photo point
- Plot Label

Assessment Date: 05/09/2021
Prepared: Anthony Rowe
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PLOT: 1		
Vegetation Classification	**PHOTO ID: 1.1**	
Excludable - 2.2.3.2(e) Non Vegetated Areas		
Slope		
Flat		
Description (AS3959)		
2.2.3.2 Exclusions – Low threat vegetation and non-vegetated areas e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.		

Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓	✓	✓	✓
Moderate				
High				
Very High				
Extreme				

Post development

Low threat area to be within the expanded area to be developed.

Comment: The existing driveway and workshop/shed compound. The workshop is to be demolished.

PLOT: 2

Vegetation Classification

Class G Grassland – Sown pasture G-26

Slope

Flat

Description (AS3959)

Grassland: All forms (except tussock moorlands) including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. NOTE: Grassland managed in a minimal fuel condition and non-curing cropland is regarded as low threat vegetation for the purposes of Clause 2.2.3.2.

Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low		✓	✓	✓
Moderate				
High	✓			
Very High				
Extreme				

Post development

Grassland will be displaced and become low threat, by buildings and future landscaping.

The area outside of the APZ, 21 m around the habitable buildings has the potental to be planted as forest.

PHOTO ID: 2.1

PHOTO ID: 2.2

PHOTO ID: 2.3

PHOTO ID: 2.4

Comment: The site is flat and mostly pasture grasses that will be displaced by the placement of the proposed development. The balance area in photo 2.3 will be retained as grassland. Photo 2.3 is a single row of trees, to be retained over grassland.

PLOT: 3

Vegetation Classification

Excludable - 2.2.3.2(e) Non Vegetated Areas

Slope

Flat

Description (AS3959)

2.2.3.2 Exclusions – Low threat vegetation and non-vegetated areas

e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.

PHOTO ID: 3.1

PHOTO ID: 3.2

Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓	✓	✓	✓
Moderate				
High				
Very High				
Extreme				

Comment: The area is predominantly grazing land with cleared areas for houses and sheds. Areas around houses are irrigated grasses, no curing and low threat (background in photo 3.1 Excluded, the fore ground has been classed as grassland). Photo 3.2 illustrates a commercial activity with grasses less than 100 mm, isolated trees foreground, and hardstand areas.

Post development

Existing land uses are expected to remain, the excluded areas around existing buildings is expected to be retained.

PLOT: 4

Vegetation Classification

Class G Grassland – Sown pasture G-26

Slope

Flat

Description (AS3959)

Grassland: All forms (except tussock moorlands) including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. NOTE: Grassland managed in a minimal fuel condition and non-curing cropland is regarded as low threat vegetation for the purposes of Clause 2.2.3.2.

Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓			✓
Moderate		✓	✓	
High				
Very High				
Extreme				

Post development

Retained vegetation, outside of the site

PHOTO ID: 4.1

PHOTO ID: 4.2

PHOTO ID: 4.3

PHOTO ID: 4.4

Comment: Adjoining areas are predominantly grassland excluding single trees and windrows along the road verges.

PLOT: 4

Vegetation Classification

Class G Grassland – Sown pasture G-26

Slope

Flat

Description (AS3959)

Grassland: All forms (except tussock moorlands) including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. NOTE: Grassland managed in a minimal fuel condition and non-curing cropland is regarded as low threat vegetation for the purposes of Clause 2.2.3.2.

Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓			✓
Moderate		✓	✓	
High				
Very High				
Extreme				

Post development

Retained vegetation, outside of the site

PHOTO ID: 4.5

PHOTO ID: 4.6

PHOTO ID: 4.7

Comment: Adjoining areas are predominantly grassland excluding single trees and windrows along the road verges.

PLOT:5

Vegetation Classification

Class A Forest - Open forest A-03

Slope

Flat

Description (AS3959)

Open Forest: Trees over 30 m high; 30%-70% foliage cover (may include understorey ranging from rainforest species and tree ferns to low trees and tall shrubs). Found in areas of high reliable rainfall. Typically dominated by eucalypts with a sub-dominant tree layer.

Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓	✓	✓	✓
Moderate				
High				
Very High				
Extreme				

Post development

Retained vegetation, outside of the site.

PHOTO ID: 5.1

PHOTO ID: 5.2

PHOTO ID: 5.3

Comment: An area of forest is retained adjacent to the Kwinana Freeway. Direct access to the Baldivis urban area (west of the site) across Kwinana Freeway, onto Safety Bay Road is available with only a 60 m (short travel through) through extreme(bushfire) vegetation. An alternative route is available but immediate evacuation to the Baldivis urban area is mostly anticipated. Mechanical failures along roadsides can ignite roadside vegetation but land scape scale fires are most likely to come from the eastern hemisphere to the site because of the bushfire fuels to the east.

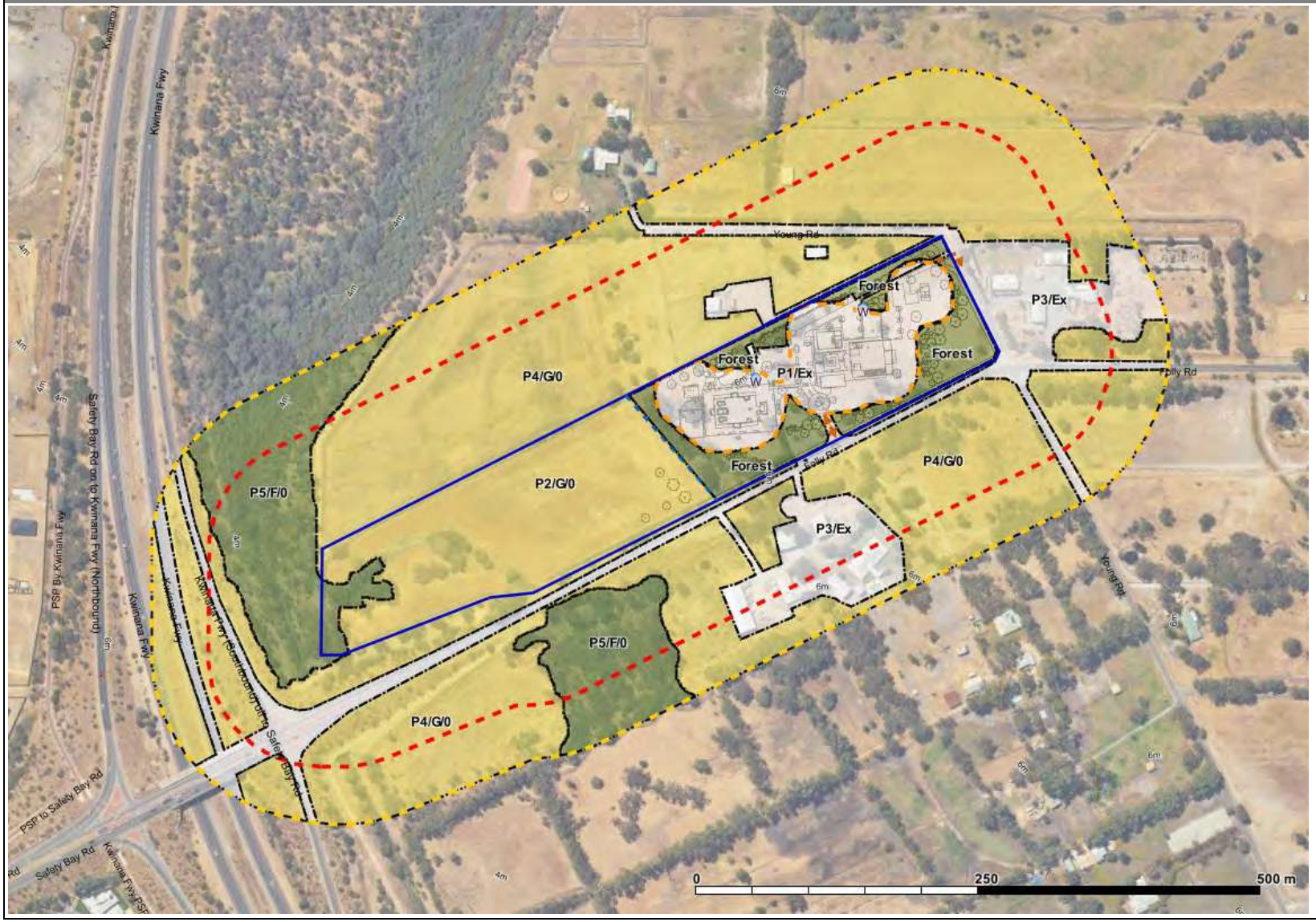
POTENTIAL BUSHFIRE IMPACT - Outputs

In accordance with SPP 3.7, a BAL Contour Map has been prepared to illustrate the potential radiant heat impacts and associated BAL ratings for the assessment area after the development is completed (Figure 5). Figure 5 is based upon an overall completion and illustrates that no building will exceed BAL 29.

The required distance and commensurate BAL rating is provided below. Plots 1 and 3 are excluded vegetation and impose no separation.

Plot	Vegetation classification	Effective slope (degrees)	Separation Distance (AS 3959:2018 Table 2.5)	BAL
5	Forest	Flat/upslope	< 16 m	BAL-FZ
			16- < 21 m	BAL-40
			21 - < 31 m	BAL-29
			31 - < 42 m	BAL-19
			42 - < 100 m	BAL-12.5
			> 100 m	BAL-LOW
2 and 4	Grassland	Flat/upslope	< 6 m	BAL-FZ
			6- < 8 m	BAL-40
			8 - < 12 m	BAL-29
			12 - < 17 m	BAL-19
			17 - < 50 m	BAL-12.5
			> 50 m	BAL-LOW

Figure 4: Vegetation Classification Post Development – Sri Balaji Temple 67 Folly Road Baldivis



Building Envelope

Site boundary

150 m assessment area

100 m assessment area

Class A Forest

Class B Woodland

Class C Shrubland

Class D Scrub

Class G Grassland

Excluded

APZ boundary 21 m from habitable buildings

Plot/Class/Slope Plot Label

Assessment Date: 05/09/2021
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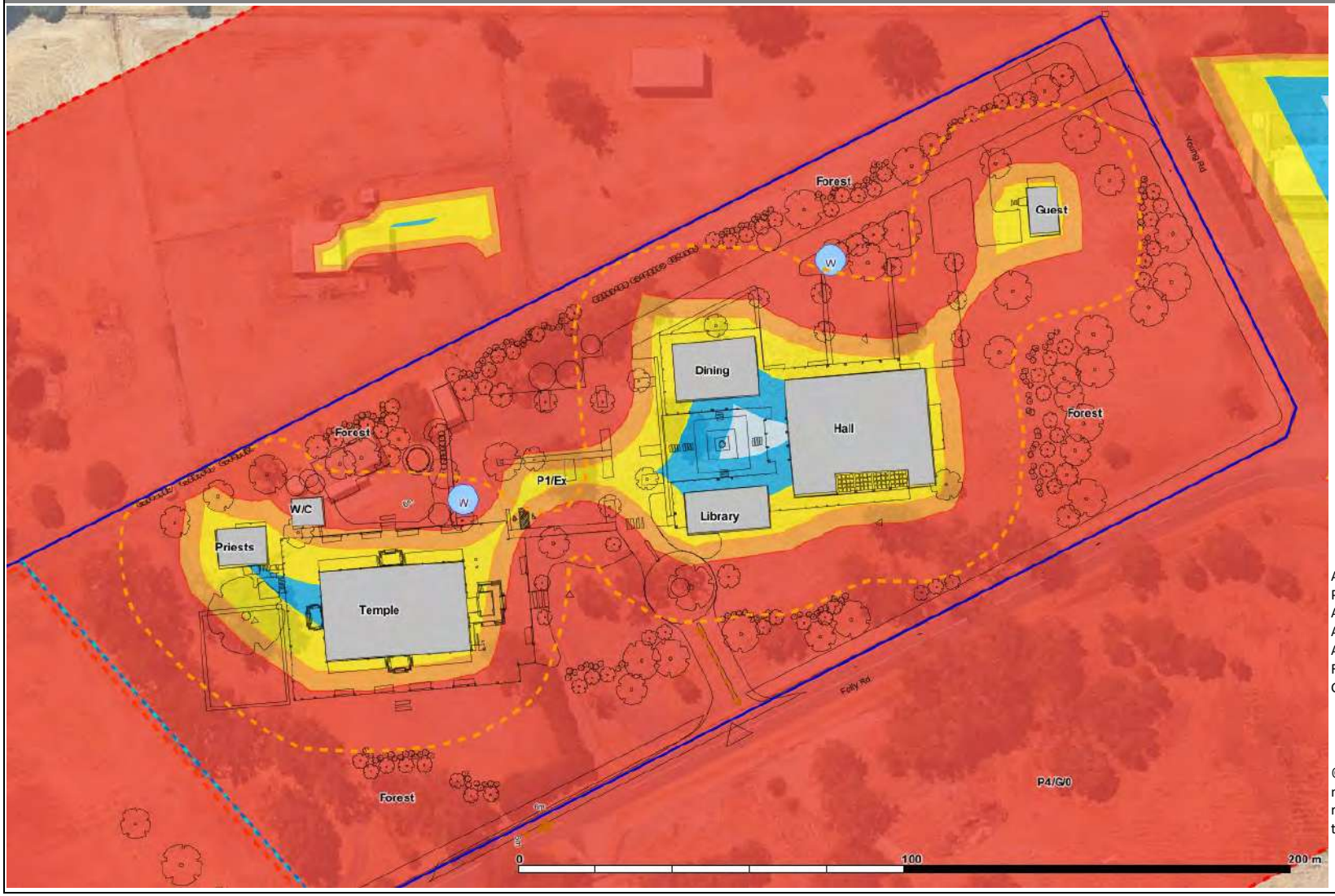
Figure 5: BAL Contour Plan Post Development - Sri Balaji Temple 67 Folly Road Baldivis



Site boundary

150 m assessment area

100 m assessment area

BAL-FZ

BAL-40

BAL-29

BAL-19

BAL-12.5

BAL-Low

Assessment Date: 05/09/2021
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4. IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

Bushfire Behaviour

Sustainable fire combustion depends upon the availability of fuel, oxygen, and heat. Removal of any one of the three aspects will extinguish or not sustain a fire. Fuel management, the management of vegetation, is the most practical means of control.

Bushfire behaviour, as it increases in intensity and speed of travel, can exceed human control measures and when this occurs the risk increases to humans and property. Bushfire behaviour is a result of climate, topography, and the availability of bushfire fuel (vegetation).

- Climate (drought and season) & weather (temperature, humidity, wind, atmospheric instability).

  Wind

  Bushfires are influenced by the wind direction and the speed. The wind direction generally determines the direction of the fire and wind speed, along with ground slope, generally determines the speed a fire will travel over ground. As wind strength increases it increases the availability of oxygen allowing the fire intensity to increase.

  Atmospheric conditions determine the potential for the uplift of embers and particles that can be distributed by the prevailing wind direction well ahead of the fire, up to 9 km, to create spot fires that can advance the location of the fire front.

  Fire Danger Index FDI

  FDI is an indicator of potential fire intensity and behaviour based upon weather conditions; temperature, humidity, and wind speed, together with climate measures, drought factor representing the dryness of the ground fuels.

  The FDI is an indicator of the potential for house loss and fatalities.

  The FDI is used as a basis for determining the required design performance of a building.

- Topography (slope of the ground, aspect) – fire travels faster uphill, and in some conditions may determine the direction of the fire. The landform can also channel and increase the windspeed at a locality and create turbulence. It is measured as 0.0^0 or in downslope increments of 5.0^0.

- Vegetation (horizontal and vertical structure, flammability, mass, and availability). Measured as a vegetation classification, or an exclusion, in AS 3959 (Method 1). The arrangement of fuel has a greater effect upon the intensity of a fire than just its mass; its exposure to oxygen is referred to as its availability in a bushfire.

It is assumed that a bushfire will achieve a steady-state and be fully developed to maximum intensity over a 100 m (minimum) fire run. Grass fires travel faster (GFDI) than a forest canopy fire, but a forest canopy fire can eject a higher level of embers and also eject them over a greater distance. Crown fires occur when the ground fire is intense, and conversely, when ground fuels are managed, the resultant fire intensity may not be sufficient to involve the crown or sustain a fire.

Fuel reduction initiatives such as slashing and controlled burns are intended to reduce the fuel availability to a level where the intensity of the fire remains controllable.

Climate

The nearest weather station to the site is at Jandakot airport. The site is within an area described as having a Mediterranean climate of dry summers and mild, wet winters. The majority of rainfall is between May and September. The prohibited burning period is from mid-December to mid-March.

The Bushfire Danger Season has traditionally been between November and April each year, but recent climatic conditions have caused fire danger conditions to be present either side of this period.

Severe bushfire conditions FDI 50+, occur mostly between January and March. Extreme and Catastrophic conditions occur mostly in the afternoon and typically with south-south easterly winds (BoM Jandakot airport). A bushfire can however come from any direction.

Bushfires generally travel in the direction of the prevailing wind. The direction of the prevailing wind conditions can affect the options for evacuation and anticipated fire intensity depending upon the slope and fuel.

The wind roses below (Plates 5 and 6) for February (averaged) recorded at 9 am and 3 pm illustrate wind directions are predominantly from the east in the mornings and from the south west and west in the afternoons.

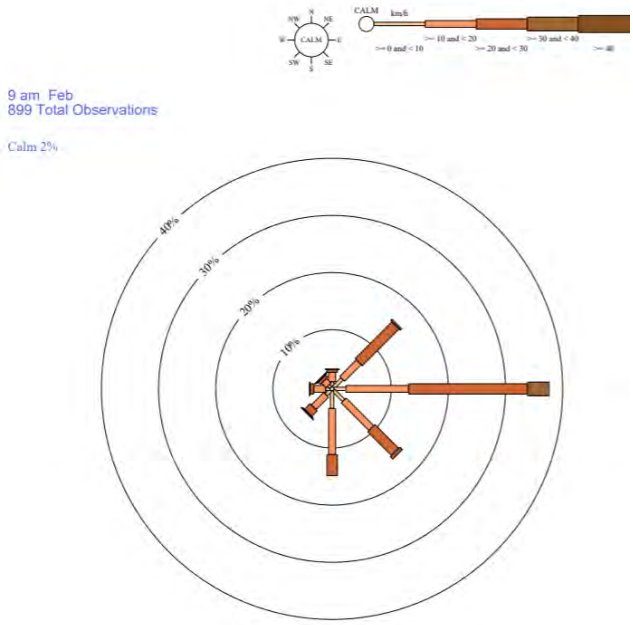


Plate 5: BoM weather data, prevailing wind directions as at 9 am

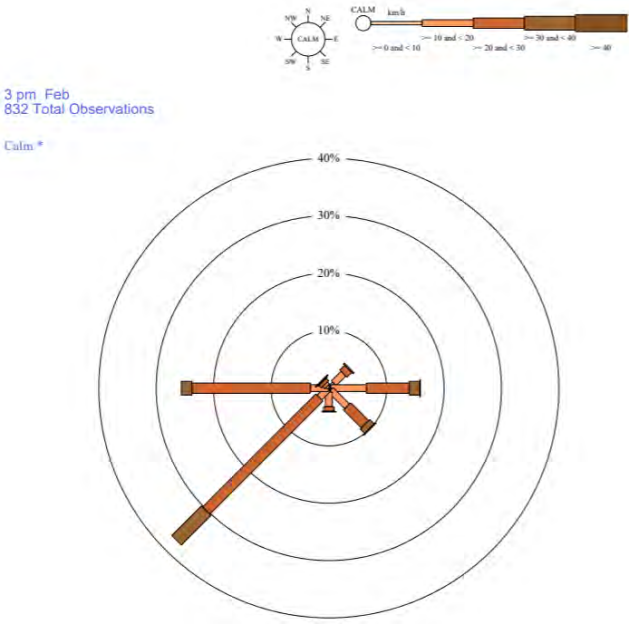


Plate 6: BoM weather data, prevailing wind directions as at 3 pm

Plate 7: 2.5 km and 5.0 km – landscape context

Bushfire Hazard Issues

The following bushfire hazard issues have been identified.

The site as observed from plate 7 is within an immediate are that is characterised as pasture grasses > 100 mm (grassland).

The site does not adjoin forest, but forest is a generator of embers and ember attack is attributed to the greatest building loss. The density of ember attack diminishes with distance from the forest and the size of the forest area, the larger the area the greater the convective lift and dispersal of embers. The subject land adjoins a narrow strip of vegetation alongside the Kwinana Freeway, that expands in area (31 ha) to the north of the site. It is the closest forest vegetation at 200 m. Other areas of forest of less than 100 ha are located 900 m east, followed by pasture and grassland out to 5 km. Forest is also located 2 km west associated with the wetlands system (Lake Cooloongup / Lake Walyungup). This is followed by urban development 5 km west of the site.

The risk to the site is primarily from a grassfire from the adjoining land, reaching the revegetated area on the site. The habitable building have been provided with an APZ that will avoid direct flame contact, but ember contact from a distant fire or an immediate fire from landscaping on the site may affect the buildings.

Ember attack damages and destroys more buildings than any other bushfire attack measure. It can amass embers against vulnerable surfaces, such as windows, and flammable materials that may overwhelm the building performance of exterior materials that are not non-combustible. Protective measures include a masonry construction and adoption of BAL 29 standards (AS 3959:2018 including the screening opening windows) and site management to enclose flammable material (rubbish bins) and restrict the location of flammable material near to buildings and maintaining the condition of the APZ.

Evaporative cooling units are noted for drawing embers and are required to have ember screens in bushfire prone areas.

Access

The primary evacuation option is Folly Road to Kwinana Freeway and the Baldivis Urban area west of the site which is mostly through low and moderate (acceptable) bushfire hazard level conditions.

An area of forest along Kwinana freeway (Folly Pool) separates the site from the urban area but is only 60 m, below the width for a fully developed (maximum intensity) fire. Roadside vegetation can be ignited by human activity and mechanical failure. A landscape fire, other than from a road side ignition, may come from the east through the grassland that extends east of the site pushed by the prevailing wind from the east. This will enable evacuation to be taken into Baldivis, in the opposite direction to an approaching fire.

Evacuation is the preferred response when the evacuation routes are safer than the site. This is determined by ensuring the Available Safe Evacuation (Egress) Time (ASET) is greater than the Required Safe Evacuation Time (RSET). In this instance the lead time for RSET is short because visitors will be congregated and will not need to gather possessions.

The minimum RSET time to evacuate to Kwinana Freeway, and the urban BAL Low area, based on 200 vehicles with a 10 second delay to access Folly Road (right hand turn) is 34 minutes. Most visitors will not be required to collect possessions and will be able to move to evacuation immediately upon instruction. Emergency management of the site would include ensuring the orderly evacuation of vehicles from the carpark.

A fire from the west of has a short fire run 400 m. the rate of spread of an initial forest fire 90 m and grassland 310 m will be less (ASET), than the RSET and therefore in sufficient time would be available to safely evacuate.

5. BUSHFIRE PROTECTION MEASURES

5.1 State Planning Policy 3.7 - Planning In Bushfire Prone Areas (SPP 3.7)

SPP 3.7 applies to all subdivision applications in designated bushfire prone areas.

SPP 3.7 Objectives

Policy Measure 5 contains the objectives of SPP 3.7. The following demonstrates how the proposed development meets each of the objectives.

Objective 1: Avoid any increase in the threat of bushfire to people, property, and infrastructure. The preservation of life and management of bushfire impact is paramount.

Development Response

The nature of the proposed activity will not increase the occurrence or intensity of bushfire within its locality.

Objective 2: Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision-making at all stages of the planning and development process.

Development Response

Objective 2 is satisfied through:

- The site is adjacent the urban area, across Kwinana Freeway, providing quick access to BAL Low and safety from bushfire attack. The site also has access to safe destination east of the site because Folly Road is a through road connecting to multiple route options.
- The buildings are separated from the perimeter and there is no restriction from the site being maintained as low threat that any proposed building will have a BAL exceeding BAL-29.

Objective 3: Ensure that higher order strategic planning documents, strategic planning proposals, subdivision and development applications take into account bushfire protection requirements and include specified bushfire protection measures.

Development Response

Objective 3 is satisfied through the compliance of the proposed development with all required Policy Principles as detailed as detailed in Section 5.2 of this report.

Objective 4: Achieve an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity, with consideration of the potential impacts of climate change.

Development Response

The site is former pasture/grazing land. It is not required for environment protection nor are any locational restrictions presented at the site.

5.2 Guidelines for Planning in Bushfire Prone Areas Version 1.4 (the Guidelines)

The Guidelines apply to development applications located within designated bushfire prone areas. The Guidelines provide supporting information for implementation of SPP 3.7. Specifically, they provide the Bushfire Protection Criteria to be addressed for all applications.

5.2.1 Bushfire Protection Criteria

The bushfire risk mitigation strategies detailed in (Table 2 below) are designed to comply with the Bushfire Protection Criteria detailed in Guidelines for Planning in Bushfire Prone Areas Version 1.4 (the Guidelines) Appendix 4 (WAPC, 2021).

Where discrepancy occurs between State and Local bushfire planning provisions the higher standard of mitigation has been selected.

Table 2: Bushfire Protection Criteria assessment.

For each of the elements listed within Appendix 4 of the Guidelines for Planning in bushfire-prone areas v1.4, the 'intent' must be achieved either by the proposal meeting the acceptable solutions; or where these acceptable solutions cannot be fully met, then by a performance-based solution that can achieve the 'intent.'

✓	Acceptable solution provided	C	An Acceptable Solution to be conditioned
N/A	Not Applicable	P	Performance Principle solution see 5.2

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
Element 1: location **Intent:** To ensure that strategic planning proposals, subdivision, and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property, and infrastructure **P1** The strategic planning proposal, subdivision and development application is located in an area where the bushfire hazard assessment is or will, on completion, be moderate or low, or a BAL–29 or below, and the risk can be managed. For unavoidable development in areas where BAL–40 or BAL–FZ applies, demonstrating that the risk can be managed to the satisfaction of the decision-maker.	**A1.1 Development location** The strategic planning proposal, subdivision, and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL–29 or below.	✓		The proposed development is located within a moderate Bushfire Hazard Level area and all habitable buildings can achieve BAL 29. Development response Compliance acknowledged

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
Element 2: Siting and Design **Intent:** To ensure that the siting and design of development minimises the level of bushfire impact **P2** The siting and design of the strategic planning proposal, subdivision or development application, including roads, paths and landscaping, is appropriate to the level of bushfire threat that applies to the site. The proposal incorporates a defendable space and significantly reduces the heat intensities at the building surface thereby minimising the bushfire risk to people, property and infrastructure, including compliance with AS 3959 if appropriate.	**A2.1 Asset Protection Zone (APZ)** Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements: **Width:** Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29) in all circumstances. **Location**: the APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity (see explanatory notes). **Management**: the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones' (see Schedule 1).28	✓		The Acceptable solution A2.1 requires that the BAL at a habitable building can achieve a BAL not exceeding BAL-29, by measures within the boundary of the lot/development site. The site is grassland that would ordinarily require only a BAL of 8 m to achieve BAL-29 at all buildings. However, given the desire to achieve effective screening of the buildings in a natural setting, and APZ of 21 m is proposed around all habitable buildings with the exception of the Priests residence which is up to the north boundary. This will provide for a high density of screening vegetation to be arranged within the site, outside of the APZ, without increasing the BAL at the buildings above the acceptable level of BAL-29. The area within the APZ will be landscaped in accordance with the Standard for Asset Protection Zones which will enable the retention of the existing trees and a canopy stratum not exceeding 15%. <u>Development Response</u> The APZ (21 m) is to be provided as indicated on Figure 5 and Figure Ex1.

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
Element 3: Vehicular Access **P3i** The design and capacity of vehicular access and egress is to provide for the community to evacuate to a suitable destination before a bushfire arrives at the site, allowing emergency services personnel to attend the site and/or hazard vegetation. **P3iv** Vehicular access is provided which allows emergency service vehicles to directly access all habitable buildings and water supplies and exit the lot without entrapment.	**A3.1 Public roads** The minimum requirements under this acceptable solution are applicable to all proposed and existing public roads. Public roads are to meet the minimum technical requirements in Table 6, Column 1. The trafficable (carriageway/pavement) width is to be in accordance with the relevant class of road in the Local Government Guidelines for Subdivisional Development (IPWEA Subdivision Guidelines), Liveable Neighbourhoods, Austroad standards and/or any applicable standards for the local government area.	✓		Folly Road is bituminised road compliant with Table 6 Column 1. It connects both west and east to an extensive public road network providing multiple destination options away from an advancing bushfire. Development response Compliance acknowledged.
	A3.2a Multiple access routes Public road access is to be provided in two different directions to at least two different suitable destinations with an all-weather surface (two-way access). If the public road access to the subject site is via a no-through road which cannot be avoided due to demonstrated site constraints, the road access is to be a maximum of 200 metres from the subject lot(s) boundary to an intersection where two-way access is provided. The no-through road may exceed 200 metres if it is demonstrated that an alternative access, including an emergency access way, cannot be provided due to site constraints and the following requirements are met: the no-through road travels towards a suitable destination; and the balance of the no-through road, that is greater than 200 metres from the subject site, is wholly within BAL-LOW, or is within a residential built-out area – Figure 23.29	✓		Folly Road is a through road. The primary direction for evacuation would be to access Kwinana Freeway for destinations north or south. Development response Compliance acknowledged

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
	A3.2b Emergency access way Where it is demonstrated that A3.2a cannot be achieved due to site constraints, or where an alternative design option does not exist, an emergency access way can be considered as an acceptable solution. An emergency access way is to meet all the following requirements: requirements in Table 6, Column 2; provides a through connection to a public road; be no more than 500 metres in length; and must be signposted and if gated, gates must open the whole trafficable width and remain unlocked.30	N/A		
	A3.3 Through-roads All public roads should be through-roads. No-through roads should be avoided and should only be considered as an acceptable solution where: it is demonstrated that no alternative road layout exists due to site constraints; and the no-through road is a maximum length of 200 metres to an intersection providing two-way access, unless it satisfies the exemption provisions in A3.2a of this table. A no-through road is to meet all the following requirements: requirements of a public road (Table 6, Column 1); and turn-around area as shown in Figure 2430	N/A		

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
	A3.6 Private driveways There are no private driveway technical requirements where the private driveway is: within a lot serviced by reticulated water; no greater than 70 metres in length between the most distant external part of the development site and the public road measured as a hose lay; and accessed by a public road where the road speed limit is not greater than 70 km/h. In circumstances where all of the above conditions are not met, or the private driveway is in a non-reticulated water area, the private driveway is to meet all the following require: requirements in Table 6, Column 4; passing bays every 200 metres with a minimum length of 20 metres and a minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres); and turn-around area as shown in Figure 28 and within 30 metres of the habitable building.31	C		Primary entry (two way) is from Folly Road and services the Temple carpark (main carpark). The high volume sections of the private driveway and the primary carparking areas are shown to be constructed to a public road standard; to provide a consistent two way road through out the primary traffic movement area. A supplementary road (Emergency and Service Access 4 m carriage way) is provided to Young Road as a through road option for egress and to avoid any potential conflict with arriving emergency service vehicles. Vehicle access to the priest residence is across the paved courtyard are around the temple. The Priest's residence is within 50 m of the carpark and dedicated water tank. <u>Development response</u> A condition of approval is to be provided to require the primary driveway section and carpark to be constructed as a to a public road standard and remaining private driveway areas to be constructed in accordance with Table 6 Column 4. This includes the provision of directional signage.

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
Element 4: Water **Intent:** To ensure that water is available to enable people, property and infrastructure to be defended from bushfire. **P4** Provide a permanent water supply that is: – sufficient and available for firefighting purposes; – constructed from non-combustible materials (e.g. steel), or able to maintain its integrity throughout a bushfire; and – accessible, with legal access for maintenance and re-filling by tankers and emergency service vehicles.	A4.2 Provision of water for firefighting purposes Where a reticulated water supply is existing or proposed, hydrant connection(s) should be provided in accordance with the specifications of the relevant water supply authority. Where these specifications cannot be met, then the following applies: The provision of a water tank(s), in accordance with the requirements of Schedule 2; and Where the provision of a strategic water tank(s) is applicable, then the following requirements apply: – land to be ceded free of cost to the local government for the placement of the tank(s); – the lot or road reserve where the tank is to be located is identified on the plan of subdivision; – tank capacity, construction, and fittings, provided in accordance with the requirements of Schedule 2; and – a strategic water tank is to be located no more than 10 minutes from the subject site (at legal road speeds). Where a subdivision includes an existing habitable building(s) that is to be retained, a water supply should be provided to this existing habitable building(s), in accordance with the requirements listed above.32	C		The site does not have access to a reticulated water supply. The nearest hydrant is located 950 m west of the site on Safety Bay Road. There is no community water tank provided for emergency services that is closer to the hydrant. The minimum requirement for an emergency services water supply is a 50 000 L tank placed near, so as not to obstruct or confuse vehicle evacuating from the main carpark. The applicant proposes a 75 000 L and 50 000 L to be located close to the Temple and dining hall respectively. The supply of water for Structural Fire Fighting will be required by the National Construction Code, to address a structural fire. The requirement for bushfire is a supply to replenish emergency service vehicles. When designing the system for approval for a structural fire the solutions should be designed to serve both a bushfire and a structural fire. As an example the placement of fire hoses to serve both the interior and exterior of buildings and the area around the buildings. <u>Development response</u> A 75 000 L and 50 000 L water supply (standalone tanks) will be provided with couplings to City of Rockingham specification and signposted as exclusively for use by emergency services.

5.3 Bushfire Management Strategies

The proposal is not a high-risk land use (likely to increase the risk of starting a bushfire), but it may attract people who are unfamiliar with bushfire prevention. Prevention necessitates the restriction of some activities that contribute to ignitions, including the disposal of cigarettes or outside fires (torches, wood fired barbeques).

The principles of Emergency Management (listed below) that may apply to the proposal can be divided across the BMP and BEEP working in unison – the BMP determines the suitability of the location, and the BEEP describes the management actions. The two align with emergency management principles as follows:

- Prevention – avoidance and mitigation works undertaken in advance i.e. (Planned APZ).
- Preparation – education, procedures, training i.e. Seasonal maintenance APZ, regular review of (BEEP)requirements, contacts , responsibilities, and warning systems
- Response – actions taken in an event for saving lives (primary) - early evacuation if safe or shelter as a last resort with survival procedures described (BEEP).
- Recovery – return and restoration procedures described (BEEP).

5.3.1 Vulnerable Development Emergency Evacuation (Cl 6.6)

In regard to this proposal the additional bushfire management strategies to the Bushfire Protection Criteria, relates to the management of the facility to preserve life, and for a Vulnerable class of development this is to be addressed in the BEEP.

The proposed BEEP is attached in Appendix 2 and follows the State Government's *A Guide to developing a Bushfire Emergency Evacuation Plan* October 2019 and the *Emergency Evacuation Plan template* v1.1. The BEEP has been developed consistent with the Australian Standard AS 3745-2010, Planning for Emergencies in facilities.

The attached BEEP incorporates the requirements listed under section 5.5.2 v1.4 Guidelines for Planning in Bushfire Prone areas and acknowledged in **Table 4.**

Table 4: Compliance with Cl. 5.5.2 *Guidelines for Planning in Bushfire Prone Areas*

The emergency evacuation plan should be concise and consider:	**Addressed in Emergency Evacuation Plan**
The number of guests at the facility	400 maximum *Average attendance is 100 - 150 people.* *A long term projection is fortnightly attendance by up to 400 people for weddings or festivals.*
Whether the occupants are permanent or transient	Transient
Whether there is a caretaker on site	The site is supervised at all times
Whether there are people with a disability, medically dependant, young children, or the elderly	Visitors are able-bodied or expected to be in the care of a patron.
Identification of a safe alternative location if there was a need for evacuation/relocation	Visitors are expected to return to their homes through the urban road network.
A proposed method of movement of occupants to a safe location(s)	Private vehicles

Details of suitable access/egress routes for the expected type/volume of traffic, including alternatives when suitable roads are inaccessible, insufficient or inappropriate	Folly Road to Kwinana Freeway, Perth Urban area road network.
Transport options for those without access to private vehicles	Guests are expected to arrive by private vehicle.
Options to shelter in place as a last resort	Evacuation is the preferred response as per DFES instruction however if it is not safe to leave a contingency has been made for shelter as a last resort in the Temple building
Roles and responsibilities of facility personnel and emergency services.	Sri Balaji Temple will be responsible for the preparation of the facility before the commencement of each bushfire season. Sri Balaji Temple will have members present at all times who are familiar with the locality. The facility manager will have the responsibility as the Chief fire Warden. Emergency procedures and responsibilities shall be clearly displayed within the buildings.

The emergency evacuation plan should consider if actions will change based on a series of triggers, such as:	Addressed in Emergency Evacuation Plan
Effective warning methods appropriate for the occupants (including consideration of at-risk persons and the demographics of the occupants)	The Chief Warden will monitor the media for Fire Danger Rating information and be trained in the triggers and procedure for evacuation.
Closure of facility and early relocation of occupants appropriate to the fire danger rating (FDR) and bushfire warnings	
Any local government bushfire requirements (for example, harvest and vehicle movement bans)	N/A
A suitably qualified emergency management professional should prepare the emergency evacuation plan in collaboration with relevant stakeholders including the landowner/developer and the local government (refer to section 6.14 of the Guidelines)	Anthony Rowe Accreditation Level 3 Accreditation Number: 36690

5.4 Spatial representation of the bushfire management strategies

Further to the assessment against the bushfire protection criteria, the key features demonstrating compliance should be represented spatially in the *Spatial representation of the bushfire management strategies*. It represents the required bushfire risk management measures that must be implemented and maintained.

The Spatial representation of the bushfire management strategies is provided in Figure Ex1.

6. RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES

The responsibilities for implementation and management of the bushfire measures, summarises the measures identified to achieve compliance with the bushfire protection measures following SPP 3.7. This has been provided in the Executive Summary. The details contained within the planning application authorised by the responsible decision maker are enforceable under section 214 of the *Planning and Development Act 2005*. The items addressed in the table responsibilities for implementation and management of the bushfire measures form part of the planning authorisation and where there is conflict supersede the detail of the planning application.

The responsibilities assigned to the City of Rockingham reflect the current activities of the City and are not to be relied upon nor are they binding upon the City as a consequence of this Bushfire Management Plan.

Owner

1.	The adoption of the Bushfire Emergency Evacuation Plan (Appendix 2 here in).	Ongoing
2.	The development site (extent shown on Fig Ex1), within the area identified as Asset Protection Zone is to be maintained compliant with the Asset Protection Zone Standard described in Element 2, Schedule 1 of the Guidelines v1.4.	Prior to occupation and ongoing
3.	The habitable buildings are to be constructed commensurate to BAL level at their location on the site unless the method is in conflict with a requirement of the *Building Act 2011.*	Prior to occupation
4.	The internal roads (private driveway and supplementary road (Emergency and Service Access) are to be constructed and maintained in accordance with Guidelines for Planning in Bushfire Prone Areas, Appendices, Element 3 Table 6, Column 4 (private driveway).	Prior to occupation
5.	The primary road access from Folly Road and the main carparking area it serves is to be constructed in accordance with public road standard IPEWA, and provided with two way carriageways and a minimum inner radius of 8.5 m.	Prior to occupation
6.	Two Standalone water supply tanks (75 000 L and 50 000 L) are proposed, (compliant with Schedule 2: Water Supply Dedicated for Bushfire firefighting purposes Guidelines v.1.4) accessible to the emergency and service access, with couplings to City of Rockingham specification and signposted as exclusively for the use by emergency services.	Prior to occupation
7.	A notification, pursuant to Section 70A *Transfer of Land Act 1893* is to be placed on the certificate(s) of title of the proposed lot(s) with a Bushfire Attack Level (BAL) rating of 12.5 or above, advising of the existence of a hazard or other factor. The notification is to state as follows: "This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and is subject to a Bushfire Management Plan. Additional planning and building requirements may apply to development on this land"	Prior to occupation

Advisory notes

1. For the buildings other than class 1-3 (to be constructed to BAL-29) it is recommended the construction performance is compared to the requirements AS3959:2018, (section 2 and section 7), to compare the performance standards of the materials with the level required at BAL-29, and in turn ensure the building is comparable to, or exceed, the BAL-29 standard – except where it would conflict with an expressed standard in the *Building Act 2011*.

2. The landowner acknowledges their duty of care to protect any visitors to the site from harm, from a bushfire affecting the property and for the safe direction from the site.

3. The landowner is responsible for availing themselves of any promotions and information to assist owners in preparing for and responding to a bushfire event as may be made by the City or the Department Fire and Emergency Services

The City of Rockingham

1.	Developing and maintaining district bushfire fighting services and facilities.	Ongoing
2.	Administer the *Bushfire Act 1954* and the enforcement of the City Fire Control Notice *Where there is conflict between this Bushfire Management Plan and the City Fire Control Notice the higher level of bushfire protection will prevail*	Ongoing
3.	Promoting education and awareness of bushfire prevention and preparation measures through the community.	Ongoing
4.	Administering the requirements of the *Planning and Development Act 2005* by ensuring the facility closure in accordance with the terms of the Development approval.	Ongoing
5.	Administering the requirements of the *Planning and Development Act 2005* and the *Building Act 2011*.	Ongoing

State Government

•	Notification of Emergency Alerts - Website and Telecommunication Media	Ongoing
•	Policing operations to minimise the deliberate ignition of bushfires.	Ongoing
•	Maintain fuel reduction on public lands	Ongoing

Acknowledgment - Proponent

The proponent acknowledges the responsibilities as listed above and the requirement to ensure that should the land transfer to a new owner, that the new owner is aware of the BMP and their ongoing responsibility.

APPENDIX 1 - Emergency Evacuation Plan

BUSHFIRE EMERGENCY EVACUATION DOCUMENTS

Sri Balaji Temple

67 Folly Road, Baldivis

June 2022

This document contains two parts:

1. The preparation compliance with the WAPC A *Guide to developing a BUSHFIRE EMERGENCY EVACUATION PLAN October 2019: and*

2. The Emergency Evacuation Plan contained in Appendix 1. The Emergency Evacuation Plan incorporates the requirement of AS3745-2010 where relevant in the WAPC Emergency Evacuation Plan Template.

Section 1 does not form part of Emergency Plan

1. ESTABLISHING THE EMERGENCY MANAGEMENT TEAM

In accordance with the Guidelines for preparing a bushfire emergency evacuation plan an accredited bushfire practitioner was engaged (Anthony Rowe BPAD L3 36690).

The bushfire planning practitioner has been responsible for assisting the emergency management team with

- The establishment and implementation of emergency plans and procedures
- Formulation of emergency procedures
- Reviewing the local emergency services

The Emergency Planning Committee with feedback from the Emergency Management Team should regularly review the emergency evacuation plan to ensure it remains practical and current.

Emergency Planning Committee (EPC)

The **Emergency Planning Committee** (The Sri Balaji Temple management team) is responsible for overseeing the preparation of the site buildings and grounds and any supporting facilities required for protection in a bushfire, prior to the approaching bushfire season. This includes attendance to any maintenance required to minimise the risk of damage from bushfire attack and extends to ensuring that site mobile phones are registered on the Emergency Alert System.

The Emergency Planning Committee should regularly review the emergency evacuation plan to ensure it remains practical and current.

The Committee is responsible for reviewing the BEEP and overseeing the undertaking of education and training. It evaluates the outcomes of any drills and ensure appropriate resources are provided to prepare for the bushfire season.

The Committee is responsible for establishing the Emergency Management Team and assigning roles and responsibilities to staff.

The difference between the **Emergency Planning Committee** and the **Emergency Management Team** is the Emergency Planning Committee is responsible for all things in planning for the occurrence of a bushfire and preparing the facility to minimise any adverse effects. The priority is human safety. The Emergency Management Team responds to the bushfire event, it comprises the people expected to be in attendance at the time of a bushfire event. Its priority is human safety, and secondary may also include firefighting if trained. There should be no expectation upon any visitor to the facility to participate in firefighting.

Emergency Management Team (EMT)

The Emergency Management Team shall comprise staff assigned to the following positions:

- Chief Warden
- Area Warden Communication
- Area Warden Traffic

The Chief Warden will be responsible for responding to a bushfire event and ensuring the safety of visitors.

Section 1 - does not form part of Emergency Plan

2. PREPARING THE EMERGENCY PLAN

The emergency plan applies to the facility, **The Sri Balaji Temple,** at 67 Folly Road, Baldivis.

The Bushfire Management Plan dated **11 June 2022** articulates bushfire safety measures that include:

- Identification of the Asset Protection Zone and maintenance
- Provision of firefighting equipment

This Emergency Plan has been prepared in response to bushfire threats identified in the BMP.

The Sri Balaji Temple is within a rural area of Baldivis, 400 m east of the residential area of Baldivis.

- Monitor the DFES Alerts and Warnings web page https://www.emergency.wa.gov.au
  The Chief Warden is responsible for monitoring this site at regular intervals.

Evacuate before the fires arrival when safe to do so.

- If directly advised to leave by DFES or the police (Chief Warden)

Shelter on site

- If DFES has advised it is not safe to leave

3. DETERMINE EMERGENCY ACTION

The **primary action** in response to bushfire threat is early **evacuation**

In a bushfire event, announcements will be made via electronic media and online, regarding bushfire incidents and potential threats to the site.

- Monitor the DFES Alerts and Warnings web page **https://www.emergency.wa.gov.au**
  The Chief Warden is responsible for monitoring this site at regular intervals during the bushfire season

The Trigger to evacuate.

- If the day has been forecast to be Severe, Extreme or Catastrophic.
- If directly advised to leave by DFES or the Police.

Time Required to Evacuate – 50 minutes

Suitable Access Routes: from Folly Road travel west to Safety Bay Road and on to Warnbro or north on Kwinana Freeway then west on Kulija Road/Dixon Road to Rockingham

Transportation Arrangements: Private Vehicles.

Section 1 - does not form part of Emergency Plan

4. EVACUATION / SHELTER REQUIREMENTS

Visitors to The Sri Balaji Temple will arrive by their own transport and it is expected they would evacuate via their own transport back to the Perth Urban area.

The City of Rockingham has four primary evacuation centres which may be activated in a bushfire emergency, however in an emergency, announcement will be made via electronic media and online confirming locations of evacuation centres.

Whilst shelter on site is not recommended the owner should ensure the Asset Protection Zone is maintained.

PRIMARY AND SECONDARY EMERGENCY PROCEDURES

The **Primary procedure** is to EVACUATE when safe to do so.

Evacuation should be in the direction advised by Emergency Services, usually in the opposite direction to the approaching fire.

Head west on Folly Road and on to Safety Bay Road if a fire will arrive from the north.

Head west on Folly Road then north on Kwinana Freeway if a fire will arrive from the south.

The Emergency Evacuation Plan must be reviewed annually, ensuring all information, procedures, contact details and any attached publications (e.g. DFES) are current.

A current copy must be kept at the facility, and an A3 size copy of the evacuation diagram is to be displayed at all exit doors in all buildings.

If advised by DFES or emergency services that it is not safe to leave, either directly or by public information, or if fire/flames are visible from the site, then shelter in the Temple.

Assemble all visitors and staff, close all doors and windows, block smoke ingress, keep hydrated, observe the passing of the fire front, then exit the building when survivable conditions establish outside or if the building is failing.

The **Secondary procedure** is to Shelter if evacuation is not safe

- If a fire is within 5 km of the site (Chief Warden) and DFES has advised it is not safe to leave
- If smoke or a fire is seen nearby (Chief Warden)
- If evacuation cannot be completed before the fire's arrival.
  - the fire will arrive in under 50 minutes – not safe
  - movement onto Folly Road is slow and the fire may arrive before evacuation has been completed

Section 1 - does not form part of Emergency Plan

5. TRAINING REQUIREMENTS

The Emergency Planning Committee is responsible for:

- The written procedures applicable to the site.
- Individual roles and responsibilities.
- Identifying Response Actions
    - Access and egress routes and managing evacuation.
    - Assembly point location and shelter procedures.

The Emergency Management Team is responsible for:

- Acknowledging the emergency response plan and the evacuation procedures.
- Acknowledging the location of facilities
- The allocation of responsibilities.
    - Nominating the chief warden
    - Nominating the traffic management responsibility
    - First aid responsibility

Section 1 - does not form part of Emergency Plan

Emergency Evacuation Plan Preparation Checklist

The following questions will assist the individual in developing or reviewing the Emergency Evacuation Plan to identify an off-site location. For an appropriate off-site location ***Note that the majority of visitors to the facility will be day visitors and as such will return to their homes unless their home is within the area being evacuated due to the bushfire; in that instance they would attend an evacuation (welfare) centre as per public advice.***		
If there are occupants with support needs that require a similar facility to support them, is the off-site location suitable?	Yes No	☒ ☐
Comment: Visitors with support needs may attend the facility but would have a carer or family member in attendance with them to provide the required support.		
Is the off-site location in an area away from the effects of a bushfire?	Yes No	☒ ☐
Comment: City nominated emergency evacuation facility		
Are there amenities (toilets, food, water etc.) available at the off-site location? (if applicable)	Yes No	☒ ☐
Can the off-site location accommodate the number of occupants?	Yes No	☒ ☐
Comment: City nominated emergency evacuation facility		
Does the route to the off-site location require transporting through bushfire affected areas or areas that may be affected by an approaching bushfire?	**Yes** **No**	☒ ☐
Has the owner of the off-site location advised that they are happy to accommodate occupants if evacuation from a bushfire emergency occurs?	Yes No	☒ ☐
Comment: City nominated emergency evacuation facility		

Section 1 - does not form part of Emergency Plan

Consider the following questions to assist in planning transport arrangements.	
Do you have your own transport for all occupants? **If no what transport provider will you use?** Visitors will have their own transport	Yes ☐ No ☒
Are private vehicles to be used?	Yes ☒ No ☐
If using private vehicles will there be sufficient vehicles to transport all the occupants, will they be available when you need them, and will there be drivers available? **If no, consider another mode of transport**	Yes ☒ No ☐
Will there be sufficient vehicles to transport all occupants? All visitors will arrive by private transport	Yes ☒ No ☐
Have occupants with support needs been considered when determining transport types and necessary timing to evacuate?	Yes ☒ No ☐
Do you require ambulances? **If yes, St John Ambulance Australia needs to be consulted.**	Yes ☐ No ☒
Is a community bus available?	Yes ☐ No ☒
Will community buses be available when you need them and will drivers be available?	Yes ☐ No ☒
Are other means of transport available?	Yes ☐ No ☒
Do you need any other type of special transport?	Yes ☐ No ☒

Section 1 - does not form part of Emergency Plan

The following questions will assist the individual in developing or reviewing the Emergency Evacuation Plan to identify an on-site building. For an appropriate building, the answers to ***the below questions should receive a 'yes'.***	
Is the property well maintained and kept free from a build-up of fuel and leaf litter in gutters and around buildings?	Yes ☒ No ☐
• The standards for Asset Protection Zones in The Guidelines for Planning in Bushfire Prone Areas should be used as a reference	
Is there a building on-site that is away from bushland and is unlikely to be impacted by bushfire?	Yes ☐ No ☒
NA	
Is the building constructed in a manner that minimises bushfire attack with appropriate Asset Protection Zones?	Yes ☐ No ☐
NA	
Can the building accommodate the number of occupants and visitors?	Yes ☐ No ☐
NA	
Is there ease of accessibility to the building, and is it easily identifiable?	Yes ☐ No ☐
NA	
Is there access to amenities (toilets, food, water, etc.) away from the effects of a bushfire?	Yes ☒ No ☐
NA	

Section 1 - does not form part of Emergency Plan

BUSHFIRE EMERGENCY PLAN

NAME OF FACILITY	The Sri Balaji Temple
ADDRESS	67 Folly Road, Baldivis
PREPARED BY	Anthony Rowe, L3 BPAD 36690
OWNER/OPERATOR	Jeeyars Acharya Peetham Ltd
DATE	11 June 2022
VERSION NUMBER	5

Document Control

Version	Date	Details	Undertaken by
1	20/09/2021	DRAFT	Anthony Rowe
2	29/11/2021	FINAL	Anthony Rowe
3	22/02/2022	FINAL	Anthony Rowe
4	18/05/2022	FINAL	Anthony Rowe
5	11/06/2022	FINAL	Anthony Rowe

Emergency Management Team

Name	Role	Identification Colour	Contact Details
	Chief Warden		
	Area Warden (Communication)		
	Area Warden (Traffic)		

FACILITY DETAILS

This Plan is for the Sri Balaji Temple and has been designed to assist management in protecting life and property in the event of a bushfire.

The plan outlines procedures for both **evacuation** and **shelter-in-place** to enhance the protection of occupants from the threat of a bushfire.

The primary action to follow in a bushfire emergency is to:

Evacuate ☒ Shelter in place ☐

NAME OF CONTACT PERSON		tbc	
POSITION / ROLE OF CONTACT PERSON		Sri Balaji Temple facility manager	
PHONE NUMBER		tbc	
FACILITY TYPE	Place of Worship	NUMBER OF BUILDINGS	5
NUMBER OF STAFF	tbc	NUMBER OF OCCUPANTS	400
NUMBER OF OCCUPANTS WITH SUPPORT NEEDS		0	
DESCRIPTION OF SUPPORT NEEDS		Not applicable	

RESPONSIBILITIES

The following outlines who has responsibility for implementing emergency procedures in the event of a bushfire.

Position	Role	Responsibility
OWNER or MANAGER Emergency Planning Committee (EPC)		• Daily - check www.emergency.wa.gov.au for any warnings or alerts • Monitor Fire Danger Ratings at all times when visitors are at the site and ensure precautionary evacuation (closure) occurs on days of Extreme or Catastrophic Fire Danger Rating (FDR) • Ensure the site is prepared for the bushfire season • Maintain the Asset Protection Zone • Establish a first aid store.
Sri Balaji Temple Staff Emergency Management Team	Chief Warden	• Monitor conditions on Severe plus FDR days o Local ABC Radio 720 am o emergency.wa.gov.au • Determine with DFES/emergency services that safe evacuation is available • Determine to Evacuate- advise visitors to evacuate due to an emergency warning and if DFES advise the evacuation route is safe • Remain contactable (mobile phone) at all times • If a fire is within 5 km of the site or if an Emergency or Watch and Act warning has been issued confirm the safe evacuation (route) and destination and oversee evacuation • Advise visitors of the safe route and destination • Ensure all visitors have been accounted for and have evacuated • evacuate staff

EMERGENCY CONTACTS

Name of Organisation	Office / Contact	Contact details
Fire / Police / Ambulance	Fire or Emergency	**000 (112 from a mobile)**
Department of Fire & Emergency Services	Emergency Information	**13 33 37 (13 DFES)**
Emergency WA	Warnings and incidents	**www.emergency.wa.gov.au**
Bureau of Meteorology	Weather information	**1300 659 213**

Secondary Contacts

Name of Organisation	Office / Contact	Contact details

PREPAREDNESS

CHECKLIST – ongoing, prior to and during the bushfire season		
BUSHFIRE SEASON: DECEMBER TO MAY OF EVERY YEAR (refer to the City's Annual Fire Hazard Reduction Notice for precise start and finish dates as they vary each season)		
Action	**Frequency**	**Responsibility**
To be completed during the bushfire season from December to May each year by the Emergency Planning Committee (facility owner and/or manager). **Please refer to the City's Annual Fire Hazard Reduction Notice for precise start and finish dates as they vary each season.**		
1. The Asset Protection Zone is maintained as per the Standards for Asset Protection Zones (*Schedule 1 Guidelines for planning in bushfire prone areas)*	Ongoing	EPC
2. The evacuation diagram is clearly displayed at the exit doors of all buildings		
3. Emergency Contacts details are current and identified on the Evacuation Diagram		
4. First aid kits are stocked.		

AWARENESS AND PRE-EMPTIVE PROCEDURES

The following outlines the actions that must be taken to ensure occupants maintain an awareness of the bushfire threat and the appropriate procedures to follow.

Actions	Frequency	Responsible Person
Days forecast High, Extreme or Catastrophic		
Check the Emergency WA website **hourly** for alerts and warnings www.emergency.wa.gov.au	Monitor for alerts. Close / evacuate the facility evacuate if advised to do so by Emergency Services or if a fire is observed nearby.	Chief Warden
Throughout the Bushfire Season		
Check the Emergency WA website **daily** for alerts and warnings www.emergency.wa.gov.au	Check for alerts prior to opening each day. Actively monitor any incidents within 10 Km.	Chief Warden

The Department of Fire and Emergency Services provides community and emergency advice about predicted and current conditions and the level of bushfire threat.

The Fire Danger Rating (**FDR)** is based on the forecast weather conditions, the higher the rating, the higher the threat.

A new national Fire Danger Rating System is to be launched in September 2022

There are four levels of fire danger in the new system. Fire Danger Ratings are based on predicted conditions such as temperature, humidity, wind and the dryness of the landscape and give an indication of the possible consequences of a fire, if one was to start; the higher the fire danger rating, the more dangerous the conditions.

FIRE DANGER RATINGS

CATASTROPHIC

Catastrophic - For your survival, leave bush fire risk areas

EXTREME

Extreme – Take action now to protect your life and property

HIGH

High – Be ready to act

MODERATE

Moderate – Plan and prepare

The **Australian Bushfire Warning System** provides public information on **ACTIVE** fires

BUSHFIRE WARNING SYSTEM

EMERGENCY WARNING

An out of control fire is approaching fast and you need to take immediate action to survive. If you haven't prepared your home it is too late.

You must seek shelter or leave now if it is safe to do so.

WATCH AND ACT

A fire is approaching and there is a possible threat to lives or homes. Put your plan into action. If your plan is to leave, make sure you leave early. If your plan is to stay, check all your equipment is ready.

Only stay and defend if you are mentally and physically prepared.

ADVICE

A fire has started but there is no immediate danger. Stay alert and watch for signs of a fire.

Be aware and keep up to date.

Where can I get information during an emergency?

emergency.wa.gov.au 13 DFES (13 33 37)

@dfeswa @dfes_wa Local ABC Radio

GOVERNMENT OF WESTERN AUSTRALIA

DFES

EMERGENCY PROCEDURE, LOCATION, AND TRANSPORT DETAILS

Evacuation

Designated evacuation assembly point/s

1. The carpark

Primary off-site location

It is expected that visitors would return to their homes via the urban road network unless home is in a location which is affected by the bushfire. In that case visitors would follow Emergency Services advice on the location of evacuation welfare centres.

The following are two of the Welfare centres nominated by the City of Rockingham.

Name of venue	**Warnbro Community Recreation Centre**		
Address of venue	Okehampton Rd, Warnbro		
Nearest cross street	Warnbro Sound Avenue	Map reference	MQ93+P2 Warnbro
Venue phone number	(08) 9528 0333		
Primary route to location	Head **WEST** on Folly Road and continue onto Safety Bay Road. After 7.8 km turn left onto Warnbro Sound Avenue and after 577 m turn right onto Okehampton Road. The entry to Warnbro Community Recreation Centre is on the right after 570 m.		
Secondary route to location	Head **WEST** on Folly Road and continue onto Safety Bay Road then turn right to merge onto Kwinana Freeway. After 3.4 km take the Mundijong Road exit and after 7.4 km turn left onto Dixon then turn left onto Ennis Avenue. Follow Ennis Avenue to Safety Bay Road turn right then turn left onto Warnbro Sound Avenue and right onto Okehampton Road. The entry to Warnbro Community Recreation Centre is on the right after 570 m.		

Primary transportation arrangements

Visitors will have transport adequate for all members of their party.

Required Safe Evacuation Time	50 minutes - from awareness to clearing the premise
Estimated travelling time to destination	12 minutes (individual vehicle)

Secondary off-site location

Name of venue	**Mike Barnett Sports Complex**		
Address of venue	Goddard St, Rockingham		
Nearest cross street	Dixon Road	Map reference	PPCW+H5 Rockingham
Primary route to location	Head **WEST** on Folly Road and continue onto Safety Bay Road then turn right to merge onto Kwinana Freeway. After 3.4 km take the Mundijong Road exit and after 7.4 km turn left onto Dixon Road – stay on Dixon Road for 4 km then turn left on to . Follow Ennis Avenue to Safety Bay Road turn right then turn left to the Mike Barnett Sports Complex.		
Secondary route to location	na		

Secondary transportation arrangements

Visitors will have their own transport adequate for all members of the party.

Required Safe Evacuation Time	50 minutes - from awareness to clearing the premise
Estimated travelling time to destination	15 minutes

EVACUATE OR SURVIVAL

The **primary action** to follow if there is an imminent bushfire threat is to **EVACUATE** following confirmation (DFES or emergency services) that a safe evacuation route is available.

Shelter in place is not recommended. Early evacuation by vehicle to the urban area will be available however if DFES or emergency services have advised it is too late to leave then Survival procedures are to be activated. Visitors and staff should assemble in the temple for as long as it is safe to do so and until the fire has passed. If it becomes unsafe to stay in the temple visitors and staff should assemble outside at the furthest point from the approaching fire.

Designated on-site building: The temple.
Refer to DFES publication (attachment 2) for survival instructions.

Procedures for evacuation and shelter-in-place in the event of a bushfire.

Trigger	Action	Responsible Person
EVACUATE		
WATCH and ACT – EVACUATE **A fire is within 10 km** DFES have advised to evacuate and confirmed the route is safe **OR** **A fire is within 5 km** And DFES have advised to evacuate and confirmed the route is safe – EVACUATE via SAFE ROUTE	• Assemble at the temple • Advise visitors of safe route/s and destinations • Ensure all visitors have been accounted for and have evacuated • evacuate staff	**Chief Warden**
SURVIVAL – only if advised by DFES it is not possible to leave and shelter in place as a last resort is to be taken		
EMEGENCY – SURVIVAL **A fire is approaching 5km** and DFES have advised it is not safe to to evacuate **OR** **A fire is within 5 km** **OR** **A fire is observed to be approaching** and DFES have advised it is not safe to evacuate **SHELTER on SITE**	• Contact emergency services to advise you are sheltering in place. • Remain calm and advise all guests and staff to assemble in the temple. • If it becomes unsafe to stay in the temple visitors and staff will move to an area outside that is furthest from the fire front. • Keep visitors calm and stay hydrated. • Evacuate when a safe evacuation route becomes available as advised by DFES/emergency services	**Chief Warden**

RECOVERY

Action	Responsible Person
Following an evacuation when the area has been deemed safe by emergency services the owner/manager will: • return to the site • check grounds for any smouldering objects • determine when it will be safe to re-open	**Chief Warden**
Debrief - assess the severity of the event; - would the actions taken be sufficient to ensure the safety of staff and visitors in an extreme event; - were there any unexpected problems not accounted for in the existing emergency plan; - update the emergency plan to include any learnings from the event.	**Emergency Planning Committee (owner) with the Emergency Management Team (Chief Warden)**

Attachment 1 – Emergency Plan and Evacuation Map

BUSHFIRE EMERGENCY RESPONSE PLAN

FACILITY DETAILS

Location : Sri Balaji Temple
67 Folly Road, Baldivis

Facility: Place of Worship

Guests : **Maximum 400**

CONTACT PERSONS	ROLE	CONTACT NO.
Facility Manager	Chief Warden	Tbc

Chief Warden

- Monitor Alerts, Determine with DFES (emergency services) that evacuation is safe, or shelter is necessary
- Alert and Instruct visitors
- Advise visitors to evacuate and confirm the evacuation destination and route
- Ensure all visitors have been accounted for and evacuation is complete
- **If not safe to evacuate** – Advise visitors of safety procedures, maintain confidence and keep calm.
- Remain contactable (mobile phone) at all times

INFORMATION SOURCES

Local ABC radio	720 am
DFES information line	13 33 37
Emergency WA	www.emergency.wa.gov.au
Bureau of Meteorology	1300 659 213

EMERGENCY CONTACTS

Fire, Police or Ambulance 000

EMERGENCY WARNINGS (DFES)

ADVICE – PREPARE TO EVACUATE

Trigger: Fire is greater than 5 km away

An ADVICE warning has been issued across telecommunications media of an incident nearby (within 10 km).

Response:

The Chief Warden will take the following information into consideration when determining if and when to evacuate:

- The severity of the bushfire incident.
- Approximate time for the bushfire to impact the facility.

If the decision is made to evacuate, follow the procedure under Watch and Act.

WATCH AND ACT - EVACUATE

Trigger: Fire is within 5 km

DFES or Police have advised **EVACUATION IS REQUIRED** (Public Notice)

or

Smoke or fire is observed and DFES have confirmed safe evacuation along Folly Road is available.

Confirm with DFES or police the direction in which evacuation should be taken (public information).

Response:

- Advise visitors of evacuation destination and route.
- Oversee evacuation of visitors by private vehicles.

EMERGENCY - SURVIVAL

Trigger: Fire is within 2 km

DFES or Police have advised **EVACUATION IS NOT SAFE**
or
Smoke or fire is observed near by

Response

Survival Plan – only to be enacted in the event that DFES or police have advised a safe evacuation route is not available

- Visitors and staff remain undercover in the temple whilst it is safe to do so.
- Close all doors and windows, block smoke ingress, keep patons hydrated.
- Monitor the passing of the firefront.
- Monitor the building condition, if it becomes unsafe to stay in the building move outside to an area as far as possible from the fire front.

ALL CLEAR

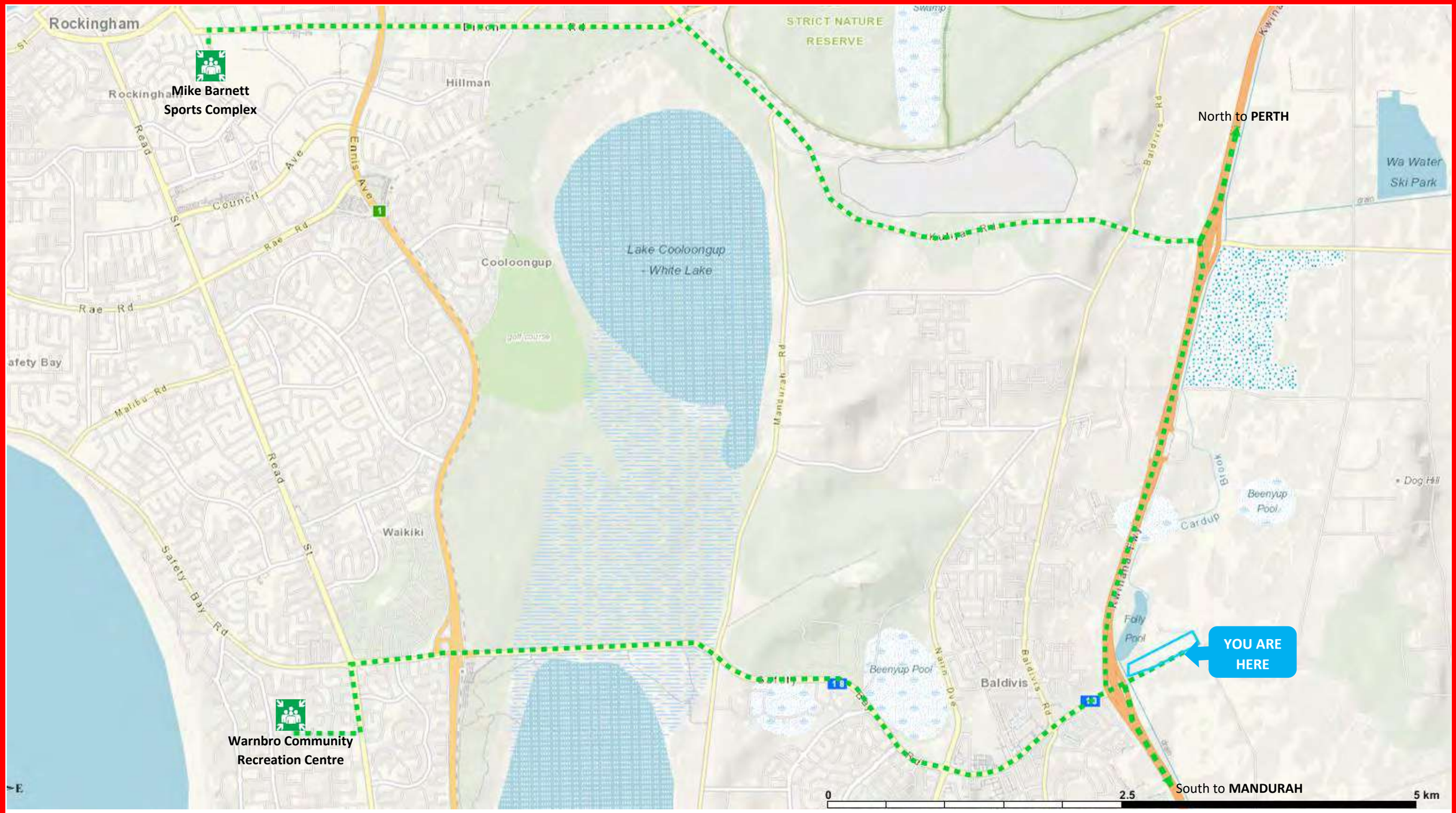
When emergency services have deemed the area safe:

- Return to the site (chief warden)
  - check buildings and grounds for any smouldering objects.
  - determine if it is safe for visitors to return
- Monitor grounds and buildings, particularly roofs for smouldering material for 24 hours after the event. Extinguish small fires.

Vehicle Management

Staff and visitors are expected to arrive by private vehicle and whilst at the facility must ensure they keep a vehicle at the site to facilitate their own evacuation.

EMERGENCY EVACUATION DIAGRAM



Your Location Is **The Sri Balaji Temple 67 Folly Road, Baldivis**

EVACUATE if DFES or Police advise evacuation is required or if you see an uncontrolled fire

Follow instructions from the Emergency Services Incident Controller (the DFES officer managing the fire).

- Assemble at the Temple building closest to the carpark
- Evacuate to destination and via route as directed by Emergency Services either directly or by public announcement.

DO NOT TRAVEL THROUGH FIRE

Monitor Emergency Information: ABC Radio 720AM; DFES information 13 33 37;

Emergency WA - www.emergency.wa.gov.au

SURVIVAL - if it is not safe to leave - advise DFES (ph. 13 33 37) of your location and the number of persons present

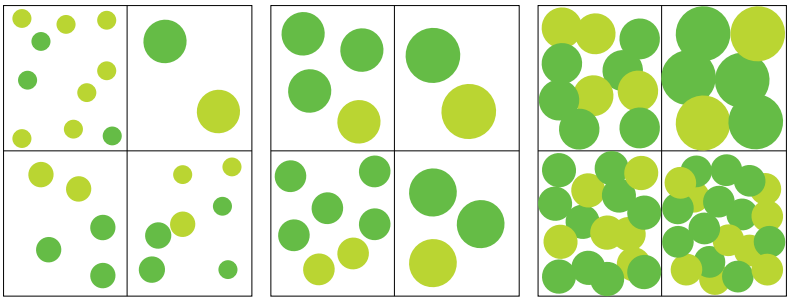
- keep fire extinguishers close by
- Soak towels to block smoke ingress
- Monitor the building condition for smoke and heat.
- Keep hydrated and monitor the fire's passing.
- Leave the building when safe to do so and shelter to avoid heat
- Evacuate the site when DFES/Emergency Services confirm a safe route is available

DO NOT STAY IN A BURNING BUILDING

APPENDIX 2 - APZ Guidelines cl. 2.2.3.2(f)

ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Fences within the APZ	• 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).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	• Should be managed and removed on a regular basis to maintain a low threat state. • Should be maintained at <2 tonnes per hectare (on average). • Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	• Trunks at maturity should be a minimum distance of six metres from all elevations of the building. • Branches at maturity should not touch or overhang a building or powerline. • Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. • Canopy cover within the APZ should be <15 per cent of the total APZ area. • 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. **Figure 19:** Tree canopy cover – ranging from 15 to 70 per cent at maturity  15% 30% 70%
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	• Should not be located under trees or within three metres of buildings. • Should not be planted in clumps >5 square metres in area. • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	• Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. • Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.

ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Grass	• Grass should be maintained at a height of 100 millimetres or less, at all times. • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
Defendable space	• 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.
LP Gas Cylinders	• 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. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

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

APPENDIX 3 – Access Standard

Table 6: Vehicular access technical requirements

TECHNICAL REQUIREMENTS	1 Public roads	2 Emergency access way[1]	3 Fire service access route[1]	4 Battle-axe and private driveways[2]
Minimum trafficable surface (metres)	In accordance with A3.1	6	6	4
Minimum horizontal clearance (metres)	N/A	6	6	6
Minimum vertical clearance (metres)	4.5			
Minimum weight capacity (tonnes)	15			
Maximum grade unsealed road[3]	As outlined in the IPWEA Subdivision Guidelines	1:10 (10%)		
Maximum grade sealed road[3]		1:7 (14.3%)		
Maximum average grade sealed road		1:10 (10%)		
Minimum inner radius of road curves (metres)		8.5		

Notes:

[1] To have crossfalls between 3 and 6%.

[2] 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.

[3] Dips must have no more than a 1 in 8 (12.5%-7.1 degree) entry and exit angle.

APPENDIX 4 – Water Tank

SCHEDULE 2: WATER SUPPLY DEDICATED FOR BUSHFIRE FIREFIGHTING PURPOSES

2.1 Water supply requirements

Water dedicated for firefighting should be provided in accordance with Table 7 below, and be in addition to water required for drinking purposes.

Table 7: Water supply dedicated for bushfire firefighting purposes

PLANNING APPLICATION	NON-RETICULATED AREAS
Development application	10,000L per habitable building
Structure Plan / Subdivision: Creation of 1 additional lot	10,000L per lot
Structure Plan / Subdivision: Creation of 3 to 24 lots	10,000L tank per lot **or** 50,000L strategic water tank
Structure Plan / Subdivision: Creation of 25 lots or more	50,000L per 25 lots or part thereof Provided as a strategic water tank(s) or 10,000L tank per lot

2.2 Technical requirements

2.2.1 Construction and design

An above-ground tank and associated stand should be constructed of non-combustible material. The tank may need to comply with AS/NZS 3500.1:2018.

Below ground tanks should have a 200mm diameter access hole to allow tankers or emergency service vehicles to refill direct from the tank, with the outlet location clearly marked at the surface. The tank may need to comply with AS/NZS 3500.1:2018. An inspection opening may double as the access hole provided that the inspection opening meets the requirements of AS/NZS 3500.1:2018. If the tank is required under the BCA as part of fire hydrant installation, then the tank will also need to comply with AS 2419.

Where an outlet for an emergency service vehicle is provided, then an unobstructed, hardened ground surface is to be supplied within four metres of any water supply.

2.2.2 Pipes and fittings

All above-ground, exposed water supply pipes and fittings should be metal. Fittings should be located away from the source of bushfire attack and be in accordance with the applicable section below, unless otherwise specified by the local government.

2.2.2.1 Fittings for above-ground water tanks:

- Commercial land uses: 125mm Storz fitting; or
- Strategic water tanks: 50mm or 100mm (where applicable and adapters are available) male camlock coupling with full flow valve; or
- Standalone water tanks: 50mm male camlock coupling with full flow valve; or
- Combined water tanks: 50mm male camlock coupling with full flow valve or a domestic fitting, being a standard household tap that enables an occupant to access the water supply with domestic hoses or buckets for extinguishing minor fires.

2.2.2.2 Remote outlets

In certain circumstances, it may be beneficial to have the outlet located away from the water supply. In such instances in which a remote outlet is to be used, the applicant should consult the local government and DFES on their proposal.

APPENDIX 5 – References

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Transport Impact Assessment

Project:	Proposed Place of Worship 67 Folly Road, Baldivis
Client:	Jeeyars Acharya Peettam Australia Pty Ltd c/- Archetype Design Studio
Author:	Paul Nguyen
Date:	10th June 2022
Shawmac Document #:	2109004-TIA-001

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1. Introduction and Background

1.1. Proponent

Shawmac has been engaged by Archetype Design Studio on behalf of Jeeyars Acharya Peettam Australia Pty Ltd (JAPA Pty Ltd) to prepare a Transport Impact Assessment (TIA) for a proposed place of worship in Baldivis.

1.2. Site Location

The site address is Lot 53, Number 67 Folly Road, Baldivis and the local authority is the City of Rockingham.

The general site location is shown in Figure 1.

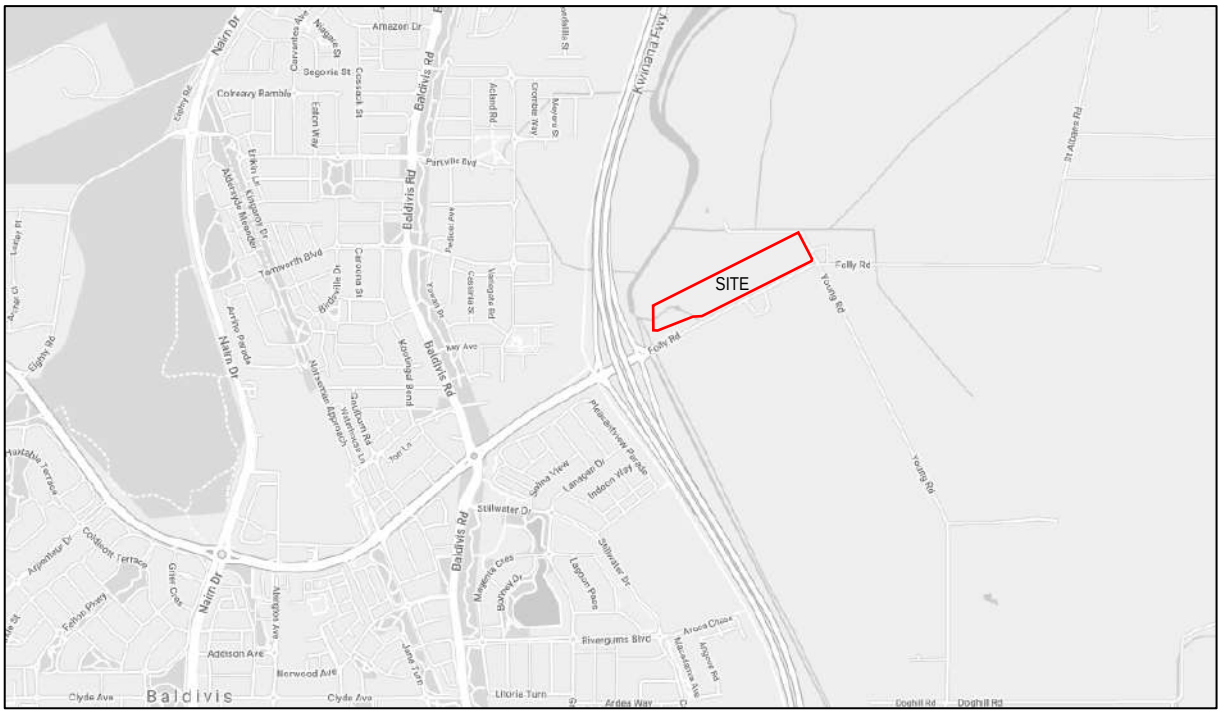


Figure 1: General Site Location

1.3. Scope

This TIA has been prepared in accordance with the Western Australian Planning Commission's (WAPC) Transport Impact Assessment Guidelines. According to the TIA guidelines, the key objectives of a TIA are to:

- assess the proposed internal transport networks with respect to accessibility, circulation and safety for all modes, that is, vehicles, public transport, pedestrians and cyclists;
- assess the level of transport integration between the development and the surrounding land uses;
- determine the impacts of the traffic generated by the development on the surrounding land uses; and
- determine the impacts of the traffic generated by the development on the surrounding transport networks.

2. Development Proposal

2.1. Land Use

The proposed development includes a main temple building, a multi-purpose hall, a dining hall, a library, a priests residence, car parking and other supporting amenities. The entire development will be located on the north-eastern half of the property closest to Young Road.

The development will be staged with the majority of development completed by 2026 except for the multi-purpose hall which is planned to be built between 6 and 10 years from development approval.

2.2. Activities

The main activity at the site will be daily prayer sessions, including a morning session and an evening session. Other activities include weekday yoga classes, weekend scripture classes, special Hindu Festival Days and Hindu Weddings.

2.2.1. Interim Operations

A summary of the expected activities, hours and attendance numbers as provided by the client is detailed below:

• Weekday Prayers (Mon-Fri)	25-50 people (morning session)	7:00am to 1:00pm
	25-50 people (evening session)	5.00pm to 9.00pm
Weekday Yoga Classes (2 per week)	20 people	6:00pm to 7:00pm
• Saturday/Sunday Prayers	100-150 people (morning session)	7:00am to 1:00pm
	100-150 people (evening session)	5.00pm to 9.00pm
Saturday/Sunday Scripture Classes	50-75 people (included in the above)	3:00pm to 6:00pm
• Special Hindu Festival Days occurring on average once per month		
If on a weekday	50-75 people (morning session)	7:00am to 1:00pm
	200-250 people (evening session)	5.00pm to 9.00pm
If on a weekend day	200 people (morning session)	7:00am to 1:00pm
	200-250 people (evening session)	5.00pm to 9.00pm
• Hindu Weddings occurring on average 6 times per year only on weekends		
	300-400 people	9:00am to 11:00pm

Hindu prayer sessions are relatively unstructured and so attendance is generally spread out over the session.

It is also noted that Hindu weddings will not occur on the same day as a special Hindu festival day.

2.2.2. Future Operations

To comply with noise regulations and to mitigate the impact on the future residents of the neighbouring land to the north of the development site (547 Young Road), the operating hours will be adjusted after any residence is built on this lot as detailed below:

• Weekday Prayers (Mon-Fri)	25-50 people (morning session)	7:00am to 1:00pm
	25-50 people (evening session)	5.00pm to 9.00pm
Weekday Yoga Classes (2 per week)	20 people	6:00pm to 7:00pm
• Saturday/Sunday Prayers	100-150 people (morning session)	7:00am to 1:00pm
	100-150 people (evening session)	5.00pm to 9.00pm
Saturday/Sunday Scripture Classes	50-75 people (included in the above)	3:00pm to 6:00pm
• Special Hindu Festival Days occurring on average once per month		
If on a weekday	50-75 people (morning session)	7:00am to 1:00pm
	200-250 people (evening session)	5.00pm to 9.00pm
If on a weekend day	400-450 people	9.00am to 9.00pm
• Hindu Weddings occurring on average 6 times per year only on Saturdays only		
	300-400 people	9:00am to 7:00pm

The key change from the interim operating hours are:

- Special Hindu Festival Days on weekends will be consolidated into one daily session starting later at 9am.
- Hindu weddings will no longer be held on Sundays or Public Holidays and weddings on Saturdays will finish earlier at 7pm.

As per the interim operations, Hindu weddings will not occur on the same day as a special Hindu festival day.

2.3. Access

Vehicle access is proposed on Folly Road including a main entry crossover and a secondary service crossover.

The site layout and access arrangement is shown in Figure 2.

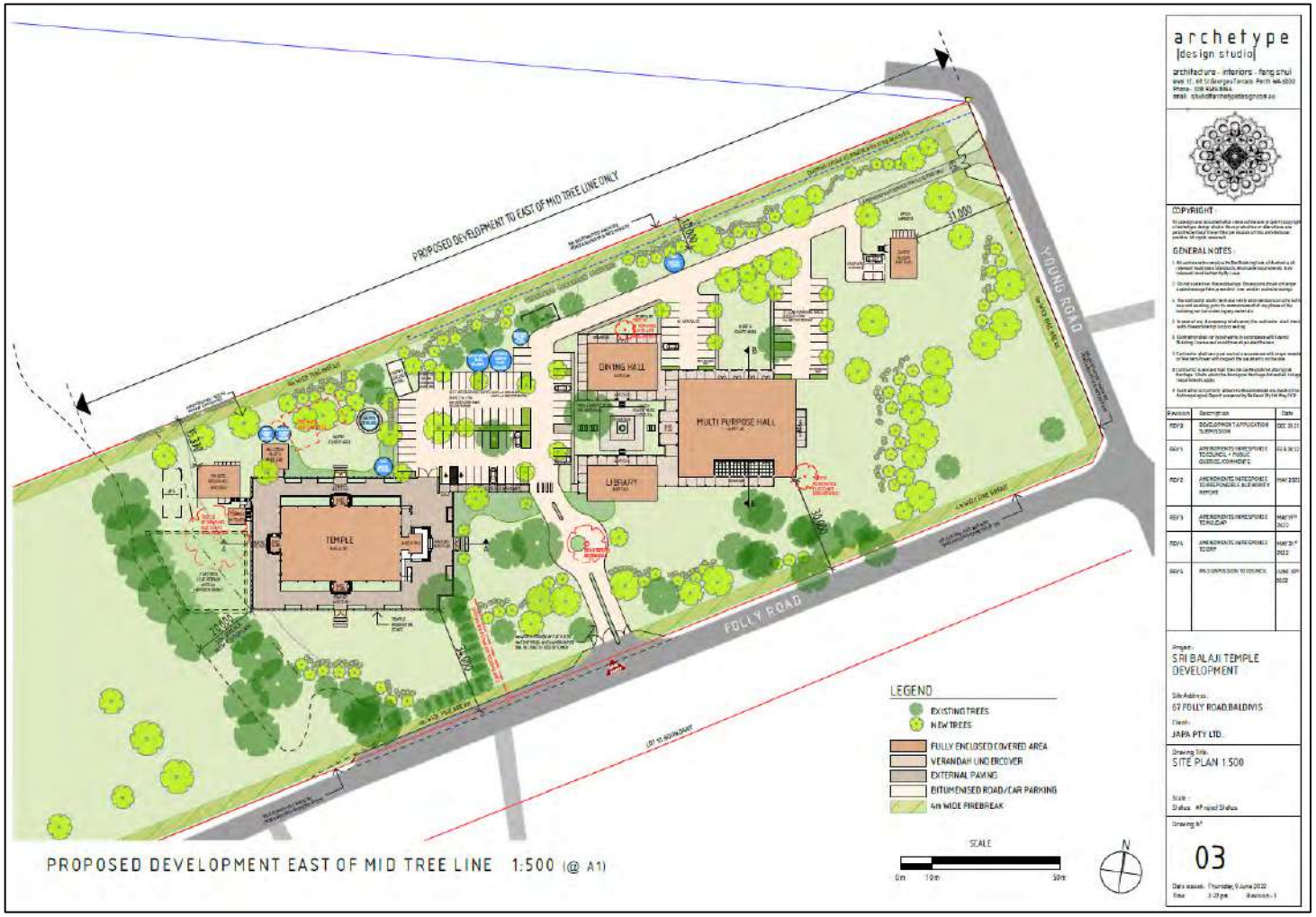


Figure 2: Site Layout

3. Existing Situation

3.1. Land Uses

The site currently has a warehouse type building and an outbuilding. An aerial view of the existing site is shown in Figure 3.

Figure 3: Aerial View of Existing Site (June 2021)

3.2. Road Network

3.2.1. Layout and Hierarchy

The current layout and hierarchy of the surrounding road network is shown in Figure 4.

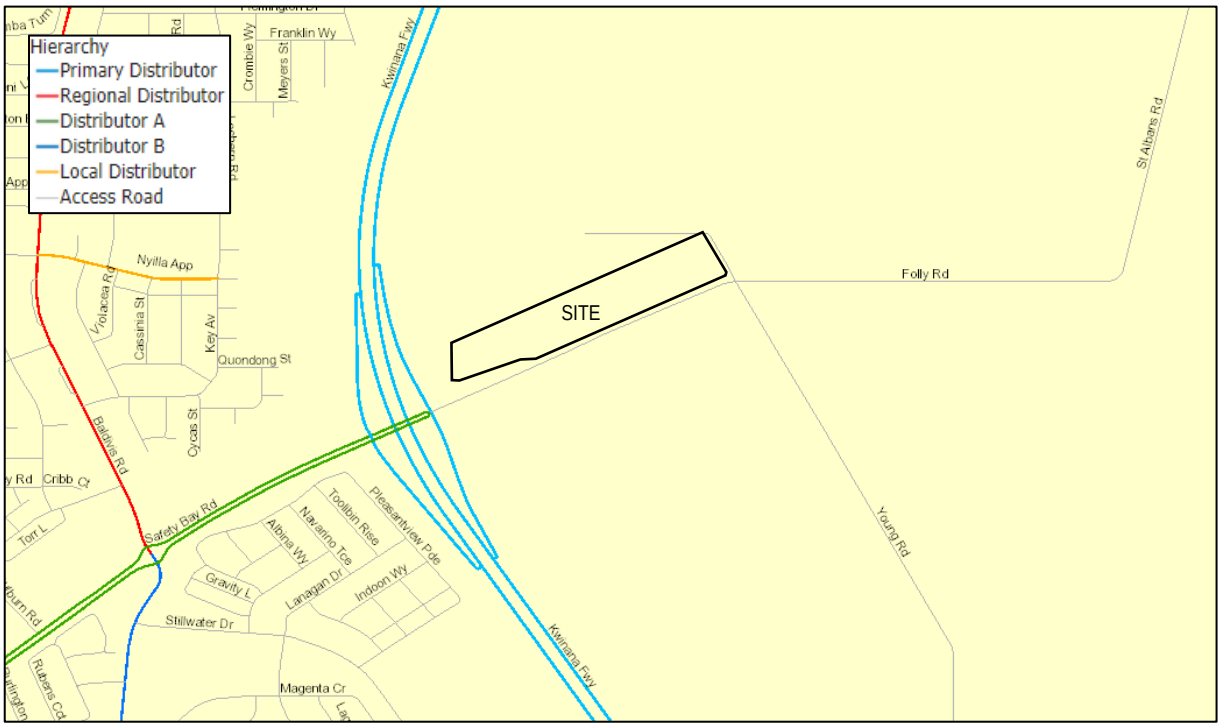


Figure 4: Road Layout and Hierarchy

The current speed limits are shown in Figure 5.

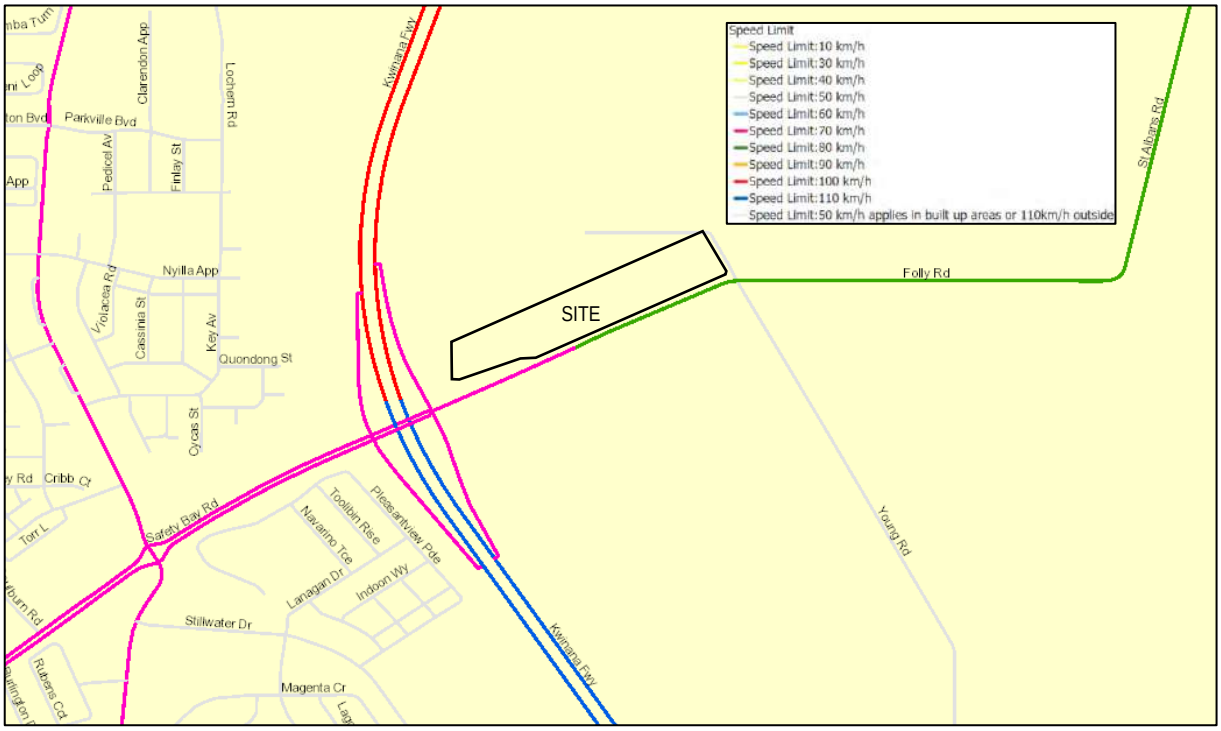


Figure 5: Speed Limits

3.2.2. Traffic Counts

The latest traffic counts for Folly Road were obtained from the Main Roads WA Traffic Map as shown in Figure 6 and Figure 7.

mainroads WESTERN AUSTRALIA

SITE 7131

Hourly Volume

Folly Rd (1070107)

West of Young Rd (SLK 0.75)

2020/21

Monday to Friday

	All Vehicles			Heavy Vehicles			
	EB	WB	Both	EB	WB	Both	%
00:00	2	5	12	0	1	1	8.3
01:00	4	3	7	1	1	2	28.6
02:00	1	0	1	0	0	0	0.0
03:00	2	3	5	0	0	0	0.0
04:00	9	5	14	1	1	2	14.3
05:00	47	18	65	9	4	13	20.0
06:00	165	28	193	18	6	24	12.4
07:00	120	66	186	18	9	27	14.5
08:00	76	83	159	14	11	25	15.7
09:00	69	62	131	10	7	17	13.0
10:00	62	63	125	10	10	20	16.0
11:00	59	61	120	8	8	16	13.3
12:00	74	61	135	12	8	20	14.8
13:00	67	67	134	10	6	16	11.9
14:00	69	91	160	8	11	19	11.9
15:00	114	127	241	12	16	28	11.6
16:00	94	165	259	13	15	28	10.8
17:00	98	175	273	10	16	26	9.5
18:00	51	71	122	6	5	11	9.0
19:00	34	30	64	3	4	7	10.9
20:00	26	24	50	2	3	5	10.0
21:00	34	27	61	2	2	4	6.6
22:00	31	17	48	2	1	3	6.3
23:00	19	8	27	1	0	1	3.7
TOTAL	1332	1260	2592	170	145	315	12.2

Peak Statistics

AM	TIME	06:00	07:45	06:15	06:45	07:30	07:30
	VOL	165	89	196	19	12	30
PM	TIME	15:15	16:45	16:45	15:15	16:30	16:15
	VOL	115	180	280	15	17	30

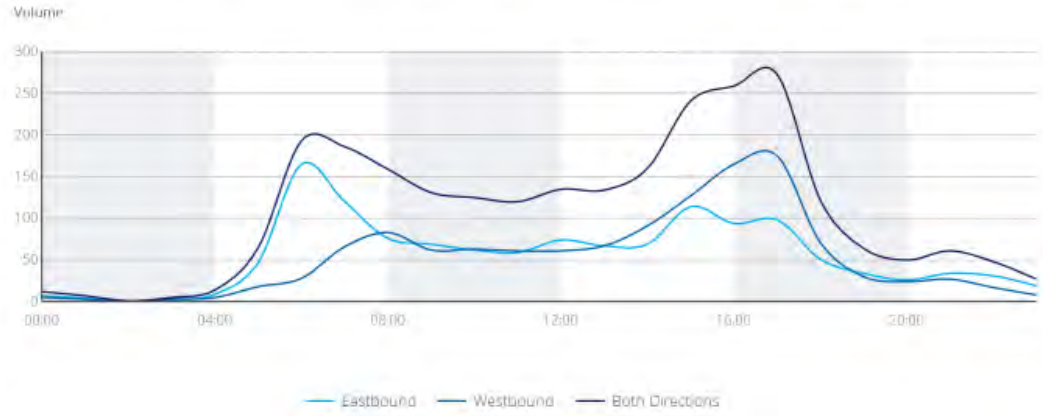
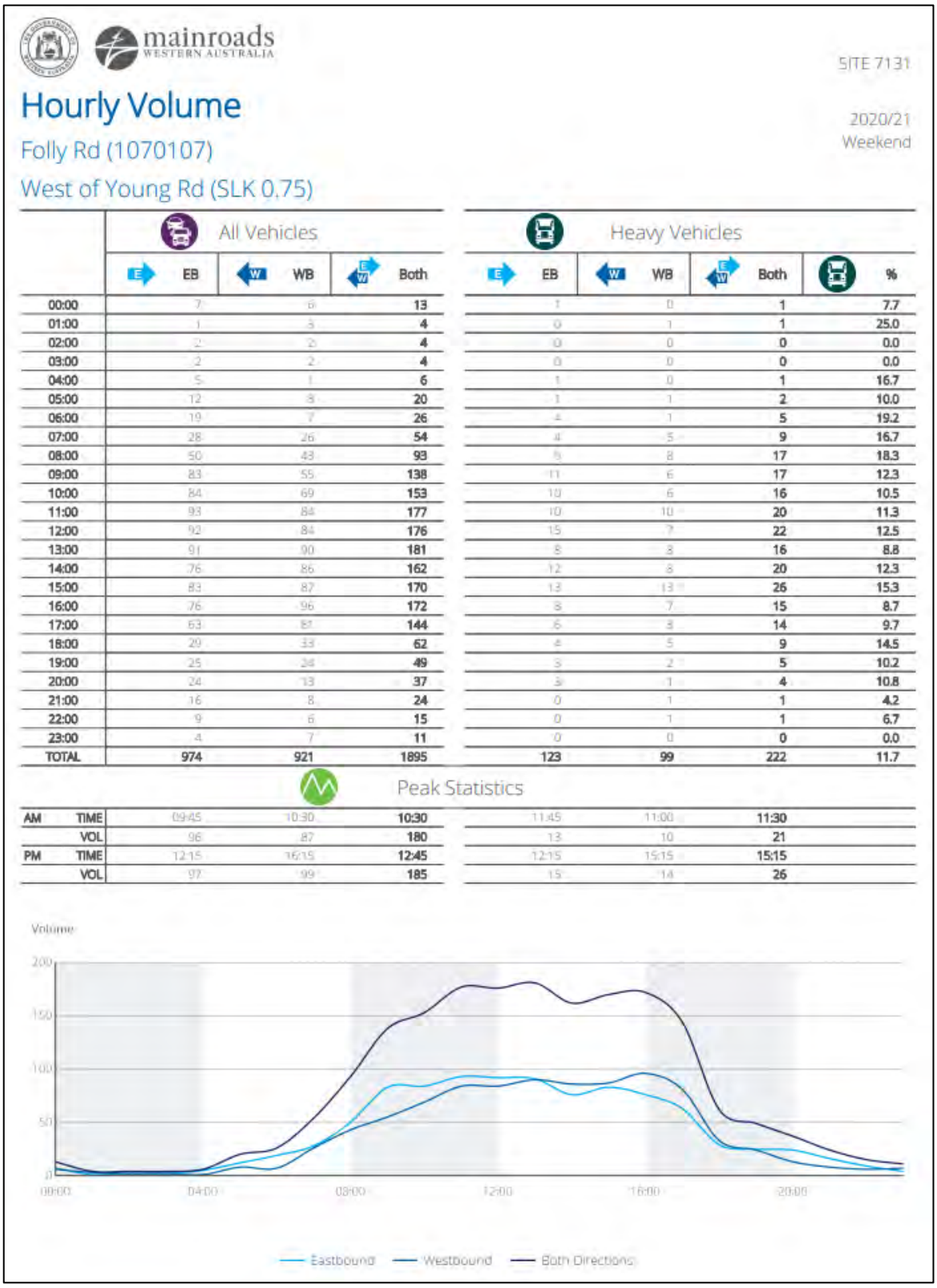


Figure 6: Average Weekday Traffic



mainroads
WESTERN AUSTRALIA

SITE 7131

Hourly Volume

Folly Rd (1070107)

West of Young Rd (SLK 0.75)

2020/21
Weekend

	All Vehicles			Heavy Vehicles			
	EB	WB	Both	EB	WB	Both	%
00:00	7	6	13	1	0	1	7.7
01:00	1	3	4	0	1	1	25.0
02:00	2	2	4	0	0	0	0.0
03:00	2	2	4	0	0	0	0.0
04:00	5	1	6	1	0	1	16.7
05:00	12	8	20	1	1	2	10.0
06:00	19	7	26	4	1	5	19.2
07:00	28	26	54	4	5	9	16.7
08:00	50	43	93	9	8	17	18.3
09:00	83	55	138	11	6	17	12.3
10:00	84	69	153	10	6	16	10.5
11:00	93	84	177	10	10	20	11.3
12:00	92	84	176	15	7	22	12.5
13:00	91	90	181	8	8	16	8.8
14:00	76	86	162	12	8	20	12.3
15:00	83	87	170	13	13	26	15.3
16:00	76	96	172	8	7	15	8.7
17:00	63	81	144	6	8	14	9.7
18:00	29	33	62	4	5	9	14.5
19:00	25	24	49	3	2	5	10.2
20:00	24	13	37	3	1	4	10.8
21:00	16	8	24	0	1	1	4.2
22:00	9	6	15	0	1	1	6.7
23:00	4	7	11	0	0	0	0.0
TOTAL	974	921	1895	123	99	222	11.7

Peak Statistics

AM	TIME	09:45	10:30	10:30	11:45	11:00	11:30
	VOL	96	87	180	13	10	21
PM	TIME	12:15	16:15	12:45	12:15	15:15	15:15
	VOL	97	99	185	15	14	26

Figure 7: Average Weekend Traffic

4. Changes to Surrounding Transport Networks

The section of Folly Road between Kwinana Freeway and Young Road is reserved as a regional road under the Metropolitan Region Scheme.

According to the Perth and Peel @ 3.5million frameworks, the site and surrounding areas to the west of Kwinana Freeway are not flagged for development by 2050. Folly Road is also not identified as a proposed regional road or freight road by 2050. It is therefore considered that the upgrade of Folly Road is unlikely to occur in the foreseeable future.

5. Transport Assessment

5.1. Time Periods for Assessment

The assessment has been based on the peak hours on the road network. According to the traffic data at the Kwinana Freeway / Folly Road interchange, the weekday peak hours are from 7 to 8am and 4 to 5pm. The weekend peak period of traffic is more spread out and generally occurs from around 11am to 4pm. The single weekend peak hour is from 12 to 1pm.

The TIA guidelines recommends considering the following development horizons:

- The first year of full development opening which is currently estimated to be 2026.
- 10 years following the full development opening which is currently estimated to be 2036.

For simplicity, it is assumed that the full operating population will be reached by 2026.

5.2. Development Traffic Generation and Distribution

The traffic generation has been estimated from the proposed activities, operating hours and expected attendance numbers as provided by the client and operator. Patrons are likely to include many families and so the average person to car ratio would be reasonably high. As instructed by the City, a conservative vehicle occupancy of 2 persons per car has been adopted. It is also conservatively assumed that the higher end of the attendance numbers will be reached during each activity session. The estimated traffic generation is detailed in the following sections.

5.2.1. Regular Weekday

• Weekday Prayers (Mon-Fri)	25-50 people (morning session)	7:00am to 1:00pm
	25-50 people (evening session)	5.00pm to 9.00pm
Weekday Yoga Classes (2 per week)	20 people	6:00pm to 7:00pm

On a regular weekday, the busiest day would be on a day that a yoga class is held with up to 120 people expected over the day. As mentioned previously, prayer sessions are unstructured and so arrivals and departures will typically be spread out over the session. The daily and hourly trip generation is as follows:

- Daily = 120 people or 60 vehicles per day (60 inbound trips / 60 outbound trips)
- Hourly: Morning Prayer (6 hours) = 8 people or 4 vehicles per hour (4 inbound trips / 4 outbound trips)
- Hourly: Evening Prayer (4 hours) = 13 people or 7 vehicles per hour (7 inbound trips / 7 outbound trips)
- Yoga = 20 people or 10 vehicles (10 inbound trips / 10 outbound trips)

The traffic generation during the road network peak hours is therefore:

- Morning peak hour (7 to 8am) = 8 trips (4 inbound / 4 outbound)
- Afternoon peak hour (4 to 5pm) = 7 trips (all inbound as this is the start of the evening prayer session)

The yoga class starts at 6pm and so arrivals would occur outside of the afternoon peak hour.

5.2.2. Regular Weekend

• Saturday/Sunday Prayers	100-150 people (morning session)	7:00am to 1:00pm
	100-150 people (evening session)	5.00pm to 9.00pm
Saturday/Sunday Scripture Classes	50-75 people (included in the above)	3:00pm to 6:00pm

On a regular weekend, up to 300 people are expected to attend the site per day over the various sessions. The daily and hourly trip generation is as follows:

- Daily = 300 people or 150 vehicles per day (150 inbound trips / 150 outbound trips)
- Hourly: Morning Prayer (6 hours) = 25 people or 13 vehicles per hour (13 inbound trips / 13 outbound trips)
- Hourly: Evening Prayer (4 hours) = 38 people or 19 vehicles per hour (19 inbound trips / 19 outbound trips)

The weekend peak hour of combined site traffic and background traffic is therefore likely to be from 12 to 1pm at the end of the morning prayer session.

The traffic generation during the weekend peak hour is therefore estimated to be approximately 13 outbound vehicle movements as the peak hour coincides with the end of the morning prayer session.

5.2.3. Special Hindu Festival Days (Interim Operation)

- Special Hindu Festival Days occurring on average once per month

If on a weekday	50-75 people (morning session)	7:00am to 1:00pm
	200-250 people (evening session)	5.00pm to 9.00pm
If on a weekend day	200 people (morning session)	7:00am to 1:00pm
	200-250 people (evening session)	5.00pm to 9.00pm

If occurring on a weekday, the daily and hourly trip generation is as follows:

- Daily = 325 people or 163 vehicles per day (163 inbound trips / 163 outbound trips)
- Hourly: Morning Prayer (6 hours) = 13 people or 7 vehicles per hour (7 inbound trips / 7 outbound trips)
- Hourly: Evening Prayer (4 hours) = 63 people or 32 vehicles per hour (32 inbound trips / 32 outbound trips)

The traffic generation during the road network peak hours is therefore:

- Morning peak hour (7 to 8am) = 14 trips (7 inbound / 7 outbound)
- Afternoon peak hour (4 to 5pm) = 32 trips (all inbound as this is the start of the evening prayer session)

If occurring on a weekend day, the daily and hourly trip generation is as follows:

- Daily = 450 people or 225 vehicles per day (225 inbound trips / 225 outbound trips)
- Hourly: Morning Prayer (6 hours) = 33 people or 17 vehicles per hour (17 inbound trips / 17 outbound trips)
- Hourly: Evening Prayer (4 hours) = 63 people or 32 vehicles per hour (32 inbound trips / 32 outbound trips)

The traffic generation during the weekend peak hour is therefore estimated to be approximately 17 outbound vehicle movements as the peak hour coincides with the end of the morning prayer session.

5.2.4. Special Hindu Festival Days (Future Operation)

Under the future operating hours, Special Hindu Festivals occurring on weekends will be consolidated in to one daily session from 9am to 9pm (a total 12 hour period). Assuming even arrivals throughout the day, the hourly traffic generation under the future operating hours will be less than the interim scenario and so the interim scenario has been assessed as the worst-case scenario.

5.2.5. Hindu Weddings (Interim Operation)

- Hindu Weddings occurring on average 6 times per year only on weekends

300-400 people	9:00pm to 11:00pm

A wedding is therefore estimated to generate approximately 400 vehicle movements including 200 inbound movements before the wedding and 200 vehicle movements after the wedding. The actual traffic generation is expected to be lower as there is typically a higher average car occupancy for events such as weddings.

5.2.6. Hindu Weddings (Future Operation)

Under the future operating hours, weddings will only occur on Saturdays and will finish earlier at 7pm. The peak traffic generation is unlikely to change under the future scenario.

5.3. Mid-Block Capacity

5.3.1. Peak Hour Traffic Capacity

As detailed in the previous section, the traffic generated from the development throughout the majority of the year (approximately 347 days per year) will be relatively low with an hourly traffic generation of about 7 to 38 vehicle movements expected. According to the WAPC TIA guidelines, an increase of between 10 to 100 peak hour vehicles is considered to have a low to moderate impact and is generally accepted as being acceptable without needing detailed capacity analysis. The estimated 7 to 38 vehicle movements is at the lower end of this range and so regular day-to-day usage of the site is considered to have a low traffic impact and the development traffic can be accommodated within the capacity of the existing road network. It is also noted that the peak periods of development traffic do not always coincide with the peak hours on the road network.

On Special Hindu festival days occurring approximately 12 times per year, the expected traffic generation is also relatively low with a maximum hourly traffic generation of 32 vehicles or 63 movements. This volume of traffic is low to moderate can also be accommodated within the capacity of the existing road network.

A Hindu wedding (approximately 6 per year) is likely to be the highest peak hour traffic generator. The traffic impact of this is assessed further in the following sections.

5.3.2. Daily Traffic Capacity

Folly Road is currently classified as an access road with a target daily traffic volume of 3,000 vehicles per day according to WAPC Liveable Neighbourhoods.

On a weekday, the maximum post-development daily traffic volume is estimated to be 2,918 vehicles per day on a Special Hindu Festival Day. The daily traffic will be much lower for the majority of the year.

On a weekend, the maximum post-development daily traffic volume is estimated to be 2,345 vehicles per day.

Both values are within the target value of 3,000 vehicles per day.

On Young Road, the development will only generate occasional service vehicle movements (outbound only).

The section of Young Road adjacent to the proposed service vehicle egress is approximately 3.2m wide which is only suitable for one-way traffic. As service vehicle movements are infrequent (estimated 3 collections weekly = 3 outbound movements on Young Road), widening of Young Road to accommodate two-way traffic is not warranted by the development. As discussed later, the proposed egress driveway on Young Road will be widened to accommodate the turning movement of exiting service vehicles.

5.4. Intersection and Access Capacity

The peak hour capacity has been undertaken in SIDRA Intersection 9.0. The assessment includes the main site crossover on Folly Road and the nearby Kwinana Freeway / Folly Road / Safety Bay Road signalised ramp intersections. The following critical peak hours have been assessed:

- Weekday morning peak hour on a special Hindu festival day
- Weekday afternoon peak hour on a special Hindu festival day
- Weekend mid-day peak hour on a special Hindu festival day
- Weekend mid-day peak hour on a Hindu wedding day assuming all arrivals occur during the peak
- Weekend mid-day peak hour on a Hindu wedding day assuming all departures occur during the peak

Three scenarios were assessed at the signalised intersections, including the current scenario (without development), the first year of full opening in 2026 (with and without development) and 10 years following full opening in 2036 (with and without development).

For the future scenarios, the background traffic volumes between Kwinana Freeway and Safety Bay Road were factored up to account for ongoing development to the west of the freeway. Historical traffic counts indicate an average growth rate of 4% per year between 2017 and 2021. As mentioned previously, development east of the freeway is unlikely to occur in the foreseeable future and so traffic volumes along Folly Road have not been factored up.

For the weekend analysis, the Saturday traffic volumes were used as the daily and peak hour volumes were higher than on Sunday. For the Hindu wedding days, it is conservatively assumed that all arrival traffic arrives or departs within the single hour.

The intersection peak hour traffic flows, signal phasing, average cycle times and other key inputs were derived from Main Roads WA traffic count data and SCATS signal data and the model has been set up according to Main Roads WA's Operational Modelling Guidelines. For the existing scenario, the average existing cycle times were used. For the future scenarios, the cycle time was set to optimum cycle time with a maximum cycle time of 150 seconds.

The majority of site traffic is likely to be generated to and from the west along Folly Road and it is assumed that site traffic is split as follows:

- 10% east via Folly Road
- 15% west via Safety Bay Road
- 15% south via Kwinana Freeway
- 60% north via Kwinana Freeway

The modelled layouts are shown in Figure 8. The freeway ramps were modelled together as a network.

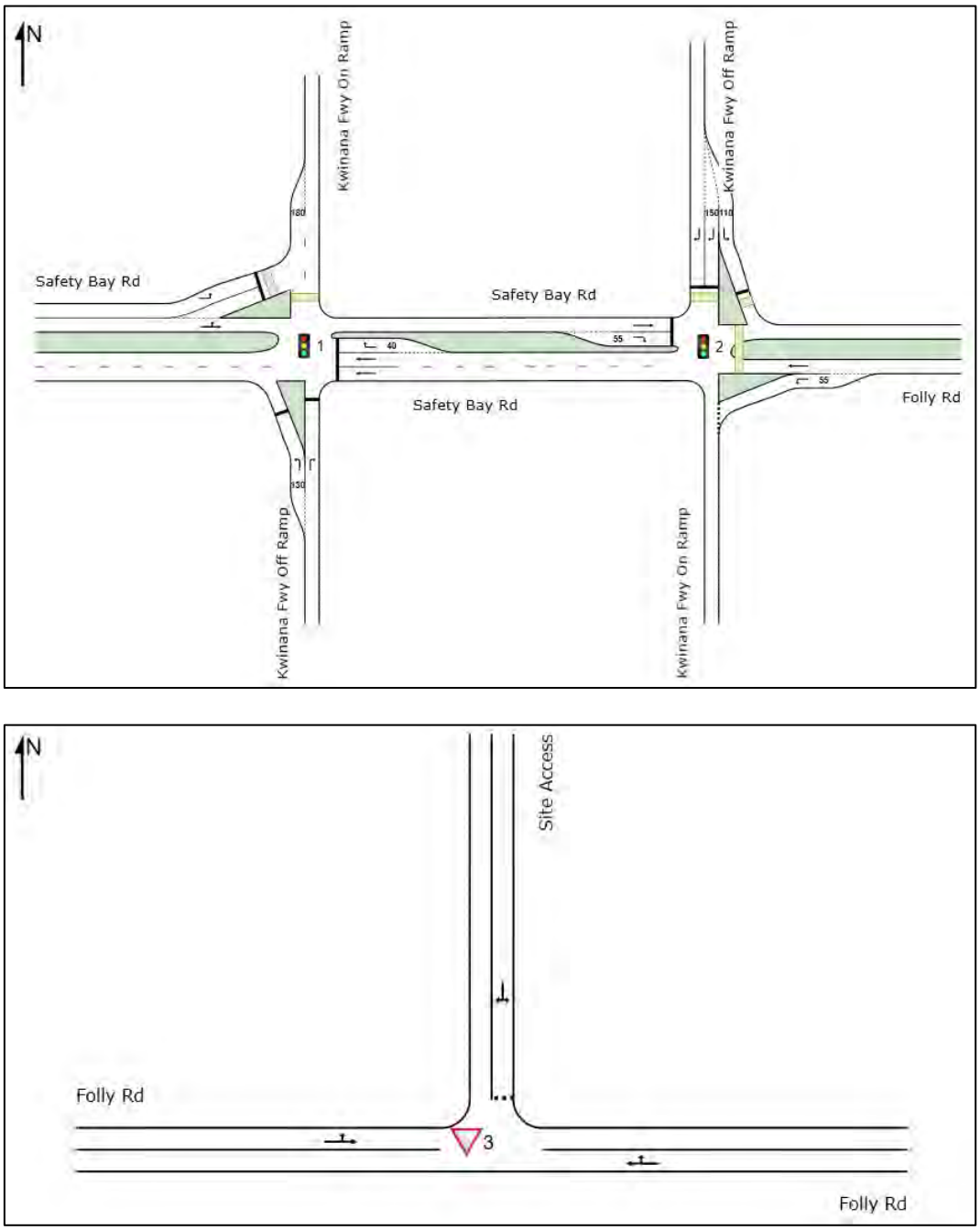


Figure 8: Modelled Layouts

The assessment results are included as Appendix A and summarised in Table 1 and Table 2.

Table 1: SIDRA Results – Freeway Ramp Intersections

Scenario	Peak Period	Average LOS	Worst LOS	DOS	Average Delay	Worst Delay	95%ile Queue
Existing	Weekday AM Peak	B	D	0.472	13.8s	47.2s	37.6m
	Weekday PM Peak	B	E	0.693	16.8s	59.2s	101.9m
	Weekend Mid-day Peak	B	D	0.531	15.6s	52.3s	58.9m
2026	Weekday AM Peak – Base	B	D	0.505	14.3s	54.6s	50.6m
	Weekday AM Peak – Festival Day	B	D	0.505	14.4s	54.9s	50.7m
	Weekday PM Peak – Base	B/C	E	0.866	19.4s	62.4s	153.4m
	Weekday PM Peak – Festival Day	B/C	E	0.866	19.7s	62.4s	153.4m
	Weekend Mid-day Peak – Base	B	D	0.558	15.6s	54.5s	70.2m
	Weekend Mid-day Peak – Festival Day	B	E	0.734	18.1s	55.2s	89.2m
	Weekend Mid-day Peak – Wedding Arrival	B/C	D	0.642	16.8s	54.5s	79.8m
	Weekend Mid-day Peak – Wedding Departure	B/C	D	0.718	20.1s	50.8s	84.6m
2036	Weekday AM Peak – Base	C	E	0.760	22.4s	55.7s	110.2m
	Weekday AM Peak – Festival Day	C	E	0.760	23.1s	56.0s	110.4m
	Weekday PM Peak – Base	E	F	1.331	259.9s	654.3s	1412.9m
	Weekday PM Peak – Festival Day	E	F	1.345	283.6s	680.6s	1483.2m
	Weekend Mid-day Peak – Base	D	E	0.978	40.6s	91.2s	308.5m
	Weekend Mid-day Peak – Festival Day	D	F	0.998	39.4s	119.2s	288.6m
	Weekend Mid-day Peak – Wedding Arrival	D/E	F	1.034	61.1s	157.8s	397.9m
	Weekend Mid-day Peak – Wedding Departure	E	F	1.138	120.1s	321.1s	587.4m

Table 2: SIDRA Results – Main Site Access

Scenario	Average LOS	Worst LOS	DOS	Average Delay	Worst Delay	95%ile Queue
Weekday AM Peak – Festival Day	A	A	0.074	0.4s	10.0s	0.1m
Weekday PM Peak – Festival Day	A	A	0.080	0.1s	9.9s	0.4m
Weekend Mid-day Peak – Festival Day	A	A	0.055	0.1s	9.9s	0.2m
Weekend Mid-day Peak – Wedding Arrival	A	A	0.156	4.5s	10.0s	1.0m
Weekend Mid-day Peak – Wedding Departure	A	A	0.148	0.2s	8.5s	2.8m

Under the 2026 scenario, the freeway ramp intersections operate within capacity with and without the development traffic. The development traffic represents a small proportion of the background traffic and so the difference in performance is minimal.

Under the 2036 scenario, the weekday AM peak on a festival day operates within capacity with negligible difference in performance with or without the proposed development traffic.

The remaining 2036 scenarios are modelled as operating over capacity without the development traffic added. It is noted that when the intersection reaches capacity, delays and queues increase exponentially and may not be realistic. As above, with the development traffic added, although already over capacity, the intersection performance decreases minimally as development traffic represents a minor proportion of the background traffic flows.

The 2036 scenario is based on the broad assumption that traffic volumes between Safety Bay Road and Kwinana Freeway increase consistently by 4% per year between 2022 and 2036. In reality, growth in traffic may reduce over time as the amount of vacant land in the area reduces, the road network is developed and travel patterns change. The following is also noted:

- The model is based on Special Hindu Festivals and weddings which will only occur a limited number of times a year. For the majority of the year (approximately 347 days per year), the site will generate a significantly lower volume of traffic.
- It was assumed as a worst-case scenario that the wedding arrivals and departures coincide with the weekend peak hour. It is likely that the arrival or departure period for a wedding would occur outside of this period when the background traffic is lower.

The proposed main site access will also operate well within capacity under all peak hour scenarios.

6. Analysis of Development Access

6.1. Location

The access arrangement of the development is shown in Figure 9.

The main access is located slightly to the east of the existing access on Folly Road. A secondary egress is proposed on Young Road which will only be used for service vehicle and emergency vehicles.

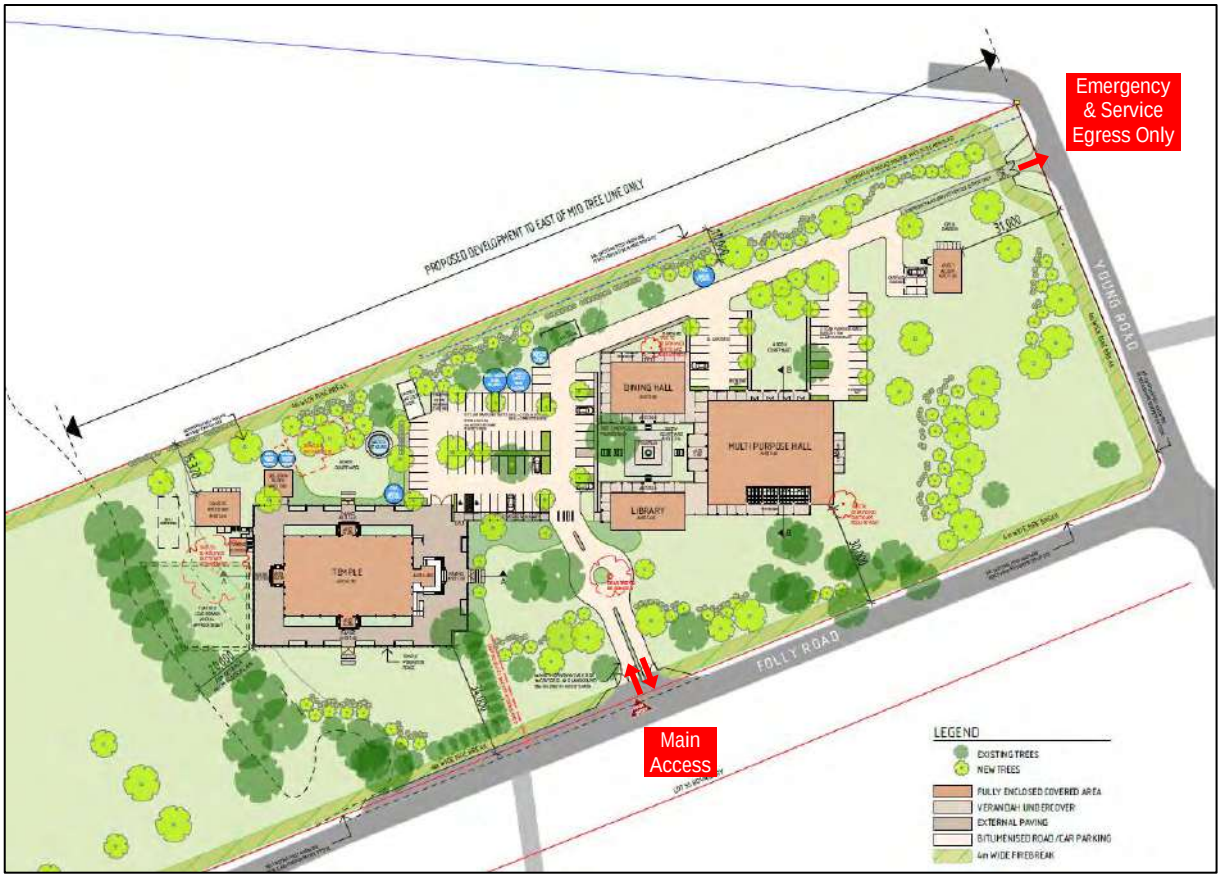


Figure 9: Proposed Access Arrangement

As mentioned previously, the section of Folly Road between Kwinana Freeway and Young Road is reserved as a regional road under the Metropolitan Region Scheme and according to regional road mapping, the frontage section of Folly Road is a Category 2 regional road on which frontage access may be allowed subject to approval.

6.2. Access Width

Clause 3.2.1 of AS2890.1 states that where traffic flow data on an access driveway is known or can be determined, such data may be used to determine driveway widths. In the absence of such data, the widths given in Table 3.2 shall be used. In this instance, the actual traffic flows have been determined with a reasonable level of accuracy and it has been concluded that a single entry lane and a single exit lane will be sufficient to accommodate the expected flows. This is supported by the results of the access capacity analysis which has been modelled with single entry and exit lanes.

The current design of the access includes 4m wide entry and exit lanes with a 1m wide separating island. As discussed later in this report, a swept path analysis has been undertaken and the results demonstrate that the proposed access width and geometry will accommodate the entry and exit movements of all proposed vehicles in a satisfactory manner.

Comment from the City noted that the entry lane should be widened to 6.0m to comply with Table 3.2 of AS2890.1. However, a 6.0m wide entry lane may confuse drivers as this would be wide enough for two lanes of traffic. It is also noted that other existing developments that would technically trigger the same requirement have not applied this width. An example is the existing Bunnings development on Safety Bay Road which also has 4.0m wide entry and exit lanes at the main access on Safety Bay Road which is shown in Figure 10.

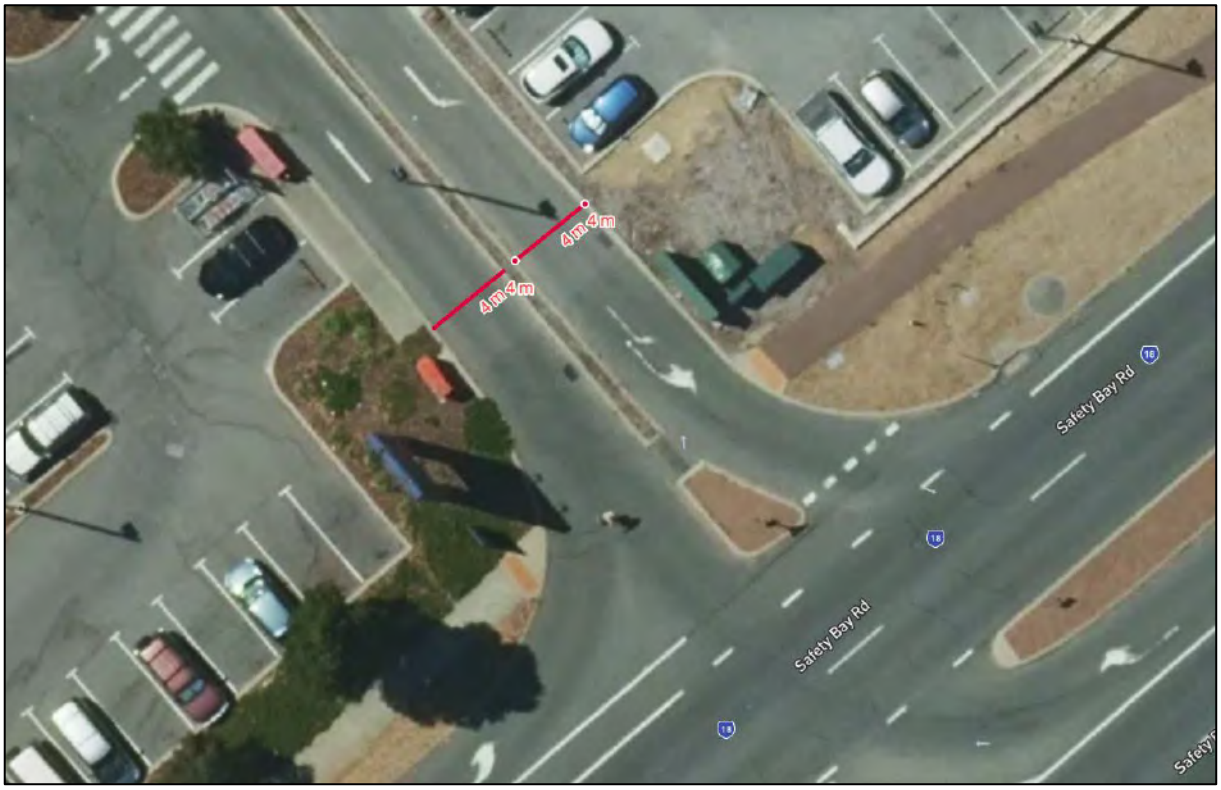
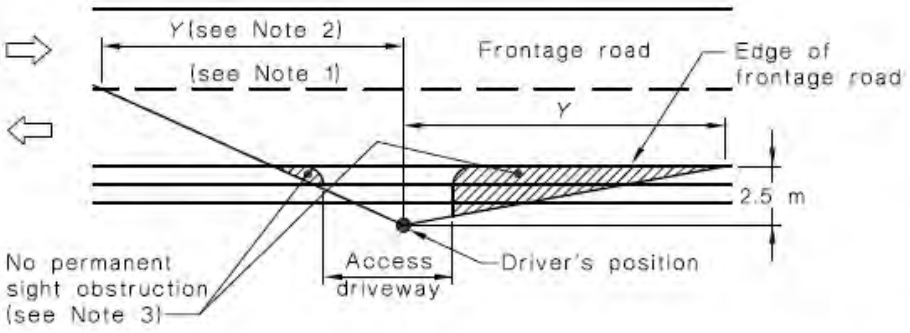


Figure 10: Existing Bunnings Baldivis Access Geometry

6.3. Sight Distance

Sight distance requirements from vehicle exit points is defined in Figure 3.2 of AS2890.1 as shown in Figure 11.



Frontage road speed (Note 4) km/h	Distance (Y) along frontage road m		
	Access driveways other than domestic (Note 5)		Domestic property access (Note 6)
	Desirable 5 s gap	Minimum SSD	
40	55	35	30
50	69	45	40
60	83	65	55
70	97	85	70
80	111	105	95
90	125	130	Use values from 2nd and 3rd columns
100	139	160	
110	153	190	

Figure 11: Sight Distance Requirements

6.3.1. Folly Road

Based on the 80km/h speed limit along the frontage section of Folly Road, the minimum required sight distance is 105m (111m desirable).

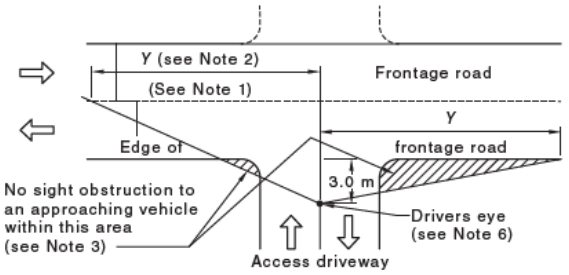
The sight distance check is shown Figure 12.

Figure 12: Sight Distance Check – Folly Road

As shown, the desirable sight distance is achieved in both directions. Vertically, the geometry of Folly Road near the proposed crossover is relatively flat with no crests that would impede sight distance.

6.3.2. Young Road

Sight distance requirements from vehicle exit points for commercial vehicles is defined in Figure 3.2 of AS2890.2 as shown in Figure 11.



Frontage road speed (see Note 4) km/h	Distance (*Y*) along frontage road (see Note 5) m	
	5 s gap	8 s gap
40	55	89
50	69	111
60	83	133
70	97	156
80	111	178
90	125	200
100	139	222
110	153	244

NOTE 1 Centre-line or centre of roadway (undivided road), or right-hand edge of right-hand through lane (divided road).

NOTE 2 A check to the left is not required at a divided road where the median is wide enough to shelter a vehicle leaving the driveway.

NOTE 3 Parking on this side of the frontage road may need to be restricted on either side of the driveway so that the sight distance required by the above table to an approaching vehicle is not obstructed.

NOTE 4 This is the posted or general speed limit unless the 85th percentile speed is significantly higher.

NOTE 5 These distances are equivalent to minimum gap sight distance (MGSD) for an exiting vehicle. The minimum requirement is a 5 s gap. A right turn exit into a six lane road may require up to an 8 s gap, unless the median is wide enough to shelter a vehicle leaving the driveway.

NOTE 6 When checking sight distance the height of the object (approaching vehicle) is to be taken as 1.15 m above the road surface. The driver's eye height is to be taken as any height in the range 1.15 m to 2.5 m, to cater for both car and commercial vehicle drivers.

Figure 13: Sight Distance Requirements – Commercial Access

Based on the layout and geometry of the adjacent section of Young Road, the likely operating speed south of the proposed egress is estimated to be 50km/h which requires a minimum of 69m based on the minimum gap sight distance (MGSD) for a 5 second gap (the 8 second gap requirement only applies to six lane roadways).

To the north of the egress is a relatively tight curve (approximately 17m radius) and the speed of vehicles approaching from this direction would be much lower. According to Figure 5.2 of Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (AGRD04A), the approximate turning speed for a 17m radius and 3% crossfall would be about 26km/h. According to Table 3.6 of AGRD04A, the required MGSD for a speed of 26km/h would be about 28m.

The sight distance check is shown Figure 14.

Figure 14: Sight Distance Check – Young Road

As shown, the required sight distance is achieved in both directions. The sight distance towards the north relies on the area inside the bend to be kept clear of obstructions. The area within the neighbours lot appears to be used as a driveway and so it is unlikely that any obstructions will be placed in this area. It is also noted that traffic from this direction will be minimal and so the risk of any incidents relating to sight distance would be negligible.

Vertically, the geometry of Young Road near the proposed crossover is also relatively flat with no crests that would impede sight distance.

6.4. Auxiliary Lanes

Previous warrants analysis determined that the expected traffic volumes would warrant the provision of a Basic Left (BAL) and Basic Right (BAR) treatment at the proposed site access on Folly Road. A BAL and BAR treatment are widened shoulders that allows left turning vehicles to move off the through carriageway or to allow through vehicles to overtake a vehicle turning right into the access. To maximise safety, the left turn treatment will be upgraded to a short Auxiliary Left (AUL(S)) turn treatment which is a sealed turning lane.

It is understood that the City of Rockingham have advised that a right turn treatment is not necessary.

6.5. Service Vehicle Access

A swept path assessment has been undertaken using Autodesk Vehicle Tracking to check the manoeuvrability of trucks through the site. The Australian Standard 8.8m Medium Rigid Truck template has been used to check waste vehicle manoeuvrability to and from the bin compound area. A swept path has also been undertaken for the largest emergency vehicle which is understood to be a DFES 9.3m Combination Ladder Platform Truck. The emergency vehicle swept path was undertaken using a custom vehicle template created using the specifications noted on the DFES website. It is assumed that emergency vehicles are allowed to use the full width of the parking aisles as other vehicles will need to give way to this vehicle in an emergency.

The results of the swept path assessment are attached as Appendix B which demonstrate that the access and site layout provides adequate manoeuvrability for the expected service vehicles. As shown, the egress driveway on Young Road will need to be adequately widened to suit the turning movement of the service vehicles.

It is recommended that waste vehicle collection is scheduled outside of peak periods of traffic and operations where possible to minimise the impact on other users.

7. Road Safety

7.1. Crash History

The crash history of the adjacent road network was obtained from the MRWA Reporting Centre. The search included the length of Folly Road from Kwinana Freeway to Young Road and the section of Young Road north of Folly Road. A summary of the recorded incidents over the five-year period ending December 2021 is shown in Figure 15.

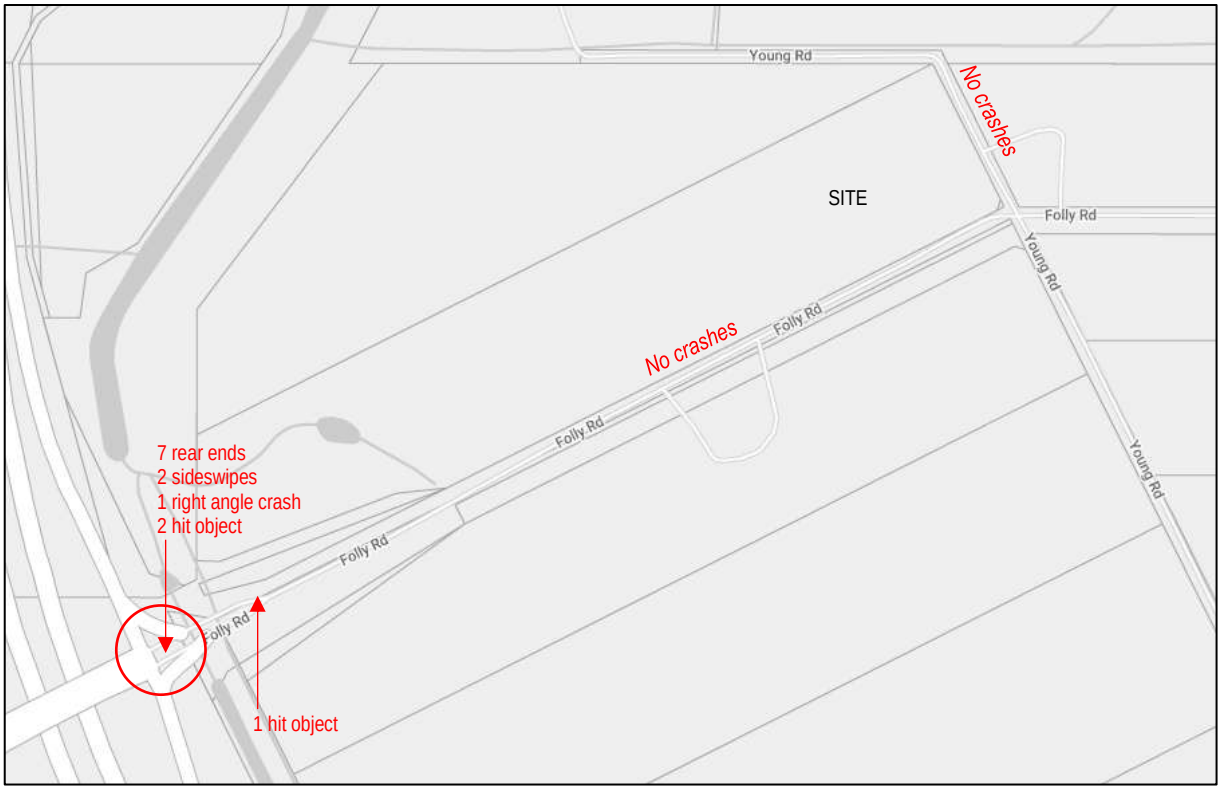


Figure 15: Crash History January 2017 to December 2021

The number and type of crashes do not indicate any major safety issues on the road network. There is no indication that the proposed development would increase the risk of crashes unacceptably.

8. Alternative Transport Modes

8.1. Public Transport

The closest public transport services are located approximately 1.6km towards the west on the opposite side of the freeway. The demand for public transport is generally low for places of worship and so the provision of new services for the development is not warranted.

8.2. Pedestrian / Cycle Access

There are no paths along and the nearest path begins at the freeway ramp intersections.

Based on the proposed use and the relatively remote location, the demand for pedestrian or cycle access would be minimal and so the provision of paths or cycling infrastructure is not considered necessary.

9. Parking

9.1. Car Parking Provision

The current plans indicate that the development will include a total of 105 on-site car parking including 65 bays in the main car park.

9.2. Car Parking Requirements

According to the City's Local Planning Scheme, the parking requirement for a Place of Worship is 1 bay per 4 persons accommodated.

Throughout the majority of the year, the typical attendance at any one time or session is up to 150 people and so the parking requirement would be 38 bays. The proposed 65 bays in the main car park is therefore sufficient on a regular day-to-day basis.

For the special Hindu festival days occurring on average once per month, the typical attendance at any one time or session is up to 250 people and so the parking requirement would be 63 bays. During these events, the main car park may become full and parking in the secondary car park will be utilised. The overall provision of 105 bays on the site will be adequate.

For Hindu weddings occurring approximately 6 times per year, the typical attendance is up to 400 people which would require 100 bays. For these events, the additional parking areas will also need to be used. The overall supply of 105 bays exceeds the calculated parking demand.

It is noted that the proposed dining hall will not generate traffic and will only be used by worshippers after regular prayer attendance if they wish to do so.

Overall, the proposed parking provision satisfies the requirements of the Local Planning Scheme and is considered to be adequate to meet the likely parking demand of the development.

10. Conclusions

A Transport Impact Assessment for the proposed place of worship at 67 Folly Road in Baldivis has concluded the following:

- The volume of traffic generated by the proposed development can be accommodated within the capacity of the road network.
- A detailed capacity analysis of the Kwinana Freeway / Folly Road signalised interchange indicates that this intersection will operate within capacity once the development is fully operating. The development traffic represents a relatively minor percentage of the background traffic and so the difference in pre- and post-development performance is negligible.
- Capacity analysis of a longer term scenario (2036) indicates that the signalised interchange may reach capacity during some peak periods. It is noted that the interchange would be over capacity without the development traffic and that the addition of development traffic only results in a negligible decrease in intersection performance. It is also noted that the long term analysis is based on a broad assumption that traffic volumes between Safety Bay Road and Kwinana Freeway would increase by 4% per year. In reality, growth in traffic may reduce over time as the amount of vacant land in the area reduces, the road network is developed and travel patterns change.
- The main site access warrants the provision of a Basic Left (BAL) and Basic Right (BAR) turn treatment which is a widened shoulder. To maximise safety and in response to safety concerns from the community, the client has opted to provide and AUL(S) turn treatment at the main site access. The City of Rockingham have advised that a right turn treatment is not necessary.
- The minimum and desirable sight distance is achieved from both crossovers in both directions.
- A swept path assessment demonstrates that the site layout will adequately accommodate the movement of service and emergency vehicles.
- The crash history does not indicate any major safety issues on the road network and there is no indication that the proposed development would increase the risk of crashes unacceptably.
- The demand for public transport is generally low for places of worship and so the provision of new services for the development is not warranted.
- Based on the proposed use and the relatively remote location, the demand for pedestrian or cycle access would be minimal and so the provision of paths or cycling infrastructure is not considered necessary.
- The provision of 105 car bays satisfies the requirements of the City's Local Planning Scheme.

Appendix A – SIDRA Analysis Results

Freeway Interchange – Existing Scenario

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday AM Peak (Network Folder: Existing)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 79 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver Speed km/h
Site: 1 [West Ramps - Weekday AM Peak]														
South: Kwinana Fwy Off Ramp														
1	L2	98	4.1	98	4.1	0.472	44.0	LOS D	2.3	16.6	0.98	0.77	0.98	37.0
3	R2	7	0.0	7	0.0	0.033	40.8	LOS D	0.2	1.1	0.91	0.66	0.91	27.6
Approach		105	3.8	105	3.8	0.472	43.8	LOS D	2.3	16.6	0.97	0.77	0.97	36.6
East: Safety Bay Rd														
5	T1	726	4.0	726	4.0	0.267	2.1	LOS A	1.5	10.6	0.17	0.15	0.17	65.6
6	R2	20	10.0	20	10.0	0.150	47.2	LOS D	0.5	3.8	1.00	0.70	1.00	25.8
Approach		746	4.2	746	4.2	0.267	3.3	LOS A	1.5	10.6	0.19	0.16	0.19	63.0
West: Safety Bay Rd														
10	L2	966	1.0	966	1.0	0.432	11.4	LOS B	5.3	37.6	0.41	0.66	0.41	57.2
11	T1	231	3.0	231	3.0	0.432	4.1	LOS A	5.3	37.6	0.42	0.58	0.42	53.6
Approach		1197	1.4	1197	1.4	0.432	10.0	LOS A	5.3	37.6	0.41	0.65	0.41	56.8
All Vehicles		2048	2.5	2048	2.5	0.472	9.3	LOS A	5.3	37.6	0.36	0.48	0.36	56.4
Site: 2 [East Ramps - Weekday AM Peak]														
East: Folly Rd														
10	L2	6	0.0	6	0.0	0.004	7.7	LOS A	0.0	0.1	0.24	0.61	0.24	59.2
11	T1	56	1.8	56	1.8	0.324	38.7	LOS D	1.3	9.4	0.98	0.73	0.98	28.4
Approach		62	1.6	62	1.6	0.324	35.7	LOS D	1.3	9.4	0.90	0.72	0.90	31.3
North: Kwinana Fwy Off Ramp														
1	L2	1	0.0	1	0.0	0.001	16.1	LOS B	0.0	0.1	0.49	0.60	0.49	52.2
3	R2	574	5.9	574	5.9	0.350	21.3	LOS C	4.4	32.3	0.69	0.78	0.69	38.8
Approach		575	5.9	575	5.9	0.350	21.3	LOS C	4.4	32.3	0.69	0.78	0.69	38.8
West: Safety Bay Rd														
5	T1	101	2.0	101	2.0	0.171	21.9	LOS C	1.7	12.2	0.75	0.60	0.75	41.4
6	R2	117	1.7	117	1.7	0.332	36.3	LOS D	2.4	17.1	0.89	0.77	0.89	30.9
Approach		218	1.8	218	1.8	0.332	29.6	LOS C	2.4	17.1	0.82	0.69	0.82	35.0
All Vehicles		855	4.6	855	4.6	0.350	24.4	LOS C	4.4	32.3	0.74	0.75	0.74	37.0

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday PM Peak (Network Folder: Existing)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 101 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekday PM Peak]														
South: Kwinana Fwy Off Ramp														
1	L2	148	0.0	148	0.0	0.664	55.1	LOS E	4.5	31.7	1.00	0.83	1.07	33.6
3	R2	9	0.0	9	0.0	0.040	49.5	LOS D	0.2	1.7	0.91	0.67	0.91	24.4
Approach		157	0.0	157	0.0	0.664	54.8	LOS D	4.5	31.7	0.99	0.82	1.06	33.3
East: Safety Bay Rd														
5	T1	1364	0.0	1364	0.0	0.466	1.9	LOS A	3.1	21.8	0.15	0.13	0.15	66.0
6	R2	9	22.2	9	22.2	0.094	59.2	LOS E	0.3	2.4	1.00	0.67	1.00	21.8
Approach		1373	0.1	1373	0.1	0.466	2.3	LOS A	3.1	21.8	0.15	0.14	0.15	65.2
West: Safety Bay Rd														
10	L2	785	2.0	785	2.0	0.343	10.0	LOS A	4.1	29.3	0.30	0.62	0.30	58.0
11	T1	224	0.9	224	0.9	* 0.343	2.9	LOS A	4.0	28.7	0.32	0.50	0.32	56.1
Approach		1009	1.8	1009	1.8	0.343	8.4	LOS A	4.1	29.3	0.31	0.59	0.31	57.7
All Vehicles		2539	0.8	2539	0.8	0.664	7.9	LOS A	4.5	31.7	0.27	0.36	0.27	57.2
Site: 2 [East Ramps - Weekday PM Peak]														
East: Folly Rd														
10	L2	15	13.3	15	13.3	0.011	8.1	LOS A	0.1	0.5	0.22	0.61	0.22	55.5
11	T1	128	2.3	128	2.3	0.351	39.0	LOS D	3.4	24.4	0.91	0.73	0.91	28.3
Approach		143	3.5	143	3.5	0.351	35.8	LOS D	3.4	24.4	0.84	0.72	0.84	31.2
North: Kwinana Fwy Off Ramp														
1	L2	10	0.0	10	0.0	0.011	20.7	LOS C	0.2	1.1	0.54	0.65	0.54	49.1
3	R2	1244	1.0	1244	1.0	* 0.688	27.7	LOS C	14.4	101.9	0.83	0.85	0.83	34.1
Approach		1254	1.0	1254	1.0	0.688	27.7	LOS C	14.4	101.9	0.83	0.85	0.83	34.3
West: Safety Bay Rd														
5	T1	103	1.9	103	1.9	0.141	22.1	LOS C	2.0	14.0	0.67	0.54	0.67	41.2
6	R2	153	1.3	153	1.3	* 0.693	54.5	LOS D	4.7	32.9	1.00	0.83	1.07	24.7
Approach		256	1.6	256	1.6	0.693	41.5	LOS D	4.7	32.9	0.87	0.71	0.91	29.4
All Vehicles		1653	1.3	1653	1.3	0.693	30.5	LOS C	14.4	101.9	0.84	0.82	0.84	33.0

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekend Mid-day Peak (Network Folder: Existing)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 88 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekend Mid-day Peak]														
South: Kwinana Fwy Off Ramp														
1	L2	147	8.8	147	8.8	0.431	41.3	LOS D	3.5	26.4	0.93	0.79	0.93	37.5
3	R2	6	16.7	6	16.7	0.019	37.7	LOS D	0.1	1.0	0.83	0.66	0.83	29.0
Approach		153	9.2	153	9.2	0.431	41.2	LOS D	3.5	26.4	0.92	0.79	0.92	37.3
East: Safety Bay Rd														
5	T1	923	12.5	923	12.5	0.391	2.5	LOS A	2.0	15.8	0.16	0.14	0.16	64.8
6	R2	19	10.5	19	10.5	0.160	52.3	LOS D	0.5	4.0	1.00	0.70	1.00	24.3
Approach		942	12.4	942	12.4	0.391	3.5	LOS A	2.0	15.8	0.18	0.16	0.18	62.7
West: Safety Bay Rd														
10	L2	850	4.8	850	4.8	0.394	10.7	LOS B	4.7	34.1	0.37	0.64	0.37	56.7
11	T1	233	4.7	233	4.7	0.394	3.6	LOS A	4.5	33.1	0.39	0.54	0.39	54.8
Approach		1083	4.8	1083	4.8	0.394	9.2	LOS A	4.7	34.1	0.37	0.62	0.37	56.4
All Vehicles		2178	8.4	2178	8.4	0.431	9.0	LOS A	4.7	34.1	0.33	0.43	0.33	55.7
Site: 2 [East Ramps - Weekend Mid-day Peak]														
East: Folly Rd														
10	L2	11	9.1	11	9.1	0.008	7.9	LOS A	0.0	0.3	0.22	0.61	0.22	56.7
11	T1	87	12.6	87	12.6	0.382	39.8	LOS D	2.2	17.1	0.96	0.75	0.96	27.9
Approach		98	12.2	98	12.2	0.382	36.2	LOS D	2.2	17.1	0.88	0.73	0.88	31.1
North: Kwinana Fwy Off Ramp														
1	L2	9	0.0	9	0.0	0.011	21.6	LOS C	0.1	0.9	0.59	0.65	0.59	48.5
3	R2	830	5.1	830	5.1	0.531	26.1	LOS C	8.1	58.9	0.79	0.82	0.79	35.2
Approach		839	5.0	839	5.0	0.531	26.1	LOS C	8.1	58.9	0.79	0.82	0.79	35.4
West: Safety Bay Rd														
5	T1	88	4.5	88	4.5	0.112	16.8	LOS B	1.4	10.1	0.64	0.50	0.64	45.7
6	R2	144	4.9	144	4.9	0.388	38.9	LOS D	3.3	24.1	0.90	0.79	0.90	29.4
Approach		232	4.7	232	4.7	0.388	30.5	LOS C	3.3	24.1	0.80	0.68	0.80	34.0
All Vehicles		1169	5.6	1169	5.6	0.531	27.6	LOS C	8.1	58.9	0.80	0.78	0.80	34.7

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday AM Peak (Network Folder: 2026 Base (Without Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h]	HV] %	ARRIVAL FLOWS [Total veh/h]	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekday AM Peak]														
South: Kwinana Fwy Off Ramp														
1	L2	120	4.2	120	4.2	0.505	48.5	LOS D	3.2	23.3	0.98	0.79	0.98	35.4
3	R2	7	0.0	7	0.0	0.029	44.5	LOS D	0.2	1.2	0.90	0.66	0.90	26.2
Approach		127	3.9	127	3.9	0.505	48.2	LOS D	3.2	23.3	0.97	0.78	0.97	35.0
East: Safety Bay Rd														
5	T1	885	4.0	885	4.0	0.321	2.3	LOS A	2.0	14.7	0.17	0.15	0.17	65.2
6	R2	20	10.0	20	10.0	0.175	54.6	LOS D	0.6	4.4	1.00	0.70	1.00	23.8
Approach		905	4.1	905	4.1	0.321	3.5	LOS A	2.0	14.7	0.19	0.16	0.19	62.8
West: Safety Bay Rd														
10	L2	1177	1.0	1177	1.0	0.505	11.8	LOS B	7.2	50.6	0.39	0.66	0.39	57.4
11	T1	282	3.2	282	3.2	0.505	3.8	LOS A	7.1	50.2	0.40	0.57	0.40	53.9
Approach		1459	1.4	1459	1.4	0.505	10.2	LOS B	7.2	50.6	0.39	0.64	0.39	57.0
All Vehicles		2491	2.5	2491	2.5	0.505	9.7	LOS A	7.2	50.6	0.35	0.48	0.35	56.2
Site: 2 [East Ramps - Weekday AM Peak]														
East: Folly Rd														
10	L2	6	0.0	6	0.0	0.004	7.9	LOS A	0.0	0.2	0.22	0.61	0.22	59.1
11	T1	56	1.8	56	1.8	0.378	46.3	LOS D	1.6	11.1	0.99	0.74	0.99	25.4
Approach		62	1.6	62	1.6	0.378	42.5	LOS D	1.6	11.1	0.91	0.73	0.91	28.3
North: Kwinana Fwy Off Ramp														
1	L2	1	0.0	1	0.0	0.001	18.0	LOS B	0.0	0.1	0.50	0.60	0.50	50.9
3	R2	699	5.9	699	5.9	0.388	21.6	LOS C	5.9	43.6	0.66	0.79	0.66	38.6
Approach		700	5.9	700	5.9	0.388	21.5	LOS C	5.9	43.6	0.66	0.79	0.66	38.6
West: Safety Bay Rd														
5	T1	101	2.0	101	2.0	0.154	22.3	LOS C	1.9	13.5	0.72	0.57	0.72	41.0
6	R2	142	1.4	142	1.4	0.391	41.1	LOS D	3.4	24.3	0.90	0.79	0.90	29.0
Approach		243	1.6	243	1.6	0.391	33.3	LOS C	3.4	24.3	0.83	0.70	0.83	33.0
All Vehicles		1005	4.6	1005	4.6	0.391	25.7	LOS C	5.9	43.6	0.72	0.76	0.72	36.1

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday AM Peak - Festival Day (Network Folder: 2026 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h]	HV] %	ARRIVAL FLOWS [Total veh/h]	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver Speed km/h
Site: 1 [West Ramps - Weekday AM Peak - Festival Day]														
South: Kwinana Fwy Off Ramp														
1	L2	120	4.2	120	4.2	* 0.505	48.5	LOS D	3.2	23.3	0.98	0.79	0.98	35.4
3	R2	8	0.0	8	0.0	0.033	44.4	LOS D	0.2	1.4	0.90	0.67	0.90	26.0
Approach		128	3.9	128	3.9	0.505	48.2	LOS D	3.2	23.3	0.97	0.78	0.97	35.0
East: Safety Bay Rd														
5	T1	886	4.0	886	4.0	0.321	2.3	LOS A	2.0	14.7	0.17	0.15	0.17	65.2
6	R2	24	8.3	24	8.3	* 0.208	54.9	LOS D	0.7	5.2	1.00	0.71	1.00	23.6
Approach		910	4.1	910	4.1	0.321	3.7	LOS A	2.0	14.7	0.19	0.16	0.19	62.3
West: Safety Bay Rd														
10	L2	1177	1.0	1177	1.0	0.505	11.8	LOS B	7.2	50.7	0.39	0.66	0.39	57.4
11	T1	283	3.2	283	3.2	* 0.505	3.8	LOS A	7.1	50.3	0.40	0.57	0.40	53.9
Approach		1460	1.4	1460	1.4	0.505	10.3	LOS B	7.2	50.7	0.39	0.64	0.39	57.0
All Vehicles		2498	2.5	2498	2.5	0.505	9.8	LOS A	7.2	50.7	0.35	0.48	0.35	56.1
Site: 2 [East Ramps - Weekday AM Peak - Festival Day]														
East: Folly Rd														
10	L2	7	0.0	7	0.0	0.005	7.7	LOS A	0.0	0.2	0.22	0.60	0.22	58.3
11	T1	61	1.6	61	1.6	0.411	46.4	LOS D	1.7	12.1	0.99	0.74	0.99	25.3
Approach		68	1.5	68	1.5	0.411	42.4	LOS D	1.7	12.1	0.91	0.73	0.91	28.3
North: Kwinana Fwy Off Ramp														
1	L2	5	0.0	5	0.0	0.005	17.3	LOS B	0.1	0.5	0.50	0.62	0.50	47.4
3	R2	699	5.9	699	5.9	0.388	21.6	LOS C	5.9	43.6	0.66	0.79	0.66	38.6
Approach		704	5.8	704	5.8	0.388	21.5	LOS C	5.9	43.6	0.66	0.78	0.66	38.7
West: Safety Bay Rd														
5	T1	103	1.9	103	1.9	0.157	22.9	LOS C	1.9	13.6	0.71	0.57	0.71	40.5
6	R2	142	1.4	142	1.4	0.391	41.1	LOS D	3.4	24.3	0.90	0.79	0.90	29.0
Approach		245	1.6	245	1.6	0.391	33.4	LOS C	3.4	24.3	0.82	0.70	0.82	32.9
All Vehicles		1017	4.5	1017	4.5	0.411	25.8	LOS C	5.9	43.6	0.72	0.76	0.72	36.0

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday PM Peak (Network Folder: 2026 Base (Without Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 104 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver Speed km/h
Site: 1 [West Ramps - Weekday PM Peak]														
South: Kwinana Fwy Off Ramp														
1	L2	180	0.0	180	0.0	0.831	62.4	LOS E	6.1	43.0	1.00	0.93	1.30	31.5
3	R2	9	0.0	9	0.0	0.042	51.1	LOS D	0.3	1.8	0.91	0.67	0.91	23.9
Approach		189	0.0	189	0.0	0.831	61.9	LOS E	6.1	43.0	1.00	0.92	1.28	31.3
East: Safety Bay Rd														
5	T1	1662	0.0	1662	0.0	0.562	2.2	LOS A	4.6	32.5	0.18	0.17	0.18	65.5
6	R2	9	22.2	9	22.2	0.096	60.9	LOS E	0.3	2.4	1.00	0.67	1.00	21.4
Approach		1671	0.1	1671	0.1	0.562	2.5	LOS A	4.6	32.5	0.18	0.17	0.18	64.7
West: Safety Bay Rd														
10	L2	957	2.1	957	2.1	0.415	10.4	LOS B	5.5	38.9	0.32	0.63	0.32	57.8
11	T1	273	0.7	273	0.7	* 0.415	3.1	LOS A	5.4	38.1	0.34	0.52	0.34	55.8
Approach		1230	1.8	1230	1.8	0.415	8.8	LOS A	5.5	38.9	0.33	0.60	0.33	57.6
All Vehicles		3090	0.8	3090	0.8	0.831	8.6	LOS A	6.1	43.0	0.29	0.39	0.31	56.5
Site: 2 [East Ramps - Weekday PM Peak]														
East: Folly Rd														
10	L2	15	13.3	15	13.3	0.011	8.6	LOS A	0.1	0.6	0.24	0.61	0.24	55.0
11	T1	128	2.3	128	2.3	0.343	39.7	LOS D	3.5	25.0	0.91	0.73	0.91	28.0
Approach		143	3.5	143	3.5	0.343	36.4	LOS D	3.5	25.0	0.84	0.72	0.84	30.8
North: Kwinana Fwy Off Ramp														
1	L2	10	0.0	10	0.0	0.011	20.8	LOS C	0.2	1.1	0.53	0.65	0.53	49.0
3	R2	1517	1.0	1517	1.0	* 0.831	34.3	LOS C	21.7	153.4	0.93	0.91	0.99	30.4
Approach		1527	1.0	1527	1.0	0.831	34.2	LOS C	21.7	153.4	0.93	0.91	0.98	30.6
West: Safety Bay Rd														
5	T1	103	1.9	103	1.9	0.141	22.8	LOS C	2.0	14.5	0.68	0.54	0.68	40.6
6	R2	186	1.1	186	1.1	* 0.866	62.3	LOS E	6.4	45.0	1.00	0.91	1.31	22.7
Approach		289	1.4	289	1.4	0.866	48.2	LOS D	6.4	45.0	0.88	0.78	1.08	27.0
All Vehicles		1959	1.2	1959	1.2	0.866	36.4	LOS D	21.7	153.4	0.91	0.88	0.99	29.9

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday PM Peak - Festival Day (Network Folder: 2026 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 104 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekday PM Peak - Festival Day]														
South: Kwinana Fwy Off Ramp														
1	L2	180	0.0	180	0.0	0.831	62.4	LOS E	6.1	43.0	1.00	0.93	1.30	31.5
3	R2	9	0.0	9	0.0	0.042	51.1	LOS D	0.3	1.8	0.91	0.67	0.91	23.9
Approach		189	0.0	189	0.0	0.831	61.9	LOS E	6.1	43.0	1.00	0.92	1.28	31.3
East: Safety Bay Rd														
5	T1	1667	0.0	1667	0.0	0.564	2.2	LOS A	4.7	32.6	0.18	0.17	0.18	65.4
6	R2	28	7.1	28	7.1	0.272	62.1	LOS E	0.9	6.8	1.00	0.72	1.00	21.5
Approach		1695	0.1	1695	0.1	0.564	3.2	LOS A	4.7	32.6	0.19	0.17	0.19	63.3
West: Safety Bay Rd														
10	L2	957	2.1	957	2.1	0.415	10.5	LOS B	5.5	38.9	0.32	0.63	0.32	57.8
11	T1	273	0.7	273	0.7	* 0.415	3.1	LOS A	5.4	38.1	0.34	0.52	0.34	55.8
Approach		1230	1.8	1230	1.8	0.415	8.8	LOS A	5.5	38.9	0.33	0.60	0.33	57.6
All Vehicles		3114	0.8	3114	0.8	0.831	9.0	LOS A	6.1	43.0	0.29	0.39	0.31	56.0
Site: 2 [East Ramps - Weekday PM Peak - Festival Day]														
East: Folly Rd														
10	L2	20	10.0	20	10.0	0.014	8.3	LOS A	0.1	0.8	0.24	0.60	0.24	54.5
11	T1	152	2.0	152	2.0	0.406	40.3	LOS D	4.2	30.0	0.92	0.75	0.92	27.5
Approach		172	2.9	172	2.9	0.406	36.6	LOS D	4.2	30.0	0.84	0.73	0.84	30.6
North: Kwinana Fwy Off Ramp														
1	L2	10	0.0	10	0.0	0.011	20.8	LOS C	0.2	1.1	0.53	0.65	0.53	49.0
3	R2	1517	1.0	1517	1.0	* 0.831	34.3	LOS C	21.7	153.4	0.93	0.91	0.99	30.4
Approach		1527	1.0	1527	1.0	0.831	34.2	LOS C	21.7	153.4	0.93	0.91	0.98	30.6
West: Safety Bay Rd														
5	T1	103	1.9	103	1.9	0.141	22.8	LOS C	2.0	14.5	0.68	0.54	0.68	40.6
6	R2	186	1.1	186	1.1	* 0.866	62.3	LOS E	6.4	45.0	1.00	0.91	1.31	22.7
Approach		289	1.4	289	1.4	0.866	48.2	LOS D	6.4	45.0	0.88	0.78	1.08	27.0
All Vehicles		1988	1.2	1988	1.2	0.866	36.4	LOS D	21.7	153.4	0.91	0.87	0.99	29.9

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekend Mid-day Peak (Network Folder: 2026 Base (Without Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h]	DEMAND FLOWS HV] %	ARRIVAL FLOWS [Total veh/h]	ARRIVAL FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh veh]	AVERAGE BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekend Mid-day Peak]														
South: Kwinana Fwy Off Ramp														
1	L2	179	8.9	179	8.9	* 0.549	44.5	LOS D	4.6	34.7	0.96	0.81	0.96	36.3
3	R2	6	16.7	6	16.7	0.019	39.8	LOS D	0.1	1.1	0.84	0.66	0.84	28.1
Approach		185	9.2	185	9.2	0.549	44.3	LOS D	4.6	34.7	0.95	0.80	0.95	36.1
East: Safety Bay Rd														
5	T1	1125	12.4	1125	12.4	0.465	2.8	LOS A	3.0	22.9	0.19	0.17	0.19	64.2
6	R2	19	10.5	19	10.5	0.167	54.5	LOS D	0.5	4.2	1.00	0.70	1.00	23.7
Approach		1144	12.4	1144	12.4	0.465	3.7	LOS A	3.0	22.9	0.20	0.18	0.20	62.5
West: Safety Bay Rd														
10	L2	1036	4.8	1036	4.8	0.479	11.4	LOS B	6.4	46.7	0.40	0.66	0.40	56.5
11	T1	284	4.6	284	4.6	* 0.479	3.8	LOS A	5.8	42.4	0.45	0.58	0.45	54.5
Approach		1320	4.8	1320	4.8	0.479	9.7	LOS A	6.4	46.7	0.41	0.65	0.41	56.2
All Vehicles		2649	8.4	2649	8.4	0.549	9.5	LOS A	6.4	46.7	0.36	0.45	0.36	55.3
Site: 2 [East Ramps - Weekend Mid-day Peak]														
East: Folly Rd														
10	L2	11	9.1	11	9.1	0.008	8.2	LOS A	0.0	0.4	0.24	0.61	0.24	56.4
11	T1	87	12.6	87	12.6	0.550	46.3	LOS D	2.4	19.0	1.00	0.78	1.02	25.4
Approach		98	12.2	98	12.2	0.550	42.0	LOS D	2.4	19.0	0.91	0.76	0.93	28.6
North: Kwinana Fwy Off Ramp														
1	L2	9	0.0	9	0.0	0.010	18.7	LOS B	0.1	0.8	0.52	0.64	0.52	50.4
3	R2	1011	5.0	1011	5.0	* 0.558	23.4	LOS C	9.6	70.2	0.75	0.82	0.75	37.1
Approach		1020	5.0	1020	5.0	0.558	23.3	LOS C	9.6	70.2	0.74	0.82	0.74	37.3
West: Safety Bay Rd														
5	T1	88	4.5	88	4.5	0.132	22.0	LOS C	1.6	12.0	0.72	0.57	0.72	41.3
6	R2	176	5.1	176	5.1	0.526	43.1	LOS D	4.5	32.6	0.94	0.81	0.94	27.8
Approach		264	4.9	264	4.9	0.526	36.1	LOS D	4.5	32.6	0.87	0.73	0.87	31.2
All Vehicles		1382	5.5	1382	5.5	0.558	27.1	LOS C	9.6	70.2	0.78	0.80	0.78	35.0

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekend Mid-day Peak - Festival Day (Network Folder: 2026 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekend Mid-day Peak - Festival Day]														
South: Kwinana Fwy Off Ramp														
1	L2	179	8.9	179	8.9	0.718	50.8	LOS D	5.1	38.2	1.00	0.86	1.12	34.2
3	R2	6	16.7	6	16.7	0.025	43.8	LOS D	0.1	1.2	0.89	0.66	0.89	26.5
Approach		185	9.2	185	9.2	0.718	50.5	LOS D	5.1	38.2	1.00	0.86	1.11	34.0
East: Safety Bay Rd														
5	T1	1128	12.4	1128	12.4	0.438	2.4	LOS A	2.8	21.4	0.18	0.16	0.18	65.1
6	R2	29	6.9	29	6.9	0.249	55.2	LOS E	0.8	6.2	1.00	0.72	1.00	23.5
Approach		1157	12.3	1157	12.3	0.438	3.7	LOS A	2.8	21.4	0.20	0.17	0.20	62.3
West: Safety Bay Rd														
10	L2	1036	4.8	1036	4.8	0.473	11.4	LOS B	6.3	45.7	0.39	0.65	0.39	56.5
11	T1	284	4.6	284	4.6	0.473	3.7	LOS A	6.0	43.9	0.42	0.56	0.42	54.5
Approach		1320	4.8	1320	4.8	0.473	9.7	LOS A	6.3	45.7	0.40	0.63	0.40	56.3
All Vehicles		2662	8.3	2662	8.3	0.718	9.9	LOS A	6.3	45.7	0.35	0.45	0.38	54.9
Site: 2 [East Ramps - Weekend Mid-day Peak - Festival Day]														
East: Folly Rd														
10	L2	13	7.7	13	7.7	0.009	8.2	LOS A	0.1	0.5	0.25	0.61	0.25	55.8
11	T1	100	11.0	100	11.0	0.218	29.8	LOS C	2.2	16.9	0.83	0.66	0.83	32.6
Approach		113	10.6	113	10.6	0.218	27.4	LOS C	2.2	16.9	0.77	0.66	0.77	35.7
North: Kwinana Fwy Off Ramp														
1	L2	9	0.0	9	0.0	0.013	25.3	LOS C	0.2	1.1	0.64	0.66	0.64	46.2
3	R2	1011	5.0	1011	5.0	0.734	33.4	LOS C	12.2	89.2	0.92	0.87	0.94	30.9
Approach		1020	5.0	1020	5.0	0.734	33.3	LOS C	12.2	89.2	0.92	0.87	0.94	31.1
West: Safety Bay Rd														
5	T1	88	4.5	88	4.5	0.098	14.2	LOS B	1.3	9.5	0.58	0.46	0.58	48.3
6	R2	176	5.1	176	5.1	0.688	48.8	LOS D	4.9	35.6	0.99	0.84	1.08	26.0
Approach		264	4.9	264	4.9	0.688	37.3	LOS D	4.9	35.6	0.86	0.71	0.91	30.7
All Vehicles		1397	5.4	1397	5.4	0.734	33.6	LOS C	12.2	89.2	0.89	0.82	0.92	31.3

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekend Mid-day Peak - Wedding Day Arrivals (Network Folder: 2026 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h]	HV] %	ARRIVAL FLOWS [Total veh/h]	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekend Mid-day Peak - Wedding Day Arrivals]														
South: Kwinana Fwy Off Ramp														
1	L2	179	8.9	179	8.9	0.519	43.4	LOS D	4.5	34.2	0.94	0.81	0.94	36.7
3	R2	36	2.8	36	2.8	0.100	38.8	LOS D	0.8	5.9	0.85	0.72	0.85	27.0
Approach		215	7.9	215	7.9	0.519	42.6	LOS D	4.5	34.2	0.93	0.79	0.93	35.5
East: Safety Bay Rd														
5	T1	1125	12.4	1125	12.4	0.473	3.3	LOS A	3.4	26.0	0.22	0.19	0.22	63.3
6	R2	19	10.5	19	10.5	0.167	54.5	LOS D	0.5	4.2	1.00	0.70	1.00	23.7
Approach		1144	12.4	1144	12.4	0.473	4.2	LOS A	3.4	26.0	0.23	0.20	0.23	61.6
West: Safety Bay Rd														
10	L2	1036	4.8	1036	4.8	0.499	11.5	LOS B	6.9	50.0	0.42	0.68	0.42	56.3
11	T1	314	4.1	314	4.1	0.499	4.2	LOS A	5.9	43.2	0.50	0.60	0.50	54.1
Approach		1350	4.7	1350	4.7	0.499	9.8	LOS A	6.9	50.0	0.44	0.66	0.44	56.0
All Vehicles		2709	8.2	2709	8.2	0.519	10.0	LOS B	6.9	50.0	0.39	0.48	0.39	54.6
Site: 2 [East Ramps - Weekend Mid-day Peak - Wedding Day Arrivals]														
East: Folly Rd														
10	L2	11	9.1	11	9.1	0.008	8.1	LOS A	0.0	0.4	0.24	0.61	0.24	56.5
11	T1	87	12.6	87	12.6	0.440	43.4	LOS D	2.4	18.3	0.98	0.76	0.98	26.5
Approach		98	12.2	98	12.2	0.440	39.5	LOS D	2.4	18.3	0.89	0.74	0.89	29.7
North: Kwinana Fwy Off Ramp														
1	L2	129	0.0	129	0.0	0.158	22.5	LOS C	2.1	14.9	0.64	0.72	0.64	43.8
3	R2	1011	5.0	1011	5.0	0.642	28.2	LOS C	10.9	79.8	0.84	0.84	0.84	33.8
Approach		1140	4.5	1140	4.5	0.642	27.6	LOS C	10.9	79.8	0.82	0.83	0.82	35.5
West: Safety Bay Rd														
5	T1	148	2.7	148	2.7	0.185	16.7	LOS B	2.1	14.8	0.54	0.45	0.54	44.1
6	R2	176	5.1	176	5.1	0.426	38.9	LOS D	4.2	30.5	0.89	0.80	0.89	29.4
Approach		324	4.0	324	4.0	0.426	28.7	LOS C	4.2	30.5	0.73	0.64	0.73	34.7
All Vehicles		1562	4.9	1562	4.9	0.642	28.6	LOS C	10.9	79.8	0.81	0.78	0.81	34.9

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekend Mid-day Peak - Wedding Day Departures (Network Folder: 2026 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekend Mid-day Peak - Wedding Day Departures]														
South: Kwinana Fwy Off Ramp														
1	L2	179	8.9	179	8.9	* 0.718	50.8	LOS D	5.1	38.2	1.00	0.86	1.12	34.2
3	R2	6	16.7	6	16.7	0.025	43.8	LOS D	0.1	1.2	0.89	0.66	0.89	26.5
Approach		185	9.2	185	9.2	0.718	50.5	LOS D	5.1	38.2	1.00	0.86	1.11	34.0
East: Safety Bay Rd														
5	T1	1155	12.1	1155	12.1	0.448	2.3	LOS A	2.8	21.7	0.18	0.16	0.18	64.9
6	R2	139	1.4	139	1.4	0.459	50.0	LOS D	3.9	27.3	1.00	0.80	1.00	24.7
Approach		1294	11.0	1294	11.0	0.459	7.5	LOS A	3.9	27.3	0.26	0.23	0.26	55.3
West: Safety Bay Rd														
10	L2	1036	4.8	1036	4.8	0.542	15.9	LOS B	9.2	67.0	0.56	0.72	0.56	53.2
11	T1	284	4.6	284	4.6	* 0.542	7.8	LOS A	8.8	63.8	0.58	0.65	0.58	48.8
Approach		1320	4.8	1320	4.8	0.542	14.1	LOS B	9.2	67.0	0.56	0.71	0.56	52.6
All Vehicles		2799	7.9	2799	7.9	0.718	13.4	LOS B	9.2	67.0	0.45	0.49	0.46	51.1
Site: 2 [East Ramps - Weekend Mid-day Peak - Wedding Day Departures]														
East: Folly Rd														
10	L2	41	2.4	41	2.4	0.029	7.6	LOS A	0.2	1.4	0.25	0.61	0.25	53.9
11	T1	237	4.6	237	4.6	0.543	34.6	LOS C	5.9	42.6	0.93	0.78	0.93	29.2
Approach		278	4.3	278	4.3	0.543	30.6	LOS C	5.9	42.6	0.83	0.76	0.83	33.1
North: Kwinana Fwy Off Ramp														
1	L2	9	0.0	9	0.0	0.012	24.0	LOS C	0.1	1.0	0.62	0.65	0.62	47.0
3	R2	1011	5.0	1011	5.0	* 0.694	30.9	LOS C	11.6	84.6	0.89	0.85	0.89	32.2
Approach		1020	5.0	1020	5.0	0.694	30.9	LOS C	11.6	84.6	0.89	0.85	0.89	32.4
West: Safety Bay Rd														
5	T1	88	4.5	88	4.5	0.103	15.8	LOS B	1.3	9.1	0.55	0.44	0.55	46.7
6	R2	176	5.1	176	5.1	0.688	48.6	LOS D	4.8	34.7	0.97	0.83	1.04	26.0
Approach		264	4.9	264	4.9	0.688	37.6	LOS D	4.8	34.7	0.83	0.70	0.88	30.6
All Vehicles		1562	4.9	1562	4.9	0.694	32.0	LOS C	11.6	84.6	0.87	0.81	0.88	32.2

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday AM Peak (Network Folder: 2036 Base (Without Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 94 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h]	HV] %	ARRIVAL FLOWS [Total veh/h]	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekday AM Peak]														
South: Kwinana Fwy Off Ramp														
1	L2	177	4.0	177	4.0	* 0.760	53.8	LOS D	5.2	38.0	1.00	0.89	1.18	33.7
3	R2	7	0.0	7	0.0	0.029	45.5	LOS D	0.2	1.2	0.90	0.66	0.90	25.8
Approach		184	3.8	184	3.8	0.760	53.5	LOS D	5.2	38.0	1.00	0.88	1.17	33.5
East: Safety Bay Rd														
5	T1	1315	4.0	1315	4.0	0.473	2.8	LOS A	3.8	27.8	0.21	0.19	0.21	64.3
6	R2	20	10.0	20	10.0	* 0.179	55.7	LOS E	0.6	4.5	1.00	0.70	1.00	23.5
Approach		1335	4.1	1335	4.1	0.473	3.6	LOS A	3.8	27.8	0.23	0.20	0.23	62.7
West: Safety Bay Rd														
10	L2	1749	1.0	1749	1.0	0.746	33.6	LOS C	15.6	110.2	0.56	0.74	0.56	55.9
11	T1	419	3.1	419	3.1	* 0.746	5.4	LOS A	15.0	106.9	0.56	0.67	0.56	51.6
Approach		2168	1.4	2168	1.4	0.746	28.1	LOS C	15.6	110.2	0.56	0.73	0.56	55.4
All Vehicles		3687	2.5	3687	2.5	0.760	20.5	LOS C	15.6	110.2	0.46	0.54	0.47	54.9
Site: 2 [East Ramps - Weekday AM Peak]														
East: Folly Rd														
10	L2	6	0.0	6	0.0	0.004	8.3	LOS A	0.0	0.2	0.25	0.61	0.25	58.6
11	T1	56	1.8	56	1.8	0.450	49.0	LOS D	1.6	11.6	1.00	0.74	1.00	24.5
Approach		62	1.6	62	1.6	0.450	45.1	LOS D	1.6	11.6	0.93	0.73	0.93	27.3
North: Kwinana Fwy Off Ramp														
1	L2	1	0.0	1	0.0	0.001	17.2	LOS B	0.0	0.1	0.48	0.60	0.48	51.4
3	R2	1040	6.0	1040	6.0	0.566	23.2	LOS C	10.0	73.7	0.74	0.82	0.74	37.2
Approach		1041	6.0	1041	6.0	0.566	23.2	LOS C	10.0	73.7	0.74	0.82	0.74	37.3
West: Safety Bay Rd														
5	T1	101	2.0	101	2.0	0.163	24.3	LOS C	2.0	14.3	0.74	0.59	0.74	39.6
6	R2	212	1.9	212	1.9	0.566	42.9	LOS D	5.5	38.8	0.94	0.82	0.94	28.3
Approach		313	1.9	313	1.9	0.566	36.9	LOS D	5.5	38.8	0.88	0.74	0.88	31.2
All Vehicles		1416	4.9	1416	4.9	0.566	27.2	LOS C	10.0	73.7	0.78	0.80	0.78	35.0

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday AM Peak - Festival Day (Network Folder: 2036 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 94 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekday AM Peak - Festival Day]														
South: Kwinana Fwy Off Ramp														
1	L2	177	4.0	177	4.0	0.760	53.8	LOS D	5.2	38.0	1.00	0.89	1.18	33.7
3	R2	2	0.0	2	0.0	0.008	44.7	LOS D	0.0	0.3	0.89	0.62	0.89	25.4
Approach		179	3.9	179	3.9	0.760	53.7	LOS D	5.2	38.0	1.00	0.88	1.18	33.6
East: Safety Bay Rd														
5	T1	1316	4.0	1316	4.0	0.474	2.8	LOS A	3.8	27.8	0.21	0.19	0.21	64.3
6	R2	24	8.3	24	8.3	0.212	56.0	LOS E	0.7	5.3	1.00	0.71	1.00	23.4
Approach		1340	4.1	1340	4.1	0.474	3.7	LOS A	3.8	27.8	0.23	0.20	0.23	62.4
West: Safety Bay Rd														
10	L2	1749	1.0	1749	1.0	0.746	35.8	LOS D	15.6	110.4	0.56	0.74	0.56	55.9
11	T1	420	3.1	420	3.1	0.746	5.4	LOS A	15.0	107.0	0.56	0.67	0.56	51.6
Approach		2169	1.4	2169	1.4	0.746	29.9	LOS C	15.6	110.4	0.56	0.73	0.56	55.4
All Vehicles		3688	2.5	3688	2.5	0.760	21.5	LOS C	15.6	110.4	0.46	0.54	0.47	54.9
Site: 2 [East Ramps - Weekday AM Peak - Festival Day]														
East: Folly Rd														
10	L2	7	0.0	7	0.0	0.005	8.2	LOS A	0.0	0.2	0.25	0.61	0.25	57.8
11	T1	61	1.6	61	1.6	0.490	49.2	LOS D	1.8	12.6	1.00	0.75	1.00	24.4
Approach		68	1.5	68	1.5	0.490	45.0	LOS D	1.8	12.6	0.92	0.73	0.92	27.3
North: Kwinana Fwy Off Ramp														
1	L2	5	0.0	5	0.0	0.005	16.6	LOS B	0.1	0.4	0.48	0.61	0.48	47.8
3	R2	1040	6.0	1040	6.0	0.566	23.2	LOS C	10.0	73.7	0.74	0.82	0.74	37.2
Approach		1045	5.9	1045	5.9	0.566	23.2	LOS C	10.0	73.7	0.74	0.82	0.74	37.3
West: Safety Bay Rd														
5	T1	103	1.9	103	1.9	0.166	24.4	LOS C	2.1	14.6	0.75	0.60	0.75	39.4
6	R2	212	1.9	212	1.9	0.566	42.8	LOS D	5.5	39.1	0.95	0.82	0.95	28.3
Approach		315	1.9	315	1.9	0.566	36.8	LOS D	5.5	39.1	0.88	0.74	0.88	31.2
All Vehicles		1428	4.8	1428	4.8	0.566	27.2	LOS C	10.0	73.7	0.78	0.80	0.78	35.0

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday PM Peak (Network Folder: 2036 Base (Without Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 116 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h]	HV] %	ARRIVAL FLOWS [Total veh/h]	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver Speed km/h
Site: 1 [West Ramps - Weekday PM Peak]														
South: Kwinana Fwy Off Ramp														
1	L2	268	0.0	268	0.0	1.274	559.7	LOS F	39.6	277.3	1.00	2.35	4.68	5.9
3	R2	9	0.0	9	0.0	0.086	58.8	LOS E	0.8	5.9	0.92	0.69	0.92	21.8
Approach		277	0.0	277	0.0	1.274	543.4	LOS F	39.6	277.3	1.00	2.29	4.56	6.0
East: Safety Bay Rd														
5	T1	2470	0.0	1805	0.0	0.599	5.3	LOS A	11.9	83.1	0.40	0.37	0.40	59.9
6	R2	9	22.2	7	22.4	0.079	67.3	LOS E	0.2	2.0	1.00	0.66	1.00	20.1
Approach		2479	0.1	1811 [M1]	0.1	0.599	5.5	LOS A	11.9	83.1	0.40	0.37	0.40	59.5
West: Safety Bay Rd														
10	L2	1421	2.0	1421	2.0	0.772	14.1	LOS B	38.2	270.7	0.55	0.76	0.55	55.6
11	T1	406	1.0	406	1.0	* 0.772	6.8	LOS A	38.2	270.7	0.67	0.70	0.67	52.0
Approach		1827	1.8	1827	1.8	0.772	12.4	LOS B	38.2	270.7	0.58	0.75	0.58	55.1
All Vehicles		4583	0.8	3915 [M1]	0.9	1.274	46.8	LOS D	39.6	277.3	0.52	0.68	0.78	31.9
Site: 2 [East Ramps - Weekday PM Peak]														
East: Folly Rd														
10	L2	15	13.3	15	13.3	0.011	8.4	LOS A	0.1	0.6	0.21	0.61	0.21	55.2
11	T1	128	2.3	128	2.3	0.755	59.9	LOS E	4.7	33.6	1.00	0.88	1.18	21.4
Approach		143	3.5	143	3.5	0.755	54.5	LOS D	4.7	33.6	0.92	0.85	1.08	24.2
North: Kwinana Fwy Off Ramp														
1	L2	10	0.0	10	0.0	0.009	16.1	LOS B	0.1	0.9	0.41	0.64	0.41	52.2
3	R2	2253	1.0	2253	1.0	* 1.303	606.2	LOS F	200.2	1412.9	1.00	2.20	4.80	2.9
Approach		2263	1.0	2263	1.0	1.303	603.6	LOS F	200.2	1412.9	1.00	2.20	4.78	2.9
West: Safety Bay Rd														
5	T1	103	1.9	103	1.9	0.192	34.4	LOS C	2.7	19.4	0.80	0.64	0.80	33.5
6	R2	277	1.4	277	1.4	* 1.331	654.3	LOS F	14.1	100.0	1.00	2.20	5.09	3.1
Approach		380	1.6	380	1.6	1.331	486.3	LOS F	14.1	100.0	0.95	1.77	3.93	4.2
All Vehicles		2786	1.2	2786	1.2	1.331	559.4	LOS F	200.2	1412.9	0.99	2.07	4.47	3.2

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekday PM Peak - Festival Day (Network Folder: 2036 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 116 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekday PM Peak - Festival Day]														
South: Kwinana Fwy Off Ramp														
1	L2	268	0.0	268	0.0	1.274	559.7	LOS F	39.6	277.3	1.00	2.35	4.68	5.9
3	R2	9	0.0	9	0.0	0.086	58.8	LOS E	0.7	4.7	0.92	0.69	0.92	21.8
Approach		277	0.0	277	0.0	1.274	543.4	LOS F	39.6	277.3	1.00	2.29	4.56	6.0
East: Safety Bay Rd														
5	T1	2475	0.0	1799	0.0	0.603	5.0	LOS A	11.1	78.0	0.38	0.35	0.38	60.4
6	R2	28	7.1	26	5.7	0.274	66.7	LOS E	0.9	6.8	1.00	0.71	1.00	20.6
Approach		2503	0.1	1825 [N1]	0.1	0.603	5.9	LOS A	11.1	78.0	0.39	0.36	0.39	58.8
West: Safety Bay Rd														
10	L2	1421	2.0	1421	2.0	0.771	14.2	LOS B	30.5	215.9	0.55	0.76	0.55	55.7
11	T1	406	1.0	406	1.0	0.771	6.4	LOS A	30.5	215.9	0.67	0.69	0.67	52.5
Approach		1827	1.8	1827	1.8	0.771	12.5	LOS B	30.5	215.9	0.57	0.75	0.57	55.2
All Vehicles		4607	0.8	3929 [N1]	0.9	1.274	46.8	LOS D	39.6	277.3	0.52	0.67	0.77	31.9
Site: 2 [East Ramps - Weekday PM Peak - Festival Day]														
East: Folly Rd														
10	L2	20	10.0	20	10.0	0.014	8.1	LOS A	0.1	0.8	0.22	0.60	0.22	54.7
11	T1	152	2.0	152	2.0	0.858	65.2	LOS E	5.9	42.3	1.00	0.98	1.39	20.1
Approach		172	2.9	172	2.9	0.858	58.5	LOS E	5.9	42.3	0.91	0.94	1.25	23.1
North: Kwinana Fwy Off Ramp														
1	L2	10	0.0	10	0.0	0.009	16.5	LOS B	0.1	1.0	0.42	0.64	0.42	51.9
3	R2	2253	1.0	2253	1.0	1.345	680.6	LOS F	210.1	1483.2	1.00	2.32	5.16	2.6
Approach		2263	1.0	2263	1.0	1.345	677.7	LOS F	210.1	1483.2	1.00	2.31	5.14	2.6
West: Safety Bay Rd														
5	T1	103	1.9	103	1.9	0.186	33.6	LOS C	2.7	19.1	0.79	0.64	0.79	33.9
6	R2	277	1.4	277	1.4	1.331	654.3	LOS F	14.1	100.0	1.00	2.20	5.09	3.1
Approach		380	1.6	380	1.6	1.331	486.1	LOS F	14.1	100.0	0.94	1.77	3.92	4.2
All Vehicles		2815	1.2	2815	1.2	1.345	614.0	LOS F	210.1	1483.2	0.98	2.16	4.74	2.9

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekend Mid-day Peak (Network Folder: 2036 Base (Without Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekend Mid-day Peak]														
South: Kwinana Fwy Off Ramp														
1	L2	267	9.0	267	9.0	* 0.942	82.9	LOS F	11.7	87.9	1.00	1.10	1.63	26.3
3	R2	6	16.7	6	16.7	0.045	51.1	LOS D	0.2	1.4	0.87	0.68	0.87	24.0
Approach		273	9.2	273	9.2	0.942	82.2	LOS F	11.7	87.9	1.00	1.09	1.61	26.3
East: Safety Bay Rd														
5	T1	1671	12.4	1644	12.6	0.638	9.1	LOS A	12.9	100.0	0.59	0.55	0.59	54.3
6	R2	19	10.5	19	10.6	0.200	65.9	LOS E	0.7	5.0	1.00	0.70	1.00	21.1
Approach		1690	12.4	1663 [N1]	12.5	0.638	9.7	LOS A	12.9	100.0	0.60	0.55	0.60	53.4
West: Safety Bay Rd														
10	L2	1539	4.8	1539	4.8	0.879	21.6	LOS C	29.5	215.2	0.73	0.86	0.77	50.2
11	T1	422	4.7	422	4.7	* 0.879	25.0	LOS C	14.5	106.0	0.88	0.93	1.05	34.5
Approach		1961	4.8	1961	4.8	0.879	22.3	LOS C	29.5	215.2	0.76	0.88	0.83	47.5
All Vehicles		3924	8.4	3897 [N1]	8.4	0.942	21.1	LOS C	29.5	215.2	0.71	0.75	0.79	45.9
Site: 2 [East Ramps - Weekend Mid-day Peak]														
East: Folly Rd														
10	L2	11	9.1	11	9.1	0.009	9.1	LOS A	0.1	0.5	0.26	0.61	0.26	55.7
11	T1	87	12.6	87	12.6	0.546	55.3	LOS E	2.9	22.8	1.00	0.78	1.00	22.6
Approach		98	12.2	98	12.2	0.546	50.1	LOS D	2.9	22.8	0.92	0.76	0.92	25.7
North: Kwinana Fwy Off Ramp														
1	L2	9	0.0	9	0.0	0.010	23.4	LOS C	0.2	1.1	0.56	0.65	0.56	47.3
3	R2	1503	5.1	1503	5.1	* 0.978	91.2	LOS F	42.2	308.5	1.00	1.10	1.57	15.7
Approach		1512	5.0	1512	5.0	0.978	90.8	LOS F	42.2	308.5	1.00	1.10	1.57	15.8
West: Safety Bay Rd														
5	T1	88	4.5	88	4.5	0.112	21.3	LOS C	1.8	12.9	0.64	0.51	0.64	41.8
6	R2	261	5.0	261	5.0	0.556	44.6	LOS D	7.7	56.4	0.93	0.83	0.93	27.3
Approach		349	4.9	349	4.9	0.556	38.7	LOS D	7.7	56.4	0.86	0.75	0.86	30.0
All Vehicles		1959	5.4	1959	5.4	0.978	79.5	LOS E	42.2	308.5	0.97	1.02	1.41	17.9

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekend Mid-day Peak - Festival Day (Network Folder: 2036 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekend Mid-day Peak - Festival Day]														
South: Kwinana Fwy Off Ramp														
1	L2	267	9.0	267	9.0	0.998	119.2	LOS F	14.5	109.1	1.00	1.26	2.03	20.9
3	R2	6	16.7	6	16.7	0.047	52.2	LOS D	0.2	1.4	0.88	0.68	0.88	23.7
Approach		273	9.2	273	9.2	0.998	117.7	LOS F	14.5	109.1	1.00	1.25	2.00	20.9
East: Safety Bay Rd														
5	T1	1674	12.4	1618	12.7	0.624	8.5	LOS A	12.9	100.0	0.57	0.52	0.57	55.1
6	R2	29	6.9	28	7.0	0.296	66.6	LOS E	1.0	7.4	1.00	0.72	1.00	20.9
Approach		1703	12.3	1646 [N1]	12.6	0.624	9.5	LOS A	12.9	100.0	0.58	0.53	0.58	53.6
West: Safety Bay Rd														
10	L2	1539	4.8	1539	4.8	0.871	20.3	LOS C	27.7	201.9	0.71	0.85	0.75	51.2
11	T1	422	4.7	422	4.7	0.871	22.2	LOS C	14.3	104.2	0.86	0.90	1.01	36.3
Approach		1961	4.8	1961	4.8	0.871	20.7	LOS C	27.7	201.9	0.74	0.86	0.80	48.8
All Vehicles		3937	8.4	3880 [N1]	8.5	0.998	22.8	LOS C	27.7	201.9	0.69	0.75	0.79	44.7
Site: 2 [East Ramps - Weekend Mid-day Peak - Festival Day]														
East: Folly Rd														
10	L2	13	7.7	13	7.7	0.010	8.9	LOS A	0.1	0.6	0.26	0.61	0.26	55.2
11	T1	100	11.0	100	11.0	0.563	54.4	LOS D	3.3	25.6	1.00	0.78	1.00	22.8
Approach		113	10.6	113	10.6	0.563	49.2	LOS D	3.3	25.6	0.91	0.76	0.91	25.9
North: Kwinana Fwy Off Ramp														
1	L2	9	0.0	9	0.0	0.010	23.4	LOS C	0.2	1.1	0.56	0.65	0.56	47.3
3	R2	1503	5.1	1503	5.1	0.967	81.8	LOS F	39.5	288.6	1.00	1.08	1.49	17.1
Approach		1512	5.0	1512	5.0	0.967	81.4	LOS F	39.5	288.6	1.00	1.07	1.49	17.2
West: Safety Bay Rd														
5	T1	88	4.5	88	4.5	0.112	21.3	LOS C	1.8	12.9	0.64	0.51	0.64	41.8
6	R2	261	5.0	261	5.0	0.576	45.6	LOS D	7.8	57.3	0.94	0.83	0.94	27.0
Approach		349	4.9	349	4.9	0.576	39.5	LOS D	7.8	57.3	0.87	0.75	0.87	29.7
All Vehicles		1974	5.3	1974	5.3	0.967	72.2	LOS E	39.5	288.6	0.97	1.00	1.34	19.2

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekend Mid-day Peak - Wedding Day Arrivals (Network Folder: 2036 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h]	HV] %	ARRIVAL FLOWS [Total veh/h]	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekend Mid-day Peak - Wedding Day Arrivals]														
South: Kwinana Fwy Off Ramp														
1	L2	267	9.0	267	9.0	0.998	119.2	LOS F	14.5	109.1	1.00	1.26	2.03	20.9
3	R2	36	2.8	36	2.8	0.258	53.5	LOS D	1.1	8.1	0.92	0.75	0.92	22.2
Approach		303	8.3	303	8.3	0.998	111.4	LOS F	14.5	109.1	0.99	1.20	1.90	21.0
East: Safety Bay Rd														
5	T1	1671	12.4	1640	12.6	0.629	9.4	LOS A	12.9	100.0	0.63	0.58	0.63	53.8
6	R2	19	10.5	19	10.6	0.200	65.9	LOS E	0.7	5.0	1.00	0.70	1.00	21.1
Approach		1690	12.4	1659 [N1]	12.6	0.629	10.1	LOS B	12.9	100.0	0.63	0.58	0.63	52.9
West: Safety Bay Rd														
10	L2	1539	4.8	1539	4.8	0.915	30.1	LOS C	39.6	288.4	0.81	0.92	0.91	44.7
11	T1	452	4.4	452	4.4	0.915	39.1	LOS D	18.1	131.6	0.94	1.04	1.24	27.4
Approach		1991	4.7	1991	4.7	0.915	32.2	LOS C	39.6	288.4	0.84	0.95	0.99	41.4
All Vehicles		3984	8.3	3953 [N1]	8.3	0.998	29.0	LOS C	39.6	288.4	0.76	0.81	0.91	40.6
Site: 2 [East Ramps - Weekend Mid-day Peak - Wedding Day Arrivals]														
East: Folly Rd														
10	L2	11	9.1	11	9.1	0.009	8.9	LOS A	0.1	0.5	0.25	0.61	0.25	55.8
11	T1	87	12.6	87	12.6	0.535	55.2	LOS E	2.9	22.7	1.00	0.77	1.00	22.7
Approach		98	12.2	98	12.2	0.535	50.0	LOS D	2.9	22.7	0.92	0.76	0.92	25.7
North: Kwinana Fwy Off Ramp														
1	L2	129	0.0	129	0.0	0.157	25.9	LOS C	2.6	18.0	0.64	0.72	0.64	42.1
3	R2	1503	5.1	1503	5.1	1.034	156.8	LOS F	54.5	397.9	1.00	1.28	2.11	10.0
Approach		1632	4.7	1632	4.7	1.034	146.5	LOS F	54.5	397.9	0.97	1.23	1.99	11.3
West: Safety Bay Rd														
5	T1	148	2.7	148	2.7	0.175	18.6	LOS B	2.4	17.2	0.52	0.44	0.52	42.5
6	R2	261	5.0	261	5.0	0.504	41.7	LOS D	7.3	53.5	0.89	0.82	0.89	28.4
Approach		409	4.2	409	4.2	0.504	33.3	LOS C	7.3	53.5	0.75	0.68	0.75	32.3
All Vehicles		2139	4.9	2139	4.9	1.034	120.4	LOS F	54.5	397.9	0.93	1.11	1.70	13.4

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [SCATS]

Network: N101 [Weekend Mid-day Peak - Wedding Day Departures (Network Folder: 2036 (With Development))]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (CCG User-Given Cycle Time)

Vehicle Movement Performance (CCG)

Mov ID	Turn	DEMAND FLOWS [Total veh/h]	DEMAND FLOWS HV] %	ARRIVAL FLOWS [Total veh/h]	ARRIVAL FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh veh]	AVERAGE BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Site: 1 [West Ramps - Weekend Mid-day Peak - Wedding Day Departures]														
South: Kwinana Fwy Off Ramp														
1	L2	267	9.0	267	9.0	1.131	310.9	LOS F	26.6	200.2	1.00	1.81	3.38	9.8
3	R2	6	16.7	6	16.7	0.053	54.4	LOS D	0.2	1.5	0.90	0.68	0.90	23.0
Approach		273	9.2	273	9.2	1.131	305.3	LOS F	26.6	200.2	1.00	1.79	3.32	9.9
East: Safety Bay Rd														
5	T1	1701	12.2	1541	13.0	0.615	6.0	LOS A	9.9	77.1	0.40	0.37	0.40	58.6
6	R2	139	1.4	137	1.4	0.827	66.2	LOS E	4.9	34.9	1.00	0.88	1.24	20.9
Approach		1840	11.4	1678 [N1]	12.0	0.827	11.0	LOS B	9.9	77.1	0.45	0.41	0.47	51.0
West: Safety Bay Rd														
10	L2	1539	4.8	1539	4.8	0.898	32.1	LOS C	35.5	258.5	0.81	0.91	0.90	45.7
11	T1	422	4.7	422	4.7	0.898	31.4	LOS C	19.7	143.9	0.90	0.98	1.12	30.7
Approach		1961	4.8	1961	4.8	0.898	32.0	LOS C	35.5	258.5	0.83	0.93	0.95	43.1
All Vehicles		4074	8.1	3912 [N1]	8.4	1.131	42.0	LOS D	35.5	258.5	0.68	0.77	0.91	34.6
Site: 2 [East Ramps - Weekend Mid-day Peak - Wedding Day Departures]														
East: Folly Rd														
10	L2	41	2.4	41	2.4	0.028	8.0	LOS A	0.3	1.8	0.24	0.60	0.24	53.6
11	T1	237	4.6	237	4.6	1.138	321.1	LOS F	24.6	179.3	1.00	2.08	3.51	5.2
Approach		278	4.3	278	4.3	1.138	275.0	LOS F	24.6	179.3	0.89	1.86	3.03	6.8
North: Kwinana Fwy Off Ramp														
1	L2	9	0.0	9	0.0	0.009	20.2	LOS C	0.1	1.0	0.50	0.64	0.50	49.4
3	R2	1503	5.1	1503	5.1	1.115	284.4	LOS F	80.4	587.4	1.00	1.60	3.04	5.9
Approach		1512	5.0	1512	5.0	1.115	282.8	LOS F	80.4	587.4	1.00	1.59	3.02	5.9
West: Safety Bay Rd														
5	T1	88	4.5	88	4.5	0.129	25.4	LOS C	1.9	14.1	0.70	0.56	0.70	38.8
6	R2	261	5.0	261	5.0	1.076	214.5	LOS F	13.7	100.0	1.00	1.39	2.67	8.7
Approach		349	4.9	349	4.9	1.076	166.8	LOS F	13.7	100.0	0.92	1.18	2.17	10.8
All Vehicles		2139	4.9	2139	4.9	1.138	262.8	LOS F	80.4	587.4	0.97	1.56	2.89	6.6

Site Access

MOVEMENT SUMMARY

▽ Site: 3 [Site Access - Weekday AM Peak - Festival Day (Site Folder: Site Access)]

Site Category: -
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Folly Rd														
5	T1	57	0	60	0.0	0.031	0.0	LOS A	0.0	0.0	0.01	0.02	0.01	79.7
6	R2	1	0	1	0.0	0.031	8.6	LOS A	0.0	0.0	0.01	0.02	0.01	37.1
Approach		58	0	61	0.0	0.031	0.2	NA	0.0	0.0	0.01	0.02	0.01	78.7
North: Site Access														
7	L2	1	0	1	0.0	0.005	0.3	LOS A	0.0	0.1	0.17	0.07	0.17	32.9
9	R2	6	0	6	0.0	0.005	0.3	LOS A	0.0	0.1	0.17	0.07	0.17	32.8
Approach		7	0	7	0.0	0.005	0.3	LOS A	0.0	0.1	0.17	0.07	0.17	32.8
West: Folly Rd														
10	L2	6	0	6	0.0	0.074	10.0	LOS A	0.0	0.0	0.00	0.06	0.00	39.4
11	T1	120	17	126	14.2	0.074	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	79.0
Approach		126	17	133	13.5	0.074	0.5	NA	0.0	0.0	0.00	0.06	0.00	76.7
All Vehicles		191	17	201	8.9	0.074	0.4	NA	0.0	0.1	0.01	0.04	0.01	75.0

MOVEMENT SUMMARY

▽ Site: 3 [Site Access - Weekday PM Peak - Festival Day (Site Folder: Site Access)]

Site Category: -
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Folly Rd														
5	T1	147	0	155	0.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.9
6	R2	1	0	1	0.0	0.080	8.5	LOS A	0.0	0.0	0.00	0.01	0.00	37.2
Approach		148	0	156	0.0	0.080	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.5
North: Site Access														
7	L2	3	0	3	0.0	0.024	0.2	LOS A	0.1	0.4	0.18	0.10	0.18	33.0
9	R2	29	0	31	0.0	0.024	0.4	LOS A	0.1	0.4	0.18	0.10	0.18	32.8
Approach		32	0	34	0.0	0.024	0.4	LOS A	0.1	0.4	0.18	0.10	0.18	32.9
West: Folly Rd														
10	L2	1	0	1	0.0	0.055	9.9	LOS A	0.0	0.0	0.00	0.01	0.00	39.7
11	T1	94	10	99	10.6	0.055	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.8
Approach		95	10	100	10.5	0.055	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.3
All Vehicles		275	10	289	3.6	0.080	0.1	NA	0.1	0.4	0.02	0.02	0.02	71.9

MOVEMENT SUMMARY

▽ Site: 3 [Site Access - Weekend Mid-day Peak - Festival Day (Site Folder: Site Access)]

Site Category: -
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Folly Rd														
5	T1	85	11	89	12.9	0.050	0.0	LOS A	0.0	0.0	0.01	0.01	0.01	79.8
6	R2	1	0	1	0.0	0.050	8.5	LOS A	0.0	0.0	0.01	0.01	0.01	37.2
Approach		86	11	91	12.8	0.050	0.1	NA	0.0	0.0	0.01	0.01	0.01	79.1
North: Site Access														
7	L2	2	0	2	0.0	0.012	0.2	LOS A	0.0	0.2	0.16	0.07	0.16	33.0
9	R2	15	0	16	0.0	0.012	0.3	LOS A	0.0	0.2	0.16	0.07	0.16	32.9
Approach		17	0	18	0.0	0.012	0.3	LOS A	0.0	0.2	0.16	0.07	0.16	32.9
West: Folly Rd														
10	L2	1	0	1	0.0	0.055	9.9	LOS A	0.0	0.0	0.00	0.01	0.00	39.7
11	T1	93	12	98	12.9	0.055	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.8
Approach		94	12	99	12.8	0.055	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.2
All Vehicles		197	23	207	11.7	0.055	0.1	NA	0.0	0.2	0.02	0.02	0.02	73.6

MOVEMENT SUMMARY

▽ Site: 3 [Site Access - Weekend Mid-day Peak - Wedding Day Arrivals (Site Folder: Site Access)]

Site Category: -
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Folly Rd														
5	T1	147	0	155	0.0	0.091	0.1	LOS A	0.1	1.0	0.11	0.11	0.11	77.5
6	R2	20	0	21	0.0	0.091	9.0	LOS A	0.1	1.0	0.11	0.11	0.11	36.3
Approach		167	0	176	0.0	0.091	1.2	NA	0.1	1.0	0.11	0.11	0.11	71.3
North: Site Access														
7	L2	1	0	1	0.0	0.001	0.2	LOS A	0.0	0.0	0.17	0.06	0.17	32.7
9	R2	1	0	1	0.0	0.001	0.5	LOS A	0.0	0.0	0.17	0.06	0.17	32.6
Approach		2	0	2	0.0	0.001	0.4	LOS A	0.0	0.0	0.17	0.06	0.17	32.7
West: Folly Rd														
10	L2	180	0	189	0.0	0.156	10.0	LOS A	0.0	0.0	0.00	0.70	0.00	35.5
11	T1	94	10	99	10.6	0.156	0.0	LOS A	0.0	0.0	0.00	0.70	0.00	69.6
Approach		274	10	288	3.6	0.156	6.6	NA	0.0	0.0	0.00	0.70	0.00	46.0
All Vehicles		443	10	466	2.3	0.156	4.5	NA	0.1	1.0	0.04	0.48	0.04	54.3

MOVEMENT SUMMARY

▽ Site: 3 [Site Access - Weekend Mid-day Peak - Wedding Day Depatures (Site Folder: Site Access)]

Site Category: -
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Folly Rd														
5	T1	147	0	155	0.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.9
6	R2	1	0	1	0.0	0.080	8.5	LOS A	0.0	0.0	0.00	0.01	0.00	37.2
Approach		148	0	156	0.0	0.080	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.5
North: Site Access														
7	L2	20	0	21	0.0	0.148	0.3	LOS A	0.4	2.8	0.20	0.13	0.20	32.9
9	R2	180	0	189	0.0	0.148	0.4	LOS A	0.4	2.8	0.20	0.13	0.20	32.8
Approach		200	0	211	0.0	0.148	0.4	LOS A	0.4	2.8	0.20	0.13	0.20	32.8
West: Folly Rd														
10	L2	1	0	1	0.0	0.055	9.9	LOS A	0.0	0.0	0.00	0.01	0.00	39.7
11	T1	94	10	99	10.6	0.055	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.8
Approach		95	10	100	10.5	0.055	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.3
All Vehicles		443	10	466	2.3	0.148	0.2	NA	0.4	2.8	0.09	0.06	0.09	53.9

Appendix B – Vehicle Swept Paths

PROPOSED DEVELOPMENT TO EAST OF MID TREE LINE ONLY
DEMOLISH EXISTING SHED
DEAD TREE TO BE REMOVED

PROPOSED DEVELOPMENT TO EAST OF MID TREE LINE ONLY
DEMOLISH EXISTING SHED
TREE TO BE REMOVED
TREE TO BE REMOVED
TREE TO BE REMOVED
TREE TO BE REMOVED
DEAD TREE TO BE REMOVED
TREE TO BE REMOVED AS PER ARB REQUIREMENT
TREE TO BE REMOVED AS PER ARB REQUIREMENT
TREE TO BE REMOVED AS PER ARB REQUIREMENT

67 Folly Road, Baldivis

Site and Soil Evaluation

Prepared for
Jeeyars Archarya Peettam Australia Ltd

June 2022

waterinsight

Executive Summary

This Site and Soil Evaluation (SSE) has been prepared to support a Development Application for 67 Folly Road, Baldivis (the site) to confirm the sites suitability for onsite wastewater management and to provide advice relating to the required wastewater management system.

The site is 7.44 ha and is in the City of Rockingham. A reticulated sewerage service is not available at the site and an onsite wastewater management system is required.

The site is proposed to be developed into a Place of Worship and cultural centre. The site is anticipated to provide permanent accommodation for the priests, a place of worship (temple) and facilities to hold large religious events and weddings. The development plan includes.

- A Hindu Temple
- Multipurpose hall
- Dining hall
- Library
- Short stay accommodation
- Priest's Residences
- Carparking
- Landscaped gardens

The site is in the Peel Harvey Catchment and a Sewerage Sensitive Area. A secondary treatment unit (STS) (previously termed an aerobic treatment unit) with nutrient removal capabilities will be used at the site to receive and treat all wastewater generated at the site.

This SSE has been prepared in accordance with the Government Sewerage Policy (DPLH, 2019). The environmental aspects of the site in relation to sewerage collection, treatment and onsite disposal have been considered. The SSE includes a description of the

- Soil profile to a depth of 2m
- Results of soil infiltration testing
- Maximum groundwater levels

Site topography, soil type and other features affecting the design and use of an STS including the location of waterways, wetlands and drains has been assessed. This SSE demonstrates the site can accommodate a suitable wastewater management system and not impact public health or the environment.

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1 Introduction

1.1 Background

This Site and Soil Evaluation (SSE) has been prepared on behalf of Jeeyars Acharya Peettam Australia Ltd (the proponent) to support a Development Application for 67 Folly Road, Baldivis (the site, Figure 1).

The site is 7.44 ha and is in the City of Rockingham (CoR). The site is proposed to be developed into a Place of Worship and cultural centre. A reticulated sewerage service is not available at the site and an onsite wastewater management system is required.

The site is mapped as being in a Sewage Sensitive Area (Figure 2) for the following reasons

- Estuary catchment on the Swan and Scott Coastal Plain
- Within 1 km of significant wetland.

The SSE is an important part of the land development permitting process for on-site wastewater systems. The site evaluation is used to determine if site and soil conditions are suitable for installation of an on-site wastewater system, the size of the land application area and if any physical features such as waterways, drinking water bores, drainages, or wells that may require setbacks to prevent possible contamination.

1.2 Proposed Development

The site is anticipated to provide permanent accommodation for the priests, a place of worship (Hindu temple), and facilities to hold religious events and weddings. The proposed Development Plans are provided in Appendix A and include.

- A Hindu Temple
- Multipurpose hall
- Dining hall
- Library
- Short stay accommodation
- A priest's residence
- Carparking
- Landscaped gardens

Although the site is 7.44 ha, the proposed development is expected to occupy approximately 3.2 ha of the site only. The development will occur on the eastern half of the site to avoid environmental constraints including main drains, a Conservation category wetland and the 1% AEP floodplain.

1.3 Planning Context

The site is zoned Rural under the Metropolitan Region Scheme and Rural under the CoR Local Town Planning Scheme No.2 (DPLH,2004).

1.4 Guidance Documents

This report has been prepared in accordance with the Government Sewerage Policy 2019 and has been developed with reference to the following guidance documents.

- Australian Standard AS/NZS1547:2012 *On-site Domestic Wastewater Management* Australia/New Zealand Standard.
- *Guidance on Site and soil evaluation for onsite sewerage management*, Department of Health 2019
- *Government Sewerage Policy,* State Government of Western Australia 2019.

Relevant Planning Policy's applicable to the site and management of wastewater include.

- State Planning Policy 2.1 Peel Harvey Coastal Catchment, and
- State Planning Policy 2.9 Water Resources

1.4.1 Government Sewerage Policy

The Government Sewerage Policy establishes the WA Government's position on the provision of sewerage services in the State through the planning and development of land.

The Policy includes specific requirements for the onsite sewage system and disposal for developments located in the sewerage sensitive areas. The requirements that are relevant to the site include:

- The discharge point of the onsite sewage system should be at least 1.5 metres above the highest groundwater level
- The site will require an unencumbered land application area for the disposal of sewage in accordance with Schedule 2 of the Policy
- Secondary treatment systems with nutrient removal are required in sewage sensitive areas.

1.4.2 Statement of Planning Policy No.2.1

One of the objectives of the *Statement of Planning Policy No. 2.1 The Peel-Harvey Coastal Plain Catchment* is to ensure that changes to landuse within the catchment to the Peel Harvey estuarine system are controlled as to avoid and minimise environmental damage.

SPP No.2.1 includes policy provisions for several landuses including Rural residential lots over 4000m^2. The applicable provisions relating to wastewater management are discussed in Section 6.2.1 of SPP 2.1 and include:

Lots that are created in this category should only use conventional on-site effluent disposal if:

- Factors such as slope, soil type, permeability, vegetation cover and system design have been addressed (the onus of proof rests with the subdivider to justify that on-site disposal and/or any associated site modifications would be acceptable to remove any adverse effects on public health, water resources or the environment while not detrimentally impacting on the character of the area).
- There is at least 100m horizontal separation between the disposal system and the nearest water body.
- Development within public groundwater resource areas utilising on-site effluent disposal will require approval from the Water Authority of Western Australia. Disposal systems require Health Department approval.
- On-site effluent disposal will be limited to densities of no more than one effluent disposal system per hectare.
- Existing vegetation should be retained except where there are defined building envelopes, approved utility requirements and firebreaks. Where lots do not have defined building envelopes existing vegetation may be removed from an area of up to 1000m^2 for the construction of approved buildings except where special approval is granted for a greater area of clearing.

1.5 Objectives of the Site and Soil Evaluation

In line with the objectives of the Government Sewerage Policy, the objective of preparing the SSE is to.

- Demonstrate the site can manage wastewater onsite
- Protect public health and amenity
- Protect the environment and local water and land resources
- Promote efficient use of infrastructure and developable land, and
- Minimise the costs to the boarder community and proponent by ensuring an appropriate level and form of sewerage servicing is provided.

2 Existing Environment

2.1 Site Location and Landuse

The site is predominately cleared and used for rural purposes and contains two large sheds. The main large shed has a septic tank and rainwater tank. The Kwinana Freeway is west of the site, a rural business in located south of the site and rural properties are located north and east (Figure 1). Plate 1 and Plate 2 provide a typical view of the site.

Plate 1: Typical site view (from southern boundary, looking north)

Plate 2: Typical site view (centre of development area, looking northeast)

2.2 Climate

The climate in Baldivis is warm and temperate. Climate and weather statistic from the Jandakot Airport (Site No. 009172), indicates the mean maximum and minimum temperature of 31.5^{oC} and 7.1^{oC} are experienced in February and July respectively. The area receives a mean annual rainfall of 816 mm/yr.

2.3 Topography

The site is very flat and planar. For this reason, the 1m topographic contours indicate the topography at the site is approximately 4 mAHD in the west to 5 mAHD in the east (Figure 3). A feature survey, provided in Appendix B, indicates the area where the existing sheds are located has the highest elevation of 5.95 mAHD and the lowest elevation of approximately 5.04 mAHD occurs on the southeast corner of the site. The site has a change in height of 0.91m over 205m (0.44% slope).

2.4 Soil Types

2.4.1 Regional Soil Mapping

The soil types and land units are mapped on Figure 4.

The western half of the site is mapped as.

- Pj_P4: Poorly drained flats, sometimes with gilgai microrelief and with moderately deep to deep black, olive grey and some yellowish brown cracking clays and less commonly non-cracking friable clays with generally acidic subsoils

A gilgai is a small, ephemeral lake formed from a depression in the soil surface in expanding clay soils. Additionally, the term "gilgai" is used to refer to the overall micro-relief in such areas, consisting of mounds and depressions, not just the lakes themselves. The name comes from an Aboriginal word meaning small water hole. These pools are commonly a few metres across and less than 30 cm deep. Gilgais are found worldwide wherever cracking clay soils and pronounced wet and dry seasons are present.

The eastern half of the site, where development is proposed to occur mainly consists of.

- Pj_B1: Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands sometimes with a pale-yellow B horizon or a weak iron-organic hardpan at depths generally greater than 2 m; banksia dominant, and

Further details about the soil type and onsite investigations are provided in Section 3.0 Site Investigation.

2.4.2 Phosphorus Retention Index

The Phosphorus Retention Index (PRI) describes a soils ability to adsorb or 'lock up' applied phosphorus. Soils with a high PRI will quickly bind phosphorus, conversely soils with a low PRI will lock up only small amounts of phosphorus, leaving most of the phosphorus available for plant uptake or accumulation in the soil profile. Table 1 below provides an explanation of the PRI classification of the soils ability to adsorb applied phosphorus.

Table 1: PRI Classification of Western Australian Soils

PRI	Classification	Example Soil Type
<2	Very weakly adsorbing or desorbing	Grey sands, Bassendean sands, Badgingarra sands
2-5	Weakly desorbing	Grey-brown duplex, deep duplex sands, Lancelin sands
5-20	Moderately adsorbing	Grey loamy sands, yellow brown sands, Coolup loamy sands, Spearwood sands
20-70	Strongly adsorbing	Lateritic gravels and sandy loams, Kununurra clays, Darling Range gravels
>70	Very strongly adsorbing	Lateritic loams, iron rich peats, Karri loams

Soil samples from four test pits were taken to test for PRI. A drill rig was used to take a soil core to a depth of 2m to classify the soil type and soil samples were taken from each soil horizon. The test pit locations are shown on Figure 4 and the laboratory results of the soil PRI are provided in Appendix C and Table 2 below.

Table 2 indicates the soils at the site are generally very weakly to weakly desorbing. An unusual result of 989 was recorded at FR3 at a depth of 1.8m to 2.0m. These results are indicative of the Bassendean Sands on site.

Table 2: PRI Results of Onsite Soils

Site	Depth (m)		
	0-0.15	0.15 – 1.8	1.8 – 2.0
FR1	2.4	0.8	3.6
FR2	1.4	0.4	1.1
FR3	0.7	-0.2	989
FR4	-0.1	2.7	0.9

2.5 Public Drinking Water Source Areas

The Public Drinking Water Source Area (PDWSA) online mapping tool (DWER, 2021x) indicates the site is not in a PDWSA.

2.6 Wetland Mapping

The Department of Biodiversity Conservation and Attractions (DBCA,,) geomorphic wetland mapping is shown on Figure 5. Most of the site is mapped as a Multiple Use Palusplain wetland (Unique feature ID 16,021).

Folly Pool, located immediately west of the site is mapped as a Conservation category wetland (Unique Feature ID 16,015). The centre of Folly Pool is classified as a Sumpland while the perimeter of the wetland, including the portion of the wetland located nearest the site is classified as a Palusplain wetland.

Although not mapped as a wetland, there are two lying gilgai's located in the west of the site which contain water during winter.

The proposed development of the site is proposed to occur in the eastern half of the site, outside any necessary buffer to Folly Pool.

2.7 Surface Water and Flooding

There are no waterways or drains located in the site however the southern extent of Folly Pool and the Peel Main Drain is located adjacent to the site's western boundary. The Peel Main Drain flows in a southerly direction and discharges to the Serpentine River at Keralup Pool, approximately 10 km south of the site.

The Peel Main Drain typically flows between July and October each year and stops flowing during Summer and Autumn. Nutrient concentrations, both total nitrogen and total phosphorus are high due to the catchment of the PMD containing leached soils, and intensive agricultural landuses (DWER, 2018).

There are several Water Corporations drains located north and east of the site, as shown on Figure 6. The Serpentine River, Peel Main Drain and Water Corporation drains flood during major rainfall events.

The 10% Annual Exceedance Probability (AEP) and 1% AEP flood mapping at the site is provided on Figure 7. The 1% AEP flood level at the site is 5.0 mAHD and the floodplain traverses through the centre and western corner of the site.

Development of the site is proposed to occur in the eastern half of the site, outside the floodplain and is not prone to flooding.

2.8 Groundwater

2.8.1 Groundwater Licences

The online Water Register (DWER, 2021) indicates the site does not have a groundwater licence as shown in Plate 3 below.

Plate 3: Perth Groundwater Map – Minimum Groundwater Level Contours

The nearest properties with a groundwater licence are located at 574 Young Road, approximately 0.25 km north and 519 Young Road, located 0.27 km south of the site.

2.8.2 Groundwater Aquifers

The online Water Register (DWER, 2021) indicates the site is located within the Stakehill groundwater area and the Maramanup and Stakehill Confined groundwater subareas. The Superficial Swan, Leederville and Yarragadee North aquifers are present.

2.8.3 Regional Groundwater Monitoring

The Perth Groundwater Map (DWER, 2020) maximum groundwater level contours do not extend to the site. The minimum groundwater level contours extend to the site, as shown in Plate 3 which indicate the minimum groundwater level at the site is approximately 2 mAHD on the west of the site to 2.5 mAHD on the east.

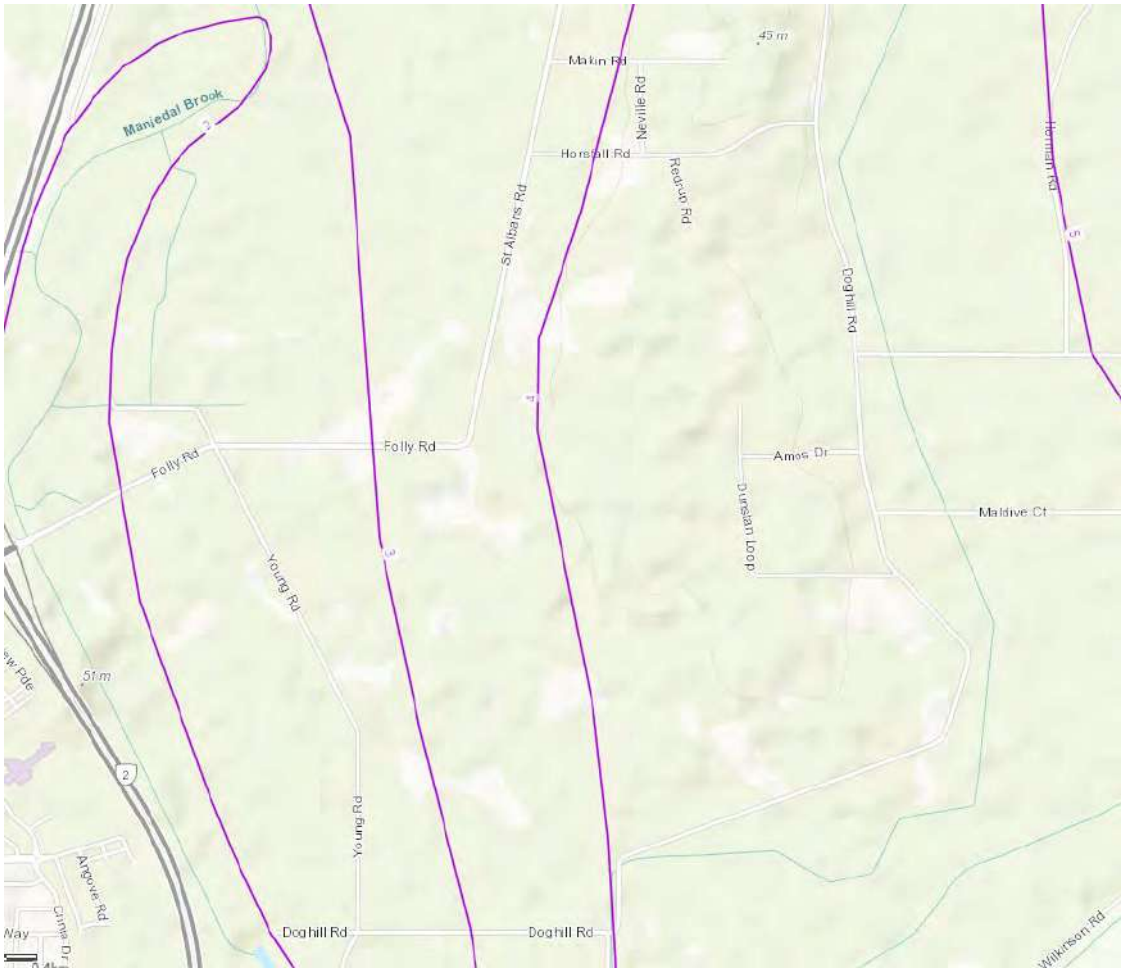

Plate 4: Perth Groundwater Map – Minimum Groundwater Level Contours

2.8.4 Local Groundwater Monitoring

During the onsite investigation completed on the 7th September 2021 (detailed further in Section 3), groundwater was encountered at 0.6 m below ground level (bgl) at FR3 and 0.8 m bgl at soil sampling location FR5 (Figure 4). Peak groundwater levels generally occur in September to October each year, these levels are therefore close to representing the peak 2021 groundwater levels.

The Water Register (DWER, 2021) indicates the nearest DWER groundwater monitoring bores are located 1.66 km south (WIN 61410478) and 2.45 km east of the site (WIN 61410093), both on Doghill Road.

WIN 61410478 has 46 years of groundwater level data from 1975 to 2021 and WIN 61410093 has groundwater levels recorded from 2011 to 2021. The water level hydrographs are provided in Appendix D.

Plate 3 and Table 1 below provides the Average Annual Maximum Groundwater Level and Maximum Groundwater Level for WIN 61410478 and WIN 61410093, and an estimated MGL for the site.

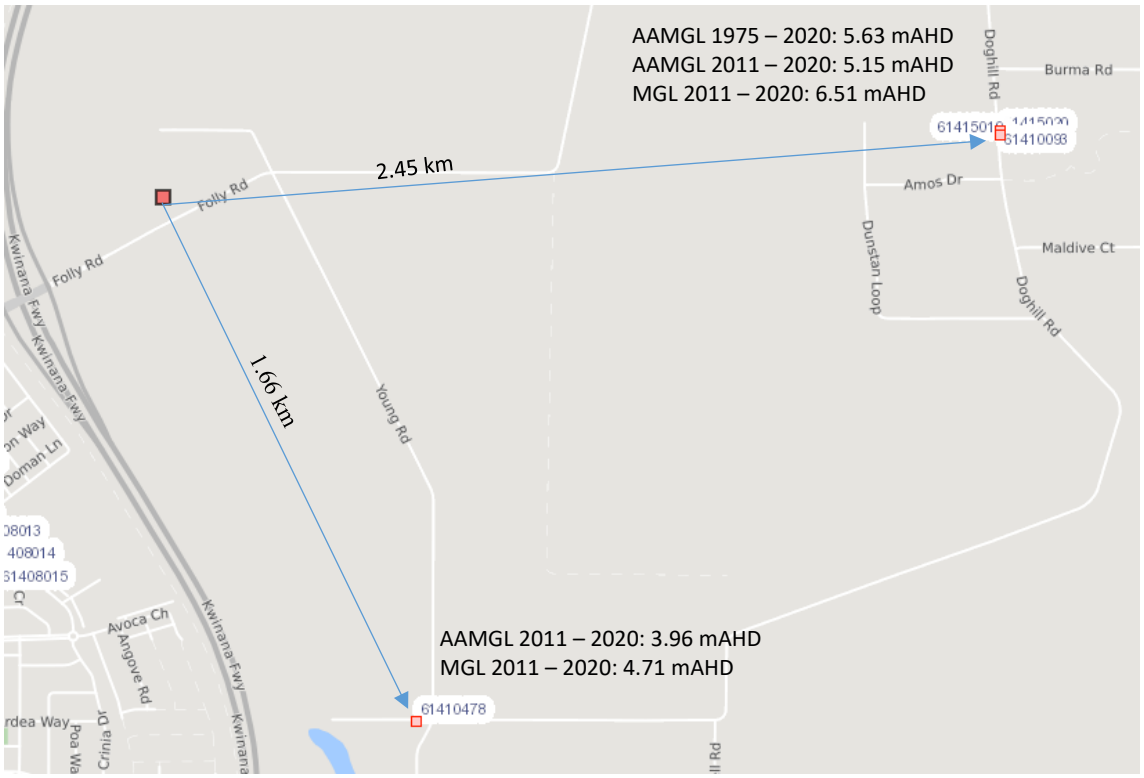

Plate 5: DWER Groundwater Monitoring Locations, AAMGL and MGL

Table 3: DWER Groundwater Monitoring Data

WIN Site	Long term AAMGL (mAHD) 1975 - 2020	10yr AAMGL (mAHD) 2011 - 2020	MGL* (mAHD)	Perth Groundwater Map (PGM) Minimum Groundwater Levels (mAHD)	Difference MGL – PGM (m)
61410478	n/a	3.96	4.71 Recorded in 2018	2.4	2.31
61410093	5.63	5.63	6.51 Recorded in 1984	4.6	1.91

*MGL 61410478 1975 – 2020 and 61410093 2011 – 2020.

2.8.5 Estimated Site Maximum Groundwater Level

Given the absence of onsite groundwater monitoring data and limited local data, an estimate of the onsite maximum groundwater levels has been derived by calculating the maximum groundwater level at the nearest DWER monitoring bores and comparing this data to the minimum groundwater contours shown at the same locations in the Perth Groundwater Map. The MGL at the DWER monitoring bores was an average of 2.11 m (2.31+1.91/2) higher than the minimum groundwater levels contours shown in the Perth Groundwater Map.

As discussed in Section 2.8.1, the minimum groundwater contours in the Perth Groundwater Map indicate the minimum groundwater level at the site is approximately 2 mAHD on the west of the site to 2.5 mAHD on the east.

The peak groundwater levels at the site are approximately 4.11m AHD on the west and centre of the site and 4.61 mAHD on the east of the site. This results in a clearance to peak groundwater levels of approximately 1.49m in the west and centre and 0.59m in the east of the site.

Winter rainfall in Baldivis in 2021 was above average. Groundwater was encountered during the site visit and on-site drilling in September at two locations (0.6 m bgl at FR3 and 0.8 m bgl at FR5 (Figure 4). Further geotechnical investigations will be completed at the site, groundwater levels will be recorded as part of this investigation and will need to be used to inform the detailed design of the wastewater system for the effluent disposal areas to achieve a minimum clearance to groundwater of 1.5m.

2.8.6 Development Assessment Panel Comments

In assessing the Development Application, the Metropolitan Outer Joint Development Assessment Panel (JDAP) raised comments in relation to the clearance to groundwater at the site and uncertainty in the information provided above in Section 2.8.4 and 2.8.5. The additional information below has been included to provide grater clarity in relation to the maximum groundwater levels at the site.

- The soil sampling and site inspection to prepare this SSE was completed on the 7th September 2021.
- Groundwater levels generally peak in September to October each year depending on the rainfall pattern during winter.
- The nearest BOM weather station located in Anketell recorded 994 mm of rainfall in 2021, the highest annual rainfall recorded for over 20 years
- Of this total, 805 mm of rainfall was recorded prior to September 2021, which is higher than the average yearly rainfall of all the proceeding years (being 790 mm)
- Therefore, the groundwater levels encountered on site on the 7th September 2021, is likely to be higher than in a typical year, and certainly a sound basis on which assumptions and design of the wastewater management system can be based
- Nevertheless, the applicant agrees to undertake groundwater monitoring prior to the wastewater management system being installed, should the DA be granted.
- The groundwater monitoring results will be provided with the *Application to Construct or Install an Apparatus for the Treatment of Sewage.*

3 Site Investigation

3.1 Site Visit

WaterInsight completed a site visit on the 7th September 2021. The proposed development is to occur on the eastern half of the site, outside the floodplain area. The site visit and soil sampling concentrated on the proposed development area only.

The soils were examined and described from 5 test sites (FR1 to FR5). Southwest Drilling used a GeoProbe drill rig to take a soil core to a depth of 2m. Due to the soil's consistency across the proposed development area, WaterInsight completed infiltration testing at three locations (FR2, FR4 and FR5). The drilling was completed easily, with no resistance and all test sites were drilled to a depth to 2m. The proposed development area did not contain fill material, gravel, or rocky outcrops. Figure 4 provides the soil sampling and infiltration test locations.

A site walk over was completed to identify any other features which may impact the use of an STS.

3.2 Soil Profile

The soil profile of each test pit is shown in Plate 6 to 10 below and the soils logs are included in Appendix E. The soil profile for all test sites was similar comprising of pale deep sands.

Test site FR1 contained a dark grey/black layer at a depth of 1.8 – 2.0 which was more prominent that at the other test locations.

The drainage of the proposed development area is classified as 'rapid draining', with no signs of localised ponding at the time of the investigation.

The soil profile can be described as:

- 0-15: SAND light grey to brown, fine to medium grained, loose, well graded, moist
- 15-1.8 SAND white, fine to medium grained, loose, well graded, moist
- 1.8-2.0 SAND dark grey to black fine to medium grained, well graded, moist.

A detailed Geotechnical Investigation will be completed as a condition of development approval to determine the site classification and site preparation requirements. The outcomes of this investigation will also be used to confirm the detailed design of the wastewater management system.

Plate 6: Test Pit FR1

Plate 7: Test Pit FR2

Plate 8: Test Pit FR3

Plate 9: Test Pit FR4

Plate 10: Test Pit FR5

3.3 Permeability Assessment

In accordance with AS/NZS1547 permeability testing was completed in the field at FR2, FR3 and FR5. Table 3 below indicates the average saturated hydraulic conductivity for the deep sands was 4.49 m/day which is representative of a 'rapidly drained' soil, (AS/NZS 1547, refer Appendix F).

Table 4: On site Permeability Test

Test Site	Field Saturated Hydraulic Conductivity (m/d)
FR2	5.86
FR3	4.23
FR5	3.37

The values of indicative permeability are based on the movement of water, not effluent through the soil. They are estimates only and shall be used with caution in assisting the determination of the Soil Category. In the field soil permeability is strongly influenced by the presence of biological channels such as root holes.

As this site is expected to be used for large functions and events, it is advised that additional permeability testing is completed at the final location of the leach drains/land application areas once detailed design of the wastewater management system has been completed.

4 Wastewater Management

4.1 Site Requirements

The Government Sewerage Policy outlines the minimum site requirements for onsite sewage disposal to protect public health and the environment. An onsite sewage system is not to be located within.

- a wellhead protection zone or on Crown land within a reservoir protection zone
- 30 metres of a private bore used for household/ drinking water purposes
- 100 metres of a waterway or significant wetland and not within a waterway foreshore area or wetland buffer.
- 100 metres of a drainage system that discharges directly into a waterway or significant wetland without treatment
- any area subject to inundation and/or flooding in a 10% AEP rainfall event.
- 1.5 metres above the highest groundwater level (in sewerage sensitive area)

Smaller setbacks may be considered where a proponent demonstrates, to the satisfaction of the responsible authority in consultation with the relevant advisory agencies (Department of Water and Environmental Regulation and/or Department of Biodiversity, Conservation and Attractions, Department of Health and/or Local Government) that the reduced setbacks will not have a significant impact on the environment or public health.

Additional setbacks to structures which impact the sizing and location of the available land application areas include.

- 1.2 metres between treatment tanks to buildings, property boundaries, driveways, paths, and other tanks
- 1.2 metres between tranches, beds and soak wells to trafficable areas
- 1.8 metres between tranches, beds and soak wells to boundary, building, tanks and other land application systems
- Sub surface dripper to
    - Boundaries, building, treatment tanks, driveways 0.5m
    - Open drain 3.0m
    - Garden bore 10m

4.2 Proposed Treatment System

As the site is in the Peel Harvey Catchment and a Sewerage Sensitive Area, and near open major drains which drain to a significant wetland. A secondary treatment system with nutrient removal will be required to treat wastewater to a higher standard and will principally be disposed via leach drains.

Secondary wastewater management systems, with nutrient removal capabilities can produce treated effluent of secondary standard, that is ≤20 mg/L of Biochemical Oxygen Demand (BOD), ≤30 mg/L of Total suspended solids (TSS) and ≤10 cfu/100 mL of *Escherichia (E) coli*.

The Department of Health have confirmed that they do not keep record of any manufacturers with approved commercial secondary treatment systems with nutrient removal capabilities (certified to AS1546.3.2017), however have advised that the manufacturers with approved domestic secondary treatment systems with nutrient removal capabilities (certified to AS1546.3.2017) should be contacted. Table 5 below provides a list of the domestic approved secondary treatment systems with nutrient removal capabilities (certified to AS1546.3.2017) that are listed on the Department of Health website (accessed December 2021). A brochure from

Table 5: Manufacturers of Domestic Approved Secondary Treatment Systems with Nutrient Removal Capabilities (certified to AS546.3.2017)

Manufacturer/Distributor	Contact Details
BioSeptic	Phone (02) 4629 6666 Email: sales@bioseptic.com.au
Biomax	Phone 9250 7733 Email: info@biomax.com.au
Everhard Industries	Phone 9417 8222 Email: waorders@everhard.com.au
Fuji Clean Australia	Phone 9561 2927 Email: dwain@fujiclean.com.au
Taylex Australia	Phone 1300 829 539 Email: info@taylex.com.au
Toowoomba Tanks	Phone (07) 4634 2860 Email: sales@tanks.com.au

Due to the treatment and disinfection process, the treated wastewater may be used for garden irrigation. In this instance however, the available unrestricted land application area is limited. Disposal of the treated wastewater via leach drains requires less space and is recommended as the primary means of disposing the treated effluent.

The site does not have a groundwater licence for irrigation and the groundwater aquifers at the site are over allocated, meaning the development may not receive a groundwater allocation for irrigation of landscaping and turf.

As a secondary treatment system with nutrient removal capabilities is being provided, the treated wastewater could be used to irrigate the landscaping and turf, instead of the water being directly infiltrated and wasted through the leach drains.

A disposal system which uses a combination of leach drains and sub surface irrigation could be investigated at the detailed design stage as a means of irrigating the proposed landscaping and turf to provide recreational areas. Groundwater levels during summer will be close to their lowest, allowing irrigation of the landscaping to occur.

4.3 Discharge Loading Rates

The site includes domestic (priests' residence) and commercial landuses. The site is expected to cater for religious festivals and weddings with a maximum of 400 guests. The weddings will likely require up to 20 catering staff. In addition, the site may be used during the day for various events, including yoga classes and use of the library or temple. The hydraulic loading assumes a further 80 people may use the venue during the day in addition to the weddings which may be held at nighttime. The commercial hydraulic load has been based on a maximum capacity of 500 persons and the short stay accommodation will be treated the same as residential homes.

Despite the Site Plans indicating the priests' residences and short stay accommodation will be 3 to 4 bedrooms, the Department of Health have been requesting that the hydraulic loading for dwellings be based on a worst case scenario of 6 people occupying a 5 bedroom residence, which results in a hydraulic loading of 900l/day (150l/person/day).

To demonstrate to the Department of Health that the site is capable of managing wastewater on site, a design hydraulic loading of 900l/day has been considered for the two priests' residence and short stay accommodation. These details however should be reassessed at the detailed design stage as part of the building application to ensure an appropriately sized wastewater management system is designed and installed to suit the dwelling to be constructed.

Table 6 below details the developments maximum daily hydraulic loading.

Table 6: Hydraulic Loading

Type of Premise	Combined Flow (L/Person/day)	Total Daily Hydraulic Load (L/day)
Domestic		
Priest residence	150	900
Sub Total Domestic		900

Type of Premise	Combined Flow (L/Person/day)	Total Daily Hydraulic Load (L/day)
Commercial		
Short stay accommodation	150	900
Place of worship (with cooking and catering facilities), temple, dining hall, multipurpose hall, library)	30	15,000
Sub Total Commercial		15,900
Total		**16,800**

The septic tank located at the existing shed will be decommissioned.

The site will use a single secondary treatment system to collect, treat and dispose of the effluent.

4.4 Disposal Area

While secondary treated effluent has undergone chlorination and is treated to a higher standard than septic tank effluent, it can still contain pathogenic microorganisms some of which are chlorine resistant. Therefore, the effluent:

- is unsuitable for human contact or consumption
- must only be used on a dedicated irrigation area
- must not be surface irrigated on areas such as lawns or areas used for recreational purposes; and
- is unsuitable for irrigation onto vegetable gardens or food crops.

If the effluent is used for irrigation, the irrigation area (size and location) forms part of the approved wastewater system. It is illegal for owners to modify the location or size of the approved irrigation area without approval from the local government.

Irrigation areas must:

- have warning signs displayed advising that effluent is being used and is not suitable for human contact or consumption
- achieve minimum setbacks from certain features such as buildings, boundaries and paved areas, to avoid human exposure to the effluent
- not be altered or reduced in size without approval
- be looked after so that irrigation lines are accessible for maintenance
- be planted out with salt and nutrient resistant plants to avoid puddling or run off of effluent.

Activities within the land application area shall not interfere with the function of the current and future land application system and people should avoid potential contact with effluent residues. Unless allowed for in the design, the land application area) should:

- not be built on or paved in a manner which precludes reasonable access
- not be subject to vehicular traffic (other than a pedestrian-controlled lawnmower)
- not be subject to regular foot traffic such as pathways and clothesline areas; and
- should be kept in a manner which enables servicing and maintenance of the disposal area

4.5 Land Application Area

4.5.1 Flatbed Leach Drains

Due to the scale of the development, flat bed leach drains are recommended to dispose of the treated effluent as they require less space to infiltrate the effluent, when compared to surface or sub surface irrigation.

As mentioned, a combination of leach drains and sub surface irrigation could be considered at the detailed design stage to provide irrigation water for the proposed landscaping.

For secondary treated effluent, the following calculation is used to determine the length of leach drains required for both domestic and commercial applications.

- Land application area for leach drains (m2) in sand, gravel and loam soils is:

= Hydraulic loading (L/day) ÷ 50 ÷ IA

The IA of Atlantis Corporation flatbed leach drains = 2.6 m2/m.

The IA of leach drains varies depending on the manufacturer chosen and the land application area will need to be calculated to suit the leach drains used, a list of the approved leach drains is available on the Department of Health website (https://ww2.health.wa.gov.au/Articles/A_E/Approved-leach-drains).

The minimum length of leach drains required to dispose of the effluent via leach drains is 129 m (16,800 l/day ÷ 50 ÷ 2.6).

A minimum of two rows of leach drains are required to allow for maintenance to be completed. The leach drains are 2.5m wide and require 1.8m separation between each bed.

The possible configuration of leach drains would be 7 drains x 20m long. The footprint required for installation is approximately 29m x 20m, plus setback clearances. The leach drains will need to be semi inverted to achieve a clearance of 1.5m to the maximum groundwater level year-round.

4.5.2 Irrigation

Irrigation requires significantly larger land application areas than leach drains to dispose of the effluent. As mentioned the site could use a combination of leach drains and irrigation including shallow subsurface drip irrigation and covered surface drip irrigation.

The Government Sewerage Policy provides the following calculation to determine the required irrigation land application area as follows:

- Land application area for irrigation (m2)

= hydraulic load (L/day) X conversion factor for the soil texture.

The conversion factor for secondary treated effluent for gravels and sands and sandy loams is 0.2.

The minimum application area required to dispose of the treated effluent via irrigation alone is 3,360m^2 excluding setbacks) (16,800 l/day x 0.2).

A summary of the above information is provided in Table 7.

Table 7: Wastewater Management Summary

Discharge Rate L/day	Proposed System	Disposal Area	
		Irrigation (m^2)	*Leach Drains (m)
16,800	Secondary with nutrient removal	3,360	129 (Footprint of 29m x 20m)

***The length of the leach drains will vary slightly depending on the type of leach drain used**

An *Application to Construct or Install An Apparatus for the Treatment of Sewerage* will need to be submitted to the City of Rockingham by the lot owners following detailed design to specify the final design and wastewater management system to be installed.

4.5.3 Indicative Disposal Area

Figure 8 and the Site Plans (Appendix A) have been revised to illustrate that the flat bed leach drains are proposed to be located west of the main temple to effectively screen the wastewater system from view of neighbours. The wastewater management system will be shielded from view by surrounding buildings and vegetation. The leach drains will be located on the higher area of the site to achieve clearance to groundwater and comply with the required buffers, including providing a 100m buffer to the Water Corporation drains, Folly Pool and the Peel Main Drain.

The feature survey indicates the ground level at the proposed leach drain location is 5.47 mAHD. The maximum groundwater level observed on the 7th September was 4.70 mAHD. A partially inverted leach drain will be required to ensure the base of the leach drains achieves a clearance

to peak groundwater of 1.5m. It is estimated that approximately 730 mm of fill will be required to achieve a clearance of 1.5 m.

An amended soil with a minimum PRI of 15 will be applied to the base of the leach drains to assist with nutrient retention. The amended soil however will need to be free draining to allow the treated wastewater to infiltrate.

5 References

CoTerra Environment (2021) Environmental Assessment Report – 67 Folly Road, Baldivis

Department of Health (2015). *Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatments Units (ATU's) Serving Single Dwellings*

Department of Planning, Lands and Heritage (2019). *Map of Sewage Sensitive Areas.*

Department of Planning, Lands and Heritage (2004). *City of Rockingham Town Planning Scheme No. 2.*

Department of Water and Environmental Regulation (2018). Peel Main Drain. Peel-Harvey estuary catchment nutrient report 2018.

Department of Water and Environmental Regulation. (2019). *Water Information Reporting.*

Department of Water and Environmental Regulation (2020). *Perth Groundwater Map.* Government of Western Australia, Perth, Western Australia.

Department of Water and Environmental Regulation. (2021). *Water Register.*

Landgate (2021). Shared Land Information Platform – Locate V5. Government of Western Australia, Perth, Western Australia.

State Government of Western Australia (2019). Government Sewerage Policy.

Figures

Legend

- Lot Boundary
- Cadastral Lines

N

0 60 120 180 240 300 m

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1:5,000 @ A4 Date: 20/09/2021

waterinsight
W: www.waterinsight.net.au
E: kelly@waterinsight.com.au
P: +61 411 354 463

Site Boundaries: Landgate
Imagery: Landgate/ESRI
GDA 1994 MGA Zone 50

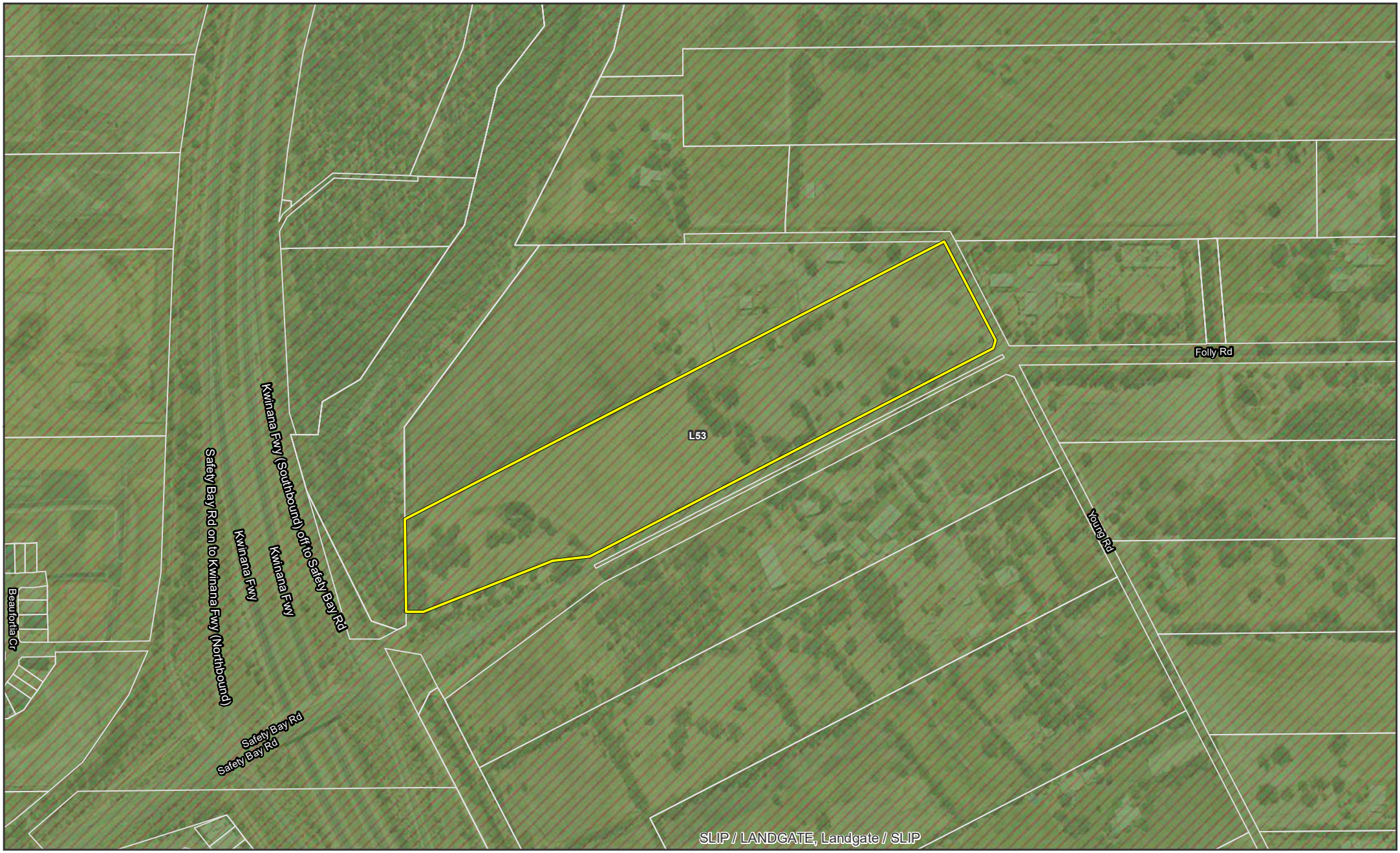
NOTE: All areas and dimensions are subject to survey, engineering and detailed design and may change without notice.

SITE AND SOIL EVALUATION

67 Folly Road, Baldivis

Figure 1

Site Location



Legend

- Lot Boundary
- Cadastral Lines

Government Sewerage Policy (DPLH-062)

- a) Estuary catchments on the Swan and Scott Coastal Plains
- f) Within 1km of significant wetlands

N

0 60 120 180 240 300 m

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SITE AND SOIL EVALUATION

67 Folly Road, Baldivis

Figure 2

Sewerage Sensitive Area Mapping

Legend

- Lot Boundary
- Cadastral Lines
- Contours 1m interval (mAHD)

N

0 60 120 180 240 300 m

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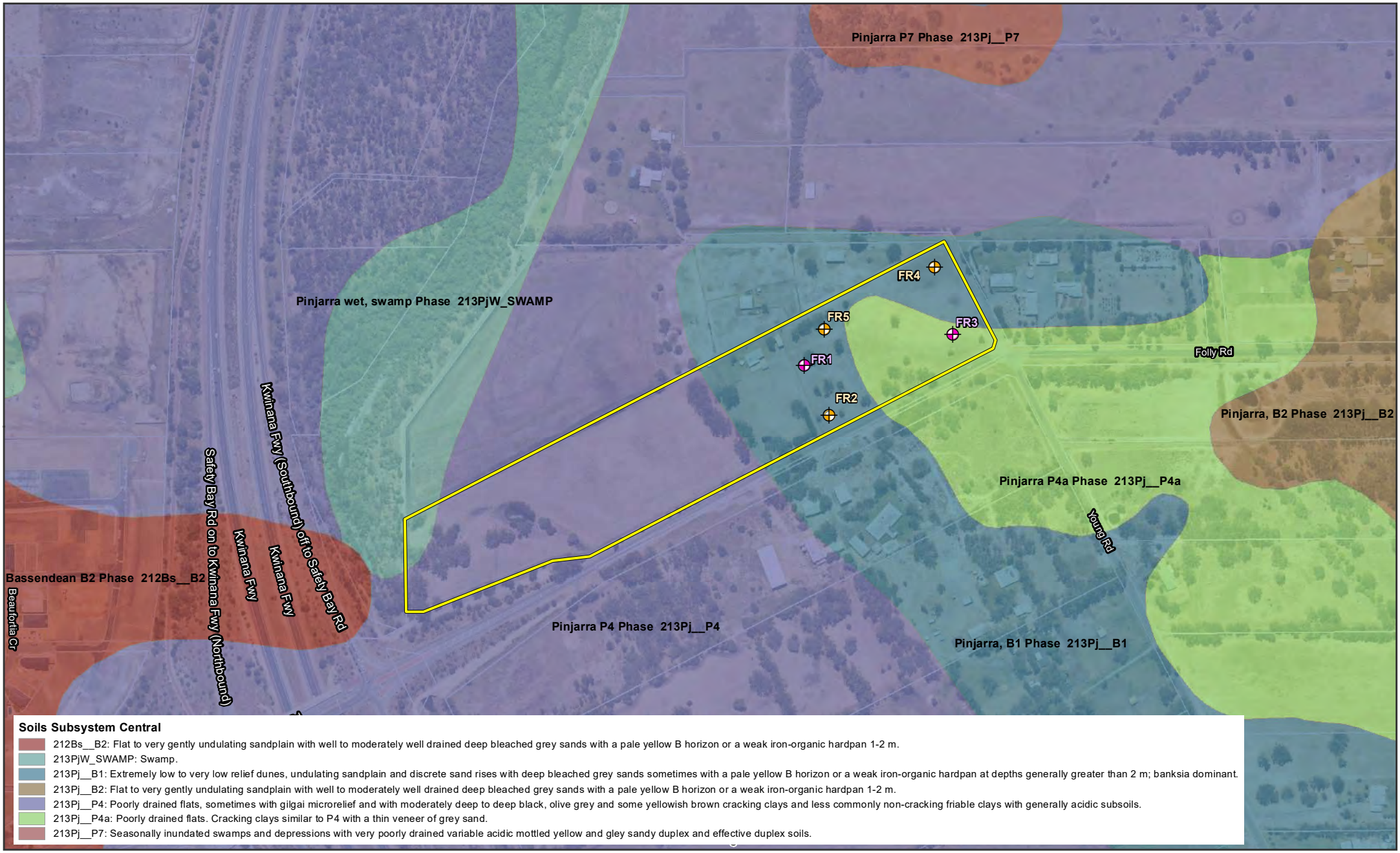
SITE AND SOIL EVALUATION

Balaji Temple and Cultural Centre
67 Folly Road, Baldivis

Figure 3

Topography



Soils Subsystem Central

- 212Bs__B2: Flat to very gently undulating sandplain with well to moderately well drained deep bleached grey sands with a pale yellow B horizon or a weak iron-organic hardpan 1-2 m.
- 213PjW_SWAMP: Swamp.
- 213Pj__B1: Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands sometimes with a pale yellow B horizon or a weak iron-organic hardpan at depths generally greater than 2 m; banksia dominant.
- 213Pj__B2: Flat to very gently undulating sandplain with well to moderately well drained deep bleached grey sands with a pale yellow B horizon or a weak iron-organic hardpan 1-2 m.
- 213Pj__P4: Poorly drained flats, sometimes with gilgai microrelief and with moderately deep to deep black, olive grey and some yellowish brown cracking clays and less commonly non-cracking friable clays with generally acidic subsoils.
- 213Pj__P4a: Poorly drained flats. Cracking clays similar to P4 with a thin veneer of grey sand.
- 213Pj__P7: Seasonally inundated swamps and depressions with very poorly drained variable acidic mottled yellow and gley sandy duplex and effective duplex soils.

Legend

- Lot Boundary
- Cadastral Lines
- Soil Sampling Location
- Soil Sampling and Infiltration Test Location

N

0 60 120 180 240 300 m

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Site Boundaries: Landgate
Imagery: Landgate/ESRI

GDA 1994 MGA Zone 50

NOTE: All areas and dimensions are subject to survey, engineering and detailed design and may change without notice.

SITE AND SOIL EVALUATION

Balaji Temple and Cultural Centre
67 Folly Road, Baldivis

Figure 4

Soil Type and Sampling Locations

Legend

- Lot Boundary
- Cadastral Lines

Geomorphic Wetlands Swan Coastal Plain DBCA_019

- Conservation
- Resource Enhancement
- Multiple Use

N

0 60 120 180 240 300 m

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GDA 1994 MGA Zone 50

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SITE AND SOIL EVALUATION

Balaji Temple and Cultural Centre
67 Folly Road, Baldivis

Figure 5

Wetland Mapping

Legend

Lot Boundary

Hydrography

Watercourse - minor

Drain - major (Water Corporation)

Area Subject to Inundation

N

0 60 120 180 240 300 m

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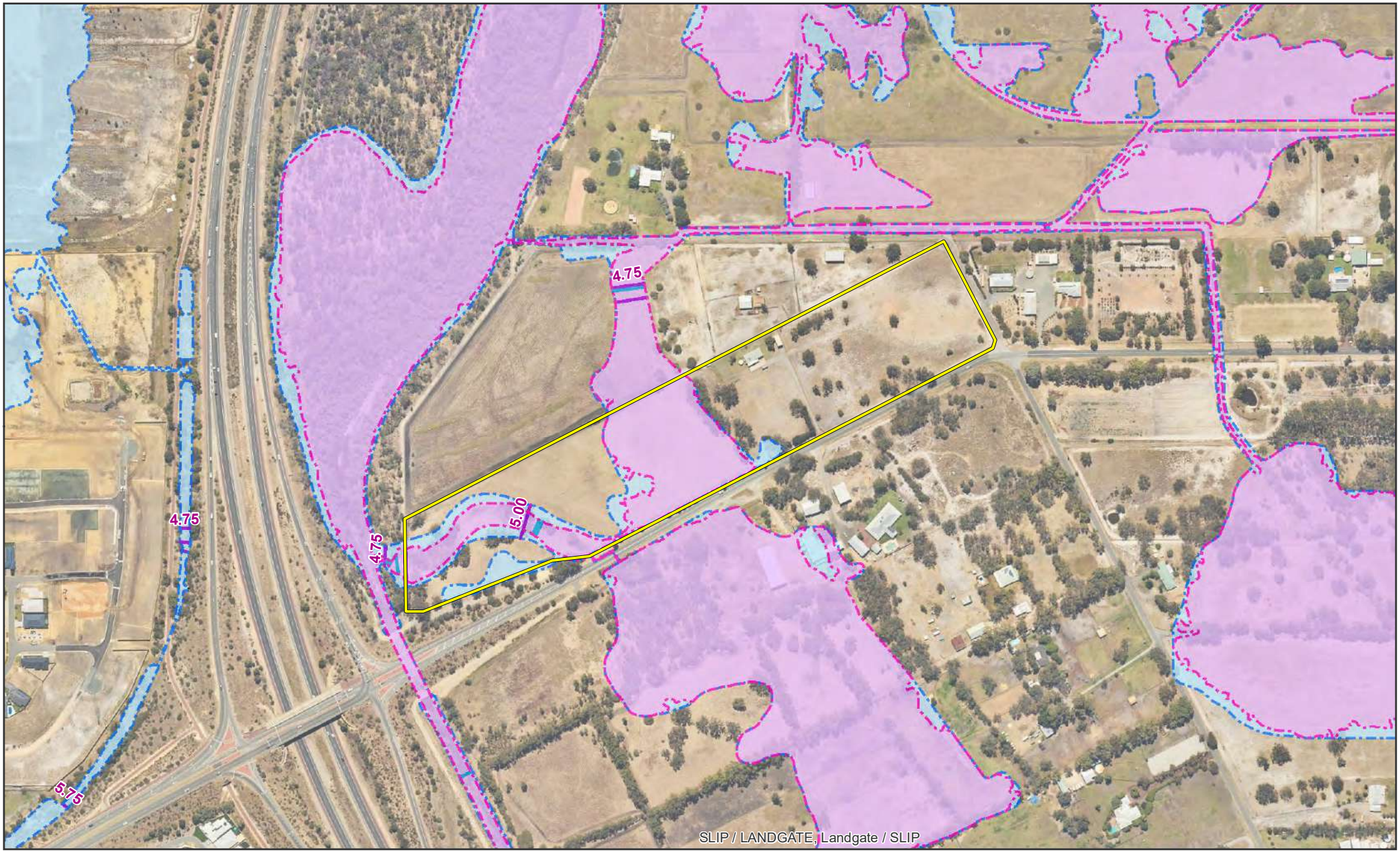
SITE AND SOIL EVALUATION

Balaji Temple and Cultural Centre
67 Folly Road, Baldivis

Figure 6

Hydrological Features



Legend

Lot Boundary

Floodplain Area (DWER-020)

1 in 10 (10%) AEP floodplain

1 in 100 (1%) AEP floodplain

Flood Level Contours (m AHD) (DWER-018)

1 in 10 (10%) AEP flood level contour

1 in 100 (1%) AEP flood level contour

N

0 60 120 180 240 300 m

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P: +61 411 354 463

Site Boundaries: Landgate
Imagery: Landgate/ESRI

GDA 1994 MGA Zone 50

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Site and Soil Evaluation

Balaji Temple and Cultural Centre
67 Folly Road, Baldivis

Figure 7

Flood Mapping

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1:5,000 @ A4

Date: 21/09/2021

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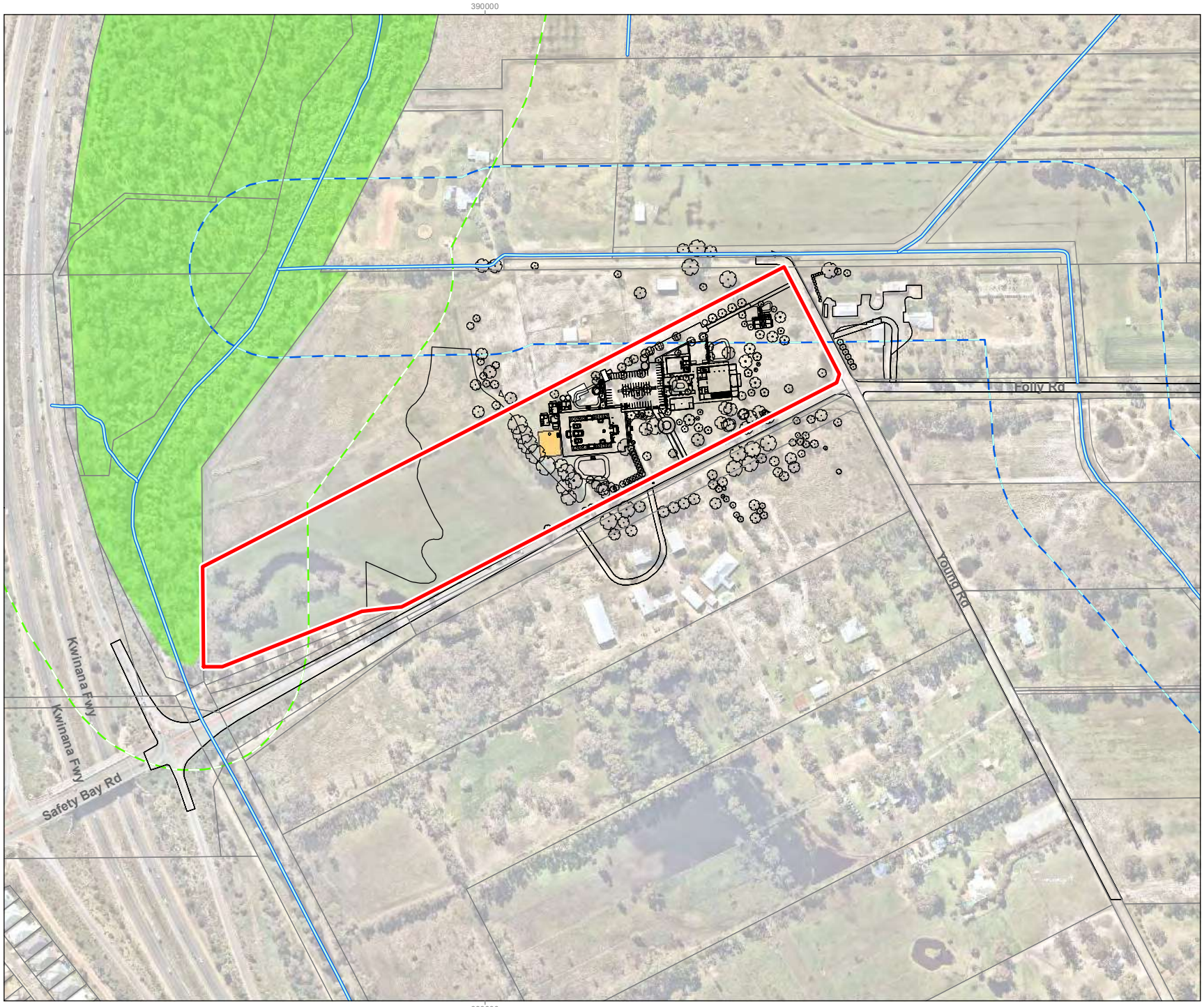

Legend

- Site Boundary
- Cadastre
- Proposed Development
- Indicative Leach Drain Location (24m x 20m)
- Folly Pool - Conservation Category Wetland
- 100m Folly Pool CCW Buffer
- Drainage - Open Channel
- 100 m Peel Drain Buffer

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS
- CADASTRE SOURCED LANDGATE 2021
- AERIAL PHOTOGRAPHY SOURCED NEARMAPS 13.08.21

waterinsight

0 37.5 75 150 N

Metres

Scale: 1:5,000 @ A4

LOCALITY MAP

CREATED	JOB	DATE	REVISION
ENVIRONMAPS	2130	9/06/2022	0

SITE AND SOIL EVALUATION

Balaji Temple and Cultural Centre
67 Folly Road, Baldivis

FIGURE 8

INDICATIVE LAND APPLICATION AREAS

ENVIRONMAPS Environmental Mapping Solutions | t: 0406 590 006 | www.environmaps.com.au

C:\GIS\Jobs\Water Insight\2130 - Folly Rd, Baldivis\Figures\2130_F08 Indicative Land Application Areas_220609.mxd

Appendices

Appendix A
Development Plans

LEGEND

- EXISTING TREES
- NEW TREES
- FULLY ENCLOSED COVERED AREA
- VERANDAH UNDERCOVER
- EXTERNAL PAVING
- BITUMENISED ROAD/CAR PARKING
- 4m WIDE FIREBREAK

SCALE OF METERS

0 10 50 100 200

N

SITE PLAN: TOTAL LOT 1:1000 (@ A1)

archetype
|design studio|

architecture - interiors - feng shui
level 12, 68 St Georges Terrace Perth WA 6000
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6. Contractor shall carry out works in accordance with Council Building License and conditions stipulated thereon
7. Contractor shall carry out works in accordance with requirements of Western Power with respect the easements on the site.
8. Contractor is advised that the site is a Registered Aboriginal Heritage Site to which the Aboriginal Heritage Act and all its legal requirements apply.
9. Contractor is to strictly adhere to Recommendations made in the Anthropological Report prepared by De Gand Pty Ltd May 2011

Revision	Description	Date
REV 0	DEVELOPMENT APPLICATION SUBMISSION	DEC 2021
REV 1	AMENDMENTS IN RESPONSE TO COUNCIL + PUBLIC QUERIES/COMMENTS	FEB 2022
REV 2	AMENDMENTS IN RESPONSE TO RESPONSIBLE AUTHORITY REPORT	MAY 2022
REV 3	AMENDMENTS IN RESPONSE TO MOJDAP	MAY19TH 2022
REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31st 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
SITE PLAN 1.1000

Scale :
Status: #Project Status

Drawing N0
02

Date issued: Tuesday, 31 May 2022
Time 4:47 pm Revision : 1

PROPOSED DEVELOPMENT EAST OF MID TREE LINE 1:500 (@ A1)

LEGEND

- EXISTING TREES
- NEW TREES
- FULLY ENCLOSED COVERED AREA
- VERANDAH UNDERCOVER
- EXTERNAL PAVING
- BITUMENISED ROAD/CAR PARKING
- 4m WIDE FIREBREAK

SCALE

0m 10m 50m

N

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|design studio|
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REV 2	AMENDMENTS IN RESPONSE TO RESPONSIBLE AUTHORITY REPORT	MAY 2022
REV 3	AMENDMENTS IN RESPONSE TO MOJDAP	MAY19TH 2022
REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31ST 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
SITE PLAN 1.500

Scale :
Status: #Project Status

Drawing N0
03

Date issued: Tuesday, 31 May 2022
Time 4:46 pm Revision : 1

VISUAL LANDSCAPE STRATEGY

The proposed planting combination of trees and understory shrubs and bushes along the boundary of the proposed APZ, provides continuous natural planted screening and as such, obscures buildings, cars, people and activities at the temple development. The planted screening along all four sides of the development and improves the visual amenity of the proposal from both the roads and neighbouring properties.

LEGEND

Ai Combination planting consisting of:
- native trees > 5m height (ranging 6m-20m height) Type T1-T7
- native trees < 5m height Type T8
- native shrub < 2m height

Aii Tree planting to obscure view of temple from Folly Road approach

Aiii Managed hedge, single row excludedfrom APZ.
Dense mature hedge to prevent car headlights projecting onto neighbouring property + screen visual sight-lines into development

Aiv Mature dense hedge planted in naturalistic manner to prevent car headlights projecting onto neighbouring property + screen visual sight-lines into development

Ci Planting around the immediate vicinity of Temple into planter beds located within the temple perimeter 'fence'. Lower ornamental flowering shrubs and hedge bushes will be selected

Cii Planting of shrubs organically at outside perimeter of East side 'fence' of Temple and wrapping around to the south of the covered walkway on main carpark. Some smaller native trees will be incorporated.

Ciii The courtyard North of the main Temple will have an organically structured planted perimeter and grassed open space. A large water feature is also part of this garden experience and its location and symbol holds sacred value to this development. It will be chlorinated and moving water.

Cv Main courtyard of secular buildings is proposed as grass. A small water feature is proposed

Cvi Planting in the north aspect of the Multi-purpose hall to beautify the outlook will use grass and edge planting to create some sense of containment to the open space.

Cvii Planting at the entry and to the north aspect of the Guest Accommodation to create a sense of enclosure and privacy

PROPOSED TREES (> 5m in height)
New tree canopies will not exceed 15% of APZ area at maturity
New tree canopies will be minimum 5m clear between each tree
Trunks will be kept at minimum 6m clearance from buildings
Branches at maturity will not reach or overhang buildings

PROPOSED SHRUB (0.5m - 5m in height)
Will not be located under trees or within 3m of buildings
Will not be planted in clumps greater than 5m²
Clumps of shrubs will be 10m clear between each clump

PROPOSED HEDGE (max 2m height)

EXISTING TREES (OVER 5m HEIGHT)

TREES TO BE REMOVED

PROPERTY BOUNDARY
EXTERNAL PAVING
VERANDAH UNDERCOVER
GRAVEL, LASERITE ASPHALT ROAD/CARPARK
FULLY ENCLOSED COVERED AREA
FIREBREAK
GARDEN BEDS AND EDGE PLANTS
GROUND COVERS/GRASS
CARPARK SWALE
EXTENT OF ASSET PROTECTION ZONE (APZ)

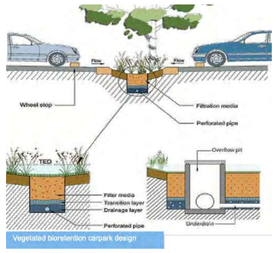
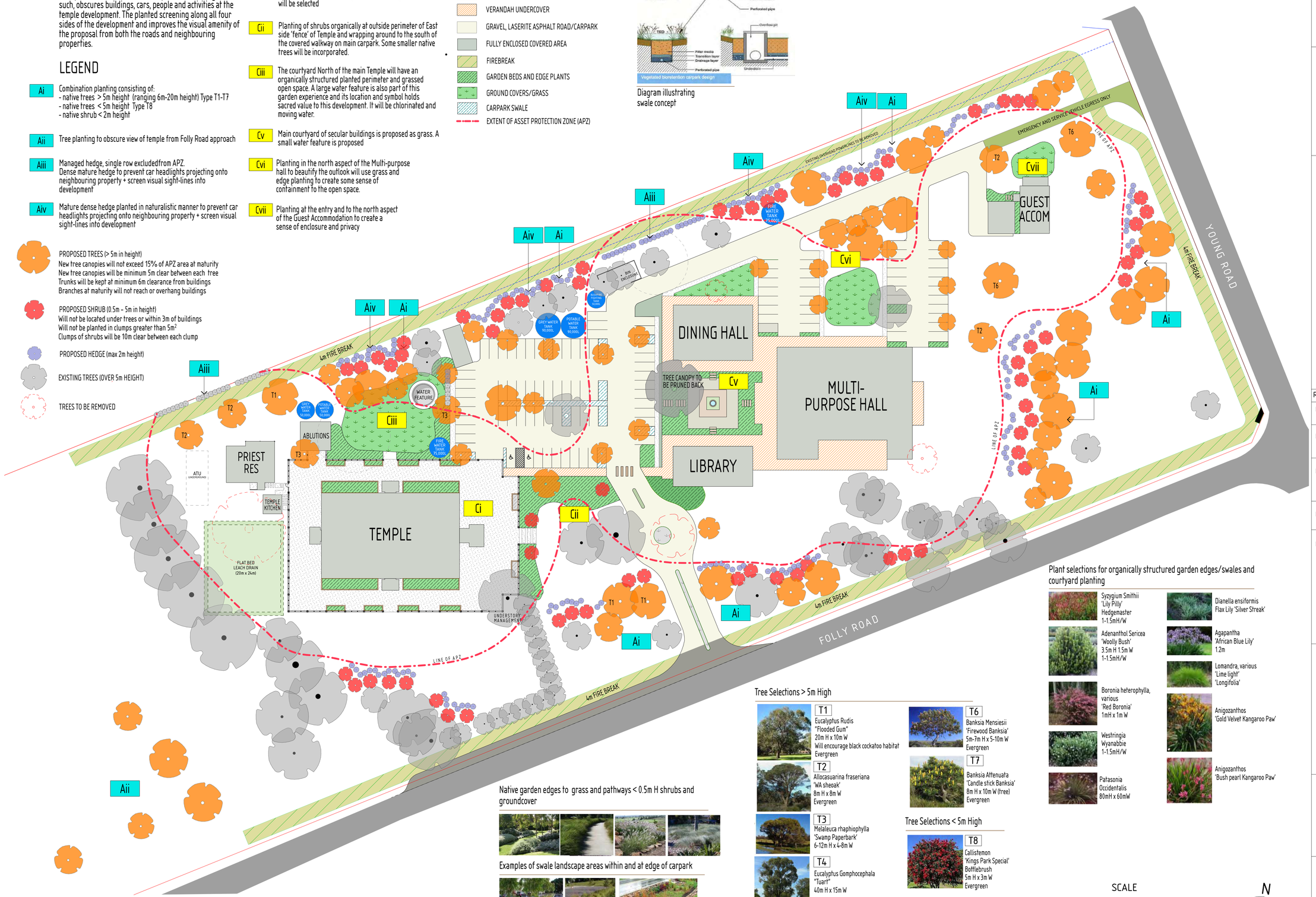


Diagram illustrating swale concept



LANDSCAPE PLAN 1:500 (@ A1)

Native garden edges to grass and pathways < 0.5m H shrubs and groundcover

Examples of swale landscape areas within and at edge of carpark

Tree Selections > 5m High

T1 Eucalyptus Rudis
"Flooded Gum"
20m H x 10m W
Will encourage black cockatoo habitat
Evergreen

T2 Allocasuarina fraseriana
'WA sheoak'
8m H x 8m W
Evergreen

T3 Melaleuca rhaphiophylla
'Swamp Paperbark'
6-12m H x 4-8m W

T4 Eucalyptus Gomphocephala
"Tuart"
40m H x 15m W

T5 Eucalyptus Marginata
"Jarrah"
40m H x 15m W

T6 Banksia Mensiesii
'Firewood Banksia'
5m-7m H x 5-10m W
Evergreen

T7 Banksia Attenuata
'Candle stick Banksia'
8m H x 10m W (tree)
Evergreen

Tree Selections < 5m High

T8 Callistemon
'Kings Park Special'
Bottlebrush
5m H x 3m W
Evergreen

Plant selections for organically structured garden edges/swales and courtyard planting

Syzygium Smithii
'Lily Pilly'
Hedgemaster
1-1.5mH/W

Adenanthol Sericea
'Woolly Bush'
3.5m H 1.5m W
1-1.5mH/W

Boronia heterophylla, various
'Red Boronia'
1mH x 1m W

Westringia
Wyanabbie
1-1.5mH/W

Patasonia
Occidentalis
80mH x 60mW

Dianella ensiformis
Flax Lily 'Silver Streak'

Agapantha
'African Blue Lily'
1.2m

Lomandra, various
'Lime light'
'Longifolia'

Anigozanthos
'Gold Velvet Kangaroo Paw'

Anigozanthos
'Bush pearl Kangaroo Paw'

SCALE
0m 10m 50m

N

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|design studio|
architecture - interiors - feng shui
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REV 3	AMENDMENTS IN RESPONSE TO MOJDAP	MAY19TH 2022
REV 4	AMENDMENTS IN RESPONSE TO DRP	MAY 31ST 2022

Project :
SRI BALAJI TEMPLE DEVELOPMENT

Site Address :
67 FOLLY ROAD,BALDIVIS

Client :
JAPA PTY LTD.

Drawing Title:
LANDSCAPE PLAN

Scale :
Status: #Project Status

Drawing N⁰
09

Date issued: Tuesday, 31 May 2022
Time 4:51 pm Revision : 1

Appendix B
Feature Survey

COTTAGE SURVEYS

87-89 Guthrie Street
Osborne Park, WA 6017

PO Box 1611
Osborne Park
Business Centre WA 6917

P: (08) 9446 7361
E: perth@cottage.com.au
W: www.cottage.com.au

JOB #	507054	**GPS**	Lat: -32.324566 Long: 115.833514	**ROADS**	Bitumen	**ELEC.**	O/Head
				KERBS	Semi-Mount / Nil	**COMMS.**	Yes
ADDRESS	#67 Folly Road	**LOT**	Lot 53 (DP 61344)	**FOOTPATH**	Nil	**WATER**	Check Owner
SUBURB	Baldivis			**SOIL**	Sand	**GAS**	Check Alinta
LGA	CITY OF ROCKINGHAM	**AREA**	7.4362ha **VOL.** 2793 **FOL.** 800	**DRAINAGE**	Good	**SEWER**	Nil
DRAWN	B. Saliba	**DATE**	18 Aug 21 **SSA** No	**VEGETATION**	Refer to Survey	**COASTAL**	No

(Approximate Only Confirm With Shire)

LEGEND

	Power Dome
	Power Pole
T C	Phone Pits
W	Water Conn.
TP 10.00	Top Pillar/Post
TW 10.00	Top Wall
TR 10.00	Top Retaining
TF 10.00	Top Fence

LOT MISCLOSE
0.104 m

DISCLAIMER:
Lot boundaries drawn on survey are based on landgate plan only. Survey does not include title search and as such may not show easements or other interests not shown on plan. Title should be checked to verify all lot details and for any easements or other interests which may affect building on the property.

DISCLAIMER:
Survey does not include verification of cadastral boundaries. All features and levels shown are based on orientation to existing pegs and fences only which may not be on correct cadastral alignment. Any designs based or dependent on the location of existing features should have those features' location verified in relation to the true boundary.

DISCLAIMER:
Survey shows visible features only and will not show locations of underground pipes or conduits for internal or mains services. Verification of the location of all internal and mains services should be confirmed prior to finalisation of any design work.

DISCLAIMER:
Cottage & Engineering surveys accept no responsibility for any physical on site changes to the parcel or portion of the parcel of land shown on this survey including any adjoining neighbours levels and features that have occurred after the date on this survey. All Sewer details plotted from information supplied by Water Corporation.

Scale 1:200
0 2 4 6 8

BEWARE: POSSIBLE SERVICE RUN IN & COST

Appendix C
PRI Laboratory Analysis

Analysis Results

CSBP Soil and Plant Laboratory

97227
Water Insight Pty Ltd

Lab No	4IS21053	4IS21054	4IS21055	4IS21056	4IS21057	4IS21058	4IS21059	4IS21060
Name	FR1	FR1	FR1	FR2	FR2	FR2	FR3	FR3
Code	0-0.15	0.15-1.8	1.8-2.0	0-0.15	0.15-1.8	1.8-2.0	0-0.10	0.10-1.8
Customer	Water Insight Pty Ltd	Water Insight Pty Ltd	Water Insight Pty Ltd	Water Insight Pty Ltd	Water Insight Pty Ltd	Water Insight Pty Ltd	Water Insight Pty Ltd	Water Insight Pty Ltd
Depth	0-10	0-10	0-10	0-10	0-10	0-10	0-10	0-10
Phosphorus Retention Index	2.4	0.8	3.6	1.4	0.4	1.1	0.7	-0.2

CSBP Lab. Extract Value.

Analysis Results

CSBP Soil and Plant Laboratory

Lab No	4IS21061	4IS21062	4IS21063	4IS21064
Name	FR3	FR4	FR4	FR4
Code	1.8-2.0	0-0.15	0.15-1.8	1.8-2.0
Customer	Water Insight Pty Ltd	Water Insight Pty Ltd	Water Insight Pty Ltd	Water Insight Pty Ltd
Depth	0-10	0-10	0-10	0-10
Phosphorus Retention Index	989.0	-0.1	2.7	0.9

CSBP Lab. Extract Value.

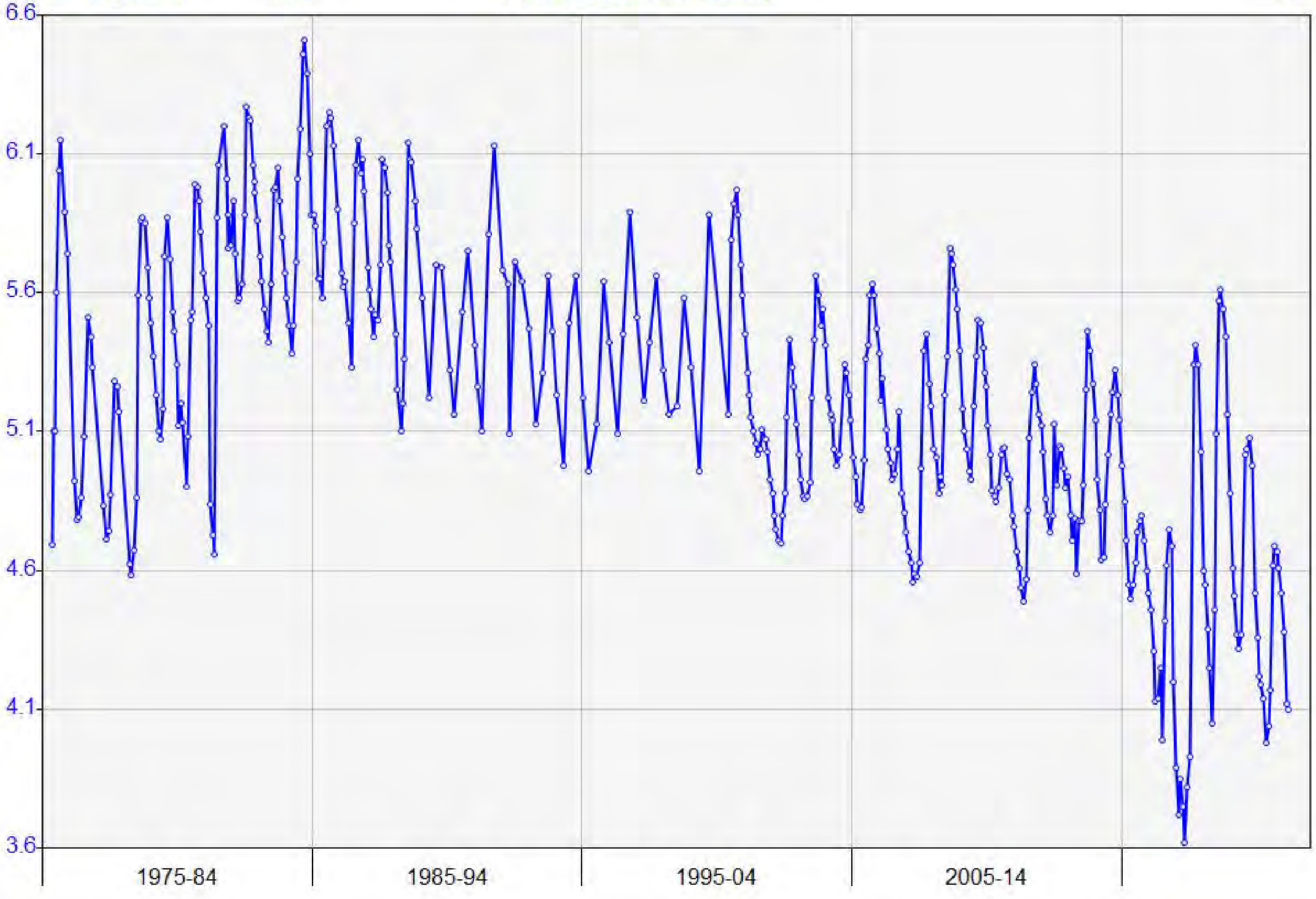
Appendix D
WIN Bore Hydrographs

Department of Water and Environmental Regulation

HYPLOT V134 Output 06/03/2021

Period 47 Year 01/01/1975 to 01/01/2022 1975-2021

61410093 T350 115.00 Water Level (mAHD) GW

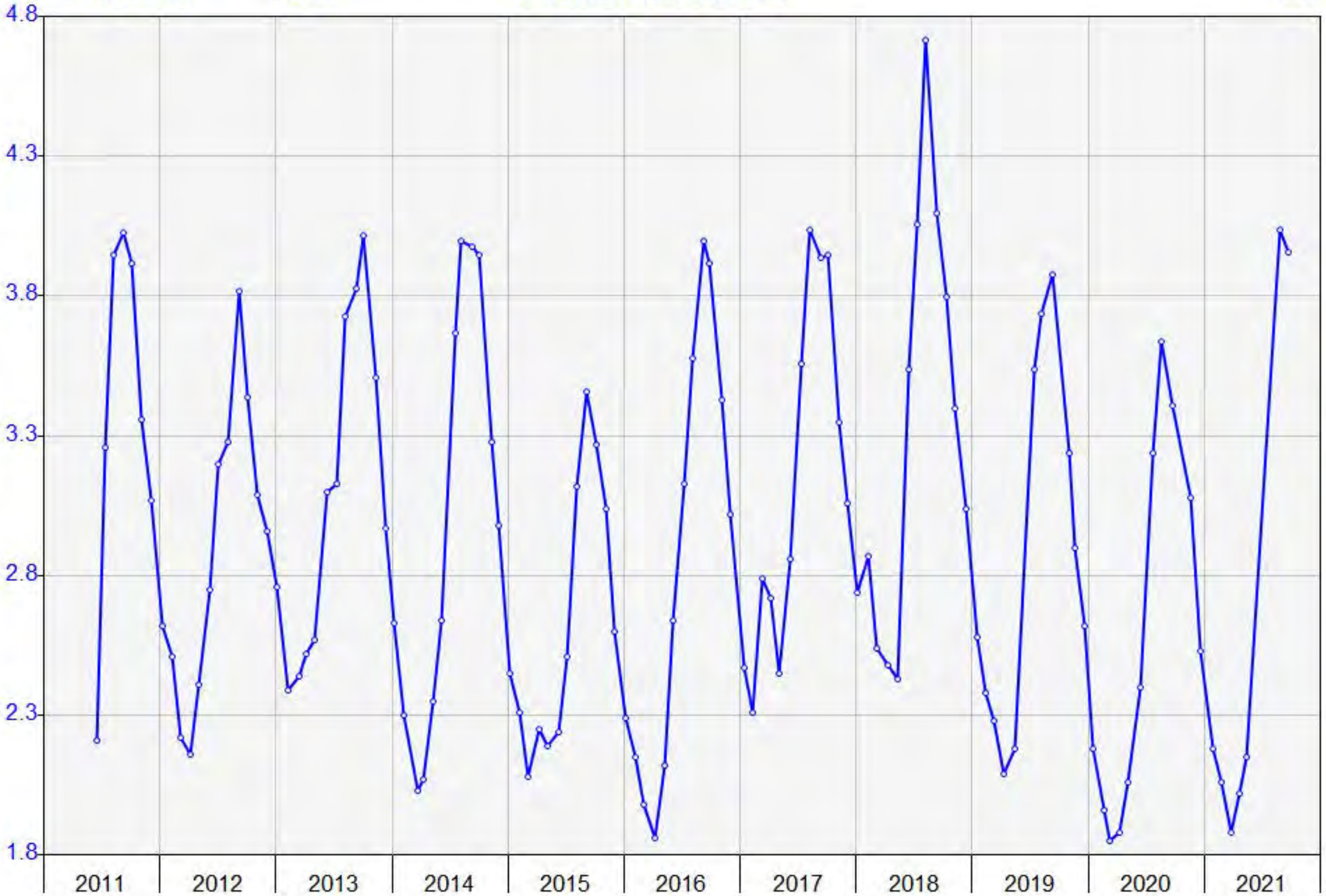


Department of Water and Environmental Regulation

HYPLOT V134 Output 24/09/2021

Period 11 Year 01/01/2011 to 01/01/2022 2011-21

61410478 SSB4 115.00 Water Level (mAHD) GW



Appendix E
Soil Logs

Test Pit Log
Test Pit: FR1
Sheet: 1/5

Project		Excavation/Drilling		Coordinates	
Job	2130	Contractor	South West Drilling	Latt	-32.3247
Client	Jeeyars Acharya Peetam	Equipment	Geoprobe Drill Rig	Long	115.8328
Project	67 Folly Rd SSE	Bucket/Auger	Auger	Weather	fine, no rain
Location	Baldivis	Logged By	KL		
Date	7/09/2021	Time	am		

Depth (m)	Ease of Excavation	Material Description Soil Type Particle Characteristics, colour, secondary components	Moisture Condition	Groundwater Level	Comments
0.15	Easy	SAND fine to medium grained, light brown to dark brown, loose, well graded	Moist		
0.5	Easy	SAND fine to mediumg grained, white, loose, well graded	Moist		
1.0					
1.5					
1.8					
2.0	Easy	SAND fine to mediumg grained, dark grey to black, well graded	Moist		
		Test pit termintaed at target depth of 2.0			

Test Pit Log
Test Pit: FR2
Sheet: 2/5

Project		Excavation/Drilling		Coordinates	
Job	2130	Contractor	South West Drilling	Latt	-32.3250
Client	Jeeyars Acharya Peetam	Equipment	Geoprobe Drill Rig	Long	115.8330
Project	67 Folly Rd SSE	Bucket/Auger	Auger	Weather	fine, no rain
Location	Baldivis	Logged By	KL		
Date	7/09/2021	Time	am		

Depth (m)	Ease of Excavation	Material Description Soil Type Particle Characteristics, colour, secondary components	Moisture Condition	Groundwater Level	Comments
0.15	Easy	SAND fine to medium grained, light grey, loose, well graded	Moist		
1.8		SAND fine to mediumg grained, white, loose, well graded	Moist		
2.0		SAND fine to mediumg grained, dark grey, well graded	Moist		
		Test pit termintaed at target depth of 2.0m			

Test Pit Log
Test Pit: FR3
Sheet: 3/5

Project		Excavation/Drilling		Coordinates	
Job	2130	Contractor	South West Drilling	Latt	-32.3244
Client	Jeeyars Acharya Peetam	Equipment	Geoprobe Drill Rig	Long	115.8344
Project	67 Folly Rd SSE	Bucket/Auger	Auger	Weather	fine, no rain
Location	Baldivis	Logged By	KL		
Date	7/09/2021	Time	am		

Depth (m)	Ease of Excavation	Material Description Soil Type Particle Characteristics, colour, secondary components	Moisture Condition	Groundwater Level	Comments
0.15	Easy	SAND fine to medium grained, dary grey, loose, well graded	Moist		
0.5	Easy	SAND fine to mediumg grained, white to light grey, loose, well graded	Moist	▼	
1.0					
1.5					
1.8					
2.0	Easy	SAND fine to mediumg grained, dark grey, well graded	Moist		
		Test pit termintaed at target depth 2.0m			

Test Pit Log
Test Pit: FR4
Sheet: 4/5

Project		Excavation/Drilling		Coordinates	
Job	2130	Contractor	South West Drilling	Latt	-32.3238
Client	Jeeyars Acharya Peetam	Equipment	Geoprobe Drill Rig	Long	115.8342
Project	67 Folly Rd SSE	Bucket/Auger	Auger	Weather	fine, no rain
Location	Baldivis	Logged By	KL		
Date	7/09/2021	Time	am		

Depth (m)	Ease of Excavation	Material Description Soil Type Particle Characteristics, colour, secondary components	Moisture Condition	Groundwater Level	Comments
0.25	Easy	SAND fine to medium grained, dary grey to brown, loose, well graded	Moist		
0.5	Easy	SAND fine to mediumg grained, white to light grey, loose, well graded	Moist		
1.0					
1.5					
1.9					
2.0	Easy	SAND fine to mediumg grained, dark grey, well graded	Moist		
		Test pit termintaed at target depth 2.0m			

Test Pit Log
Test Pit: FR5
Sheet: 5/5

Project		Excavation/Drilling		Coordinates	
Job	2130	Contractor	South West Drilling	Latt	-32.32436
Client	Jeeyars Acharya Peetam	Equipment	Geoprobe Drill Rig	Long	115.83304
Project	67 Folly Rd SSE	Bucket/Auger	Auger	Weather	fine, no rain
Location	Baldivis	Logged By	KL		
Date	7/09/2021	Time	am		

Depth (m)	Ease of Excavation	Material Description Soil Type Particle Characteristics, colour, secondary components	Moisture Condition	Groundwater Level	Comments
0.1	Easy	SAND fine to medium grained, light brown to dark brown, loose, well graded	Moist		
0.2	Easy	SAND fine to mediumg grained, white, loose, well graded	Moist	▼	
0.5					
1.0					
1.5					
1.8					
	Easy	SAND fine to mediumg grained, dark grey, well graded	Moist		
2.0					
		Test pit termintaed at target depth of 2.0			

Appendix F
Determination of Soil Category

TABLE 4.1.1
DETERMINATION OF SOIL CATEGORY

Soil category (see Note 1)	Soil texture	Structure	Indicative permeability (K_{sat}) (m/d) (see Note 2)	Indicative drainage class (see Note 3)
1	Gravels and sands	Structureless (Massive)	>3.0	Rapidly drained
2	Sandy loams	Weakly structured	> 3.0	Well drained
		Massive	1.4-3.0	
3	Loams	High/moderate structured	1.5-3.0	Moderately well drained
		Weakly structured or massive	0.5-1.5	
4	Clay loams	High/moderate structured	0.5-1.5	Imperfectly drained
		Weakly structured	0.12-0.5	
		Massive	0.06-0.12	
5 (Note 4)	Light clays	Strongly structured	0.12-0.5	Poorly drained
		Moderately structured	0.06-0.12	
		Weakly structured or massive	< 0.06	
6 (Note 4)	Medium to heavy clays	Strongly structured	0.06-0.5	Very poorly drained
		Moderately structured	< 0.06	
		Weakly structured or massive	< 0.06	

NOTES:

1 Soil Category determination shall take into account the soil horizons within the depth range into which effluent is absorbed (see Clause 4.1.4 and Paragraph 4.1A8). Figure 4.1A1 may be used to report on the overall soil category determined from the inspection of the individual soil layers.

2 The values of indicative permeability K_{sat} are based on the movement of water, not effluent, through the soil. They are estimates only and shall be used with caution in assisting the determination of the Soil Category. In the field, soil permeability is strongly influenced by the presence of biological channels such as old root holes, termite, ant and worm passages, as well as shrinkage cracks, and not merely by soil texture. A virgin clay-based soil under native bush could easily be ten times as permeable as the same soil under frequent cultivation or compacted by heavy traffic.

3 Indicative drainage classes are based on the assumption that drainage is governed only by the indicative permeability and that external factors play no role.

4 For clay-dominated soils having dispersive (sodic) or shrink/swell behaviour, specialist soil advice and special design techniques will be required to enable their utilization for land-application systems. Generally these soils will have very poor drainage.

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TABLE L1

RECOMMENDED DESIGN LOADING RATES FOR TRENCHES AND BEDS

Soil category	Soil texture	Structure	Indicative permeability (K_{sat})(m/d)	Design loading rate (DLR) (mm/d)			
				Trenches and beds			ETA/ETS beds and trenches
				Primary treated effluent		Secondary treated effluent	
				Conservative rate	Maximum rate		
1	Gravels and sands	Structureless (massive)	> 3.0	20 (see Note 1)	35 (see Note 1)	50 (see Note 1)	(see Note 4)
2	Sandy loams	Weakly structured	> 3.0	20 (see Note 1)	30 (see Note 1)	50 (see Note 1)	
		Massive	1.4 – 3.0	15	25	50	
3	Loams	High/ moderate structured	1.5 – 3.0	15	25	50	
		Weakly structured or massive	0.5 – 1.5	10	15	30	
4	Clay loams	High/ moderate structured	0.5 – 1.5	10	15	30	12
		Weakly structured	0.12 – 0.5	6	10	20	8
		Massive	0.06 – 0.12	4	5	10	5
5	Light clays	Strongly structured	0.12 – 0.5	5	8	12	8
		Moderately structured	0.06 – 0.12	(see Notes 2 & 3)	5	10	5 (see Notes 2, 3, & 5)
		Weakly structured or massive	< 0.06			8	
6	Medium to heavy clays	Strongly structured	0.06 – 0.5				
		Moderately structured	< 0.06				
		Weakly structured or massive	< 0.06				

NOTES:

1 The treatment capacity of the soil and not the hydraulic capacity of the soil or the growth of the clogging layer govern the effluent loading rate in Category 1 and weakly structured Category 2 soils. Land application systems in these soils require design by a suitably qualified and experienced person, and distribution techniques to help achieve even distribution of effluent over the full design surface (see L6.2 and Figure L4 for recommended discharge method by discharge control trench). These soils have low nutrient retention capacities, often allowing accession of nutrients to groundwater.

2 To enable use of such soils for on-site wastewater land application systems, special design requirements and distribution techniques or soil modification procedures will be necessary. For any system designed for these soils, the effluent absorption rate shall be based upon soil permeability testing. Specialist soils advice and special design techniques will be required for clay dominated soils having dispersive (sodic) or shrink/swell behaviour. Such soils shall be treated as Category 6 soils. In most situations, the design will need to rely on more processes than just absorption by the soil.

3 If K_{sat} < 0.06 m/d, a full water balance for the land application can be used to calculate trench/bed size (see Appendix Q).

4 ETA/ETS systems are not normally used on soil Categories 1 to 3.

5 For Category 6 soils ETA/ETS systems are suitable only for use with secondary treated effluent.

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Attachment 4 - Proposed Operating Hours

1. Operating Hours (before a dwelling is constructed on 547 Young Road)

Day	Activity	Number of Persons	Time	Difference compared to original application
Monday-Fridays	Prayers (Morning)	25-50	7am – 1pm (7am -12pm)	+ 1 hour
	Prayers (Evening)	25-50	5pm – 9pm	
	Yoga classes (2 per week)	20	6pm – 7pm	
Saturday – Sundays	Prayers (Morning)	100 - 150	7am – 1pm (7am - 12pm)	+ 1 hour
	Prayers (Evening)	100 - 150	5pm – 9pm	
	Scripture Classes	50 - 75 (included in above)	3pm – 6pm	
Mondays - Fridays	Hindu Festival (Morning)	50 - 75	7am – 1pm (7am - 12pm)	+ 1 hour
Mondays – Fridays	Hindu Festival (Evening)	200 - 250	5pm - 9pm	
Saturday & Sundays	Hindu Festival (Morning)	200	7am – 1pm (7am - 12pm)	+ 1 hour
Saturday & Sundays	Hindu Festival (Evening)	200 - 250	5pm – 9pm	
Saturdays (Fridays, Saturdays & Sundays)	Weddings	300 - 400	9am – 11pm (6pm - 12am)	+8 hours
Sundays and public holidays (Fridays, Saturdays & Sundays)	Weddings	300 - 400	9am – 11pm (6pm - 12am)	+8 hours

- The original advertised operating times are outlined in red where these have changed.
- The difference in hours between the original and amended application is highlighted in yellow.
- The amended operating hours for festivals and weddings when a dwelling is constructed on No.547 Young Road are highlighted in blue.

2. Operating Hours (when a dwelling gets constructed on 547 Young Road)

Day	Activity	Number of Persons	Time	Difference compared to original application
Monday-Fridays	Prayers (Morning)	25-50	7am – 1pm	+ 1 hour
	Prayers (Evening)	25-50	5pm – 9pm	
	Yoga classes (2 per week)	20	6pm – 7pm	
Saturday – Sundays	Prayers (Morning)	100 - 150	7am – 1pm	+ 1 hour
	Prayers (Evening)	100 - 150	5pm – 9pm	
	Scripture Classes	50 - 75 (included in above)	3pm – 6pm	
Mondays - Fridays	Hindu Festival (Morning)	50 - 75	7am – 1pm	+ 1 hour
Mondays - Fridays	Hindu Festival (Evening)	200 - 250	5pm - 9pm	
Saturdays	Hindu Festival (Morning) (Evening)	200 200-250	7am – 1pm 5pm – 9pm	+ 1 hour
Sundays / public holidays	Hindu Festival	200 - 250	9am – 9pm	+3 hours
Saturdays	Weddings	300 - 400	9am – 7pm	+4 hours
Sundays and public holidays	Weddings		Not permitted	