Government of **Western Australia**
Development Assessment Panels

Metro Outer Joint Development Assessment Panel Agenda

Meeting Date and Time: Thursday, 1 September 2022; 9:30am
Meeting Number: MOJDAP/195
Meeting Venue: Electronic Means

To connect to the meeting via your computer - https://us06web.zoom.us/j/83345127390

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 - 833 4512 7390

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 David Bolt (Local Government Member, Shire of Murray)
Cr Ange Rogers (Local Government Member, Shire of Murray)

Item 8.2
Cr Nige Jones (Local Government Member, City of Joondalup)
Cr Tom McLean (Local Government Member, City of Joondalup)

Officers in attendance

Item 8.1
Ms Susan Cowling (Shire of Murray)
Mr Greg Delahunty (Shire of Murray)
Mr Martin Harrop (Shire of Murray)
Mr Rod Peake (Shire of Murray)
Mr Cale Luxton (Western Australia Planning Commission)

Item 8.2
Ms Cathrine Temple (City of Joondalup)
Mr Tim Thornton (City of Joondalup)
Mr Michael Hancock (City of Joondalup)

Minute Secretary

Mr Stephen Haimes (DAP Secretariat)

Applicants and Submitters

Item 8.1
Mr Matthew Filov (Urbis)
Mr Kris Nolan (Urbis)
Mr Brad Harris (Porters Consulting Engineers)
Mr Owen McLean (Main Roads WA)

Item 8.2
Ms Bianca Sandri (Urbanista Town Planning)
Mr Gerrit Duijckers (Resident)

Members of the Public / Media

Nil.

1. Opening of Meeting, Welcome and Acknowledgement

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

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

2. Apologies

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 25 August 2022.

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 8.1a, received on 29 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
Mr Jason Hick	8.1	Indirect Pecuniary Interest – Mr Hick is a shareholder, director and employee of Emerge Environmental Services Pty Ltd. (Emerge). Emerge has prepared documentation that supports the application at Item 8.1.

7. Deputations and Presentations

7.1 Mr Owen McLean (Main Roads WA) presenting against the application at Item 8.1. The presentation will address insufficient land availability and road safety and road design concerns.

7.2 Mr Kris Nolan (Urbis) presenting in support of the application at Item 8.1. The presentation will address the proposal context and planning framework, with requested modification to conditions.

7.3 Mr Brad Harris (Porters Consulting Engineers) presenting in support of the application at Item 8.1. The presentation will address the proposed access arrangements and compliance with Austroads Standards/Guidelines.

7.4 Mr Gerrit Duijckers (Resident) presenting in support of the recommendation for the application at Item 8.2. The presentation will address safety concerns regarding the traffic for residents, along with parents and children using the centre.

7.5 Ms Bianca Sandri (Urbanista) presenting against the recommendation for the application at Item 8.2. The presentation will address reasons for refusal and why approval is preferable.

The Shire of Murray and City of Joondalup 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

8.1a No. 630 (Lot 137) Pinjarra Road, Furnissdale

Development Description:	Proposed Petrol Filling Station
Applicant:	Matthew Filov (Yolk Property Group co/Urbis)
Owner:	Mandurah Spotlight Property 2 Pty Ltd
Responsible Authority:	Shire of Murray
DAP File No:	DAP/22/02159

8.1b No. 630 (Lot 137) Pinjarra Road, Furnissdale

Development Description:	Proposed Petrol Filling Station
Applicant:	Matthew Filov (Yolk Property Group co/Urbis)
Owner:	Mandurah Spotlight Property 2 Pty Ltd
Responsible Authority:	Western Australian Planning Commission
DAP File No:	DAP/22/02159

8.2 102, 104 and 106 Cockman Road, Greenwood

Development Description:	Child Care Premises
Applicant:	Bianca Sandri (Urbanista Town Planning)
Owner:	SPG Capital Fund 3 Pty Ltd
Responsible Authority:	City of Joondalup
DAP File No:	DAP/22/02239

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.

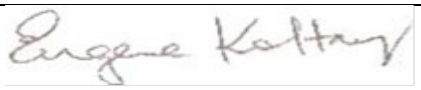
The request will be considered by the Presiding Member and if approved, the Responsible Authority will be directed to provide a response to DAP Secretariat within the form.

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
DAP Application Number	DAP/22/02239
Responsible Authority	City of Joondalup
Property Location	102,104,106 Cockman Road, Greenwood

Presiding Member Authorisation

Presiding Member Name	Mr Eugene Koltasz Presiding Member
Signature	
Date	25 August 2022
Response Due	**CoB Monday 29th August**

Nature of technical advice or information required*

1	**DAP query**	**Request for an alternate recommendation for Approval, with appropriate conditions**
	Response	Alternate Recommendation That the Metro Outer JDAP resolves to: **Approve** DAP Application reference DAP/22/02159 and accompanying plans (Attachment 1) 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 Joondalup *Local Planning Scheme No. 3:* **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.

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

		2. This decision constitutes planning approval only and is valid for a period of four years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect. 3. This approval relates to the Child Care Premises and associated works only and development shall be in accordance with the approved plan(s), any other supporting information and conditions of approval. It does not relate to any other development on the lot. 4. The lots included shall be amalgamated prior to occupancy certification. 5. A maximum of 92 children and 15 staff on the premises at any one time. 6. The hours of operation for the centre shall be between 7:00am to 6.00pm Monday to Friday, and 8:00am to 1:00pm Saturdays only. Child Care Centre staff shall not arrive at the centre before 6:30am and be off site by 6:30pm Monday to Friday, and shall not arrive before 7:30am and be off site by 1:30pm on Saturdays. 7. An arborist report shall be submitted to and approved by the City prior to commencement of development. The arborist report shall include an assessment of the existing tree within the verge adjacent to the site's corner truncation and include appropriate measures to ensure its retention and protection during construction and thereafter, to the satisfaction of the City. Regarding the retention of the verge tree, the measures indicated in the approved Arborist report are to be implemented during construction to the satisfaction of the City. 8. An Operations Management Plan shall be submitted to and approved by the City prior to the commencement of development. The Operations Management Plan is to include: • A Noise Management Plan, addressing the impact of noise on surrounding properties. The Noise Management Plan is to incorporate all recommendations of the Environmental Noise Assessment dated May 2022 (Attachment 8). • An updated Waste Management Plan indicating the method and timing of rubbish collection. • The general operation of the centre, including: - Hours of operation, including the number of staff opening and closing the centre; - The operation of the parking bays, including details regarding management of the tandem bays and bays that may need to be kept free during waste pickup; - Details of outside play time, including the maximum number of children within the play area at any one time; - Procedures and policies to monitor noise levels; and - Contact details and complaints procedure. Operation of the Child Care Premises shall then be carried out in accordance with the approved Operations Management Plan.

		9. A Construction Management Plan shall be submitted to and approved by the City prior to the commencement of development. The management plan shall include details regarding mitigation measures to address impacts associated with construction works, including potential closure of the adjacent public footpath along Cockman Road, and shall be prepared to the specification and satisfaction of the City. The construction works shall be undertaken in accordance with the approved Construction Management Plan. 10. An updated detailed Landscaping Plan shall be submitted to, and approved by, the City prior to the commencement of development. The plan is to indicate the proposed landscaping treatment(s) in the subject site and the adjoining road verge(s), and shall: • Be drawn at an appropriate scale of either 1:100, 1:200 or 1:500; • Provide landscaping that discourages the parking of vehicles within the verge; • Provide details of the play equipment and shade structures within the outdoor play area, incorporating minimum concrete or brick paved areas; • Provide all details relating to paving, treatment of verges, visual screening of the car park and tree planting in the car park; • Show spot levels and/or contours of the site; • Indicate any natural vegetation to be retained and the proposed manner in which this will be managed; • Be based on water sensitive urban design principles to the satisfaction of the City; • Be based on Designing out Crime principles to the satisfaction of the City; and • Show all irrigation design details. 11. Landscaping and reticulation shall be established in accordance with the approved updated landscaping plan and relevant Australian Standards prior to the development first being occupied and thereafter maintained to the satisfaction of the City. 12. All external fixtures, utilities (eg. meter boxes, drying areas, air conditioning units, piping, ducting and water tanks) and the proposed bin store, shall be located so as to minimise any visual, noise and odour impact on surrounding landowners, and screened from view from the street or integrated with the building design to the satisfaction of the City. Updated details of the bin store area are to be provided including an enclosure suitable for mitigating the impact of odour on neighbouring properties, to the satisfaction of the City. Details shall be submitted to and approved by the City prior to the commencement of development. 13. A full schedule of colours and materials for all exterior parts of the development (including retaining walls) is to be submitted to and approved by the City prior to the commencement of development. Development shall be in accordance with the approved schedule and all external materials and finishes shall be maintained to a high standard, including being free of vandalism, to the satisfaction of the City.

		14. The applicant shall remove the existing crossovers to Cockman Road, including any concrete aprons, and reinstate any kerbing, landscaping, footpath and/or other infrastructure to the satisfaction of the City. These works shall be completed within 28 days of the completion of construction of the new crossover. 15. The car parking bays, driveways and/or access points shown on the approved plans are to be designed, constructed, drained and marked in accordance with the Australian Standards (AS2890), including: • Entry and exit/no entry signage and directional pavement arrows/line marking; • Marking of the two staff parking closest to the intersecting point of the Cockman Road street boundary and corner truncation as 'reverse-in only'; • Visitor bays with minimum dimensions of 2.6 metres by 5.5 metres as outlined in the Transport Impact Statement (Attachment 7); • The five southern-most staff bays within the tandem arrangement being marked for 'small cars' or otherwise be modified so that tandem parking achieves a minimum length of 11 metres. Details shall be provided to and approved by the City prior to commencement of development with the car parking bays, driveways and/or access points constructed in accordance with the approved details prior to the occupation of the development and thereafter maintained to the satisfaction of the City. 16. Two (2) bicycle parking spaces shall be designed and installed in accordance with the Australian Standard for Off-street Car parking – Bicycles (AS2890.3-1993), prior to occupation of the development and thereafter maintained to the satisfaction of the City. 17. The open style fencing indicated along the Cockman Road and Ollis Street frontages shall be visually permeable (as defined in the Residential Design Codes). 18. No solid walls, fences or other structures higher than 0.75 metres shall be constructed within 1.5 metres of where the driveway meets the street boundary. 19. Retaining walls shall be of a clean finish and made good to the satisfaction of the City. 20. The signage shall: • use low illumination that does not flash, pulsate or chase; • not include fluorescent, reflective or retro reflective colours; • be established and thereafter maintained to a high standard to the satisfaction of the City. 21. All stormwater shall be collected on-site and disposed of in a manner acceptable to the City.

22. All development shall be contained within the property boundaries.

Advice Notes:

1. Further to condition 3, the City of Joondalup *Local Planning Scheme No. 3* defines 'Child Care Premises' as:

   "premises where:

   a. an education and care service as defined in the Education and Care Services National Law (Western Australia) section 5(1), other than a family day care service as defined in that section, is provided; or
   b. a child care service as defined in the Child Services Act 2007 section 4 is provided."

2. The City encourages the applicant/owner to incorporate materials and colours to the external surface of the development, including roofing, that have low reflective characteristics to minimise potential glare from the development impacting the amenity of the adjoining or nearby neighbours.

3. Any existing infrastructure/assets within the road reserve are to be retained and protected during construction of the development and are not to be removed or altered. Should any infrastructure or assets be damaged during the construction of the development, it is required to be reinstated to the satisfaction of the City.

4. In regard to condition 8, any amendments to the Operations Management Plan are to be approved by the City.

5. In regard to condition 9, the construction management plan shall be prepared using the City's Construction Management Plan template which can be provided upon request.

6. In regard to condition 13, it is recommended that the applicant submit the schedule of colours and materials prior to the lodgement of a building application to ensure the building application reflects the approved schedule of colours and materials.

7. In regard to condition 17, the Residential Design Codes define visually permeable as:

   In reference to a wall, gate, door, screen or fence that the vertical surface when viewed directly from the street or other public space has:

   a. continuous vertical or horizontal gaps of 50mm or greater width occupying not less than one third of the total surface area;
   b. continuous vertical or horizontal gaps less than 50mm in width, occupying at least one half of the total surface area in aggregate; or
   c. a surface offering equal or lesser obstruction to view.

		as viewed directly from the street. 8. All lighting to the centre is to be designed to minimise light spillage onto the surrounding residential properties and be in accordance with the requirements of Australian Standard AS1158. 9. Bin store and wash down area to be provided with a hose cock and have a concrete floor graded to an industrial floor waste connected to sewer. 10. Laundry to be provided with a floor waste in accordance with the City's Local Laws. In addition to having mechanical ventilation it is recommended that laundry areas be provided with condensation dryers to minimise the likelihood of mould occurring. 11. Ventilation to toilets and any other room which contains a w/c must comply with the *Sewerage (Lighting, Ventilation and Construction) Regulations 1971.* 12. Development to be set up and run in compliance with the *Food Act 2008* and the *Australia New Zealand Food Standards Code*. Consideration should be given to having adequate number of sinks in the main kitchen including a dedicated food preparation sink. The applicant is encouraged to send detailed kitchen fit out plans to the City's Health Services for comment prior to lodging a certified building permit. For further information please contact Health & Environmental Services on 9400 4933. 13. There is an obligation to design and construct the development to meet compliance with the requirements of the *Environmental Protection Act 1986* and the *Environmental Protection (Noise) Regulations 1997.* 14. This approval does not include the dividing fence(s). You are advised that in accordance with the Dividing Fences Act 1961 you are required to reach agreement with the adjoining owners as to the height, appearance and location of the dividing fence. Further information is available at www.buildingcommission.wa.gov.au.

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Development Assessment Panels

Direction for Further Services from the Responsible Authority

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

Guidelines

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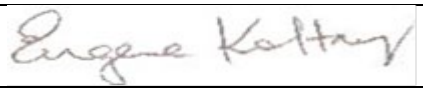
The request will be considered by the Presiding Member and if approved, the Responsible Authority will be directed to provide a response to DAP Secretariat within the form.

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
DAP Application Number	DAP/22/02159
Responsible Authority	Shire of Murray
Property Location	Lot 137 Pinjarra Road Furnissdale

Presiding Member Authorisation

Presiding Member Name	Mr Eugene Koltasz
Signature	
Date	25 August 2022
Response Due	**CoB Monday 29th August**

Nature of technical advice or information required*

1	**DAP query**	**Request for an alternate recommendation for Refusal, with appropriate reasons**
	Response	See attached alternate recommendation

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

Alternative Recommendation

That the Metro Outer Joint Development Assessment Panel resolves to:

Refuse DAP Application reference DAP/22/02159 and accompanying plans in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015,* and the provisions the Shire of Murray *Local Planning Scheme No.* 4, for the following reasons:

1. The proposed vehicular access at Pinjarra Road with left-in and left-out manoeuvrability is not acceptable as:

   (a) It is inconsistent with the Barragup Furnissdale Activity Centre Local Planning Policy, which only permits vehicular access from Pinjarra Road via a left turn in with an associated 120 metre long left-turn deceleration lane and does not propose this point of access be the primary entry/exit for the subject land.

   (b) Main Roads Western Australia does not support the proposed left-in left-out access and the applicant has not demonstrated, through the provision of a detailed concept plan, that a left-in access from Pinjarra Road can be provided in accordance with Main Roads Western Australia specifications, including:

      i. the provision of a suitable separation distance between the proposed left-in access and a future required left-turn auxiliary lane at the intersection of Pinjarra and Furnissdale Roads;
      ii. confirmation that the adjoining landowner to the east supports the left-turn lane into the proposed development, as this fronts their property and will require the closure of an existing vehicle access point and the potential relocation of another vehicle access point;
      iii. if additional road widening is required to relocate the existing footpath and utility services within the road reserve for Pinjarra Road, and the provision of drainage infrastructure associated with the left-turn lane; and
      iv. whether the affected landowner agrees to the acquisition of such land areas.

   (c) Pinjarra Road has declared Control of Access under the Main Roads Act 1930 and new access or modifications to existing access can only be approved if supported by the Commissioner of Main Roads. Road with Control of Access have a general restriction on new access. Main Roads Western Australia do not support the proposed left-in left-out access via Pinjarra Road.

   (d) It is inconsistent with Western Australian Planning Commission Development Control Policy 5.1: Regional Roads (Vehicular Access) which states in part 3.3.2 that there is a presumption against the creation of new driveways on regional roads where access is available from side or rear streets.

   (e) It is inconsistent with Western Australian Planning Commission Development Control Policy 5.1: Regional Roads (Vehicular Access) which states that where access is permitted, conditions may be imposed prescribing the location and width of the driveway to ensure adequate visibility and provide for the safe and convenient movement of vehicles, both entering and leaving the traffic stream. In determining such design requirements, the Western Australian Planning Commission has regard to Main Roads Western Australia design standards.

2. The design of the development fails to meet the following key requirements of the Barragup Furnissdale Activity Centre Local Planning Policy:

   (a) It fails to provide a vehicular access from Pinjarra Road via a left turn in with an associated 120-metre-long left-turn deceleration lane and in the general location shown in the Policy.

   (b) It fails to provide pedestrian paths with a minimum width of 2 metres along the Pinjarra Road front of the building.

   (c) It fails to provide dual use paths along Pinjarra Road and Furnissdale Road with clear pedestrian pathways connecting key development entries to these paths.

   (d) It fails to provide for the sufficient upgrade of Furnissdale Road to a two-lane boulevard road.

   (e) It fails to present a minimum two storey building height.

   (f) It fails to meet the minimum 15.5m setback from the ultimate alignment of Pinjarra Road.

   (g) The building elevations contain large expanses of blank facades finished in a primary colour (red) which does not exhibit a high quality design and is not sympathetic and complementary with the surrounding rural/natural environment consistent with the 'Building form and character' and 'Materials and colours' guidelines in the Policy.

   (h) Car parking areas have not been provided with native trees at the rate of 1 per 4 car bays for shade and visual amenity.

   (i) Bicycle 'end of trip' facilities have not been provided in the building.

   (j) Signage is dominate and not successfully integrated into the building design.

   (k) It fails to provide convenient pedestrian connections through the site and into the broader network.

   Consequently, the development fails to meets the following objectives of the Barragup Furnissdale Activity Centre Local Planning Policy:

   i Provide an attractive and functional western gateway to the Shire.

   ii Provide for safe, functional and coordinated vehicular and pedestrian access to and within the centre.

   iii Provide an appropriate interface to protect the character and amenity of land adjacent to the centre.

3. The signage is inconsistent with the following requirements of the Signs Local Planning Policy:

   (a) The wall signs exceed 2m² area or 30% in aggregate on the north, east and west facing elevations;

   (b) The pylon sign exceeds 6m in height, 2m in width and has a face area greater than 4m².

Consequently, the signage dominates the development and fail to meet the following objectives of the Signs Local Planning Policy:

i Minimise visual clutter and rationalise the overall number of signs.

ii Promote a high standard of design and presentation of signs that complement, are well integrated with and do not dominate built form.

iii Ensure that the character and amenity of the Shire is not eroded by excessive or poorly designed or located signs.

iv Ensure signs are designed to be sympathetic and harmonious with the site and surrounding environment.

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	Owen Mclean
Company (if applicable)	Main Roads
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
Meeting Date	1 September 2022 9.30am
DAP Application Number	DAP/22/02159Click or tap here to enter text.
Property Location	Lot 137 Pinjarra Road Furnissdale – Service Station And Convenience Store
Agenda Item Number	Item 8.1b and 8.1a

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:* This includes but is not limited to: • Additional third-party land (from the adjoining property owner) is required to enable a left turn slip to be provided to enable a safe access. This has not been covered in the alternative recommendation or council's recommended approval. Consideration of services, verge, footpath and drainage also required further consideration prior to approving the development. • Road Safety and Road Design • The alternative recommendation proposed by 8.1b cannot be executed as there is insufficient land within the existing reserve and there is no timing nominated for when the works are to occur.

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.

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	Kris Nolan
Company (if applicable)	Urbis
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	1/09/2022
DAP Application Number	DAP/22/02159
Property Location	Lot 137 Pinjarra Road, Furnissdale
Agenda Item Number	Item 8.1a and 8.1b

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 Proposal Context Planning Framework Proposed Access Arrangement Requested Modifications to Conditions

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:

- Slides will be provided, along with a Briefing Note (briefing note for distribution to JDAP Members) on Tuesday 30 August 2022.

-

PROPOSED SERVICE STATION

630 PINJARRA ROAD, FURNISSDALE

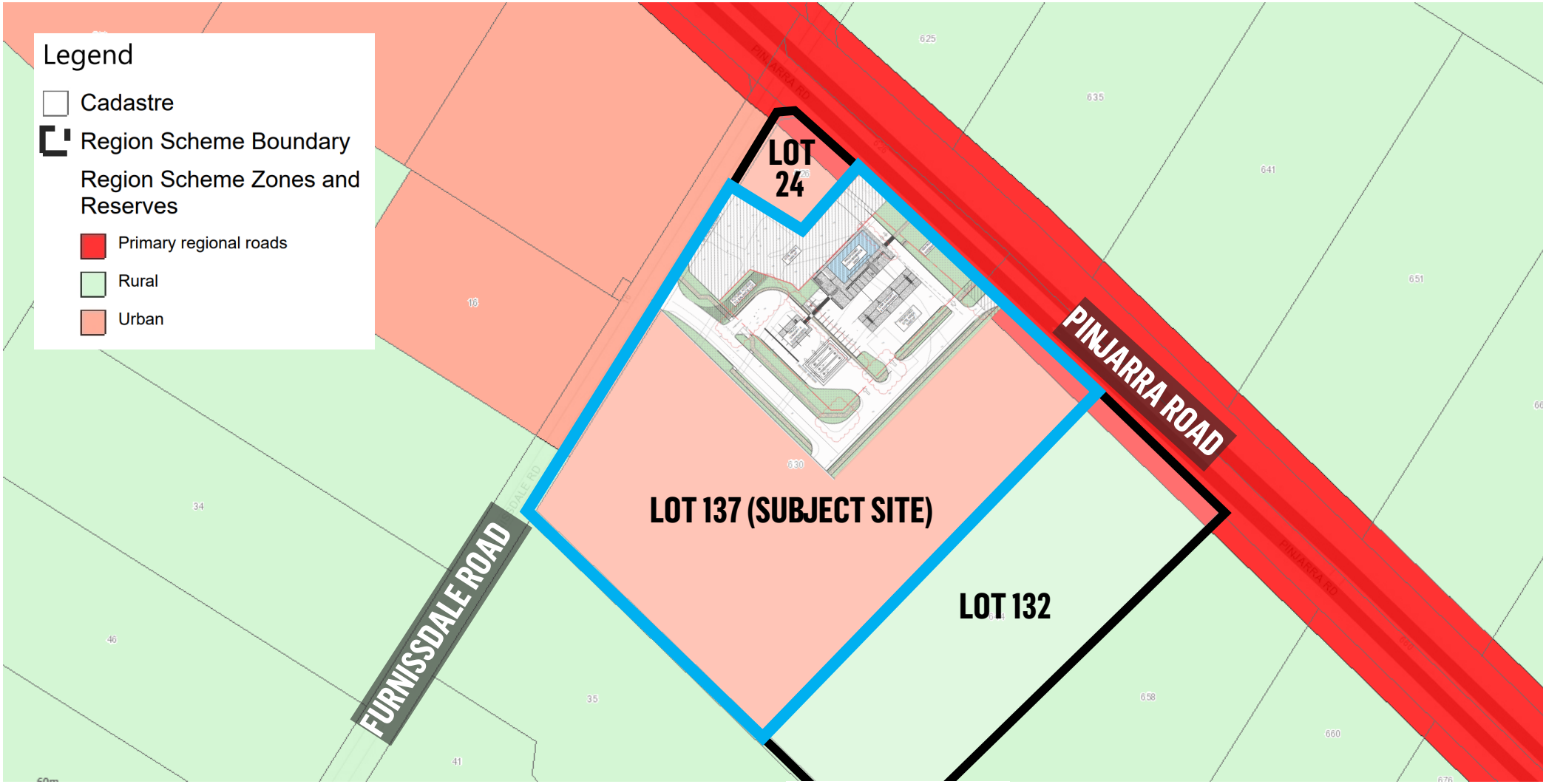
DEPUTATION – METRO OUTER JDAP MEETING – 1 SEPTEMBER 2022

URBIS

CONTEXT

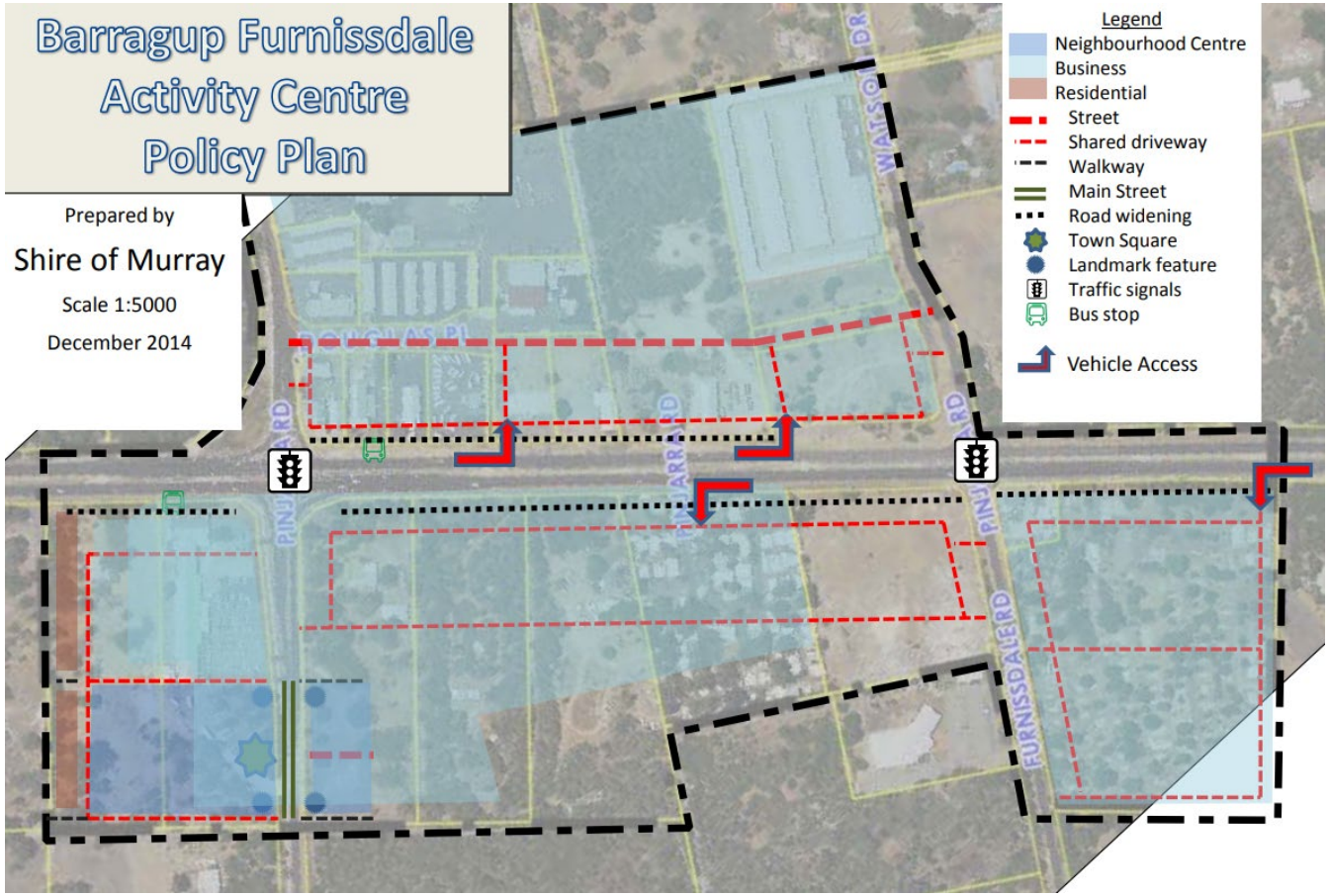

LOT 24
PINJARRA ROAD
LOT 137 (SUBJECT SITE)
LOT 132
FURNISSDALE ROAD

CONTEXT – PEEL REGION SCHEME

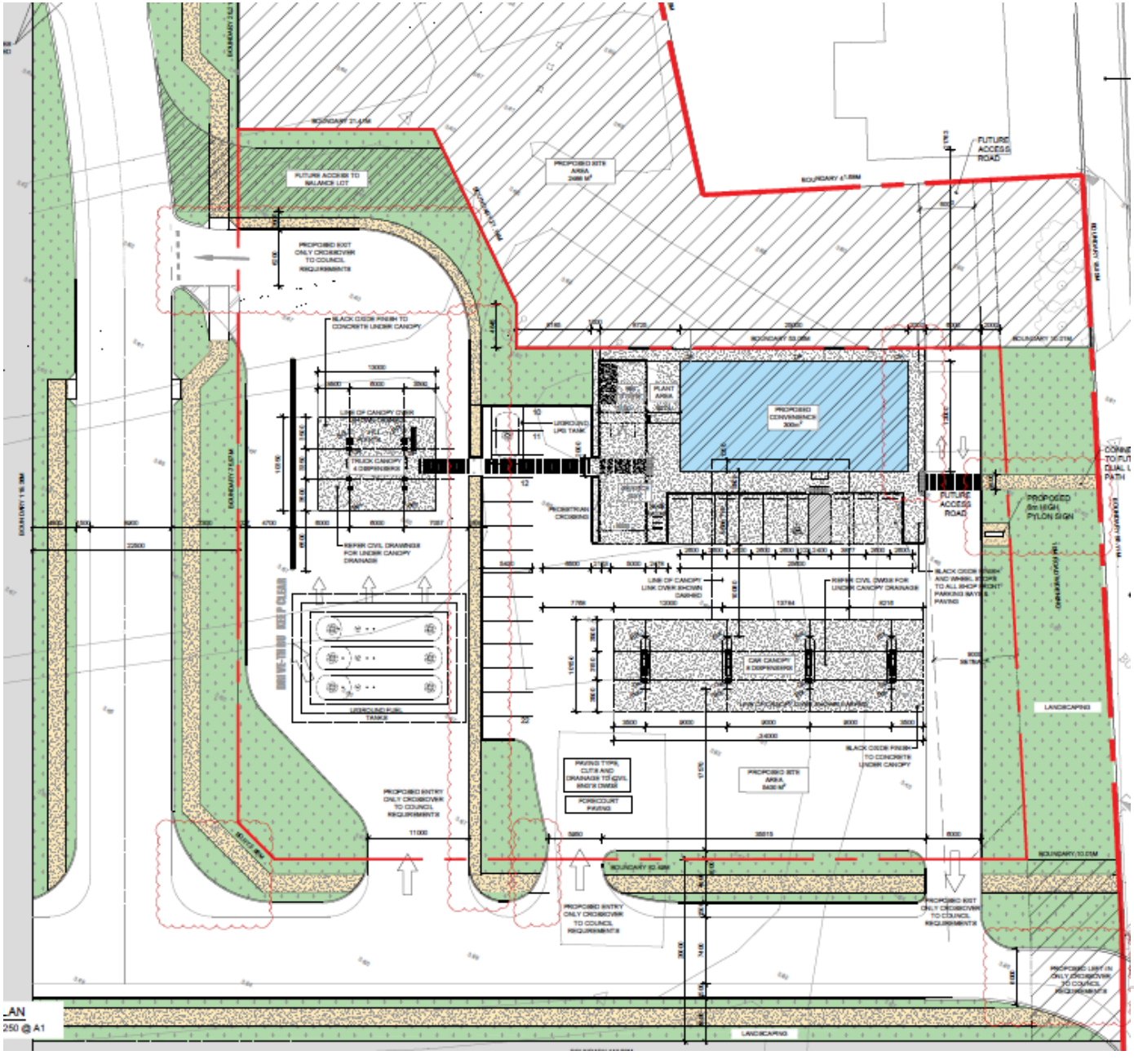


LPP - BARRAGUP FURNISSDALE ACTIVITY CENTRE

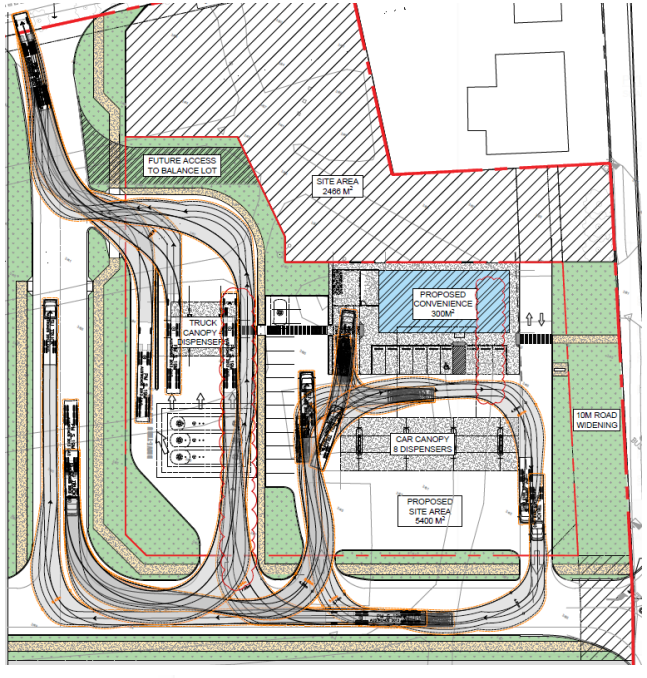
- **Business Precinct:**
  - **Preferred Uses -** *"Those sites with frontage to Pinjarra Road are preferred for showrooms, retail warehouses, open air display and uses focused on servicing of vehicle traffic such as **service stations** and drive through take away food outlets."*



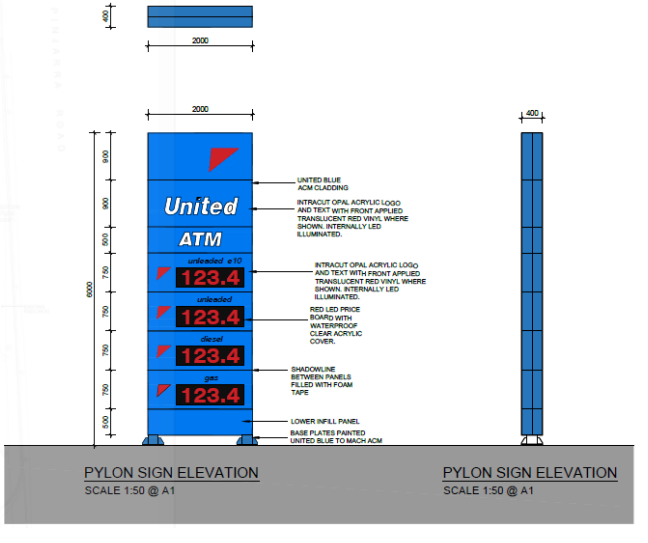
RECENT DESIGN CHANGES



SWEPT PATHS



PYLON SIGN PLAN
SCALE 1:50 @ A1



PYLON SIGN ELEVATION
SCALE 1:50 @ A1

PYLON SIGN ELEVATION
SCALE 1:50 @ A1

REQUESTED MODIFICATIONS

CONDITION 2)

Condition Item	Design Response	Request
(ii) A minimum two-metre-wide landscape strip abutting the Pinjarra Road widening and a two-metre wide pedestrian pathway on the northern side of the convenience store building linking the proposed building to the future development area on the western portion of the development site and the adjoining Lot 24 Pinjarra Road, Furnissdale. The convenience store building setback to Pinjarra Road to be increased sufficient to achieve this.	Plans have been updated to provide 2m wide landscaping strip as per the Shire's request.	Deletion.
(iii) An extended footpath between the truck canopy and the car canopy (abutting bays 10-22) so that it connects up to the paths within the two internal access roads.	Plans have been updated to provide extended footpath as per the Shire's request.	Deletion.
(iv) A dual use path within the Pinjarra Road reserve / road widening and the Furnissdale Road reserve where they abut Lot 137.	Item will be provided following detailed design and outcome of Pinjarra Road access arrangement.	Deletion.
(v) Pathway links between dual use paths referred to in part (iv) and internal pathways.	Plans updated to provide pathway future links as per the Shire's request.	Deletion.
(vi) The vehicular accessway to the north of the convenience store building is to be extended westward to the boundary of the abutting Lot 24 Pinjarra Road, Furnissdale	Plans updated to extend westward towards the boundary of Lot 24 as per the Shire's request.	Deletion.
(x) The pylon sign being reduced to 6m in height and 2m in width.	Plans amended as per the Shire's request.	Deletion.

REQUESTED MODIFICATIONS TO CONDITION

CURRENT CONDITIONS

2) *Prior to applying for a Building Permit, updated development plans shall be prepared and submitted to the Local Government for approval showing:*

*….**vii)** Bicycle bays and end of trip bicycle facilities including showers and lockers within the development site designed in accordance with the Austroads' Guide to Traffic Engineering Practice Part 14: Bicycles and AS 2890.3 Parking facilities Bicycle parking….*

5) *Prior to applying for a Building Permit, detailed engineering drawings and specifications shall be prepared and submitted to the Local Government for approval for the upgrade of Furnissdale Road from the intersection of Pinjarra Road to the proposed vehicular access point. The design is to show the upgrade of Furnissdale Road to an overall 26-metre-wide reserve with five metre wide verges, five metre wide lanes (including traffic and cycle lanes), and a six metre wide central median. The design is to include turning lanes/pockets, drainage, kerbing, paths, street trees, street lighting and undergrounding of the above ground powerlines and allow for suitable all movement vehicular access to Lot 157 on the western side of Furnissdale Road. All works shown on the approved engineering drawings and specifications are to be undertaken prior to the occupation of the development.*

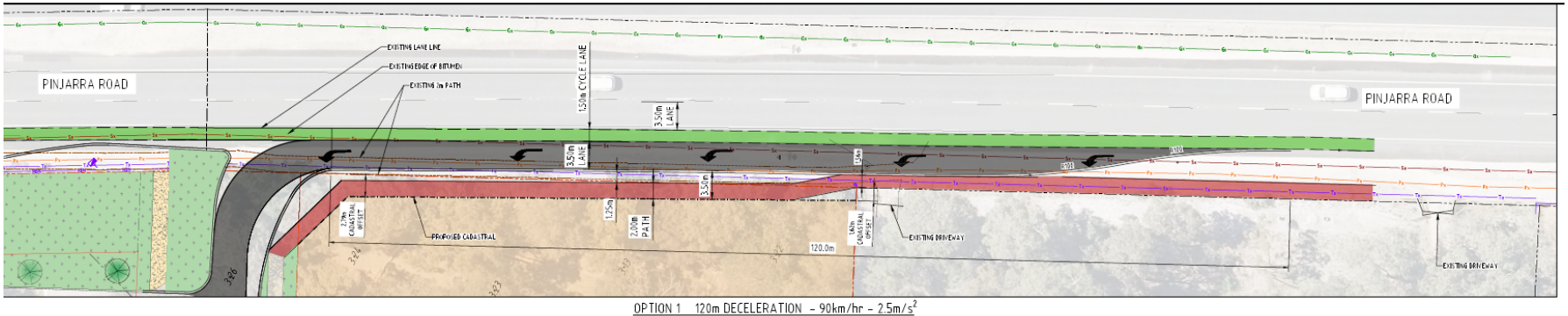
REQUESTED MODIFICATIONS

2) *Prior to applying for a Building Permit, updated development plans shall be prepared and submitted to the Local Government for approval showing:*

~~*….vii) Bicycle bays and end of trip bicycle facilities including showers and lockers within the development site designed in accordance with the Austroads' Guide to Traffic Engineering Practice Part 14: Bicycles and AS 2890.3 Parking facilities Bicycle parking….*~~

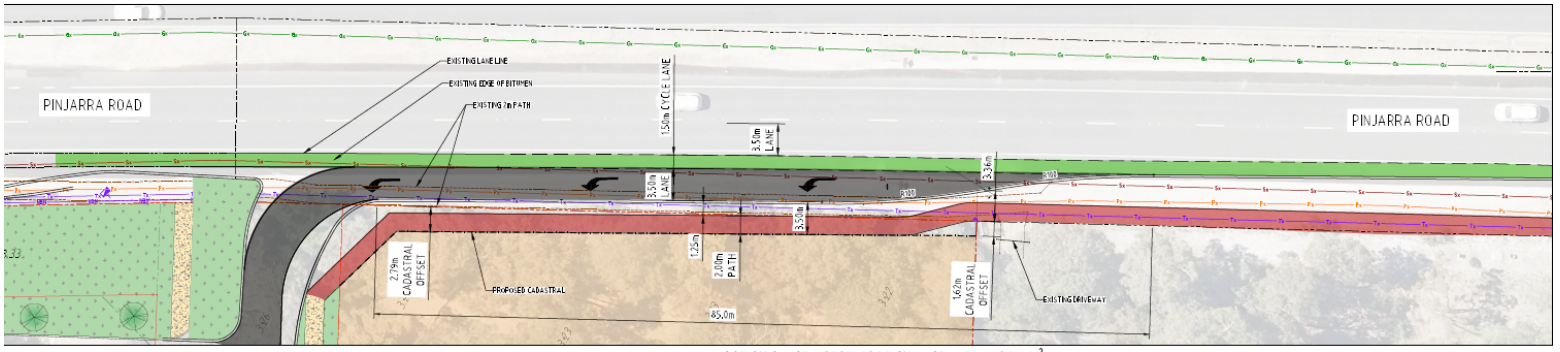
5) *Prior to applying for a Building Permit, detailed engineering drawings and specifications shall be prepared and submitted to the Local Government for approval for the upgrade of Furnissdale Road from the intersection of Pinjarra Road to the proposed vehicular access point. The design is to be provided in accordance with the agreed plan, prepared by the Shire in April 2022. ~~show the upgrade of Furnissdale Road to an overall 26-metre-wide reserve with five metre wide verges, five metre wide lanes (including traffic and cycle lanes), and a six metre wide central median. The design is to include turning lanes/pockets, drainage, kerbing, paths, street trees, street lighting and undergrounding of the above ground powerlines and allow for suitable all movement vehicular access to Lot 157 on the western side of Furnissdale Road.~~ All works shown on the approved engineering drawings and specifications are to be undertaken prior to the occupation of the development.*

ACCESS ARRANGEMENTS



OPTION 1 120m DECELERATION - 90km/hr - 2.5m/s^2

SCALE 1:250

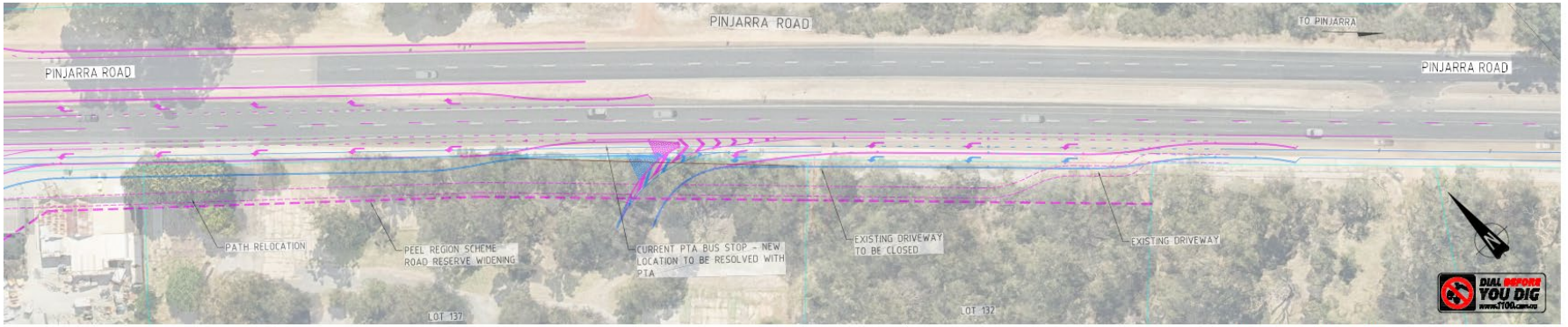


OPTION 2 85m DECELERATION - 90km/hr - 3.5m/s^2

SCALE 1:250

LEGEND

- PROPOSED CADASTRAL BOUNDARY
- EXISTING CADASTRAL BOUNDARY
- PROPOSED NEW KERB
- EXISTING EDGE OF BITUMEN
- EXISTING 2.0m PATH
- EXISTING FENCE
- LOT AREA
- LEFT SLIP LANE
- 2.0m CONCRETE PATH
- 1.5m CYCLE LANE
- EXISTING OPTIC FIBRE
- EXISTING NBN
- EXISTING TELSTRA
- EXISTING 225PE MP GAS
- EXISTING WATER
- EXISTING 150 PVC SEWER
- EXISTING UNDERGROUND LV POWER
- EXISTING UNDERGROUND HV POWER



MRWA 120m DECELERATION - 120km/hr - 2.5m/s^2

SCALE 1:500

1:500 0 5 10 20 30

1:250 0 2.5 5 10 15

BRIEFING NOTE

To:	Metro Outer Joint Development Assessment Panel
Cc:	Mr Rod Peake, Mr Greg Delahunty, Mrs Susan Cowling – Shire of Murray Mr Cale Luxton - DPLH, Owen McLean - MRWA, Jerko Ostoic - MRWA
From:	Kris Nolan - Urbis c/o Yolk Property Group
Email:	knolan@urbis.com.au
Date:	30 August 2022
Subject:	**DAP/22/02159 – Lot 137 (No.630) Pinjarra Road, Furnissdale – Briefing Note**

Dear Panel Members,

We refer to the abovementioned application, which is listed for consideration at the Metro Outer Joint Development Assessment Panel (**JDAP**) meeting on the 1st of September 2022. We are pleased to reach this milestone in the project and note the positive Officer recommendation following considerable collaboration and cooperation with the Shire of Murray (**the Shire**).

It is noted that despite the positive Officer recommendation (refer Item 8.1a of JDAP Agenda) for approval and support from the Shire, Main Roads WA (**MRWA**) were unable to provide support for the proposed access arrangement. As a result of this, the Shire's delegation to provide a recommendation to JDAP under the Peel Region Scheme (**PRS**) has been rescinded, as the Shire was not accepting of MRWA's advice.

Following the above, the Department of Planning, Lands and Heritage (**DPLH**) was instructed to prepare a Responsible Authority Report (**RAR**) and recommendation under the PRS to the JDAP (refer to Item 8.1b of the JDAP Agenda). It is noted the DPLH assessment under the PRS is limited to the proposed access arrangement with the Primary Regional Road (Pinjarra Road), and the Shire's assessment remains applicable for all other matters.

It is noted that the DPLH RAR puts forward an alternative recommendation to the JDAP, in which it is recommended that JDAP refuse the application for access reasons. Clearly this is a point we refute and will respond to later in this memo and associated attachments.

We trust this briefing note will provide further clarification on the matters to be discussed throughout the JDAP Meeting.

PLANNING FRAMEWORK COMPLIANCE

On 18 December 2014, the Shire adopted the Barragup Furnissdale Activity Centre Local Planning Policy (Activity Centre LPP). The Activity Centre LPP allows for the provision of safe, functional and coordinated vehicular and pedestrian access. The Activity Centre LPP constitutes the ultimate road reserve capacity required to be implemented to achieve safe and effective vehicular manoeuvrability over time to ensure all lots retain access to the road network. The LPP identifies a left-in access to the site from Pinjarra Road.

As outlined within the Shire's RAR, the proposed development demonstrates a sound level of compliance from a local planning policy, zoning, land use and design perspective (subject to some recommended conditions).

RECENT DESIGN CHANGES

The proposal has been revised throughout the assessment process, and in the lead up to the JDAP Meeting. More specifically, there have been several more recent design changes to address various items raised in Condition 2 of the Shire's RAR (please refer **Attachment A**).

The below table addresses Condition 2 of the Shire's RAR and details the design changes that have been made to accommodate the Shire's requests, and therefore, it is requested that these items be removed from Condition 2. It is noted that we have liaised with Shire of Murray officers on these modifications and they are accepting of the changes.

Table 1 – Condition 2 Items addressed through design amendments

Condition Item	Design Response
(ii) A minimum two-metre-wide landscape strip abutting the Pinjarra Road widening and a two-metre wide pedestrian pathway on the northern side of the convenience store building linking the proposed building to the future development area on the western portion of the development site and the adjoining Lot 24 Pinjarra Road, Furnissdale. The convenience store building setback to Pinjarra Road to be increased sufficient to achieve this.	Plans updated to provide 2m wide landscaping strip as per the Shire's request. **Condition to be removed.**
(iii) An extended footpath between the truck canopy and the car canopy (abutting bays 10-22) so that it connects up to the paths within the two internal access roads.	Plans updated to provide extended footpath as per the Shire's request. **Condition to be removed.**
(iv) A dual use path within the Pinjarra Road reserve / road widening and the Furnissdale Road reserve where they abut Lot 137.	Will be provided following detailed design and outcome of Pinjarra Road access arrangement.
(v) Pathway links between dual use paths referred to in part (iv) and internal pathways.	Plans updated to provide pathway links as per the Shire's request. **Condition to be removed**.
(vi) The vehicular accessway to the north of the convenience store building is to be extended westward to the boundary of the abutting Lot 24 Pinjarra Road, Furnissdale	Plans updated to extend westward towards the boundary of Lot 24 as per the Shire's request. **Condition to be removed.**

Condition Item	Design Response
(x) The pylon sign being reduced to 6m in height and 2m in width.	Plans amended as per the Shire's request. **Condition to be removed.**

PROPOSED PINJARRA ROAD ACCESS ARRANGEMENT

CONTEXT

The proposal was originally submitted with a proposed left-in/left-out intersection on Pinjarra Road. Since then, the proposed access arrangement has been significantly altered in liaison with the Shire, and MRWA in an effort to come to an agreement on a safe design outcome for Pinjarra Road. This includes the provision of a Left-In only access from Pinjarra Road. It is noted that this satisfies Condition 2 of the DPLH's Alternative Recommendation for Approval, which requires the proposed plans to be modified to a left-in only.

MRWA prepared a concept plan (refer Attachment 4 of DPLH RAR) illustrating their desired long term road design for this section of Pinjarra Road which includes the upgrade of the Furnissdale/Pinjarra Road intersection to a full movement signalised intersection. This plan was prepared on the basis that MRWA advised it may be possible to support a left-in access from Pinjarra Road subject to the design being the specifications of MRWA.

The MRWA concept plan has the following key requirements:

- Left-in only access arrangement.
- The Furnissdale/Pinjarra Road intersection, once upgraded will require a left hand turning lane with a minimum length of 120m.
- The proposed left-in access would also require a 120m long deceleration turning lane.
- Sufficient verge space/road reserve to accommodate the turning lane, drainage and other services

This issue with this design being the need for land acquisition from neighbouring Lot 132 Pinjarra Road; clearly something we as applicants have no control over.

Porters Design Response

Notwithstanding the above, the project team has completed further revisions to the above ahead of the JDAP Meeting to demonstrate the options that are available (compliant with Austroad Standards / Guidelines) to ensure that the proposed development can be accessed safely without compromising future upgrades along Pinjarra Road, and adequately catering for the provision of services within the road reservation.

Porter Consulting Engineers (**Porters**) has prepared a technical note (refer **Attachment B**) which presents two access arrangement options (compliant with Austroad Standards / Guidelines) that detail the consideration given to the site (and its constraints), design standards and future development of the site. It is noted that both of the options presented within the technical note provide an access arrangement for the site that avoids the need for land acquisition from Lot 132 Pinjarra Road (which is not party to this application or controlled by the applicant), will accommodate all services within the existing road reserve and are Austroads standard compliant.

To this end, we say there is a suitable left-in access arrangement from Pinjarra Road that, whilst not compliant with MRWA's ultimate desired design, is compliant with Australian Standards and akin to other similar access arrangements constructed on Pinjarra Road.

REQUESTED MODIFICATIONS TO CONDITIONS

CONDITION 2 (VII)

Condition 2 (vii) currently reads:

> *2) Prior to applying for a Building Permit, updated development plans shall be prepared and submitted to the Local Government for approval showing:*
>
> *….vii) Bicycle bays and end of trip bicycle facilities including showers and lockers within the development site designed in accordance with the Austroads' Guide to Traffic Engineering Practice Part 14: Bicycles and AS 2890.3 Parking facilities Bicycle parking….*

It is noted that bicycle bays have been provided at the entrance of the development, however, no end of trip facilities have been provided as part of the proposal as the nature of the proposal does not warrant end of trip facilities. It is anticipated that all customers of the development will be driving to the development and will not require end of trip facilities.

Based on the above, it is recommended that the JDAP delete Condition 2 (vii).

CONDITION 5

Condition 5 currently reads:

> *5) Prior to applying for a Building Permit, detailed engineering drawings and specifications shall be prepared and submitted to the Local Government for approval for the upgrade of Furnissdale Road from the intersection of Pinjarra Road to the proposed vehicular access point. The design is to show the upgrade of Furnissdale Road to an overall 26-metre-wide reserve with five metre wide verges, five metre wide lanes (including traffic and cycle lanes), and a six metre wide central median. The design is to include turning lanes/pockets, drainage, kerbing, paths, street trees, street lighting and undergrounding of the above ground powerlines and allow for suitable all movement vehicular access to Lot 157 on the western side of Furnissdale Road. All works shown on the approved engineering drawings and specifications are to be undertaken prior to the occupation of the development.*

Throughout the assessment process, the Shire prepared a concept plan (refer **Attachment C**) that demonstrates the Shire's minimum expected upgrades to Furnissdale Road. The project team agreed to complete the works that are displayed in this plan, which depicts an approximate 23-metre-wide road reserve, with five-metre-wide verges, five-metre-wide lanes (including traffic and cycle lanes), and a 2-metre-wide central median. Through recent discussions with the City (on Friday 18 August 2022), it was confirmed that there was an unintentional discrepancy between the agreed upon plan and Condition 5, and that the specifications that are displayed in the agreed upon plan are appropriate. Therefore, for simplicity, the following wording for Condition 5 is suggested:

> *5) Prior to applying for a Building Permit, detailed engineering drawings and specifications shall be prepared and submitted to the Local Government for approval for the upgrade of Furnissdale Road from the intersection of Pinjarra Road to the proposed vehicular access point. The design is to be provided in accordance with the agreed plan, prepared by the Shire in April 2022. show ~~the upgra~~de ~~of Furnissdale Road to an overall 26-metre-wide reserve with five metre wide verges, five metre wide lanes (including traffic and cycle lanes), and a six metre wide central median. The design is to include turning lanes/pockets, drainage, kerbing, paths, street trees, street lighting and undergroundi~~ng of the ~~above ground powerlines and allow for suitable all movement vehicular access to Lot 157 on the western side of Furnissdale Road. All works shown on the a~~pproved engineering drawings and specifications are to be undertaken prior to the occupation of the development.*

CONCLUSION

We sincerely thank Shire of Murray for the collaborative process and positive Officer report, which we believe accurately reflects the proposal and process undertaken. We trust this briefing note and attachments provides clarity regarding the proposal, the proposed access arrangements, and requested condition changes.

Representatives from the Project Team (Yolk Property Group, Urbis, and Porters Engineering) will be present at the JDAP meeting to present this item and respond to any questions the Panel may have.

If you have any queries ahead of the meeting, please do not hesitate to contact me on the below

Regards,

Kris Nolan
Director
knolan@urbis.com.au

ATTACHMENT A – UPDATED DEVELOPMENT PLANS

UNITED SERVICE STATION
FURNISSDALE, WA
ISSUE FOR DEVELOPMENT APPLICATION
ALL NEW BUILD

DRAWING LIST:

SK16 - REV C:	COVER PAGE & DRAWING LIST
SK13 - REV G:	PROPOSED SITE PLAN
SK14 - REV F:	OVERALL LOT PLAN
SK15 - REF C:	OVERALL LOT PLAN WITH SWEPT PATH
SK10 - REV C:	PROPOSED FLOOR PLAN
SK09 - REV G:	PROPOSED LANDSCAPING PLAN
SK11 - REV B:	PROPOSED ELEVATIONS P1
SK12 - REV B:	PROPOSED ELEVATIONS P2

N

B	REF 01	JR	NP	25.08.2022
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE, WA

drawn: MS
checked: NP
description: COVER PAGE & DRAWING LIST
scale: NTS
date: 03.12.2021
project no: 68.21
dwg no: SK16
rev: B

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PINJARRA ROAD

BOUNDARY 38.95M
3M ROAD WIDENING
BERRY 0.68M
BOUNDARY 20.21M
BOUNDARY 41.68M
VERGE TREES TO BE REMOVED
BOUNDARY 21.41M
FUTURE ACCESS TO BALANCE LOT
PROPOSED SITE AREA 2466 M²
BOUNDARY 21.14M
EXISTING FOOT PATH
21763
FUTURE ACCESS ROAD
BOUNDARY 41.68M
6000
BOUNDARY 18.95M
2000
6200
PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS
BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY
4845
8185
1800
8725
25000
BOUNDARY 53.06M
2000
6000
2000
BOUNDARY 10.01M
DP
DP
DP
BIN STORE
5150
PLANT AREA
3574
PROPOSED CONVENIENCE 300m²
2200
13000
3500
6000
3500
LINE OF CANOPY OVER SHOWN DASHED
FILL POINTS
Bol
DP
TRUCK CANOPY 4 DISPENSERS
10
U/GROUND LPG TANK
11
2000
12
SERVICE BAY
BIKE RACKS
5000
2600
5500 TYP
9
CONNECTION TO FUTURE DUAL USE PATH
1600
FUTURE ACCESS ROAD
PROPOSED 6m HIGH PYLON SIGN
BOUNDARY 56.11M
BOUNDARY 119.36M
BOUNDARY 75.97M
10350
3500
3350
3500
4800
1500
8900
7300
027
4700
6000
6000
7057
1500
22500
6500
REFER CIVIL DRAWINGS FOR UNDER CANOPY DRAINAGE
PEDESTRIAN CROSSING
2600
2600
2600
2600
2600
1123
2400
3877
2600
2600
5400
6500
2163
5000
2478
25600
LINE OF CANOPY LINK OVER SHOWN DASHED
10080
REFER CIVIL DWGS FOR UNDER CANOPY DRAINAGE
BLACK OXIDE FINISH AND WHEEL STOPS TO ALL SHOP FRONT PARKING BAYS & PAVING
10M ROAD WIDENING
EXISTING FOOT PATH
7768
12000
13784
8216
DRIVE-THRU KEEP CLEAR
3500
3150
3500
10150
CAR CANOPY 8 DISPENSERS
9000 SETBACK
U/GROUND FUEL TANKS
22
3500
9000
9000
9000
3500
34000
LINE OF CANOPY OVER SHOWN DASHED
LANDSCAPING
BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY
PAVING TYPE, CUTS AND DRAINAGE TO CIVIL ENG'S DWGS
FORECOURT PAVING
PROPOSED SITE AREA 5400 M²
17570
PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS
11000
5950
35515
6000
BOUNDARY 10.01M
BERRY 5.66M
BOUNDARY 82.49M
1000
4800
1500
PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS
PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS
20000
7400
1500
4000
8000
PROPOSED LEFT-IN ONLY CROSSOVER TO COUNCIL REQUIREMENTS
LANDSCAPING
BOUNDARY 119.53M
BUS

N

SITE PLAN
SCALE 1:250 @ A1

revision/ issue	description	drawn	checked	date
G	CROSSOVER AMENDMENT	JR	NP	29.08.2022
F	RFI 01 FURTHER AMENDMENT	JR	NP	29.08.2022
E	ADJUSTMENT IN ACCORDANCE WITH SWEPT PATH	JR	NP	26.08.2022
D	RFI 01	JR	NP	25.08.2022
C	RFI 01	JR	NP	25.08.2022
B	LANDSCAPING AMENDMENTS	JR	NP	14.06.2022
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE W.A.
drawn: MS
checked: NP
description: PROPOSED SITE PLAN
scale: 1:250 @A1
date: 30.11.2021
project no: 68.21
dwg no: SK13
rev: G

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LANDSCAPE LEGEND

PROPOSED SITE AREA:	5400M²
PROPOSED SITE LANDSCAPING:	961M²
LANDSCAPING % OF PROPOSED SITE:	**17.8%**

SHOPFRONT PAVING (CONCRETE)

BLACK OIDE (HAND-STIPPLED) CONCRETE COMPRISING :
- NUTECH - PR 210 BLACK PAVECOAT (UNDERCO DILUTED, FULL-STRENGTH TOP COAT) COLOURED WITH NUTECH ANTI-SLIP ADDITIVE AS PER MANUFACTURERS INSTRUCTIONS

FORECOURT PAVING

ACACIA APHYLLA (LEAFLESS ROCK WATTLE)
MIN. POT SIZE: NA
MATURE GROWTH HEIGHT ~2M
PLANTS TO SPREAD ~2M

EUTAXIA OBOVATA
MIN. POT SIZE: 150mm
75MM MULCH COVER
MATURE GROWTH HEIGHT ~0.5M
PLANTS TO SPREAD ~1M

HAKEA CERATOPHYLLA (HORNED LEAF HAKEA)
MIN. POT SIZE: 150mm
75MM MULCH COVER
MATURE GROWTH HEIGHT ~2M
PLANTS TO SPREAD ~2M

HAKEA ORTHORRHYNCHA (BIRDS BEAK HAKEA)
MIN. POT SIZE: 150mm
75MM MULCH COVER
MATURE GROWTH HEIGHT ~2.5M
PLANTS TO SPREAD ~1.5M

MELALEUCA PULCHELLA (CLAW HONEY MYRTLE)
MIN. POT SIZE 150mm
75MM MULCH COVER
MATURE GROWTH HEIGHT ~2M
PLANT SPREAD ~1.2M

AGONIS FLEXUOSA (WESTERN AUSTRALIAN PEPPERMINT)
75MM MULCH COVER
MATURE GROWTH HEIGHT ~5M
PLANT SPREAD ~4M

MELALEUCA QUINQUENERVIA (BROAD-LEAVED PAPERBARK)
75MM MULCH COVER
MATURE GROWTH HEIGHT ~15M
PLANT SPREAD ~10M

GREVILLEA LEUCOPTERIS (WHITE-PLUMED GREVILLEA)
75MM MULCH COVER
MATURE GROWTH HEIGHT ~3M
PLANT SPREAD ~3M

LANDSCAPE NOTE:

IRRIGATION SYSTEM PROPOSED ON SITE, DRIPPER SYSTEM TO BE INSTALL ON GARDEN BED AS PER LANDSCAPING ARCHITECT'S DETAIL

revision/issue	description	drawn	checked	date
G	CROSSOVER AMENDMENT	JR	NP	29.08.2022
F	RFI 01 FURTHER AMENDMENT	JR	NP	29.08.2022
E	ADJUSTMENT IN ACCORDANCE WITH SWEPT PATH	JR	NP	26.08.2022
D	RFI 01	JR	NP	25.08.2022
C	LANDSCAPING AMENDMENTS	JR	NP	14.06.2022
B	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE, W.A.
drawn: MS
checked: NP
description: PROPOSED LANDSCAPING PLAN
scale: 1:250 @ A1
date: 08.10.2021
project no: 68.21
dwg no: SK09
rev: G

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TRAFFIC PLAN
SCALE 1:500 @ A1

revision/ issue	description	drawn	checked	date
C	CROSSOVER AMENDMENT	JR	NP	29.08.2022
B	RFI 01 FURTHER AMENDMENT	JR	NP	29.08.2022
A	RFI 01 – SWEPT PATH UPDATE	JR	NP	26.08.2022

project
PROPOSED UNITED SERVICE STATION
location
FURNISSDALE W.A.

drawn: MS
checked: NP
description: OVERALL LOT PLAN WITH SWEPT PATH
scale: 1:600 @A1
date: 30.11.2021
project no: 68.21
dwg no: SK15
rev: C

Hodge Collard Preston
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FURNISSDALE ROAD

PROPOSED CROSSOVER TO COUNCIL REQUIREMENTS AS PER TRAFFIC ENGINEER'S DRAWINGS

3M ROAD WIDENING

FUTURE ACCESS TO BALANCE LOT

SITE AREA 2466 M²

PROPOSED CONVENIENCE 300M²

TRUCK CANOPY 4 DISPENSERS

10M ROAD WIDENING

CAR CANOPY 8 DISPENSERS

PROPOSED SITE AREA 5400 M²

PROPOSED CROSSOVER TO COUNCIL REQUIREMENTS AS PER TRAFFIC ENGINEER'S DRAWINGS

ROAD WIDENING AS PER TRAFFIC ENGINEERS DRAWINGS

REMAINING OVERALL SITE AREA 29,520 M²

FURNISSDALE ROAD

TRAFFIC PLAN

SCALE 1:500 @ A1

revision/ issue	description	drawn	checked	date
F	CROSSOVER AMENDMENT	JR	NP	29.08.2022
E	RFI 01 FURTHER AMENDMENT	JR	NP	29.08.2022
D	ADJUSTMENT IN ACCORDANCE WITH SWEPT PATH	JR	NP	26.08.2022
C	RFI 01	JR	NP	25.08.2022
B	LANDSCAPING AMENDMENTS	JR	NP	14.06.2022
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021

project: PROPOSED UNITED SERVICE STATION

location: FURNISSDALE W.A.

drawn: MS

checked: NP

description: OVERALL LOT PLAN

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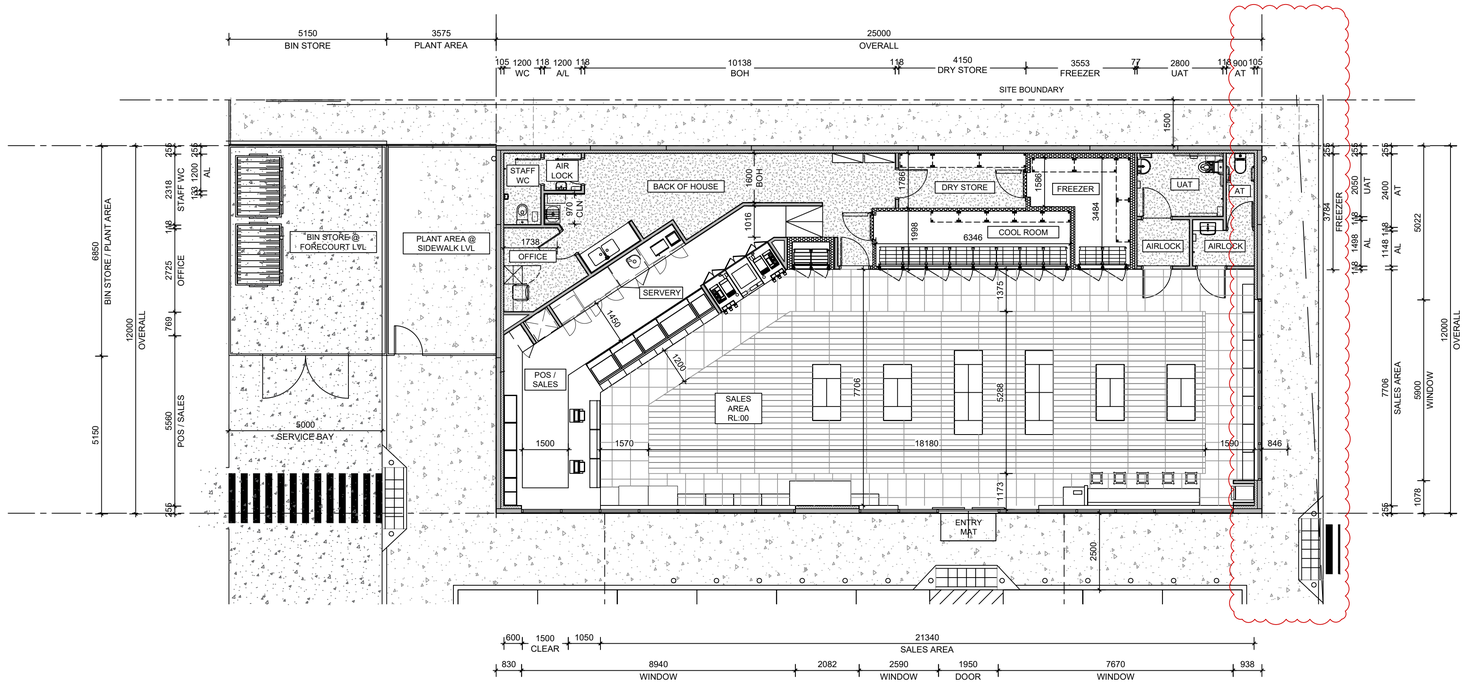
scale: 1:600 @A1

date: 30.11.2021

project no: 68.21

dwg no: SK14

rev: F



CONTROL BUILDING FLOOR PLAN

SCALE 1:100 @ A1

C	RFI 01	JR	NP	25.08.2022
B	LANDSCAPING AMENDMENTS	JR	NP	14.06.2022
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project
PROPOSED UNITED SERVICE STATION
location
FURNISSDALE, W.A.

drawn: MS
checked: NP

description
PROPOSED FLOOR PLAN

Hodge Collard Preston
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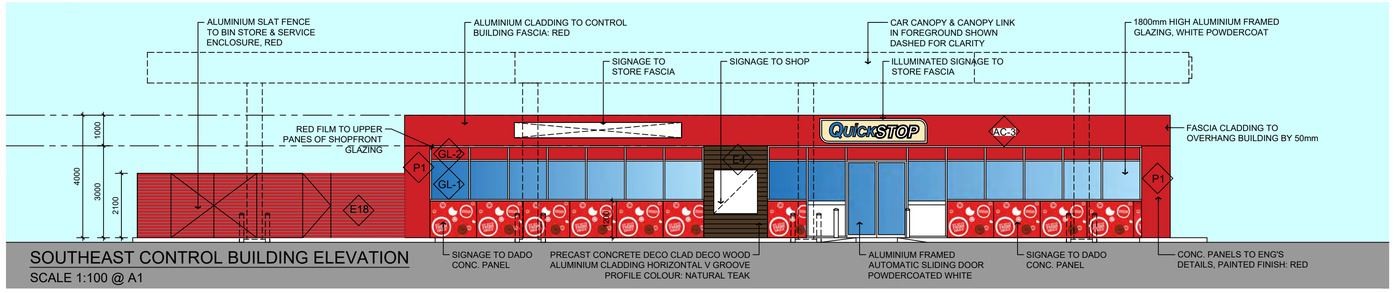
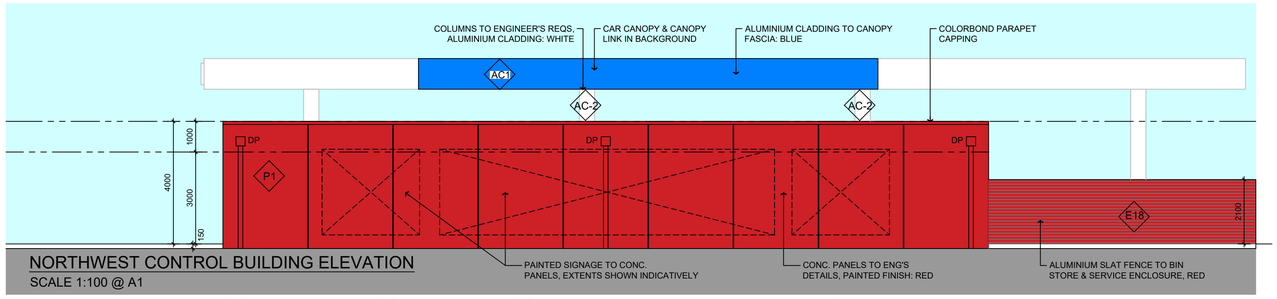
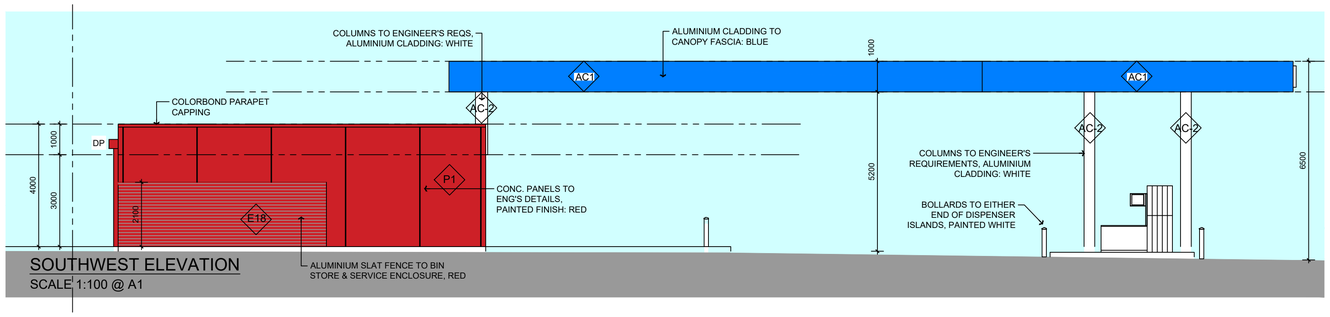
scale: 1:100 @ A1
date: 15.10.2021
project no: 68.21
dwg no: SK10
rev: C



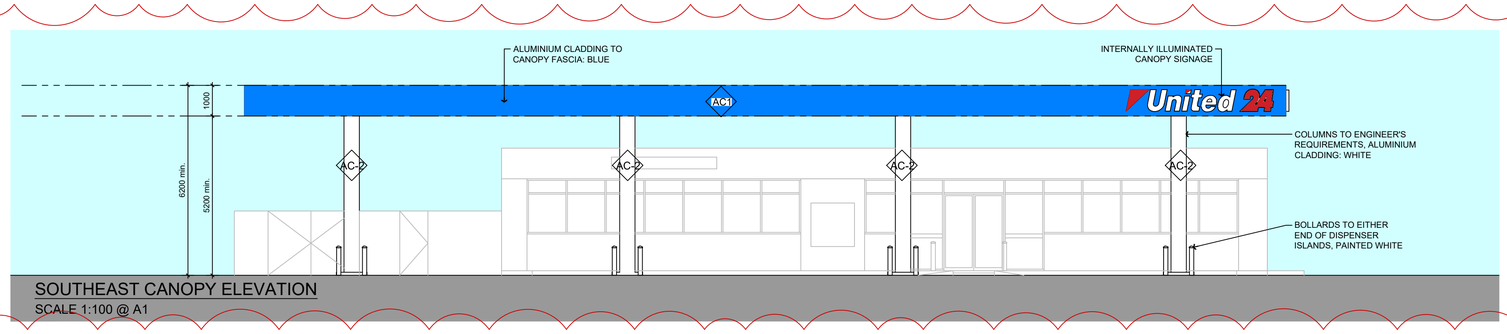
SOUTHEAST CONTROL BUILDING ELEVATION
SCALE 1:100 @ A1



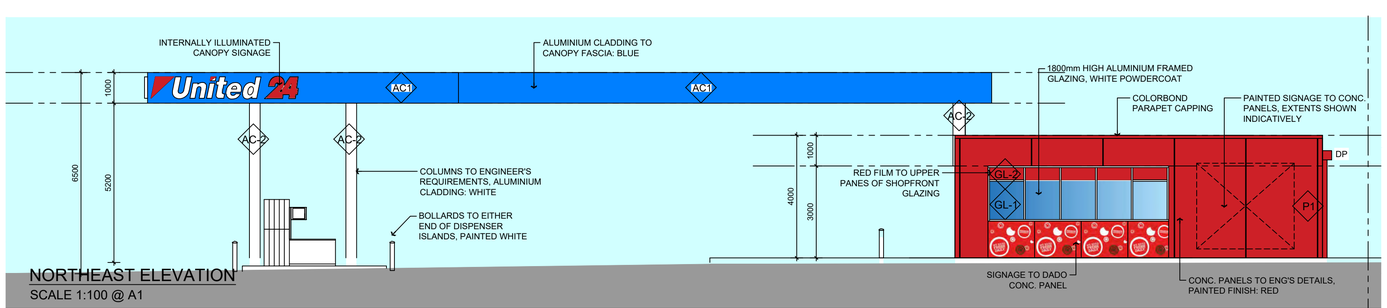
NORTHWEST CONTROL BUILDING ELEVATION
SCALE 1:100 @ A1



SOUTHWEST ELEVATION
SCALE 1:100 @ A1



SOUTHEAST CANOPY ELEVATION
SCALE 1:100 @ A1



NORTHEAST ELEVATION
SCALE 1:100 @ A1

COLOUR LEGEND

AC-1		AC - 1 ALUMINIUM CANOPY FASCIA CLADDING - BLUE
AC-2		AC - 2 ALUMINIUM CANOPY COLUMN CLADDING - WHITE
AC-3		AC - 2 ALUMINIUM STORE FASCIA CLADDING - RED
E18		E18 - ALUMINIUM SLATS - RED
E4		P4 - PRECAST CONCRETE DECO CLAD DECO WOOD ALUMINIUM CLADDING HORIZONTAL V GROOVE PROFILE COLOUR: NATURAL TEAK
P1		P1 - EXTERNAL WALLS PAINT FINISH - RED
GL-1		GL-1 CLEAR GLAZING TO CODE, NCC & RELEVANT STANDARDS
GL-2		GL-2 CLEAR GLAZING TO CODE WITH RED VINYL

B	RFI 01	MS	NP	25.08.2022
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE W.A.

drawn: MS
checked: NP
description: PROPOSED ELEVATIONS
scale: 1:100 @ A1
date: 05.11.2021
project no: 68.21
dwg no: SK11
rev: B

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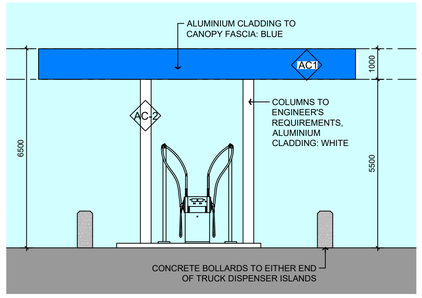
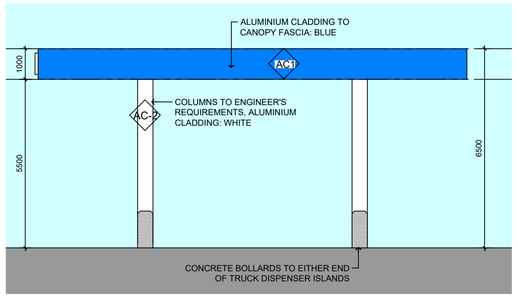
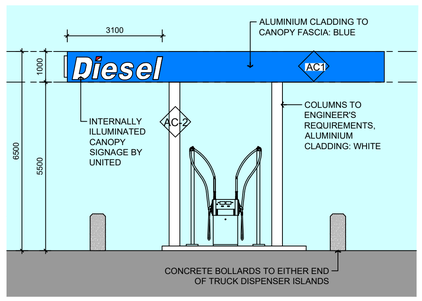


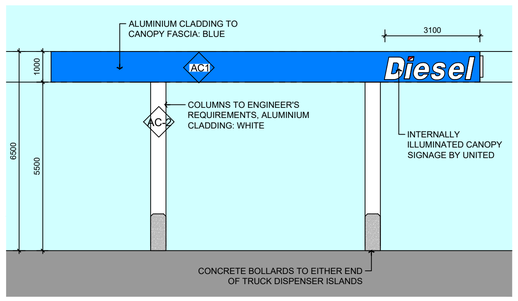
SOUTHWEST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1



NORTHWEST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1

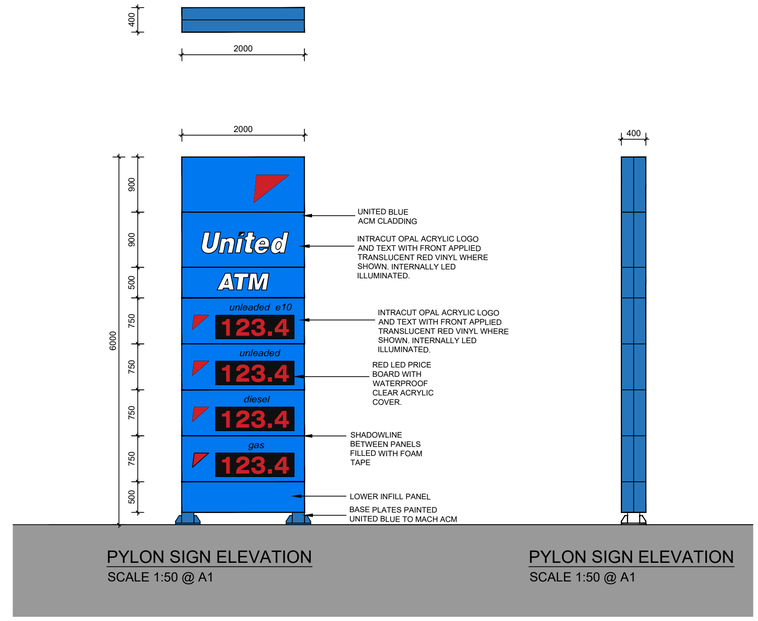


NORTHEAST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1



SOUTHEAST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1

PYLON SIGN PLAN
SCALE 1:50 @ A1



PYLON SIGN ELEVATION
SCALE 1:50 @ A1

PYLON SIGN ELEVATION
SCALE 1:50 @ A1

COLOUR LEGEND

AC-1	AC - 1 ALUMINIUM CANOPY FASCIA CLADDING - BLUE
AC-2	AC - 2 ALUMINIUM CANOPY COLUMN CLADDING - WHITE
AC-3	AC - 2 ALUMINIUM STORE FASCIA CLADDING - RED
E18	E18 - ALUMINIUM SLATS - RED
E4	P4 - PRECAST CONCRETE DECO CLAD DECO WOOD ALUMINIUM CLADDING HORIZONTAL V GROOVE PROFILE COLOUR: NATURAL TEAK
P1	P1 - EXTERNAL WALLS PAINT FINISH - RED
GL-1	GL-1 CLEAR GLAZING TO CODE, NCC & RELEVANT STANDARDS
GL-2	GL-2 CLEAR GLAZING TO CODE WITH RED VINYL

revision/ issue	description	drawn	checked	date
C	RFI 01 FURTHER AMENDMENT	JR	NP	29.08.2022
B	RFI 01	JR	NP	25.08.2022
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE, W.A.
drawn: MS
checked: NP
description: PROPOSED ELEVATIONS
scale: 1:100 @ A1
date: 05.11.2021
project no: 68.21
dwg no: SK12
rev: C

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ATTACHMENT B – PORTERS TECHNICAL MEMO

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TECHNICAL NOTE

Project:	Lot 137, Pinjarra Road, Furnissdale	**Date Issued:**	25 August 2022
Issued to:	Urbis	**Job Number:**	21-06-080

There is a Development Application for a service station to be located within Lot 137 Pinjarra Road, Furnissdale within the Shire of Murray. Lot 137 forms part of the Barragup Furnissdale Activity Centre (BFAC) located on the southeast corner of the intersection of Pinjarra Road and Furnissdale Road. In order to develop Lot 137 future internal access roads that are part of the BFAC are proposed to be used. This includes a proposed left turn ingress only along Pinjarra Road.

The BFAC did not however given consideration to the design requirements of a future deceleration lane adjacent to Lot 132 not included within the activity area. The proposed service station design within Lot 137 considers this by balancing the position of the left turn ingress between a future left turn lane at a signalised intersection at Furnissdale Road whilst minimising the impact on Lot 137 This Technical Note outlines the conceptual design parameters with respect to the left turn deceleration to service the development application and the future BFAC.

Pinjarra Road, adjacent to the Site is constructed to a four-lane divided carriageway standard. Future planning for Pinjarra Road is for an upgrade to a six-lane divided carriageway standard. There is an existing path located on the southern side of Pinjarra Road adjacent to the Site. Pinjarra Road has a posted speed limit of 80km/h currently decreasing to 60km/hr east of Lakes Road.

The *Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been sourced with respect to the conceptual layout of the proposed left turn deceleration lane. The proposed left turn ingress is such that vehicles left turning vehicles are not required to come to a stop condition hence less deceleration length than that typically required for a stop condition has been adopted as outlined in Table 5.2 of this reference document. An extract of this table is included in Attachment 1.

The proposed service station uses only a portion of Lot 137. As such the Developer has control over only Lot 137. The development does not however have control of the adjoining lot (Lot 132) to the east and as such this does pose as a design constraint with respect to the design of the left turn deceleration lane.

Two options are presented in drawing 21-6-80-807 in **Attachment 2** that give consideration to the site, design standards, adjacent constraints and future development.

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All options presented include a 3.5m wide left turn deceleration lane and a 1.5m on road cycle lane. These proposed widths are equivalent to, or more than the existing widths constructed for the deceleration lane on the Pinjarra Road, eastbound carriageway, west of Furnissdale Road.

Option 1- 120m Deceleration Length- 90km/h – 2.5m/s^2

Option 1 shows the left turn deceleration based on a design speed of 90km/h (i.e. 10km/h over the posted speed limit of 80km/hr) being 120m including taper. A verge width 3.5m has been shown abutting Lot 137 of which the developer has control. This 3.5m verge would allow for a 2.0m path abutting the property boundary plus a 1.5m verge for services such as signs, drainage pits and future street lights.

The conceptual design indicates that existing Telstra and underground power may need to be relocated under the new footpath. This will depend on existing depth of the cables and location of any pits. It is not uncommon for this type of infrastructure to be located under roads and turn lanes. If relocated, this would be within the 0-1.2m alignment. A 3.5m verge is sufficient for services required in this development area.

Whilst the existing 250mm sewer pressure main has not been surveyed and it may already be located under the existing sealed shoulder. It is not uncommon for this type of infrastructure to be located under road pavement, as long as cover requirements are met. These elements would be subject to further detailed design. It is further noted that gas is currently contained within the central Pinjarra Road median, whilst water, NBN, Optic Fibre and underground power are all located within the eastbound carriageway on the other side of Pinjarra Road.

It is evident from this design that based on the length of deceleration lane, there is inadequate verge width to provide a 2m path at the start of the deceleration lane (i.e. eastern end) adjacent to adjoining Lot 132. The narrowest point suggests only 1.5m between the new kerb and property boundary of Lot 132 would be available until Lot 132 develops.

Option 2- 85m Deceleration Length- 90km/h – 3.5m/s^2

Option 2 shows a reduced left turn deceleration based on a design speed of 90km/h (i.e. 10km/h over the posted speed limit of 80km/h) being 85m including taper based on an increased deceleration rate of 3.5m/s^2. Austroads allows for this higher deceleration rate resulting in reduced deceleration lengths in situations where a site is constrained. Given the developer has no control over the adjacent Lot 132 this is considered a constraint to the design what could be considered an interim situation i.e. the start of development in particular within Furnissdale.

Again, a verge width 3.5m has been shown abutting Lot 137. This 3.5m verge would allow for a 2.0m path abutting the property boundary plus a 1.5m verge for services such as signs, drainage pits and street lights. Again, the existing services can be managed within the proposed 3.5m verge as required at the detailed design stage.

This design results in the deceleration lane taper occurring across the boundary of Lot 132 and 137 which assists with the available verge widths. The narrowest width between the new kerb

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and adjacent Lot 132 is 3.36m for a very short distance. This is considered adequate for the existing services, a 2m path, drainage structures, signs and future street lights.

Future Potential Scenario – speed reduction of 60km/hr

Whilst Pinjarra Road currently has a speed limit of 80km/h it is noted that this reduces to 60km/h approximately 1.6km east of Furnissdale Road due to the increased traffic activity and adjoining development. It is envisaged that as development within the Furnissdale and Barragup areas in line with the BFAS and other structure plans that the speed limit on Pinjarra Road will also likely decrease. Based on a design speed of 70km/h (i.e. 10km/h above a posted speed limit of 60km/h) a deceleration lane length of 70m with the lower deceleration rate of 2.5m/s^2 is required by Austroads. Therefore, Option 2 with a deceleration length of 85m exceeds the desirable requirements in the future scenario with a reduced posted speed limit along Pinjarra Road.

5.2.2 Determination of Deceleration Turning Lane Length

Procedure

Table 5.2 shows the distances required for deceleration (including the physical taper) required for cars on a level grade and the diverge length required to change lanes, for a range of design speeds.

Table 5.2 should be used as follows:

- Where vehicles are required to stop or to give way the deceleration distance from the 'stop condition' column for a comfortable deceleration rate of 2.5 m/sec should be used.
- The column for a maximum design deceleration rate of 3.5 m/sec should only be used where it is impracticable to adopt the 'comfortable' rate. This usually involves situations where an intersection is located adjacent to a design constraint and it is not feasible to relocate either the intersection or the constraint (e.g. bridge abutment, bridge pier, utility that would be excessively expensive to modify or relocate), in order to achieve a deceleration lane length that provides for the 2.5 m/sec rate.
- In situations where a turning vehicle does not have to stop or give way and is able to turn a corner at speed, less deceleration distance is required (shaded green and pink in Table 5.2). L_d should be used where it exceeds the value shown in the area shaded green.

Table 5.2: Deceleration distances required for cars on a level grade

Design speed of approach road (km/h)	Length of deceleration D – including diverge taper *T* (m)										Diverge length L_d[3] for lane widths (m)	
	Stop condition[1] (m)		Design speed of exit curve (km/h)[2]									
	0	0	20	30	40	50	60	70	80	90	3.5 m[4]	3.0 m[4]
	Comfortable 2.5 m/s^2	Maximum 3.5 m/s^2	Comfortable average rate of deceleration 2.5 m/s^2									
50	40	30	30	25	15						33	27
60	55	40	50	40	30	15					40	33
70	75	55	70	60	50	40	20				47	40
80	100	70	95	85	75	60	45	25			54	44
90	125	90	120	110	100	85	70	50	25		60	50
100	155	110	150	140	130	115	100	80	55	30	67	57
110	185	135	180	175	160	150	130	110	90	60	74	62

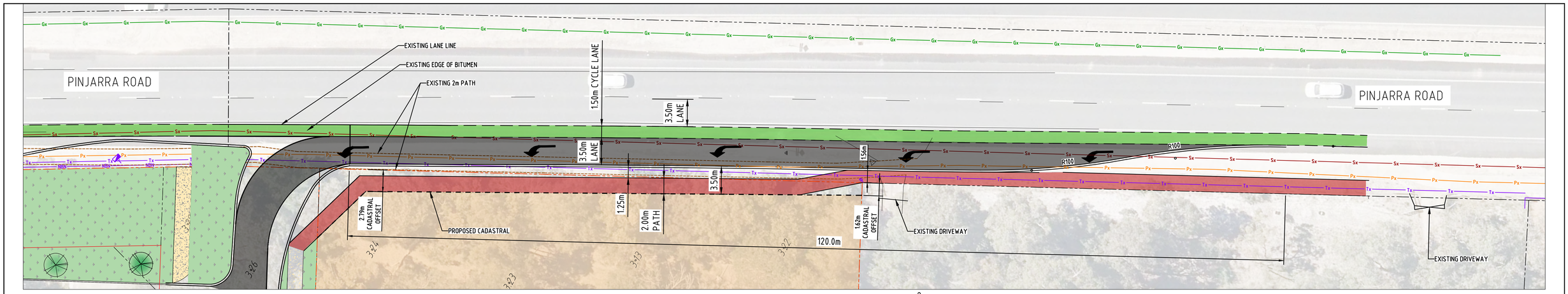
1 *Rates of deceleration are: 2.5 m/s^2 for comfortable deceleration; 3.5 m/s^2 is the maximum for design purposes.*
2 *Speed of exit curve depends on radius and crossfall (Figure 5.2).*
3 *Distance Ld assumes a lateral rate of movement of 1.5 m/s.*
4 *Example lane widths – use actual lateral shift distance of vehicle.*

Notes:
The pink shading indicates that the deceleration lengths given are greater than the diverge length. The length of the deceleration lane should be based on these values.
The green shading indicates that the diverge length is greater than the deceleration length. In these cases, the length of the deceleration lane should be based on the diverge length (the values shown in yellow shading).
Adjust for grade using Table 5.3.

Source: Department of Main Roads (2006)[15].

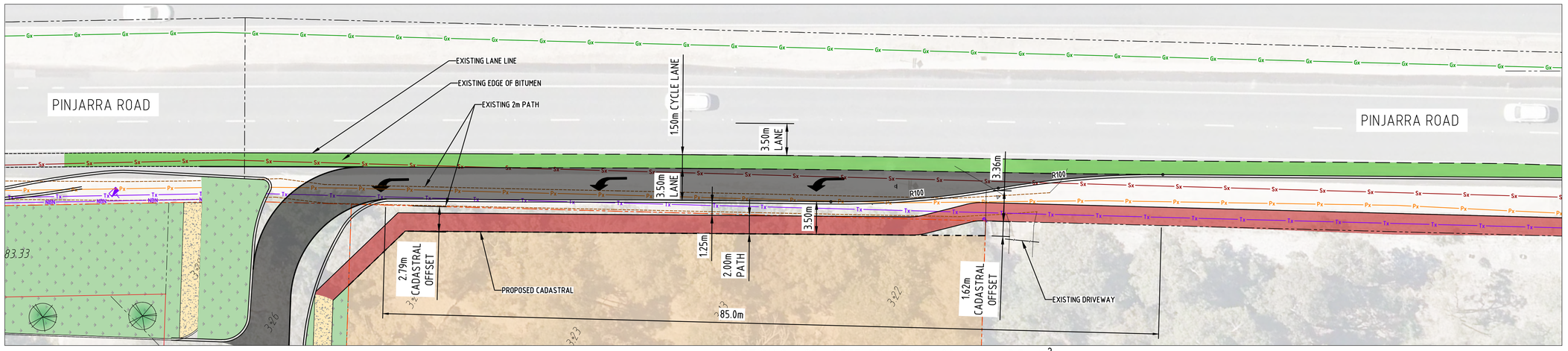
The deceleration distance determined from Table 5.2 should be increased for a downgrade and may be reduced for an upgrade in accordance with Table 5.3.

15 Department of Main Roads (2006) has been superseded and Table 5.2 has not been carried forward into Queensland Department of Transport and Main Roads (2016).



OPTION 1 120m DECELERATION - 90km/hr - 2.5m/s^2

SCALE 1:250

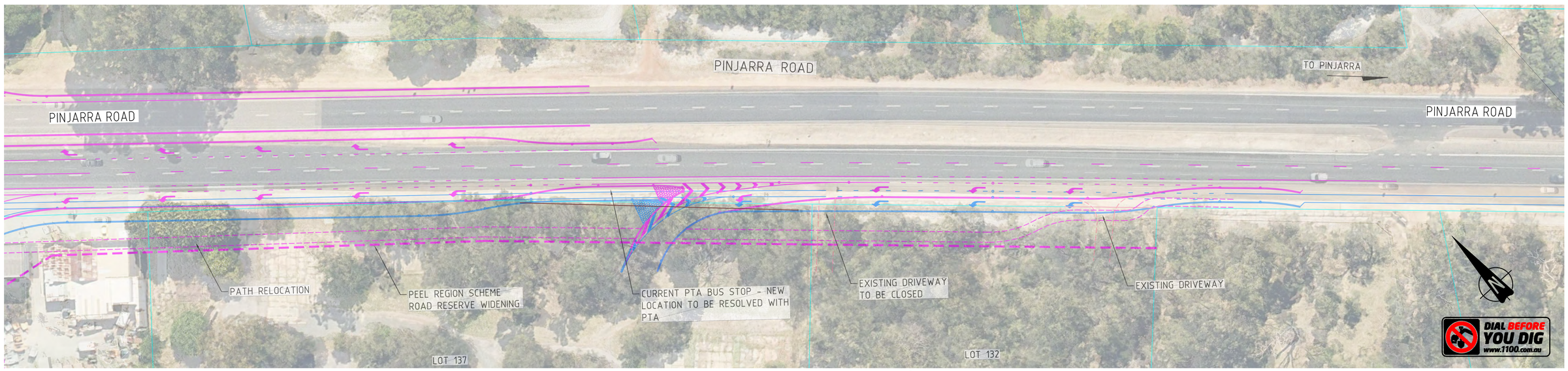


OPTION 2 85m DECELERATION - 90km/hr - 3.5m/s^2

SCALE 1:250

LEGEND

- PROPOSED CADASTRAL BOUNDARY
- EXISTING CADASTRAL BOUNDARY
- PROPOSED NEW KERB
- EXISTING EDGE OF BITUMEN
- EXISTING 2.0m PATH
- EXISTING FENCE
- LOT AREA
- LEFT SLIP LANE
- 2.0m CONCRETE PATH
- 1.5m CYCLE LANE
- OF — EXISTING OPTIC FIBRE
- NBN — EXISTING NBN
- Tx — EXISTING TESLTRA
- Gx — EXISTING 225PE HP GAS
- Wx — EXISTING WATER
- Sx — EXISTING 250 PVC SEWER
- Px — EXISTING UNDERGROUND LV POWER
- HVx — EXISTING UNDERGROUND HV POWER



MRWA 120m DECELERATION - 120km/hr - 2.5m/s^2

SCALE 1:500

1:500 0 5 10 20 30 Half Size 1:1000 - SCALE (m)

1:250 0 2.5 5 10 15 Half Size 1:500 - SCALE (m)

PROJECT:

PROPOSED SERVICE STATION CNR FURNISSDALE & PINJARRA RD

No.	DATE	REVISION	BY
A	24-8-2022	ISSUED FOR APPROVAL	MJV

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TUSMO Pty Ltd ACN 070 097 148 as trustee for the Consulting Engineering Unit Trust trading as Porter Consulting Engineers ABN 78 636 396 385

CLIENT:

YOLK PROPERTY GROUP

DRAWING:

PINJARRA ROAD DECELERATION LANE

STATUS: **FOR APPROVAL**

SCALE	1:250
DATE	AUG 2022
DESIGN	JH
DRAWN	MJV
CHECK	
APP'D	

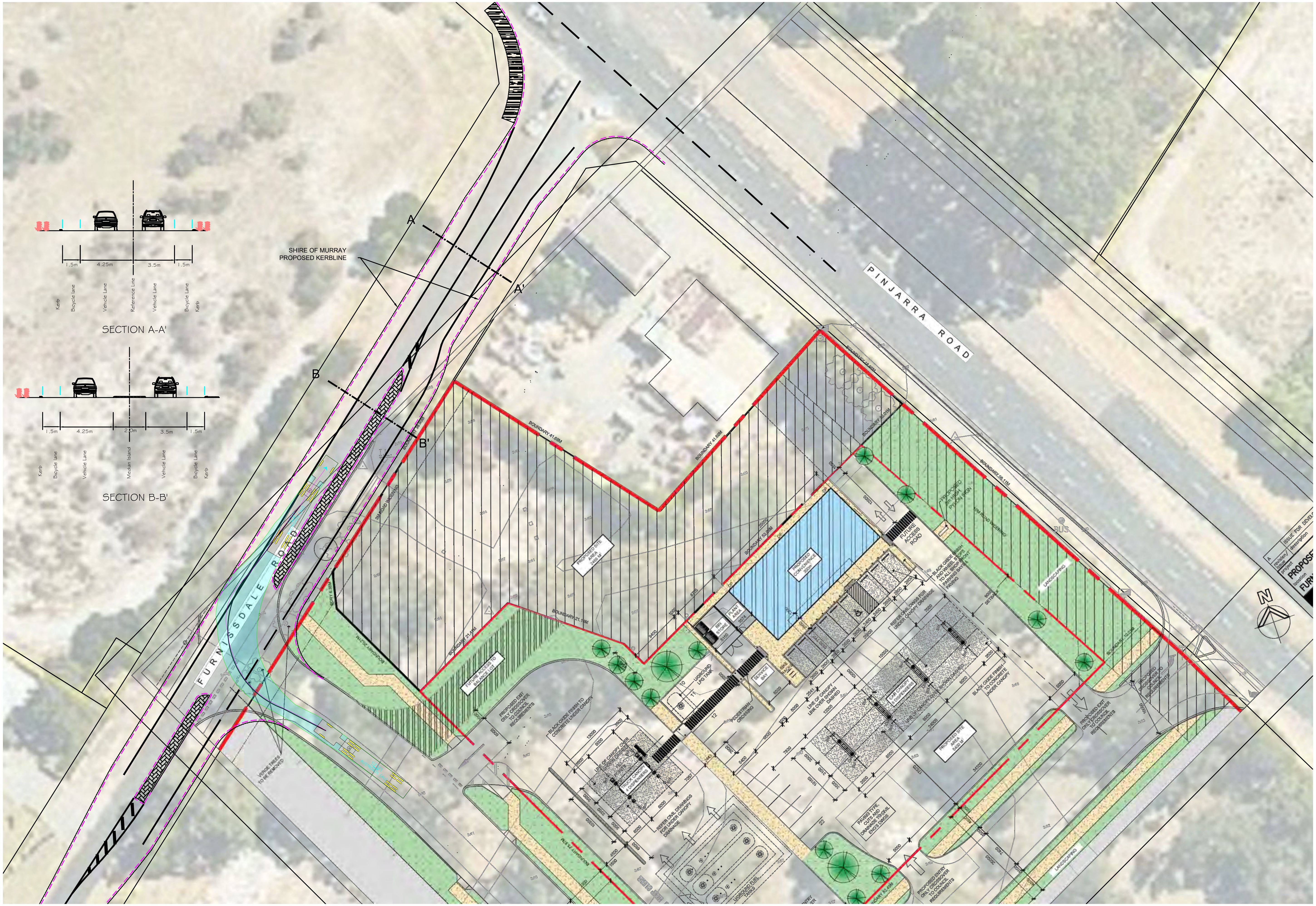
DRAWING No. 21-6-80/808

REV No. B

ORIGINAL DRAWING SIZE A1

FILE NAME S:\ACTIVE PROJECTS\21-06-080\ACAD\20680-808_RevB.dwg

ATTACHMENT C – SHIRE CONCEPT PLAN


SECTION A-A'
1.5m
4.25m
3.5m
1.5m
Kerb
Bicycle lane
Vehicle Lane
Reference Line
Vehicle Lane
Bicycle Lane
Kerb
SECTION B-B'
1.5m
4.25m
2.0m
3.5m
1.5m
Kerb
Bicycle Lane
Vehicle Lane
Median Island
Vehicle Lane
Bicycle Lane
Kerb
SHIRE OF MURRAY
PROPOSED KERBLINE
A
A'
B
B'
PINJARRA ROAD
FURNISSDALE ROAD
FUTURE ACCESS ROAD
BUS

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 Harris
Company (if applicable)	Porters Consulting Engineers
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	1/09/2022
DAP Application Number	DAP/22/02159
Property Location	Lot 137 Pinjarra Road, Furnissdale
Agenda Item Number	Item 8.1a and 8.1b

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:* Proposed Access Arrangement Compliance with Austroads Standards/Guidelines

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:

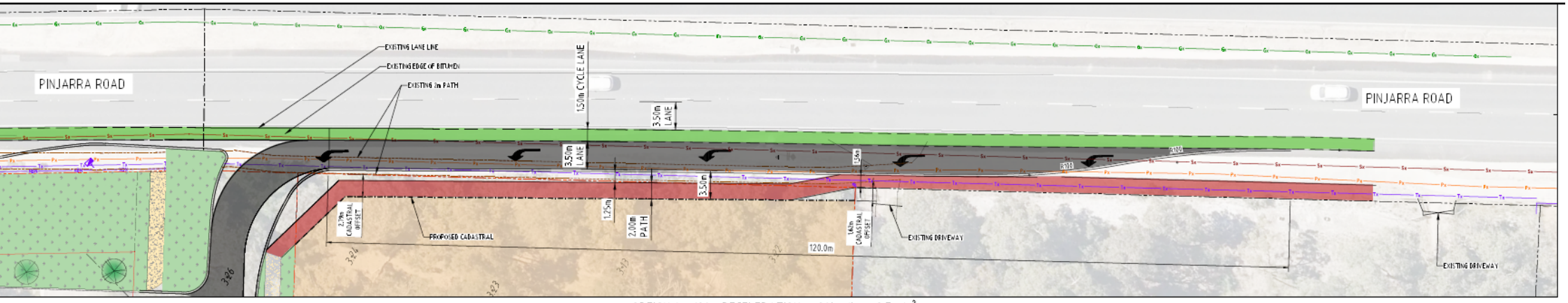
-

-

Porter
Consulting Engineers

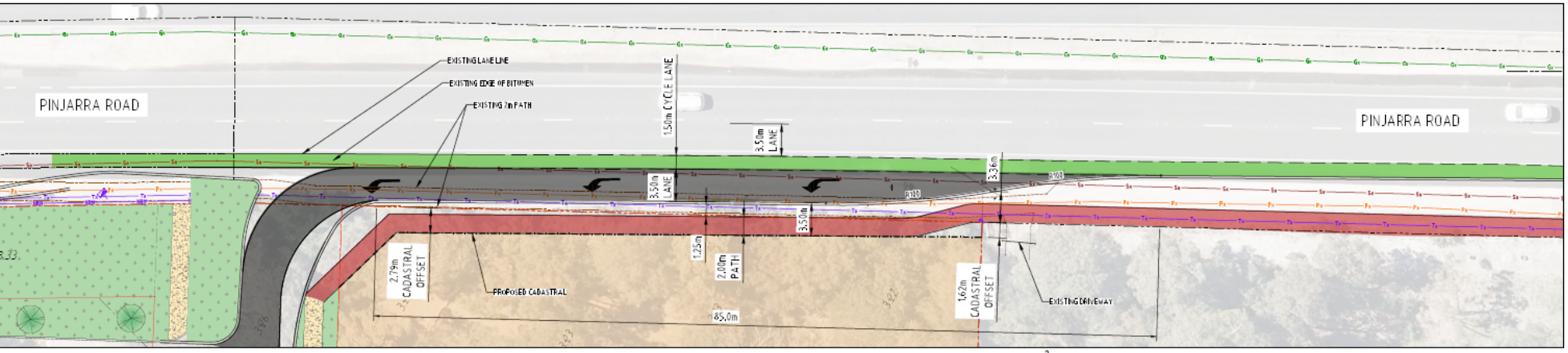
PROPOSED SERVICE STATION
630 PINJARRA ROAD, FURNISSDALE

DEPUTATION – METRO OUTER JDAP MEETING – 1 SEPTEMBER 2022



OPTION 1 120m DECELERATION - 90km/hr - 2.5m/s^2

SCALE 1:250

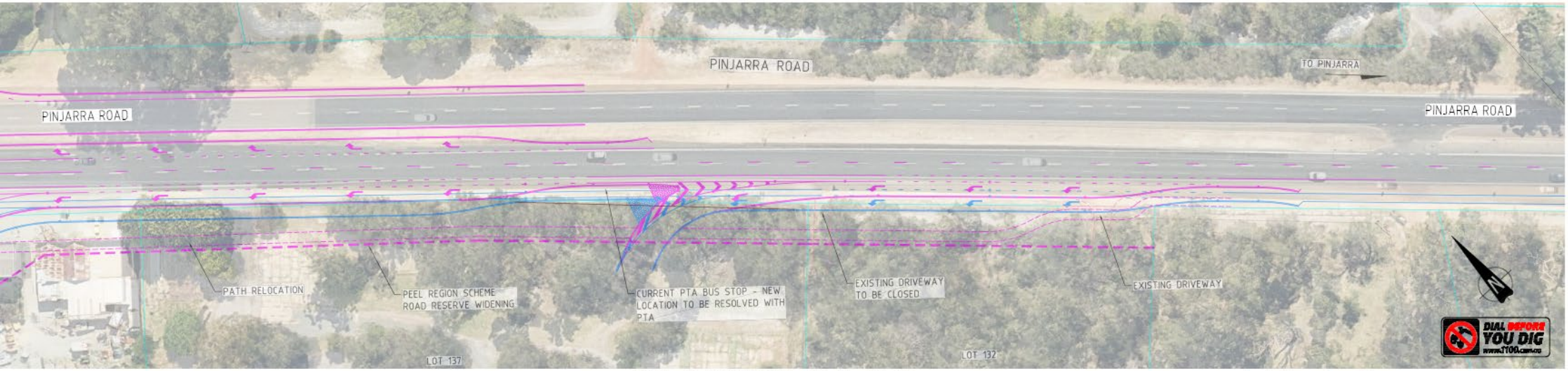


OPTION 2 85m DECELERATION - 90km/hr - 3.5m/s^2

SCALE 1:250

LEGEND

- PROPOSED CADASTRAL BOUNDARY
- EXISTING CADASTRAL BOUNDARY
- PROPOSED NEW KERB
- EXISTING EDGE OF BITUMEN
- EXISTING 2.0m PATH
- EXISTING FENCE
- LOT AREA
- LEFT SLIP LANE
- 2.0m CONCRETE PATH
- 1.5m CYCLE LANE
- EXISTING OPTIC FIBRE
- EXISTING NBN
- EXISTING TELSTRA
- EXISTING 225PE HP GAS
- EXISTING WATER
- EXISTING 250 PVC SEWER
- EXISTING UNDERGROUND LV POWER
- EXISTING UNDERGROUND HV POWER



MRWA 120m DECELERATION - 120km/hr - 2.5m/s^2

SCALE 1:500

1:500 0 5 10 20 30 Half Size 1:1000 - SCALE (m)

1:250 0 2.5 5 10 15 Half Size 1:500 - SCALE (m)

Table 5.2: Deceleration distances required for cars on a level grade

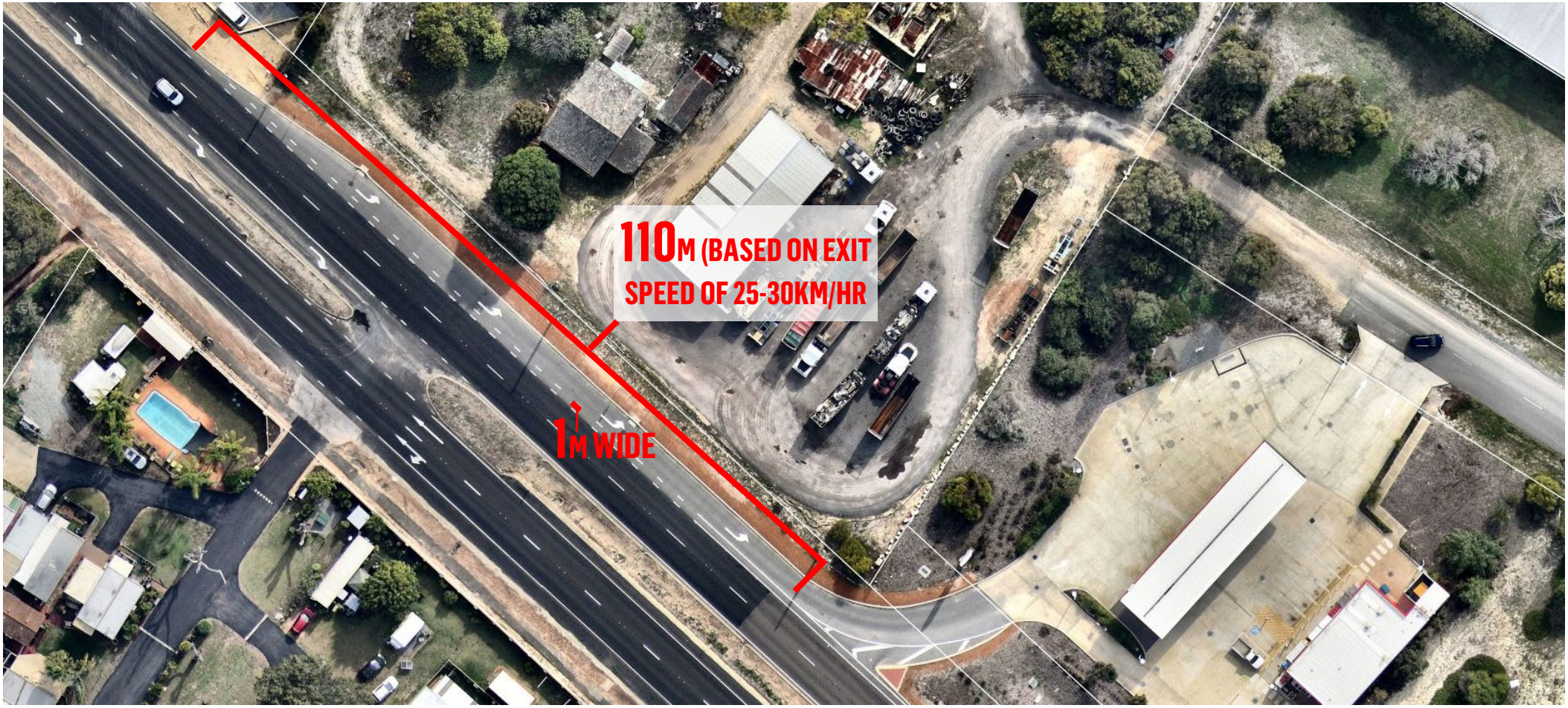
Design speed of approach road (km/h)	Length of deceleration D – including diverge taper *T* (m)									Diverge length L_d[3] for lane widths (m)	
	Stop condition[1] (m)		Design speed of exit curve (km/h)[2]								
	0	0	20	30	40	50	60	70	80	90	3.5 m[4]	3.0 m[4]
	Comfortable 2.5 m/s^2	Maximum 3.5 m/s^2	Comfortable average rate of deceleration 2.5 m/s^2									
50	40	30	30	25	15						33	27
60	55	40	50	40	30	15					40	33
70	75	55	70	60	50	40	20				47	40
80	100	70	95	85	75	60	45	25			54	44
90	125	90	120	110	100	85	70	50	25		60	50
100	155	110	150	140	130	115	100	80	55	30	67	57
110	185	135	180	175	160	150	130	110	90	60	74	62

1 *Rates of deceleration are: 2.5 m/s^2 for comfortable deceleration; 3.5 m/s^2 is the maximum for design purposes.*
2 *Speed of exit curve depends on radius and crossfall (Figure 5.2).*
3 *Distance Ld assumes a lateral rate of movement of 1.5 m/s.*
4 *Example lane widths – use actual lateral shift distance of vehicle.*

Notes:
The pink shading indicates that the deceleration lengths given are greater than the diverge length. The length of the deceleration lane should be based on these values.
The green shading indicates that the diverge length is greater than the deceleration length. In these cases, the length of the deceleration lane should be based on the diverge length (the values shown in yellow shading).
Adjust for grade using Table 5.3.

Source: Department of Main Roads (2006)[15].

PINJARRA ROAD PRECEDENCE



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	Gerrit Duijckers - [redacted]
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	DAP Outer JDAP
Meeting Date	wednesday !st September 2022
DAP Application Number	DAP/22/02239 .
Property Location	102-106 COCKMAN RD GREENWOOD WA 6024
Agenda Item Number	195 CITY OF JOONDALUP

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** X
Is the presentation in support of or against the report recommendation)? *(contained within the Agenda)*	**SUPPORT** X **AGAINST** ☐ REJECT APPLICATION
Is the presentation in support of or against the proposed development?	**AGAINST** X
Will the presentation require power-point facilities?	**YES** ☐ **NO** X **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 SAFETY OF* TRAFFIC RESIDENTS AND THE PARENTS AND CHILDREN OF THE CENTRE .

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:

ATTACHED IS MY PRESENTATION TO THE CITY OF JOONDALUP IT COVERS NUMERIOUS POINTS OF SAFETY ADDITIONAL TRAFFIC FLOW AND COMPETING COMMERCIAL BUSINESSES WITH OPPOSING ENTRY AND EXIT POINTS AND BLIND SPOTS WHEN COMING INTO OLIIS RD FROM EITHER END PLUS THE NOTION THAT THERE WILL BE ON PARKING ON OLLIS STREET IS FARCICAL AS HAS BEEN SEEN BY THE DENTAL PRACTICE OF MANY YEARS (I AM A RESIDENT OVER OV 40 YEARS)

THE SENARIO OF CLIENTS TO THE DENTIST TO THE DAY CARE CENTRE BEING SHORT TERM IN AND OUT , RESIDENTS WANTING TO DRIVE TO WORK (NOTE THIS IS A MAJOR ENTRY POINT INTO THIS PART OF THE ESTATE) AND RESIDENTS INCLUDING SCHOOL KIDS WANTING TO CATCH THE BUS USE THIS STREET WHICH HAS NO APTHS AND LIKELY INCREASE TRAFFIC DURING THERE TRAVEL TO AND FROM THE BUS IN A VERY SHORT STREET WITH TWO OPPSOING ENTRY EXIT POINTS ALL WAITING FOR THE INEVITABLE ACIIDENTS TO HAPPEN

ONLY ONE CAR STREET PARKING ON OLLIS STREET CAN AND WILL CAUSE AN ACCIDENT DUE TO THE SHORTNESS AND THE PACE OF CARS COMING OFF COCKMAN ROAD BLIND SPOTS BECAUSE OF VERGE PARKING AND STREET PARKING THE FACTORS INVOLVED IN WATCHING TRAFFIC ALONG COCKMAN AND OLLIS AND THEN THE EFFECT OF STREET PARKING AND CLIENTS PARENTS COMING OUT OF THE DEVELOPMENTS AND LOCALS WALKING TO THE BUS 6 DIFFERING FACTORS TO NEGOTAITE TURNING INTO OLLIS NOT TO MENTION TRAFFIC COMING VIA THE BACK STREETS PARENTS IN A HURRY TO DROP OF KIDS

SEE ATTACHED SUBMISSION

The danger currently to be enhanced comes clearly from the siting of both developments which will share common opposing drive ways

At the moment the dangers experienced on numerous occasions stem from the traffic at the current Dental / Chiro Practice but will heightened by the opposing development.

Note Ollis St is a major entry into this conclave of houses

1. Traffic coming in from Cockman Rd now have to compete with two sets of traffic from the dental and child care plus the number of vehicles from these premises reversing whilst you have made a decision to cross Cockman or turn off Cockman into Ollis has seen me personally have to evade them, note Cockman is a busy road .

2 The added burden of over flow traffic parking on Ollis Street, which is a extremely short street, has once again cause dangerous over taking manoeuvres, when you consider the traffic from both Cockman and Ricketts Way is upon you extremely quickly, it's a narrow street and will only be enhance with the increase of traffic

3 Ollis St has pedestrian traffic plus Bike riders using the road to get to Cockman Rd for the bus, a Major Park on Cockman Rd and the Shops, with the current situation of parking the creates blind spots by both cars on opposite drive ways and reversing into Ollis currently from the dental practice but the added traffic from the day care will see the creation of a black spot my worst fears are a errant child running out of the centre to a car parked on Ollis (Overflow) being the BLACK SPOT causality

4 The extra problem comes with Early drop-off and late pickup with winter there will be reduced lighting and once again the shortness of Ollis St coming into play

5 There will also be increased traffic not all from Cockman Rd but others wishing to evade the more than likely back up of cars dropping Kids off coming though the back roads where our Kids play and residents come out from these streets, ways and roads have resident parking on the road and parents dropping of kids at the centre being late will not have the duty of care as the residents have.

6. look at this scenario – You have parents, patients coming from and across Cockman Rd and from Ricketts Way both sides plus Parents and Patients coming out from both businesses. Add to this residents wishing to go to work walking down to the bus plus driving into Ollis wanting to go to their destination. While this takes place someone crosses Cockman in front of traffic and suddenly sees the complete chaos and in the street where two opposing drive ways sit and one usually shieled by cars parking on the road and verge

7. The two complex's have opposing drive ways what else do I need to say, short street opposing traffic Plus residents pedestrians

The whole scenario spells a major disaster of epic proportions involving residents and worst fears KIDS.

Gerrit Duijckers


106


106


TOYOTA


TOYOTA

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	Bianca Sandri
Company (if applicable)	Urbanista Town Planning
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	1 September 2022
DAP Application Number	DAP/22/02239
Property Location	102, 104 and 106 Cockman Road, Greenwood
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 will be screen shared

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 and why the correct and preferable decision is to approve the proposed development.

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

URBANISTA
TOWN PLANNING

26 August 2022

Mr Eugene Koltasz
Presiding Member
Metro Outer JDAP
daps@dplh.wa.gov.au

Dear Mr Koltasz,

PRESENTATION DAP/22/02239
NOS, 102, 104 AND 106 COCKMAN ROAD, GREENWOOD
PROPOSED CHILD CARE PREMISES

On 25 May 2022, the City of Joondalup received an application from Urbanista Town Planning a child care premises at Nos. 102, 104 and 106 Cockman Road, Greenwood to be determined by the Metro Outer Joint Development Assessment Panel ('**JDAP**').

This development application has ensured the design and scale of the proposal is copacetic with its residential setting, achieved through a single storey design approach with a single house design influence. The site planning thoroughly considered the amenity of the residential area, which is why an L-shape design is proposed to mitigate any offsite impacts.

We have worked closely with both the City's staff and Design Review Panel ('**DRP**') to ensure the best possible outcome is achieved. The City's DRP was supportive of the proposal, with positive feedback provided in respect of both locational context and the built form outcome. All suggestions made by the DRP were addressed through an amended set of plans as expressed within the RAR.

Despite the efforts of the Applicant, the City's officer's recommendation as detailed in the Responsible Authority Report ('**RAR**') is for refusal subject to two reasons:

1. *The proposed Child Care Premises does not meet the objectives of the Residential zone of the City of Joondalup Local Planning Scheme No. 3 or Clause 67(m) of the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015 as the scale of the development is incompatible with and not complementary to residential development.*

2. *In accordance with clause 67(g) of the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015, the proposed development does not meet the objectives of the City's Child Care Premises Local Planning Policy and will have an adverse impact on the amenity of the surrounding areas as a result of the location and scale (number of children proposed) of the development.*

THE PROPOSAL

The development application proposes construction of a single-storey child care premises comprising a nursery, toddlers' area, and two kindergartens, all oriented towards a large outdoor play area. Car parking is proposed in the northern corner of the site, near the intersection of Cockman Road and Ollis Street, whilst the outdoor area is located towards Cockman Road, away from the adjacent residential properties.

The child care premises has been designed to provide a consistent built form and character with existing residential dwellings in the area, whilst strategically positioning play areas and facilities to minimise potential impacts from operation. A summary of the proposed operation is provided below.

Hours of operation	
Monday to Friday	7.00am – 6.00pm*
Saturday	8.00am – 1.00pm*
Sunday and public holidays	Closed

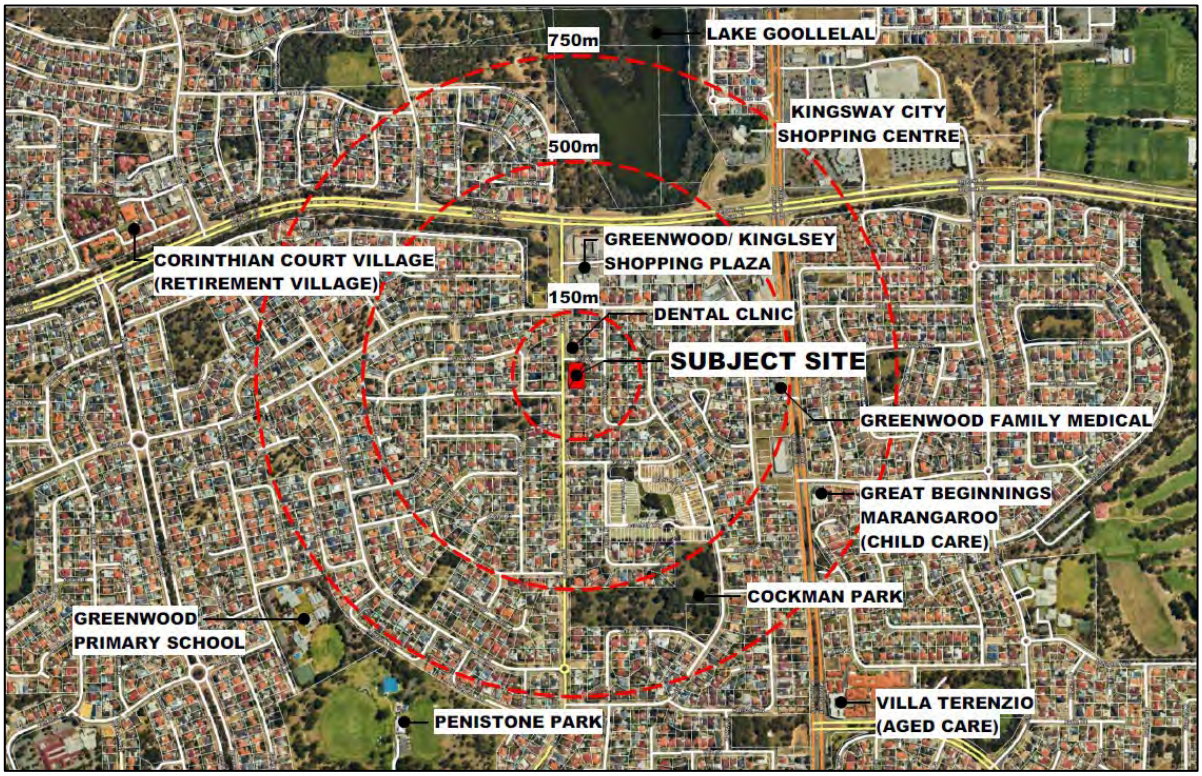
*Staff on site 30 minutes prior to and after stated hours

Staff
Max on site: 15
Parking: 15 bays

Children
Max on site: 92
Parking: 12 bays

LOCATION

The site is located only 100m from a mixed use zone to the north which directly connects with both commercial and light industrial zones. Opposite the site on Ollis Street is a commercial premises (dentist and chiropractor at 108 Cockman Road, Greenwood), also within the residential zone ('R20').



REASONS FOR REFUSAL

The reasons for refusal are principally centred around the 92 children occupancy of the child care premises as the City's Child Care Premises Local Planning Policy ('**LPP**') includes a provision for 50 children.

Regard should be given to the LPP however, discretion is available to the JDAP when undertaken in a sensible and appropriate way. This is outlined in the Development Assessment Panels *Making Good Planning Decisions*. The City's strict interpretation of their policy with respect to children numbers is incorrect as each planning application should be considered on its merits with '*proper, genuine and realistic'* consideration to be given.

The objectives of the LPP for consideration are:

- *To provide development standards for the location, siting and design of child care premises.*
- *To ensure that child care premises do not have an adverse impact on the amenity of surrounding areas, particularly residential areas.*

These objectives have been addressed in detail within the Urbanista Town Planning report and a summary is provided below.

SCALE AND AMENITY

The City's DRP provided the following commentary in relation to design principle 3 – built form and scale, design principle 6 – amenity and design principle 10 - aesthetics:

- *"The single storey scale is modest and in keeping with the surrounding context.*
- *The built form is appropriate for both its setting and use.*
- *The site planning is supported as it will mitigate noise impact with the outdoor play area and activity rooms located further away from the adjoining residential lots by the L-shaped building form.*
- *The saw tooth roof has been integrated into the residential typology design aesthetic well to allow additional light into activity rooms, however the design is quite uniform in its materiality."*

It is clear that the DRP were supportive of the proposed developments scale, amenity considerations, site layout and aesthetics.

With respect to the scale of the proposal, site coverage is one of the tools used by the Residential Design Codes ('**R-Codes**') to determine scale of a development. The LPP permits a site coverage of 50% and a building height of two storeys, which replicates the R-Codes 50% open space and two-storey building height requirements under the R20 density code.

In accordance with these requirements, the permitted site coverage across the three lots would be 1,126.5sqm and the floor area permitted over two storeys would be 2,253sqm. The proposed child care premises has a site coverage and floor area of only 597m² within a single storey built form. This is effectively only a quarter of the floor area the framework permits.

Clause 5.1.3(b) of the LPP seeks a maximum of 50 children for child care premises within a residential zone. Whilst the proposal accommodates 92 children, the development has been deliberately spread across three lots to ensure a low intensity and low impact land use. This equates to approximately 30 children per lot, which represents 40% reduced land use intensity than contemplated under the LPP, which would permit up to 50 children on a single residential lot.

The child care premises will be a low intensity land use with no adverse impacts for the following reasons:

- Noise impact to residential properties will be minimal as all active areas are oriented towards the street, away from adjacent residential properties, and additional screen fencing will be provided in accordance with the recommendations of the acoustic report.
- Traffic in the context of a local distributor road will be minimal, all activities are directed towards Cockman Road, a local distributor road connecting with a regional road 300m from the site.
- The car parking location is opposite an existing commercial premises on Ollis Street, and access is from a single crossover to Cockman Road.
- The child care premises primarily interacts with a busy traffic corridor rather than residential dwellings.
- Building scale is entirely complimentary to development in the locality, and considerably less than that permitted under both the R-Codes and LPP.

- Adjoining a non-residential use on one boundary holds no relevance to whether the child care premises will impact the other adjacent residential properties, the purpose of this criteria is unclear - notwithstanding, the site is opposite another commercial premises and has been site planned to reduce offsite impacts.

In addition to the above justification, the application is accompanied by an extensive planning report, architectural plans, landscape plans, transport impact statement, environmental acoustic assessment, and waste management plan. Each of these reports also conclude there will be no amenity and scale impacts on the locality.

CONCLUSION

In summary, the layout of the proposal has been extensively considered to ensure the proposed use presents minimal impacts on the residential area which it is located, whilst also carefully considering the building design to ensure it complements and fits within the existing residential streetscape character.

The child care premises will provide a convenient and invaluable service for many of the local residents, whilst also creating local employment opportunities.

I respectfully request the JDAP **approve** the development subject to conditions.

Yours sincerely,

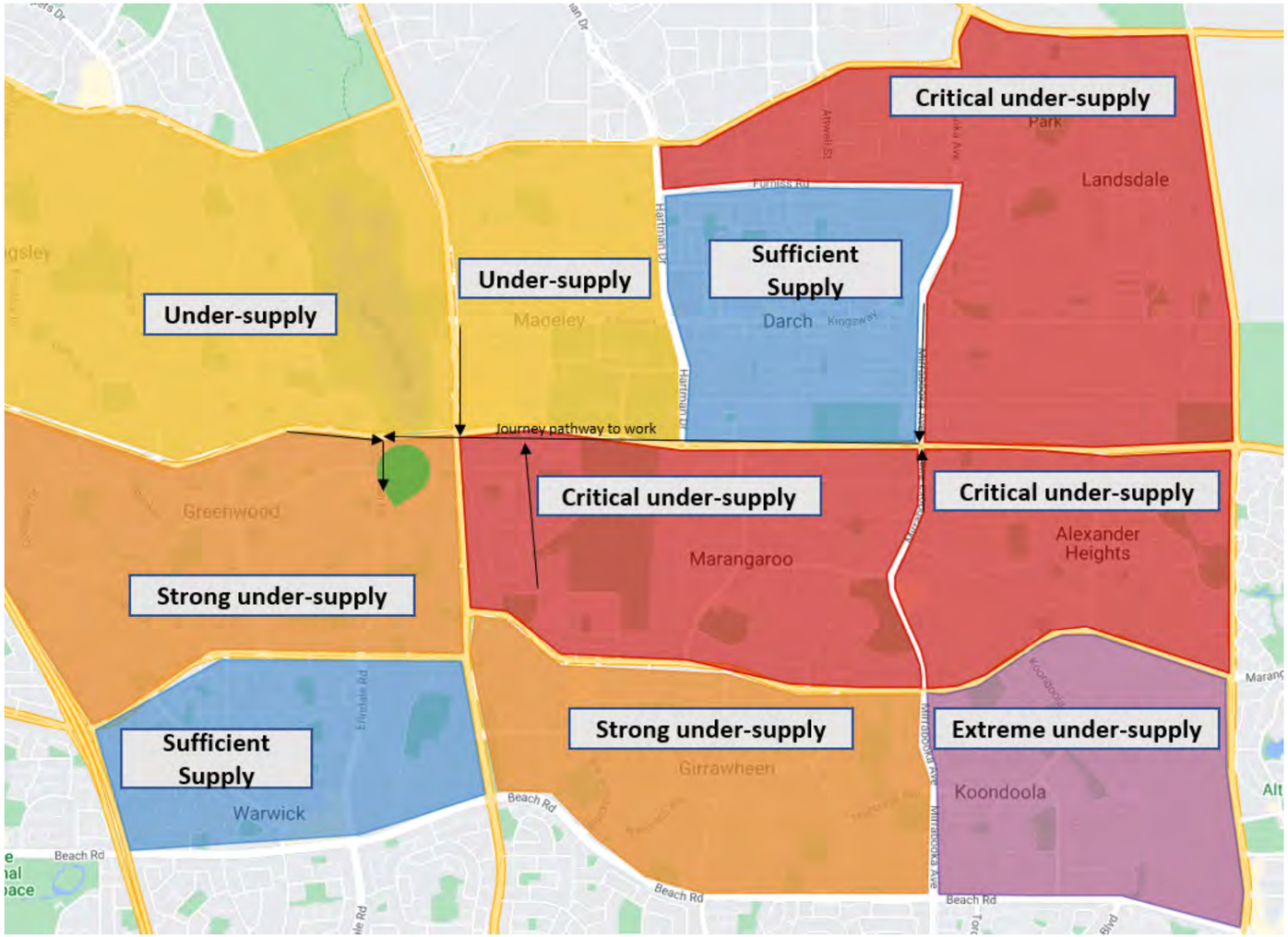
Bianca Sandri
Director

Child Care Premises

102, 104 AND 108 COCKMAN ROAD

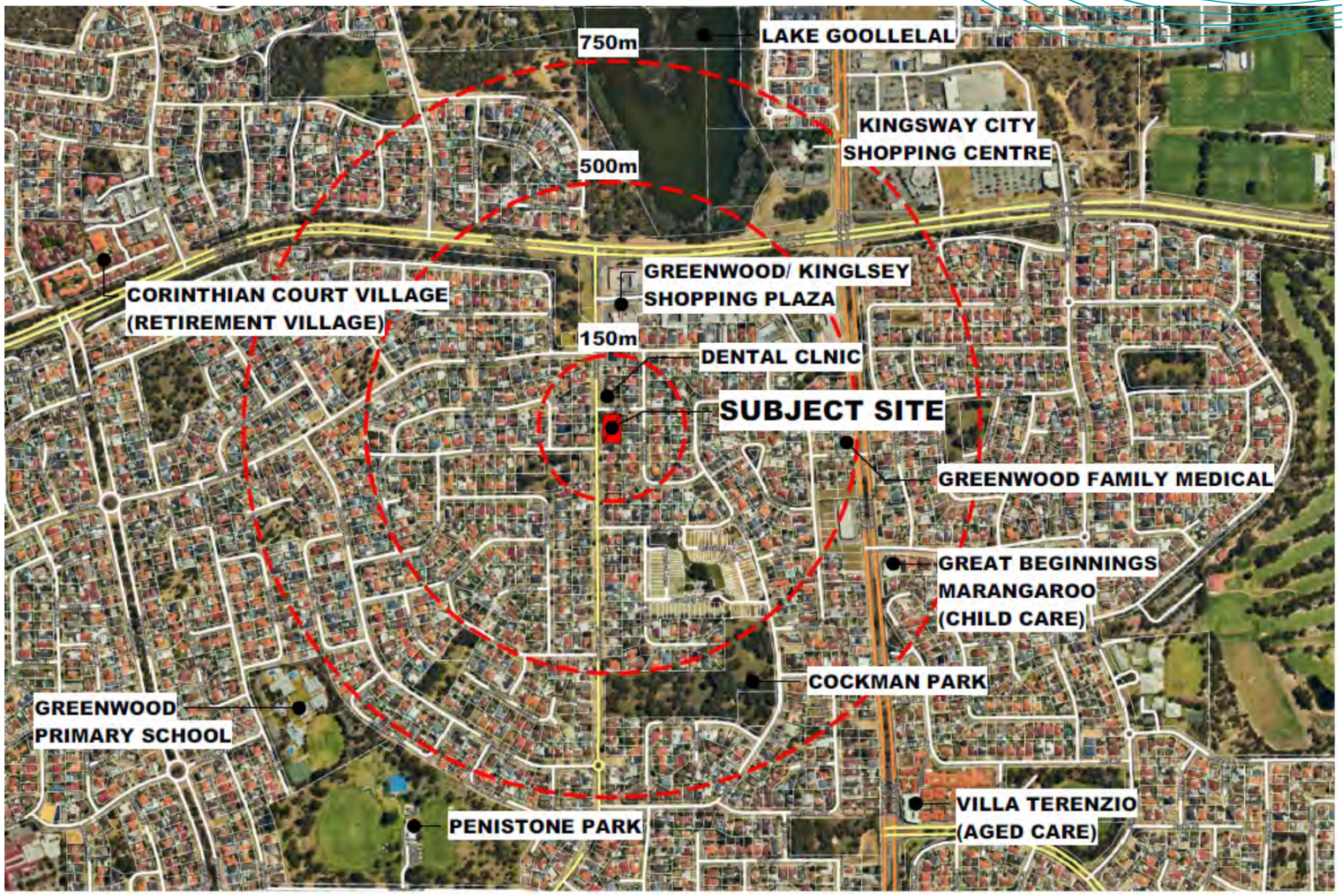
URBANISTA
TOWN PLANNING

UNAVAILABILITY OF CHILD CARE



BROADER LOCALITY

- Proposal for 92 places over three green title lots, to be amalgamated
- Located on a corner site and along a district distributor road
- Strategically located as it is located within a residential area but in proximity to a number of non-residential and commercial land uses



IMMEDIATE LOCALITY

- Most appropriate site in west Greenwood for Childcare
- Cockman Road is a daily route for parents and residents from other suburbs to get to work and school
- Highly accessible Local Distributor Road between Hepburn Avenue and Warwick Rd
- Opposite an established Dental Practice and an extension of existing mixed commercial precinct north of the site

SCALE

APPROVAL

- Overwhelming support by Design Review Panel, supporting a design that goes over and above to protect surrounding neighbours from traffic and noise impacts
- All suggestions made by the DRP have been met
- Significant/critical demand being met through supply in a highly accessible location
- Appropriate co-location with an existing non-residential precinct
- Traffic and acoustic assessments accepted by the City's officers
- Local facility for the community with positive social outcomes
- Significant merit for approval

Key Design Review Comments	**The proposal has the following design strengths:** • The development includes strong characteristics of the existing residential setbacks and single storey scale. • The site planning layout mitigates noise impact through the L-shape plan with play area to the street front away from adjoining residents. • The retention of the mature tree within the verge and the introduction of additional tree plantings are a major asset.

Pinjarra Road, No. 630 (Lot 137) Furnissdale – Proposed Petrol Filling Station

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer	
Local Government Area:	Shire of Murray	
Applicant:	Urbis	
Owner:	Mandurah Spotlight Property Pty Ltd	
Value of Development:	$3.1 million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)	
Responsible Authority:	Shire of Murray	
Authorising Officer:	Manager Planning Services	
LG Reference:	P304/2021	
DAP File No:	DAP/22/02159	
Application Received Date:	10 December 2021	
Report Due Date:	10 August 2022	
Application Statutory Process Timeframe:	90 Days with an additional 153 days	
Attachment(s):	1. Development Plans 2. Development application submission including: • Planning Report • Bushfire Management Plan • Bushfire Risk Management Plan • Stormwater Management Plan and Conceptual Drainage and Wastewater Design • Traffic Impact Assessment • Certificate of Title and Diagram of Survey 3. MRWA Preferred Access Plan 4. Submissions 5. Agency Submissions 6. Shire Concept Access Plan	
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:

Approve DAP Application reference DAP/22/02159 and accompanying plans and accompanying plans:

- SK13: Proposed Site Plan Rev A (03/12/2021)
- SK14: Overall Lot Plan Rev A (03/12/2021)
- SK10: Proposed Floor Plan Rev A (03/12/2021)
- SK11: Proposed Elevations P1 Rev A (03/12/2021)
- SK12: Proposed Elevations P2 Rev A (03/12/2021)

in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015,* and the provisions the Shire of Murray *Local Planning Scheme No.* 4, subject to the following conditions:

Conditions

1. This decision constitutes planning 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.

Amended Plans -

2. Prior to applying for a Building Permit, updated development plans shall be prepared and submitted to the Local Government for approval showing:

    (i) An amended site plan reflecting the decision under the Peel Region Scheme.
    (ii) A minimum two-metre-wide landscape strip abutting the Pinjarra Road widening and a two-metre wide pedestrian pathway on the northern side of the convenience store building linking the proposed building to the future development area on the western portion of the development site and the adjoining Lot 24 Pinjarra Road, Furnissdale. The convenience store building setback to Pinjarra Road to be increased sufficient to achieve this.
    (iii) An extended footpath between the truck canopy and the car canopy (abutting bays 10-22) so that it connects up to the paths within the two internal access roads.
    (iv) A dual use path within the Pinjarra Road reserve/road widening and the Furnissdale Road reserve where they abut Lot 137.
    (v) Pathway links between dual use paths referred to in part (iv) and internal pathways.
    (vi) The vehicular accessway to the north of the convenience store building is to be extended westward to the boundary of the abutting Lot 24 Pinjarra Road, Furnissdale
    (vii) Bicycle bays and end of trip bicycle facilities including showers and lockers within the development site designed in accordance with the Austroads' Guide to Traffic Engineering Practice Part 14: Bicycles and AS 2890.3 Parking facilities Bicycle parking.
    (viii) A geometric design of the exit only crossover adjacent to the Pinjarra Road access that precludes entry movements;

(ix) Swept path diagrams for all intended vehicular movements into, around and out of the site and the immediate surrounding road network together with any resultant design modifications necessary to achieve adequate vehicle manoeuvring;
(x) Amended elevation plans that:
- Utilise building and canopy colours that are generally be sympathetic and complementary with the surrounding rural/natural environment;
- Add a canopy or similar architectural treatment to the northern convenience store building elevation to provide weather protection to pedestrians, and shading to north facing windows;
- Use restrained and coordinated signage, including the removal of the painted signage panels and the signage to the dado concrete panels to the northern and western building elevations;
- Remove the red film signage covering the upper part of the windows fronting Pinjarra Road and the new internal road;
- Use different colours and materials to break up the large blank walls; and
- The pylon sign being reduced to 6m in height and 2m in width.

All development as shown on the approved updated development plans is to be constructed in accordance with the updated plans to the satisfaction of the Local Government.

Landscaping

3. Prior to applying for a Building Permit, a revised Landscaping Plan for the development site and the abutting street verges shall be prepared and submitted to the Local Government for approval and must include the following detail:

(i) the location, number and type of existing and proposed trees and shrubs, including calculations for the landscaping area;
(ii) any lawns to be established and areas to be mulched;
(iii) all existing trees outside of the nominated development site and within the Pinjarra Road road widening area;
(iv) Car parking areas shall be provided with native trees at the rate of 1 per 4 car bays;
(v) those areas to be reticulated or irrigated; and
(vi) proposed upgrading to landscaping, paving and reticulation of the street setback area and all verge areas.

The landscaping, including paving and reticulation must be completed prior to the occupation of the development, and must be maintained at all times to the satisfaction of the Local Government for the duration of the development.

4. Existing trees within Lot 137 which are located outside the development site, including those within the road widening area are to be maintained where ever practical. Written approval from the Local Government must be obtained to remove any existing trees within Lot 137 located outside the development site.

Roads and Access

5. Prior to applying for a Building Permit, detailed engineering drawings and specifications shall be prepared and submitted to the Local Government for

approval for the upgrade of Furnissdale Road from the intersection of Pinjarra Road to the proposed vehicular access point. The design is to show the upgrade of Furnissdale Road to an overall 26 metre wide reserve with five metre wide verges, five metre wide lanes (including traffic and cycle lanes), and a six metre wide central median. The design is to include turning lanes/pockets, drainage, kerbing, paths, street trees, street lighting and undergrounding of the above ground powerlines and allow for suitable all movement vehicular access to Lot 157 on the western side of Furnissdale Road. All works shown on the approved engineering drawings and specifications are to be undertaken prior to the occupation of the development.

6. Prior to the occupation of the development, the western three metres of Lot 137 where it abuts Furnissdale Road, together with any localised widening necessary for the turning lanes at the intersection of Furnissdale Road and Pinjarra Road and the proposed new intersection to Furnissdale Road as shown on the approved engineering drawings referred to in condition 5 above is to be ceded free of cost and without payment of compensation to the Crown for road widening purposes prior to the occupation of the development.

7. Prior to applying for a Building Permit, detailed engineering drawings and specifications shall be prepared and submitted to the Local Government for approval for the access roads abutting the south and east boundaries of the development site. The design is to include paths, street trees, street lighting and drainage. All works are to be undertaken in accordance with the approved engineering drawings and specifications prior to the occupation of the development.

8. Prior to the occupation of the development, the land required for the access roads abutting the south and east boundaries of the development site is to be ceded free of cost and without payment of compensation to the Crown for road purposes prior to the occupation of the development.

9. Prior to the occupation of the development an easement in gross pursuant to Sections 195 and 196 of the Land Administration Act 1997 for the benefit of the public is to be placed on the Certificate of Title for Lot 137 Pinjarra Road, Furnissdale, specifying access rights for the public at large between the access road to the east of the development site and the abutting Lot 24 Pinjarra Road, Furnissdale.

10. Prior to applying for a Building Permit, the parking bays, driveways and points of ingress and egress is to be designed in accordance with the Australian Standard for Off Street Parking (AS 2890) unless otherwise specified by this approval. Such areas shall be constructed, kerbed, drained and line-marked prior to the development first being occupied and thereafter maintained in a sound state of repair.

11. The landowner shall enter into a legal agreement with and to the satisfaction of the Local Government, sufficient to secure a proportional contribution is provided to the Local Government toward the future upgrade of the intersection of Pinjarra Road, Furnissdale Road and Watson Drive.

Drainage / Stormwater

12. Prior to applying for a Building Permit, an amended Drainage and Water Management Plan, consistent with the Local Government's Water Sensitive Urban Design Local Planning Policy and the Department of Water's Water Quality Protection Notes 49 - Service stations and 62 - Tanks for underground chemical storage, shall submitted to the Local Government for approval with the approved plan to be implemented.

    The plan is to address drainage and water management related issues for the site including:

    (i) Implement a piped drainage strategy that manages the catchment runoff including external road reserve stormwater and outfall into a protected drainage reserve or reserves as necessary;
    (ii) cross-sections for all relevant stormwater basins including, invert levels, top water levels (TWL) for all rainfall events, distance to maximum groundwater level from basin invert and use of amended soils;
    (iii) required storage for each rainfall event (Stormwater runoff should be fully contained onsite for small and minor storm events);
    (iv) permitted outflow of stormwater runoff from the site;
    (v) confirmation that stormwater runoff storage areas are designed to drain within the Department's recommended 96 hours; and
    (vi) the first 15 mm of stormwater runoff designed to undergo water quality treatment via bio-retention.

    The drainage and water management systems once constructed shall be maintained to a sound state of repair. A petrol and oil trap shall be installed to the satisfaction of the Local Government on advice from the Department of Water and Environment Regulation.

13. Prior to applying for a Building Permit, detailed engineering drawings and specifications shall be submitted to the Local Government for approval, and works undertaken in accordance with the approved engineering drawings and specifications, for the draining of the land.

14. Prior to the occupation of the development land required for drainage of public roads to be ceded free of cost to Crown without payment of compensation

Amenity Impacts

15. Prior to applying for a Building Permit, a Dust Management Plan shall be prepared in accordance with the Department of Water and Environmental Regulation "Guidelines for the prevention of dust and smoke pollution from land development sites in Western Australia" and submitted to the Local Government for approval. The approved Dust Management Plan is to be implemented during the construction works.

16. Prior to applying for a Building Permit, an Acoustic Report which demonstrates that all mechanical services associated with the proposed development will comply with the Environmental Protection (Noise) Regulations 1997, must be submitted to the Local Government for approval.

17. Prior to applying for a Building Permit, a Light Management Plan is required indicating light spill and method of control shall submitted to the Local Government for approval.

18. Prior to applying for a Building Permit, all services such as air conditioning plant and compressors shall be designed to be located away from public areas. All services and service yards shall be screened from view of streets and other public areas, including car parking areas in a design or manner keeping with the style and materials of the adjacent building. Roof mounted equipment such as air conditioning plant and antennae shall be screened from view of the street and other public areas, including car parking areas, by the roof form or parapets.

19. Prior to applying for a Building Permit, a fuel spill management and contingency plan shall be submitted to the Local Government for approval. The approved plan is to be implemented to the satisfaction of the Local Government.

Environmental

20. Prior to the occupation of the development, the development shall be connected to a reticulated sewerage service, unless it is demonstrated to the satisfaction of the Local Government, that connection of the development to reticulated sewer is impractical or cost prohibitive at the time of development. In such a circumstance, the Local Government may approve the deferral of this connection, provided a practical and achievable pathway to sewer connection acceptable to the Local Government is achieved. An acceptable outcome must include a conceptual design of the future sewer system for the site and the landowner entering into a legal agreement supported by an absolute caveat to the satisfaction of the Local Government, setting out triggers and commitments to proportional funding and connection of the development to the sewer. Should, on an interim basis, the development be connected to an alternative nutrient retentive effluent disposal system, the siting of the interim system shall be to the satisfaction of the Local Government on advice from the Water Corporation and the Health Department of Western Australia.

21. Prior to the commencement of site works, an acid sulphate soils self-assessment form and, if required as a result of the self-assessment, an acid sulphate soils report and an acid sulphate soils management plan is to be prepared and submitted to the Local Government for approval. Where an acid sulphate soils management plan is required to be prepared, all site works are to be carried out in accordance with the approved plan.

Ongoing

22. The requirements of the Lot 137 (630) Pinjarra Road, Furnissdale Bushfire Management and Bushfire Risk Management Plans prepared by Strategen-JBS&G dated 10 December 2021 are to be implemented to the satisfaction of the Local Government.

23. No bins, waste or other storage materials are permitted outside approved bin stores or service yards.

24. Window glazing is to remain transparent and is not to be obscured by signage or other materials.

Advice Notes

1. The proponent is to note that prior to the commencement of development works a clearing permit may be required to be obtained from the Department of Water and Environmental Regulation, unless an exemption applies. Please contact the Department for further information in this regard. The proposal should be discussed with the Federal Department of Agriculture, Water and the Environment to determine if there is a requirement to refer the proposal under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999).

2. With regard to the condition relating to the upgrade of Furnissdale Road, in order to provide suitable all movement access to the adjacent Lot 157 Furnissdale Road, the design should consider turning lanes/pockets or alternatively a roundabout.

3. With regard to the condition relating to the upgrade of the intersection of Furnissdale Road, Pinjarra Road and Watson Drive the proportional contribution relates to the costs associated with the provision of the traffic signals which include costs associated with the upgrade of the intersection such as channelisation works, drainage facilities, service relocations, street lighting, pathway connections and associated structures as well as any land acquisition costs that may be necessary to accommodate the traffic signals and associated infrastructure.

4. The design, installation and operation of underground petroleum storage systems require licensing from the Department of Mines, Industry Regulation and Safety.

5. All food related areas to comply with the provisions of the Food Act 2008.

6. Any existing septic sewer systems including all tanks and pipes and associated drainage systems (soak wells or leach drains) on the property are to be decommissioned in accordance with the Health (Treatment of Sewerage and Disposal of Effluent and Liquid Waste) Regulations 1974.

7. This proposal will require approval by the Water Corporation's Building Services section prior to commencement of works.

8. This development approval is for "as of right vehicle" access to the site up to maximum length of 19.5 metres. Restricted Access Vehicles (RAV) will not be able to access the site.

Details: outline of development application

Region Scheme	Peel Region Scheme
Region Scheme - Zone/Reserve	Urban / Primary Regional Roads
Local Planning Scheme	Shire of Murray Local Planning Scheme No. 4
Local Planning Scheme - Zone/Reserve	Commercial / Service Commercial
Structure Plan/Precinct Plan	N/A

Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	Petrol Filling Station
Lot Size:	4.2829Ha
Existing Land Use:	Vacant Land (with concrete pads and driveway remnants from former caravan park)
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:

The application proposes a new Petrol Filling Station and ancillary Shop on the subject lot. It is proposed to utilise 5,400m^2 of the site for the proposal, with the remainder of the site to be developed in the future. The development includes:

- Installation of three underground fuel tanks;
- Installation of one underground LPG tank;
- Provision of eight fuel bowsers primarily for small vehicles, with a 345m^2 canopy above);
- Provision of four fuel bowsers primarily for trucks, with 135m^2 canopy above;
- Shop building (300m^2);
- 22 car parking bays, including one disabled parking bay;
- one service bay;
- 8m high pylon sign;
- Remediation works of the existing crossover onto Pinjarra Road;
- A new left in/left out vehicle access from Pinjarra Road;
- A new entry/exit onto Furnissdale Road;
- General landscaping; and
- Bin storage and plant areas.

It has been indicated by the proponent that the proposed internal trafficable surfaces that provide access to the service station from the existing roar network will ultimately form part of the road network in the future and become road reserves at a later stage.

Proposed Land Use	Fuel Sales and Convenience Store
Proposed Net Lettable Area	300m^2
Proposed No. Storeys	Single
Proposed No. Dwellings	N/A

Background:

An application for a similar proposal was lodged with the Shire of Murray on 24 December 2019. There were a number of issues related to access from Pinjarra Road, with Main Roads Western Australia (MRWA) not supporting the proposed access from Pinjarra Road. The application was ultimately withdrawn before the Joint Development Assessment Panel (JDAP) determined it.

The subject lot is 4.2829Ha in size, however, the proposed land use occupies about 5,400m² of the property. The lot has a frontage to both Pinjarra Road and Furnissdale Road. The lot abuts rural residential properties to the south and east. A small commercial lot is wedged at the north eastern corner at Furnissdale Road and Pinjarra Road.

The subject property is currently vacant, though it was historically used as a caravan park. The hardstand areas for many of the caravan and park home sites are sill in place. There is a high number of mature trees over the site, located between the previous caravan sites and internal driveways.

An aerial photograph depicting the lot is show below.

Legislation and Policy:

Legislation

- Peel Region Scheme (PRS)
- Planning and Development (Local Planning Schemes) Regulations 2015 (Regulations).
- Shire of Murray Local Planning Scheme No.4 (LPS4).

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)
- EPA GS3 – Separation Distances between Industrial and Sensitive Land Uses (GS3)

Local Policies

- Barragup Furnissdale Activity Centre Local Planning Policy (BFACLPP).
- Signs Local Planning Policy.

Consultation:

Public Consultation

In accordance with Regulation 64 of the Deemed Provisions under the *Planning and Development (Local Planning Schemes) Regulations 2015*, a number of nearby landowners were notified of the proposal and invited to make a submission. Two submissions were received. One submission indicated no objection and no concerns with the proposal (a landowner on the opposite side of Furnissdale Road). The other submission was an objection received from the adjoining landowner to the southeast. This objection has been summarised in the table below. A full copy of the submission has been included at attachment 4.

Issue Raised	**Officer comments**
Excessive noise, lighting, explosion and traffic concerns. Suggests that a solid wall be constructed along the shared property boundary to address issue.	Noise to comply with relevant legislation. Appropriate conditions have been recommended to ensure compliance. Appropriate conditions will be placed to ensure the containment of light spill. The service station infrastructure has been appropriately designed to ensure safety. The proposal will not cause significant additional traffic to move through the area, and will likely rely mainly on passing trade of motorists already using Pinjarra Road. Vegetation outside of the development site, including along the common boundary will remain, this will ensure that an appropriate landscaped buffer is maintained.

Concerned that the access point to Lot 132 Pinjarra Road, the primary point of ingress/egress will be adversely impacted.	Access from Pinjarra Road will be appropriately designed to the satisfaction of Main Roads WA. It is noted that a deceleration lane will be required for an entry from Pinjarra Road. Although, this will impact one of the landowner's existing crossovers, their primary access is outside of this area.
There is an existing issue with squatters and drug users occupying the subject lot; concerned that the proposal will attract more. Suggests that a solid wall be constructed along the shared property boundary to address issue.	Noted. This is an ongoing policing issue. It is suggested that with the increased development and use of the subject lot, that antisocial activity will reduce in the future.
The proposal will cause his dogs to bark more, creating a noise disturbance.	Noted. Not a valid planning consideration. A condition has been recommended requiring all trees outside of the development site to be retained. This will ensure that an adequate landscaped buffer remains in place.
Support for the proposal will decrease the value of their property.	Noted. Not a valid planning consideration.
There are already many service stations in the area; another in not needed.	Noted. Not a valid planning consideration.
Concerned about vegetation removal; requests that the trees be carefully removed and transplanted onto the neighbouring property.	Noted. Appropriate clearing permits will need to be applied for in accordance with relevant legislation. A condition has been recommended requiring all trees outside of the development site to be retained. This will ensure that an adequate landscaped buffer remains in place.

Referrals/consultation with Government/Service Agencies

The proposal was referred to all relevant public agencies. All agency responses at located at attachment 5.

Where relevant the comments and recommendations are discussed below.

Main Roads WA (MRWA)
MRWA advised that the proposed left out movement onto Pinjarra Road is not supported, though the left in movement is supported, to mitigate safety concerns. MRWA were not willing to provide further advice until such time as a 15% intersection design concept was provided to better understand the scope, layout and potential impacts of access.

A proposed development concept design for left-in only access to the site was supplied by MRWA, with ultimate treatment for a future signalisation of the Furnissdale Road and Watson Drive intersection with Pinjarra Road. This plan shows Pinjarra access located further east with turning lanes for the Pinjarra Road/Furnissdale Road intersection and the site access. This plan is at attachment 3.

MRWA also advised that it did not support the Shire of Murray's concept for the upgrade of Furnissdale Road as the concept design does not align with the State Roads long term planning, with the concept being a significant departure from the ultimate concept for Pinjarra Road designed by MRWA, and that it fails to consider the following:

- Pinjarra Road is a MRWA controlled road with design requirements being determined solely by MRWA;
- The Shire's plan fails to consider the function nor safety of Pinjarra Road;
- This section of Pinjarra Road has an 80km speed limit and permits RAV4 (27.5m long vehicles). As the proposed service station will be developed to service heavy vehicles as well as domestic vehicles, a deceleration turn pocket into the left in only access road (as per MRWA design);
- Main Roads supports a left in from Pinjarra Road only, the plan prepared by the Shire of Murray indicates a left in and left out;
- The Shire of Murray plans fail to consider the future outcome of the signalisation of the Furnissdale Road/ Watson Drive intersection with Pinjarra Road. The turn pocket land requirement for the signalised intersection dictates the location at which the proposed left in access, to the subject site, can be safety positioned. The left in access on location on the Shire's concept may compromise future planned road upgrades in the locality.

Shire Comment

Through the assessment of the application the Shire prepared a concept plan (referred to in the MRWA comments) to assist discussions in regard to access to Pinjarra and Furnissdale Road (attachment 6). The concept plan focused on the requirement to upgrade of Furnissdale Road to a boulevard style road and local matters such as drainage and footpaths at the Pinjarra Road access. The plan did not account for any regional traffic matters but highlighted further design to remove conflicts with internal ingress/egress from Pinjarrra Road was necessary. It is accepted the plan is not supported by MRWA, however, the plan was to assist the applicant to prepare a concept geometric road design to integrate roads with site development and advance discussions with Main Roads.

MRWA's authority over Pinjarra Road is acknowledged and supported. The Shire, however, would prefer some access from Pinjarra Road to alleviate pressure on the local road network. This is discussed in more detail in the planning assessment under the "Vehicular access and circulation" heading.

The Shire requires the upgrade of Furnisdale Road to an urban standard boulevard with 5-metre-wide pavements (including cycle lanes), 5 metre wide verges and a 6 metre wide central median consistent with the (BFACLPP). This standard of construction can support access for as of right vehicles with the appropriate road and internal layout design. This is considered to be a solution that will not prejudice the ultimate upgrade of the Pinjarra Road/Furnissdale Road intersection.

Department of Fire and Emergency Services (DFES)
DFES noted that the land use is considered to be high risk within a bushfire prone area. DFES advised that the applicant has adequately identified issues arising from the bushfire risk assessment and considered how compliance with bushfire protection criteria can be achieved within the submitted Bushfire Management Plan.
Shire Comment Noted.
Department of Water and Environmental Regulation (DWER)
DWER noted that the proposal has the potential for impacts on environmental and water resource values and/ or management. DWER did not object to the proposal, though recommended numerous conditions and advice notes
Shire Comment Apply relevant conditions and advice notes.
Water Corporation (WC)
WC noted reticulated water is available to the site and that all water main extension is to be laid within road reserve. Additional approval is required from WC prior to the commencement of works.
Shire Comment Noted.
Department of Health (DoH)
DoH required connection to scheme water and reticulated sewerage as per *the Government Sewerage Policy 2019*. DoH expressed concern with the proposal given its proximity to sensitive land uses, noting that the adjoining neighbouring private residence is much less than the 100m, boundary to boundary, specified under the EPA Environmental Assessment Guideline (EAG) 3 '*Guidance for the Assessment of Environmental Factors No. 3 – Separation Distances between Industrial and Sensitive Land Uses.*' DoH recommended that some form of barrier, whether vegetation or built form, be installed between the proposal and existing residence.

Shire Comment

Vegetation is remaining on the broader site therefore there will be a natural buffer to proximate sensitive premises, this has been captured in a recommended condition.

Design Review Panel Advice

Not applicable.

Other Advice

Not applicable.

Planning Assessment:

The proposal has been assessed against all the relevant legislative requirements of the Scheme, State and Local Planning Policies 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:

- Land Use
- Design - Barragup Furnissdale Activity Centre Local Planning Policy and Signs Local Planning Policy
- Vehicular access and circulation
- Infrastructure Contributions/Upgrades

These matters are outlined and discussed below.

Land Use

The subject lot is zoned both 'Commercial' and 'Service Commercial'. The petrol filling station site is located entirely within the 'Commercial' zone, where it is a discretionary land use. The site is located within the business precinct under the BFACLPP which identifies uses "*focussed on servicing of vehicle traffic such as service stations"* as a preferred land use. As such, the development is considered to be appropriate from a land use perspective.

Design - Barragup Furnissdale Activity Centre Local Planning Policy and Signs Local Planning Policy

The primary objective of the BFACLPP is to provide for a high quality, comprehensively planned activity centre that provides an attractive and functional western gateway to the Shire. Elements of this Policy, for which the application of discretion is sought, are discussed in the table below:

Provision	**Requirement**	**Proposal**	**Assessment**
Vehicular and Pedestrian Access	Various vehicle and pedestrian access requirements are included in the Policy, including those with particular	The vehicular and pedestrian access requirements of the policy are generally not	This is discussed below under "Vehicular access and circulation"; "Infrastructure contributions and

	relevance to this proposal: • Traffic signals at intersection of Pinjarra Road/Furnissdale Road; • Coordinated left in only vehicle access points with deceleration lanes; • Widening and upgrade of Furnissdale Road to a 26m wide two lane boulevard road with 5m verges, 5m lanesincorporating cycle lane, and 6m central median. • Dual use paths on both sides opf Pinjarra Road, Furnissdale Road, with clear pedestrian pathway connections from key development entries to these paths. • Two metre wide pedestrian paths along the front of buildings conveniently connecting adjacent buildings.	considered by the proposal.	upgrades"; and in this table under "Vehicular and pedestrian access". Relevant conditions are recommended to address these requirements.
Character statement (Business Precinct)	The precinct will successfully integrate into the surrounding 'rural' landscape setting with site planning, building and landscape design reinforcing this landscape and providing a	The development is a standard service station. The built form fails to draw upon the local identity or rural character. The integration of pedestrian access is relatively poor.	These matters are interrogated in more detail below where a number of conditions have been recommended in order to appropriately integrate the

	distinctively local identity. Pedestrian and vehicular traffic has been comprehensively planned to provide safe, convenient and easy movement to and within the precinct. Well designed building frontages with restrained and coordinated signage provides an inviting streetscape to this important gateway into the Shire.		development into its setting.
Height	Minimum two storey façade (or equivalent), with a maximum of three storey (or equivalent)	4m building and 6.2m canopy	The building does not comply; however, the variation is relatively minor and considered to be acceptable. It is consistent with other service stations approved along Pinjarra Road
Setbacks	A minimum setback of 15.5m and a maximum setback of 21m from the ultimate Pinjarra Road alignment.	The building is setback 9m from the ultimate Pinjarra Road alignment.	The intent for the setbacks stated under the policy was to achieve a suitable landscape strip, internal driveway alignment and either one or two rows of parking and a pedestrian path in front of the building. Although the setback is not achieved the plans demonstrate that there is sufficient space for a shared access drive and landscaping within the 9m setback. A condition has been recommended to

			further increase the setback to achieve a minimum two-metre-wide landscape strip and a pathway to provide safe and convenient pedestrian access to the future development on both the development site and the adjoining Lot 24 on the corner.
Materials and colours	Proposals which exhibit broad façades of a uniform finish will not be acceptable. The aim should be to divide up the façades into contrasting smaller areas by introducing differing colours, materials and forms.	Large expanses of a singular red finish.	Condition recommended requiring facades to be broke up with different colours and materials, more compatible with local character.
	Building colours should generally be sympathetic and complementary with the surrounding rural/natural environment and to site landscaping.	Excessive use of primary colours (red and blue) which are not complementary to the intended character of the area.	Condition recommended requiring sympathetic and complementary colours to be used.
Bicycles	Provision to be made for secure bike parking for employees and the public and for end of trip facilities.	Three bike racks provided. No end of trip facilities provided.	Condition recommended to require the bicycle bays and end of trip facilities.
Signage	Signage shall be integrated into the building design.	Some signage is shown on the plans including signage on the building and a pylon sign adjacent to Pinjarra Road. It is noted that a	The building signage is considered to be excessive. Once the identified signage panels are infilled, signage will become the dominate

		number of blank signage panels are identified on the rear and side of the building.	component of the elevations. The Policy identifies that buildings in the Business Precinct should have restrained and coordinated signage provide an inviting streetscape to this important gateway into the Shire. It is recommended that revised elevations be provided that provide reduced building signage consistent with the policy.
Landscaping	Car parking areas shall be provided with native trees at the rate of 1 per 4 car bays for shade and visual amenity. These trees shall be maintained on an ongoing basis. Existing trees should be maintained and incorporated in the car parking and landscape areas where reasonably practical.	Not provided. Not addressed.	A condition for a revised landscape plan has been recommended. This will require the inclusion of tree in the carparking area, and the retention of all trees outside of the development site including within the Pinjarra Road widening. Given the hard stand and manoeuvring area within the development site there is limited capacity to maintain existing trees. Existing trees within the Pinjarra Road

			widening area and on the remaining portion of the lot outside the development site should be retained where ever practical. A condition is recommended to achieve this.
Vehicular and pedestrian access	Various access requirements are included in the Policy, including those with particular relevance to this proposal: • Traffic signals at intersection of Pinjarra Road/Furnissdale Road; • Coordinated left in only vehicle access points with deceleration lanes; • Widening and upgrade of Furnissdale Road to a 26m wide two-lane boulevard road with 5m verges, 5m lanes incorporating cycle lane, and 6m central median. • Left in vehicle movement from Pinjarra Road at eastern boundary of property.	The vehicular and pedestrian access requirements of the policy are generally not considered by the proposal. Left in, left out vehicle movement from Pinjarra Road along eastern boundary of property.	Discussed below under “Vehicular access and circulation”; “Infrastructure contributions and upgrades”; and in this table under “Vehicular and pedestrian access”. Relevant conditions are recommended to address these requirements.
	Dual use paths along Pinjarra Road frontage.	No upgrading of existing path along Pinjarra Road shown on submitted plans.	Condition recommended.

	Dual use paths long both side of Furnissdale Road	The plans show as 3m widening of Furnissdale Road.	Conditions have been recommended for upgrading and widening of Furnissdale Road including a dual use path.
	Pedestrian paths with a minimum width of 2m along the frontage of buildings and providing convenient pedestrian connections to adjacent buildings.	Generally poor pedestrian connectivity is provided. The site plan shows internal pedestrian connections, however, no connection between Pinjarra Road and the building or between the surrounding road network and the building.	Conditions recommended that will add • a dual use path to Pinjarra Road/widening, and Furnissdale Road; • a link from building to Pinjarra Road path; • link along Pinjarra Road side of building to provide access to future development to west and Lot 24; • continue link between truck and car canopies (abutting bays 12-22) down to new road path to east and abutting truck exit to path in road to south.
Car parking	Clear pedestrian paths are provided from the street pedestrian paths through the site to main building.	No paths connecting the public roads to the convenience store have been proposed.	Condition recommended to integrate pedestrian pathways into the development.

The objectives of the Signs Local Planning Policy include minimising visual clutter and rationalising the overall number of signs; ensure signs are well integrated with and do

not dominate building form; and are sympathetic and harmonious with the site and surrounding area.

The building signage is considered to be excessive, particularly the signage panels on the northern and western elevations of the convenience store building, and below the windows on the eastern and northern elevations of the same building. The proposed signage will be a dominate component of the elevations contrary to the policy objectives and requirements.

An 8-metre-high pylon sign is also proposed, which will again tend to dominate the building and associated canopy which are only four (4) and six (6) metres high respectively. The policy provides for pylon signs to be no higher than six (6) metres high.

Conditions are recommended to bring the signage into consistency with the policy.

Vehicular access and circulation

Pinjarra Road

The submitted application seeks a left in / left out (LILO) vehicular access arrangement from Pinjarra Road. Given that Pinjarra Road is reserved under the PRS as a Primary Regional Road (PRR) development approval is required under the PRS in addition to the Shire's LPS4. As MRWA is the responsible authority for PRRs, its advice on the application was sought. As shown in the consultation section of this report, MRWA do not support this access arrangement. MRWA's preference has been for a left in only arrangement.

A left in only access arrangement for Pinjarra Road will result in Furnissdale Road being the only egress point for the property. The property is significant in size and once fully developed will attract a number of commercial developments, which in turn will generate a significant traffic volume putting significant pressure on Furnissdale Road. Allowing a LILO arrangement for Pinjarra Road will assist in alleviating the pressure on the internal road network and Furnissdale Road and will further assist in providing traffic permeability through the property and the broader activity centre. For this reason, the Shire considered the access arrangement differently to MRWA advice.

Given Pinjarra Road's status under the PRS, the Shire's delegation for preparing a Responsible Authority Report (RAR) under the PRS is removed if the advice of MRWA is not reflected in its recommendation. Therefore, the Department of Planning, Lands and Heritage (DPLH) is required prepare a RAR on behalf of the Western Australian Planning Commission. That RAR will consider the matter of regional transport, whilst the Local Government's RAR focusses on local planning matters.

The Shire supports a safe access solution being developed for Pinjarra Road. In the absence of this, it is considered that the development can function with its access from Furnissdale Road for as of right vehicles with a modified site plan to accommodate the changes in traffic circulation. It is acknowledged that any decision under the PRS will have to be reflected in the decision under LPS4.

There is an expectation that the decision under the PRS will include conditions dealing with:

- Payment of a contribution toward the installation of traffic signals at the intersection of Pinjarra Road and Furnissdale Road including associated intersection upgrade, channelisation works, road widening and drainage;
- The design and construction of the vehicular access intersection to Pinjarra Road;
- The design and construction of the turning lane to the vehicular access intersection;
- A dual use path within Pinjarra Road/Pinjarra Road widening where it abuts Lot 137 and the turning lane referred to above; and
- The ceding of land free of cost from Lot 137 required to accommodate the above.

Furnissdale Road

Furnissdale Road will need to be upgraded to an urban standard boulevard, consistent with the BFACLPP. This will include drainage, kerbing, footpaths, street lighting and undergrounding of power. The design of Furnissdale Road will need to accommodate access to the development site to the west of Furnissdale Road. It is also noted that the swept paths provided by the applicant show the existing power lines being taken out by vehicles exiting via Furnissdale Road.

Three metre road widening will be necessary to support the Furnissdale Road upgrade plus any localised widening from Lot 137 (if necessary following design) to accommodate turning movements at the intersection of Pinjarra Road and Furnissdale Road as well as the Furnissdale Road access point to the proposed development.

Internal Roads

The application proposes that the internal driveways will ultimately form part of the Shire's local road network. The roads will therefore need to be designed and constructed to public road standards. As they will ultimately be handed over to the Shire, it is the Shire's preference that this occurs now, rather than in the future when the asset may have deteriorated significantly.

As such, it is recommended that these roads are designed and constructed to the Shire's satisfaction and ceded to the Crown prior to the occupation of the development.

<u>Infrastructure Contributions/Upgrades</u>

Given the site's location in an emerging activity centre there will be the requirement to upgrade a number of infrastructure and services to an urban standard.

Intersection at Pinjarra Road/Furnissdale Road

Although this development does not trigger the need for signals and turning lanes at this intersection it will contribute to the need as the precinct develops. As such a condition has been recommended that the proponents enter into a legal agreement that will secure a proportional contribution to the upgrade of this intersection in the future.

Sewer

Under SPP2.1, new commercial development is required to be connected to reticulated sewer or an approved effluent disposal system to minimise the potential for nutrient import into the estuary. This position has been affirmed by DoH in its advice.

It is accepted that there are likely to be significant development costs associated with the connection to reticulated sewer. A condition is therefore recommended that in the event that the connection to sewer is demonstrated to be is impractical or cost prohibitive at this time, it will be appropriate to defer the sewer connection provided that a practical and achievable pathway to sewer connection is demonstrated. This pathway is to include a conceptual design of the future sewer system for the site and surrounding area and the landowner entering into a legal agreement supported by an absolute caveat with and to the satisfaction of the Shire setting out suitable triggers and commitments to proportional funding and connection of the development to the sewer. In addition, the development is to be connected on an interim basis to an alternative nutrient retentive effluent disposal system.

Drainage

There has been no strategic drainage solution supplied for the development site, the road upgrades and the new access streets. As such, a condition has been recommended for a revised drainage plan and that any necessary easements are reserved appropriately.

Roads and Path Networks

As discussed in the previous sections of this report.

Conclusion:

The application proposes a development that is broadly consistent with the local planning framework and with the addition of the recommended conditions it will fit into the intended character of the area.

As such it is recommended for approval.

Alternatives

The JDAP may refuse the application with sufficient reasons.

Council Recommendation

N/A

UNITED SERVICE STATION
FURNISSDALE, WA
ISSUE FOR DEVELOPMENT APPLICATION
ALL NEW BUILD

DRAWING LIST:

SK15:	COVER PAGE & DRAWING LIST
SK13:	PROPOSED SITE PLAN
SK14:	OVERALL LOT PLAN
SK10:	PROPOSED FLOOR PLAN
SK09:	PROPOSED LANDSCAPING PLAN
SK11:	PROPOSED ELEVATIONS P1
SK12:	PROPOSED ELEVATIONS P2

revision/ issue	description	drawn	checked	date
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE, WA
drawn: MS
checked: NP
description: COVER PAGE & DRAWING LIST
scale: NTS
date: 03.12.2021
project no: 68.21
dwg no: SK15
rev: A

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FURNISSDALE ROAD

PINJARRA ROAD

BOUNDARY 38.95M

3M ROAD WIDENING

BDRY 0.38M

BOUNDARY 20.21M

BOUNDARY 41.69M

VERGE TREES TO BE REMOVED

BOUNDARY 21.41M

FUTURE ACCESS TO BALANCE LOT

PROPOSED SITE AREA 2466 M²

BOUNDARY 41.68M

BOUNDARY 18.95M

BOUNDARY 21.14M

2000

6000

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY

9400 1000 8725 25000

BOUNDARY 53.06M

1300

BOUNDARY 10.01M

DP DP DP

BIN STORE 5150

PLANT AREA 3574

PROPOSED CONVENIENCE 300m²

12000

1200

2500

FUTURE ACCESS ROAD

PROPOSED 8m HIGH PYLON SIGN

10M ROAD WIDENING

BOUNDARY 56.11M

13000

3500 6000 3500

LINE OF CANOPY OVER SHOWN DASHED

FILL POINTS

Bol DP

TRUCK CANOPY 4 DISPENSERS

10350

3500 3500 3500

10

U/GROUND LPG TANK

11

12

2000

SERVICE BAY

PEDESTRIAN CROSSING

BIKE RACKS

1

5000

5500 TYP.

9

2600 2600 2600 2600 2600 2400 2400 2600 2600 2600

25600

BOUNDARY 119.36M

BOUNDARY 75.97M

4800 1500 8900 7300 4500 6000 6000 7057 2443

1500

22500

REFER CIVIL DRAWINGS FOR UNDER CANOPY DRAINAGE

2600

6500

5400 6500 1000 5000 2541

LINE OF CANOPY LINK OVER SHOWN DASHED

10080

REFER CIVIL DWGS FOR UNDER CANOPY DRAINAGE

BLACK OXIDE FINISH AND WHEEL STOPS TO ALL SHOP FRONT PARKING BAYS & PAVING

7830 12000 15000 7000

DRIVE-THRU KEEP CLEAR

10150

3500 3150 3500

CAR CANOPY 8 DISPENSERS

9000 SETBACK

LANDSCAPING

U/GROUND FUEL TANKS

22

LINE OF CANOPY OVER SHOWN DASHED

3500 9000 9000 9000 3500

34000

BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY

PAVING TYPE, CUTS AND DRAINAGE TO CIVIL ENG'S DWGS

PROPOSED SITE AREA 5400 M²

17570

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

11000

5000

34300

6000

BDRY 5.66M

BOUNDARY 82.49M

BOUNDARY 10.01M

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

PROPOSED CROSSOVER TO COUNCIL REQUIREMENTS

1000 4800 1500 7400 1500 4600

20000

10000

LANDSCAPING

BOUNDARY 119.53M

N

SITE PLAN
SCALE 1:250 @ A1

revision/ issue	description	drawn	checked	date
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021

project
PROPOSED UNITED SERVICE STATION
location
FURNISSDALE W.A.

drawn MS
checked NP
description PROPOSED SITE PLAN

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scale 1:250 @A1
date 30.11.2021
project no 68.21
dwg no SK13
rev A

TRAFFIC PLAN
SCALE 1:500 @ A1

A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project
PROPOSED UNITED SERVICE STATION
location
FURNISSDALE W.A.

drawn: MS
checked: NP
description: OVERALL LOT PLAN

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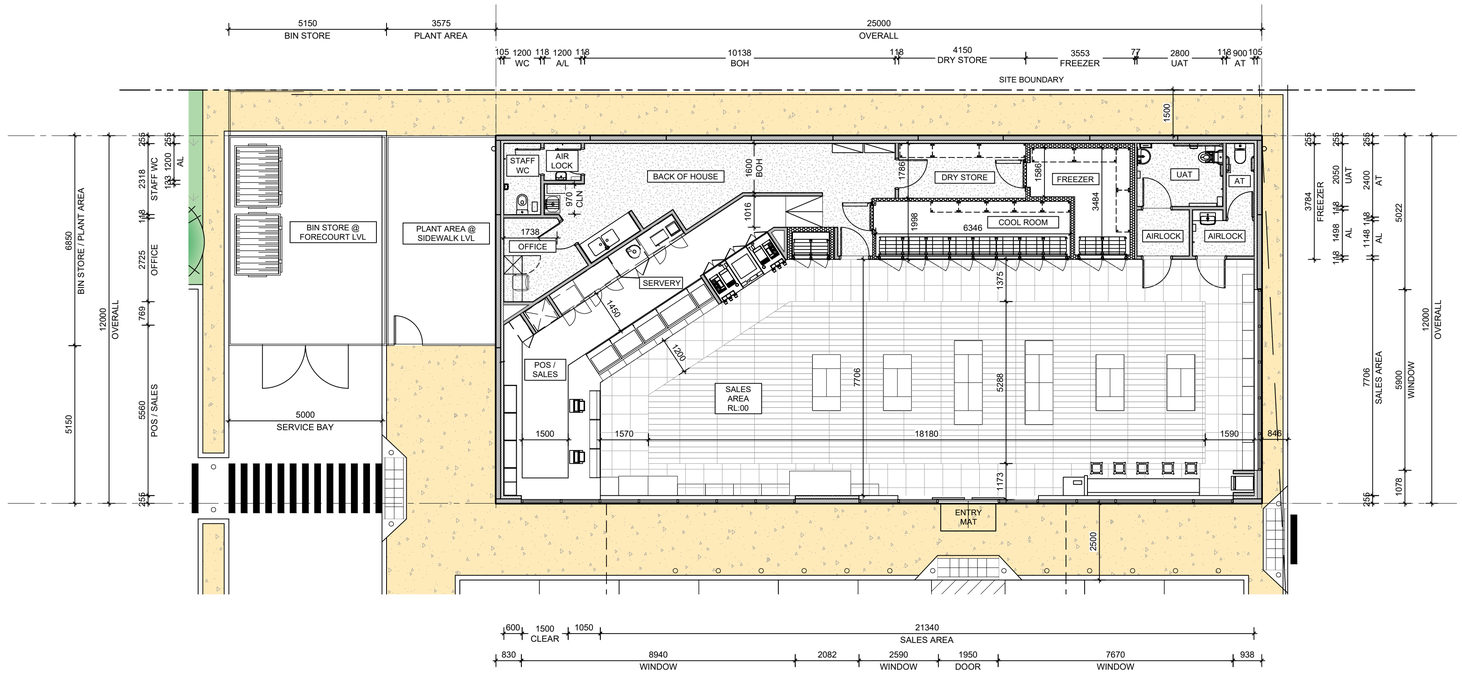
scale: 1:600 @A1
date: 30.11.2021
project no: 68.21
dwg no: SK14
rev: A



CONTROL BUILDING FLOOR PLAN

SCALE 1:100 @ A1

A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project
PROPOSED UNITED SERVICE STATION
location
FURNISSDALE, W.A.

drawn: MS
checked: NP

description: PROPOSED FLOOR PLAN

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scale: 1:100 @ A1
date: 15.10.2021
project no: 68.21
dwg no: SK10
rev: A

FURNISSDALE ROAD

PINJARRA ROAD

BOUNDARY 38.95M

3M ROAD WIDENING

RDRY 6.38M

BOUNDARY 20.21M

VERGE TREES TO BE REMOVED

BOUNDARY 41.68M

BOUNDARY 21.41M

FUTURE ACCESS TO BALANCE LOT

PROPOSED SITE AREA 2466 M²

BOUNDARY 21.14M

BOUNDARY 41.68M

BOUNDARY 18.95M

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

BOUNDARY 53.06M

1480

BOUNDARY 10.01M

BIN STORE

PLANT AREA

PROPOSED CONVENIENCE 300m²

12000

25000

5150

3575

FILL POINTS

U/GROUND LPG TANK

TRUCK CANOPY 4 DISPENSERS

10350

2500

2500

PROPOSED 8m HIGH PYLON SIGN

BOUNDARY 56.11M

BOUNDARY 119.36M

4800

1500

8900

150

2000

4150

1500

4500

500

2500

13000

BOUNDARY 75.97M

5400

6500

1000

5000

1900

7800

2400

2400

13000

2070

2500

2600

8500

ACROD BAY, SHARED SPACE & KERB RAMP TO AS1428 & AS2890 REQS

10M ROAD WIDENING

DRIVE-THRU KEEP CLEAR

12000

15000

7000

10080

CAR CANOPY 8 DISPENSERS

10150

34000

U/GROUND FUEL TANKS

BUS

PROPOSED SITE AREA 5400 M²

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

11000

5000

6000

BORY 5.66M

BOUNDARY 82.49M

BOUNDARY 10.01M

1850

2000

1150

500

7400

250

1150

2000

1850

BOUNDARY 119.53M

LANDSCAPE LEGEND

PROPOSED SITE AREA: 5400M²
PROPOSED SITE LANDSCAPING: 961M²
LANDSCAPING % OF PROPOSED SITE: 17.8%

SHOPFRONT PAVING (CONCRETE)

FORECOURT PAVING

ZYGOPHYLLUM BILLARDIEREI (COAST TWINLEAF)
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~0.6M
PLANTS TO SPREAD ~1M

BANKSIA DRYANDROIDES (DRYANDRA-LEAVED BANKSIA)
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~2M
PLANTS TO SPREAD ~2M

ANIGOZANTHOS 'BUSH SUNSET' (KANGAROO PAW - BUSH SUNSET)
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~1M
PLANTS TO SPREAD ~1M

SENECIO HYBRID TRIDENT BLUE
MIN. POT SIZE 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~0.3M
PLANT SPREAD ~1M

ALYXIA BUXIFOLIA (SEA BOX)

75MM MULCH COVER
MATURE GROWTH HEIGHT ~3M
PLANT SPREAD ~3M

ACACIA PYCNANTHA (GOLDEN WATTLE)

75MM MULCH COVER
MATURE GROWTH HEIGHT ~5M
PLANT SPREAD ~5M

B	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project
PROPOSED UNITED SERVICE STATION
location
FURNISSDALE, W.A.

drawn: MS
checked: NP
description: PROPOSED LANDSCAPING PLAN

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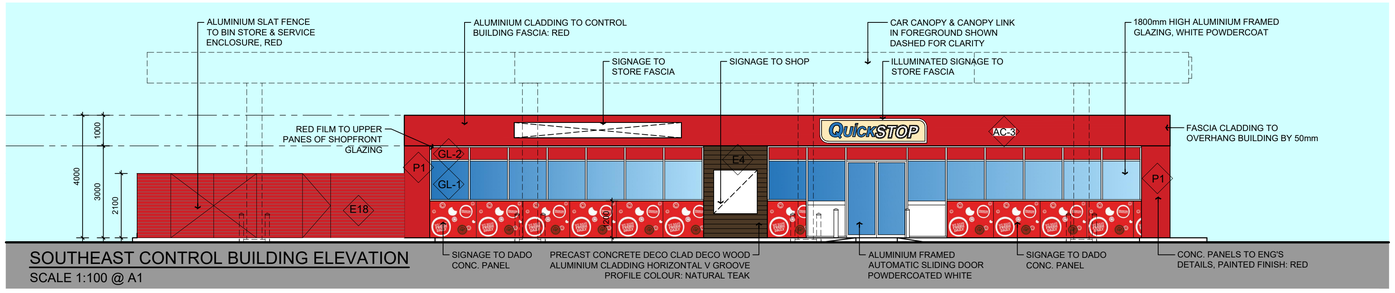
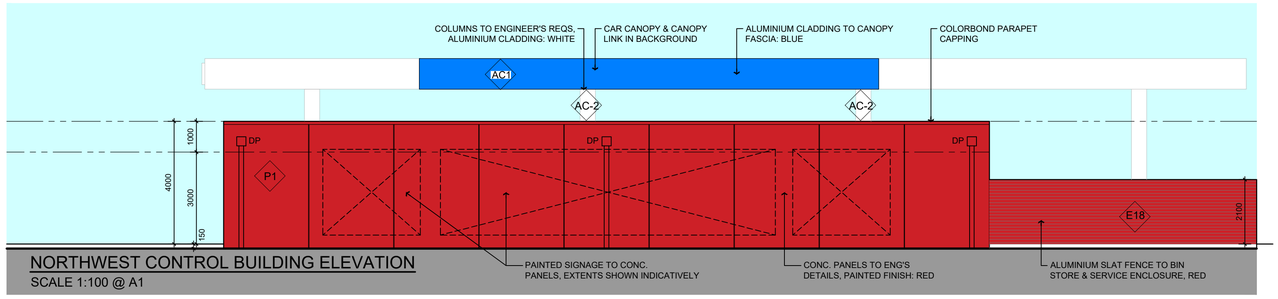
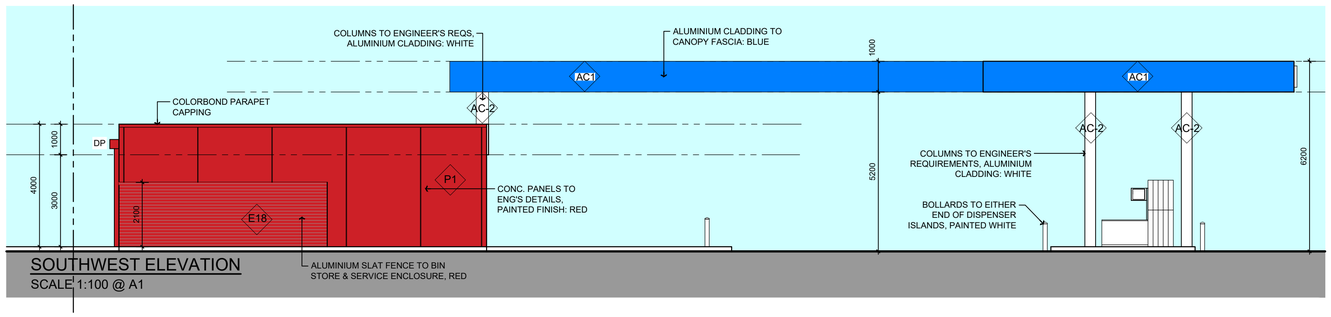
scale: 1:250 @ A1
date: 08.10.2021
project no: 68.21
dwg no: SK09
rev: B



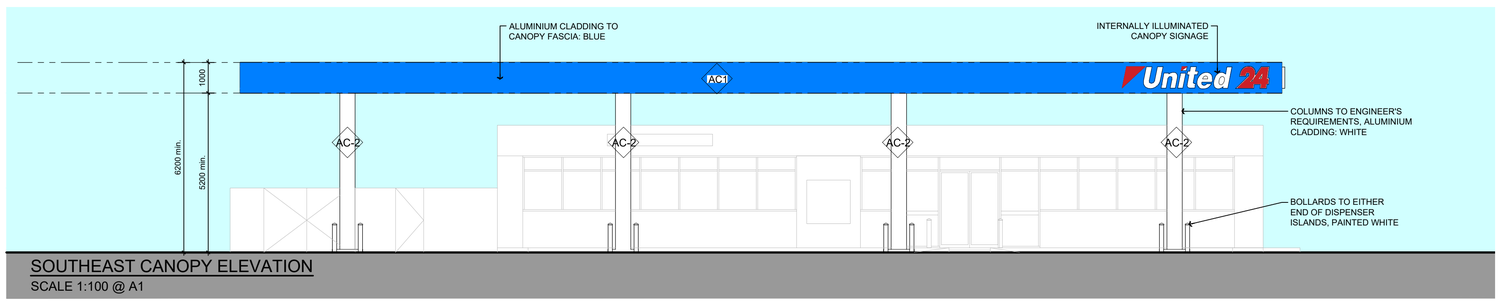
SOUTHEAST CONTROL BUILDING ELEVATION
SCALE 1:100 @ A1



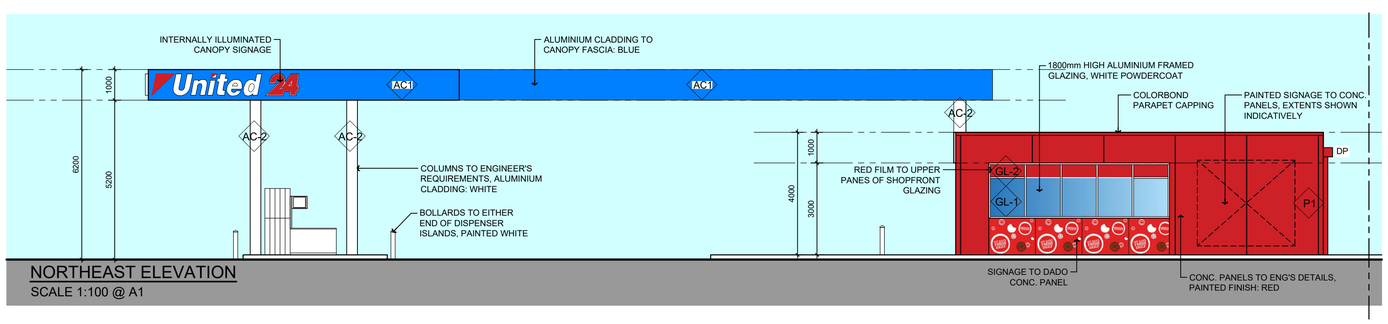
NORTHWEST CONTROL BUILDING ELEVATION
SCALE 1:100 @ A1



SOUTHWEST ELEVATION
SCALE 1:100 @ A1



SOUTHEAST CANOPY ELEVATION
SCALE 1:100 @ A1



NORTHEAST ELEVATION
SCALE 1:100 @ A1

COLOUR LEGEND

AC-1	AC - 1 ALUMINIUM CANOPY FASCIA CLADDING - BLUE
AC-2	AC - 2 ALUMINIUM CANOPY COLUMN CLADDING - WHITE
AC-3	AC - 2 ALUMINIUM STORE FASCIA CLADDING - RED
E18	E18 - ALUMINIUM SLATS - RED
E4	P4 - PRECAST CONCRETE DECO CLAD DECO WOOD ALUMINIUM CLADDING HORIZONTAL V GROOVE PROFILE COLOUR: NATURAL TEAK
P1	P1 - EXTERNAL WALLS PAINT FINISH - RED
GL-1	GL-1 CLEAR GLAZING TO CODE, NCC & RELEVANT STANDARDS
GL-2	GL-2 CLEAR GLAZING TO CODE WITH RED VINYL

revision/ issue	description	drawn	checked	date
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE W.A.
drawn: MS
checked: NP
description: PROPOSED ELEVATIONS
scale: 1:100 @ A1
date: 05.11.2021
project no: 68.21
dwg no: SK11
rev: A

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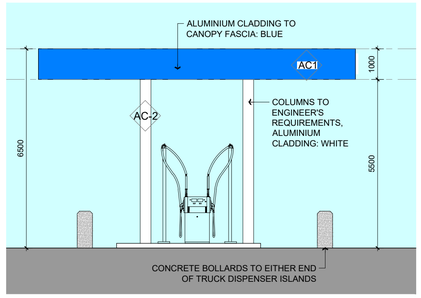
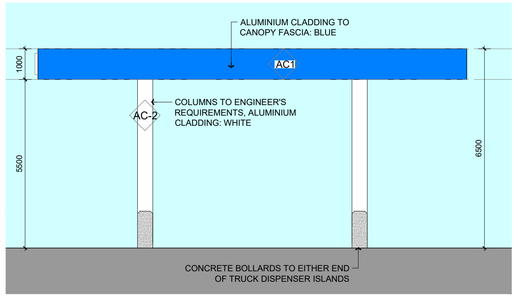
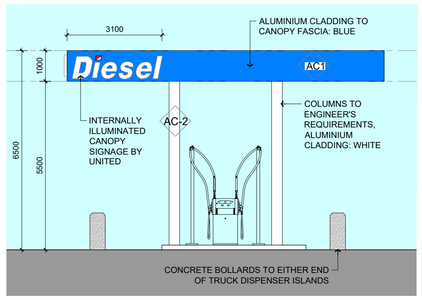


SOUTHWEST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1



NORTHWEST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1



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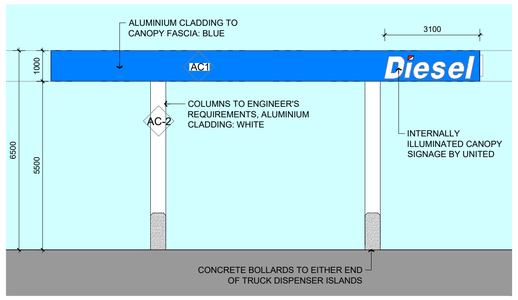
SCALE 1:100 @ A1



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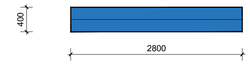
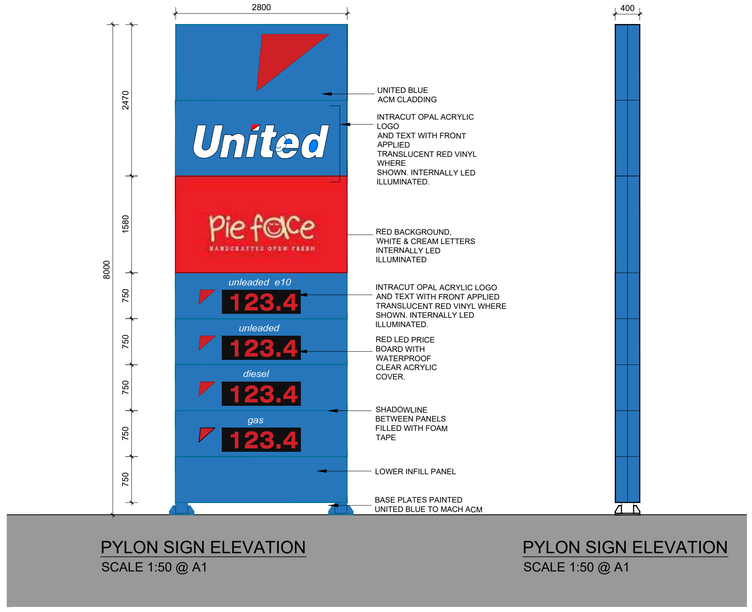
SCALE 1:100 @ A1



PYLON SIGN PLAN
SCALE 1:50 @ A1



PYLON SIGN ELEVATION
SCALE 1:50 @ A1

PYLON SIGN ELEVATION
SCALE 1:50 @ A1

COLOUR LEGEND

AC-1	AC - 1 ALUMINIUM CANOPY FASCIA CLADDING - BLUE
AC-2	AC - 2 ALUMINIUM CANOPY COLUMN CLADDING - WHITE
AC-3	AC - 2 ALUMINIUM STORE FASCIA CLADDING - RED
E18	E18 - ALUMINIUM SLATS - RED
E4	P4 - PRECAST CONCRETE DECO CLAD DECO WOOD ALUMINIUM CLADDING HORIZONTAL V GROOVE PROFILE COLOUR: NATURAL TEAK
P1	P1 - EXTERNAL WALLS PAINT FINISH - RED
GL-1	GL-1 CLEAR GLAZING TO CODE, NCC & RELEVANT STANDARDS
GL-2	GL-2 CLEAR GLAZING TO CODE WITH RED VINYL

A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE, W.A.
drawn: MS
checked: NP
description: PROPOSED ELEVATIONS

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scale: 1:100 @ A1
date: 05.11.2021
project no: 68.21
dwg no: SK12
rev: A

PROPOSED SERVICE STATION

LOT 137 (NO.630) PINJARRA ROAD, FURNISSDALE WA 6209

DECEMBER 2021

PREPARED FOR - THE SHIRE OF MURRAY

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Kris Nolan
Senior Consultant	Emma Dunning
Consultant	Matthew Filov
Project Code	**P0035838**

Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

urbis.com.au

CONTENTS

FIGURES

TABLES

INTRODUCTION

This report has been prepared by Urbis on behalf of Yolk Property Group as part of an application for planning approval for the use and development of Lot 137 (No. 630) Pinjarra Road, Furnissdale. This application proposes a Service Centre inclusive of a petrol filling station and ancillary convenience store, on the subject site.

This report considers the planning context of the proposed development and provides an assessment of the application against the relevant state and local planning framework. The information contained in this report confirms that the proposed Service Centre is an appropriate and consistent outcome that reflects the applicable planning framework. The report has been set out in the following manner:

- **Site Details:** a brief contextual discussion and description of the site.
- **Proposal:** a description of the proposed development.
- **Planning Assessment:** an assessment of the proposal against the applicable local and regional framework.

In the preparation of this application, Urbis has held discussions with the Shire of Murray to address preliminary items prior to lodgement. This feedback has been duly considered in the finalisation of the design to the proposed development.

This report demonstrates that the proposal is aligned with the Shire of Murray Local Planning Scheme No.4.

A summary of the site details is outlined below in **Table 1**.

Table 1 – Site Summary

Property Location	**Lot 137 (No. 630) Pinjarra Road, Furnissdale**
PRS Zoning	Urban
LPS4 Zoning	Commercial / Service Commercial
Region Scheme	Peel Region Scheme
Town Planning Scheme	Shire of Murray Local Planning Scheme No. 4
Existing Land Use	Non-Operating Caravan Park
Lot Size	42829.352sq.m (4.3ha)

1. SITE CONTEXT

1.1. LOCATION

The subject site is located in Furnissdale, within the Shire of Murray. The site is located approximately 67km south of the Perth CBD and is well connected to the regional road network being located directly off Pinjarra Road, which provides connections onto the Kwinana Freeway and Forrest Highway (approximately 4km south-east) as well as connections to the Mandurah CBD (approximately 4km north-west).

A context plan showing the subject site and its surrounding elements is provided in **Figure 1**.

Figure 1 – Location and Context Plan

Source: Urbis

1.2. LEGAL DESCRIPTION

The land subject to this application is legally described as Lot 137 on Diagram 71194, (No. 630) Pinjarra Road, Pinjarra WA 6209. Further site details are outlined below in **Table 2** and **Figure 2**.

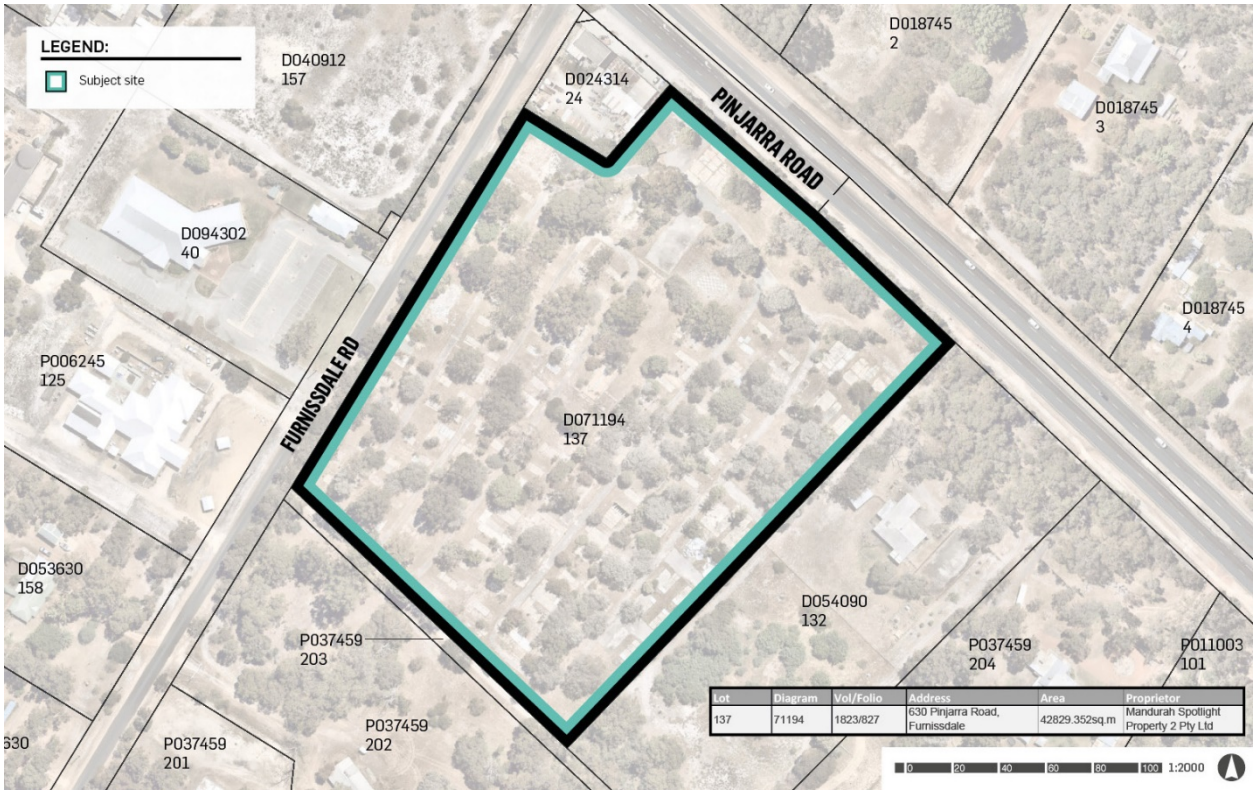
Table 2 – Lot Details

Lot	Diagram	Vol/Folio	Address	Area	Proprietor
137	71194	1823/827	630 Pinjarra Road, Furnissdale	42829.352sq.m	Mandurah Spotlight Property 2 Pty Ltd

Source: Landgate 2021

The Certificate of Title for the subject lot is attached at **Appendix A**.

Figure 2 – Cadastre Plan



Source: Urbis

1.3. SITE DESCRIPTION

Lot 137 is currently vacant, having been subject to demolition to remove the structures relating to the previous Caravan Park use in 2011. It is noted, the concrete slabs/foundations and accessways associated with the former use remain of the site.

The following site considerations are noted for the subject site

- **1 in 100 AEP Floodplain Development Control Area** – A drainage plan will be required to be submitted as part of the development application or as a condition of approval. This relates to the Murray River.
- **Acid Sulphate Soils (ASS) Risk** – The site is within a high to moderate ASS Risk area Risk Class 1.
- **Bushfire Prone Area** – The subject site is located within a Bushfire Prone area as defined by the Department of Fire and Emergency.
- **Threatened Ecological Communities** – The whole extent of the site is covered by a Threatened Ecological Communities layer.
- **Native Vegetation Extent** – Part of the site fronting Pinjarra Road contains recognised Native Vegetation; however, this would be subject to future widening of Pinjarra Road.

1.4. LOCAL CONTEXT

The locality is generally characterised by mainly Rural and Residential land holdings with a cluster of Commercial and Service Commercial sites fronting Pinjarra Road.

The subject site has primary frontage to Pinjarra Rd to the northeast and is directly adjacent to commercial land use on Lot 626 Pinjarra Road. A road widening for Pinjarra Road sits across the subject site. The site has secondary frontage to Furnissdale Road to the west. The design of the development has sought to allow for appropriate access, create an appropriate street interface and seeks to leverage the amenity from surrounding rural residential and areas to support the development.

To the north-west of the site are a number of commercial developments including a Coles Express brand petrol station, a Celebrations brand liquor outlet, a self-storage/storage facility and hire equipment retailers.

To the west, across Furnissdale Road, is the Furnissdale Masonic Centre, the Peel Caravan Park. Further afield is a Spudshed (c.500 m).

To the east and north-east of the site, are rural land holdings.

To the south of the site are rural and residential lots that are bordered by the Murray River approximately 1.7km from the subject site. This area is mainly serviced by Furnissdale Road, Ronlyn Road and Riverside Drive. Whilst attending a site visit, it was evident that Furnissdale Road carries very low numbers of traffic.

1.5. EXISTING TRAFFIC AND ACCESS

The subject site directly adjoins Pinjarra Road. Pinjarra Road is classified as a 'Primary Regional Road' under the Peel Region Scheme.

The site has an existing crossover to Pinjarra Road, located approximately 63m from the intersection of Furnissdale Road, and an existing crossover to Furnissdale Road approximately 65m from the intersection of Pinjarra Road.

The Furnissdale Road and Pinjarra Road intersection is currently controlled by a stop sign and permits full movement. The future development of traffic signals at this location may seek to control or limit some movements.

1.6. CONSULTATION

Table 3 – Consultation Table

Stakeholder Consulted	Consultation type	Outcomes
Shire of Murray (Planning Officers)	Pre-lodgement meeting (via teams)	Urbis outlined the proposal for the Service Centre, staging and variation to LPP in context of the outcomes of the previous applications and the Shire's comments. These discussions were particularly related to ensuring the vehicle movements through the site were addressed along with considering built form and the design/operation of the remainder of the site.
Shire of Murray (Planning Officers)	Email	Shire officers provided detailed design feedback on 29 September 2021, which has been incorporated into an updated design.
Main Roads Western Australia	Email	Throughout the history of the project many discussions have been had with MRWA. Many of the aspects previously discussed with MRWA have been addressed in this proposal. Porters has been in contact with MRWA in relation to the trip generation rates for the site and surrounds in order to gain updated data in this area. Discussions with MRWA (Bunbury) continue with a request for a meeting being sent and still awaiting confirmation.

2. PROPOSAL

Furnissdale has many local attributes which contribute to establishing the area's character and identity. This proposal seeks to maintain the character of the locality through ensuring the built form and site treatments that are consistent with the locality, whilst providing complementary land uses necessary to service the surrounding rural, rural residential and commercial land uses.

The development utilises the Pinjarra Road frontage and topography of the site in order to maximise the development potential of the land and ensure the full development potential of the remainder of the site can be achieved in a co-ordinated manner. The proposed development makes up stage 1 of the development of the site, with the remaining stages to be subject to future approvals. The intent is that the proposal will be a catalyst for the future and further development of the broader site, which is intended to be redeveloped for additional uses consistent with the commercial and service commercial zoning of the site.

2.1. PROPOSED USE

The proposal includes the establishment of a Service Centre comprising of petrol filling station and ancillary convenience store over 5,400sq.m of the subject site. The design and layout of the proposed uses on the site has been specifically designed to ensure appropriate legibility and interactions across the site, to ensure safety between pedestrian and vehicle movements, and allow for surveillance/CPTED principles to be implemented. Plans supporting the following text can be found in **Appendix B**.

2.1.1. Service Centre

2.1.1.1. Convenience Store / Petrol Filling Station (United Petroleum)

The proposal includes the following components:

- Installation of 3 underground fuel tanks;
- Installation of 1 underground LPG tank
- Provision of 8 fuel bowsers for the primary use of small private vehicles;
    - Fuel Canopy to be provided over bowers (345.1sq.m);
- Provision of 4 bowsers for the primary use of trucks;
    - Fuel Canopy to be provided over bowers (134.55sq.m);
- Convenience store building (300sq.m);
- 22 parking bays (inclusive of 1 disabled parking bay);
- 1 service bay;
- 8m high pylon sign;
- Remediation works of the existing crossover onto Pinjarra Road;
- Creation of a new left-in, left-out crossover onto Pinjarra Road;
- Remediation works of the existing crossover onto Furnissdale Road;
- Creation of new entry/exit crossover onto Furnissdale Road;
- General landscaping over the site;
- Screened bin store and plant areas.

It is proposed that the service station will operate 24/7. The operation will require a maximum of 2 employees to be on site at any one time, with a total of 6 employment positions being created by the activity. The convenience store building is set back approximately 19m from Pinjarra Road from the closest point of the building setback approximately 60m from Furnissdale Road.

Access to the petrol filling station is via a crossover from the proposed internal roads onto either Pinjarra Road, or Furnissdale Road. A separate entry only and exit only are proposed to the service station, car canopy and convenience store, whilst a separate crossover on the internal road is an entry only for the truck canopy. Separating the crossovers for the car and truck canopies provides improved safety and manoeuvrability by separating light and heavy vehicles. Furthermore, this will provide the distance required for swept paths of fuel tankers which service the site. The exit from the truck canopy is proposed via the internal west- east road connection to Furnissdale Road.

The requirement for large vehicle manoeuvring, fuel tanker manoeuvring, landscaping and drainage levels, along with the associated uses on the site restrict a direct frontage to Pinjarra Road. The service yard and bin store facilities are tucked away enclosed and screened from Pinjarra Road. The façade treatment of the

service yard will be of a high quality in this location. The location of the service yard will also mean this area is screened from view from the surrounding roads.

2.2. COLOURS AND MATERIALS

The proposal generally includes the use of corporate colours and branding associated with the United Petroleum provider. The proposal intends to retain a level of consistency to ensure appropriate brand recognition as well as presenting as a cohesive and high-quality development. The materials to be used will generally consist of the use of concrete tilt-up panels, colourbond capping, mixed with feature cladding and elements of glazed glass facades.

2.3. PARKING AND ACCESS

Access to the proposal will be via a repositioned and modified left-in, left-out crossover onto Pinjarra Road which is intended to be the primary entry/exit point for the majority of traffic to the site. This will provide access to a north-south internal road which provide separate entry points into the site (one for light vehicles, one for heavy vehicles). Furthermore, a repositioned and modified entry and exit crossover onto Furnissdale road will provide access to the east-west internal road which connects to the north-south internal road and access to the site.

Traffic generation has been assessed within the Traffic Impact Assessment (refer **Appendix C**). It is considered that much of the traffic is related to trips from vehicles already passing by the site on the surrounding road network. As such, it is considered that there is sufficient capacity within the surrounding road network to accommodate vehicle trips associated with the site.

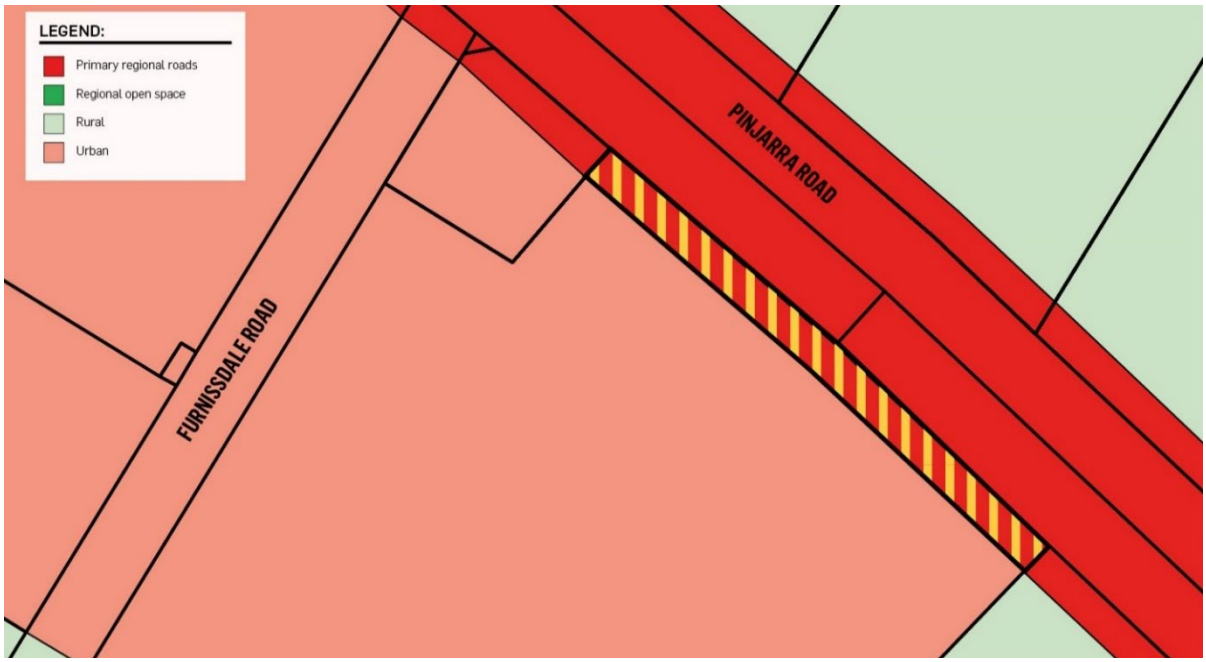
Pedestrian access through the site is both legible and safe with a number of pedestrian crossings located throughout the proposed development, car parking areas, and landscaping through raised kerbs that provide for pedestrian pathways. A total of 30 parking bays are provided with the proposed development as following:

- 22 car parking bays around the periphery of the proposed buildings
- 8 car and 4 truck dispensers under a sheltered canopy

2.3.1. Pinjarra Road Widening

A 10m wide portion of the site along Pinjarra Road has been identified for future road widening requirements. The total area required for widening impacting the site equates to approximately 2,339.53sq.m. Details of the future road widening are still unknown, and as such this portion of the site is intended to be retained and landscaped until such time.

Figure 3 – Road Widening



2.3.2. Access to Pinjarra Road / Furnissdale Road

Porter Consulting Engineers have prepared a Traffic Impact Assessment **(refer Appendix C)** in order to inform the proposal and ensure that the proposed development will not negatively impact the surrounding road network.

Access to Pinjarra Road is limited to a left in / left out movement, however full movement is permitted along Furnissdale Road and then onto Pinjarra Road at its intersection with Furnissdale Road.

The access to the north-south internal road has been positioned to the east of the intersection of Pinjarra Road, Furnissdale Road and Watson Road such that a left turn slip lane of 125m can be accommodated with the future signalisation of the existing 4 way intersection.

Similarly, access to the east-west internal road connection has been positioned approximately 115m (centreline to Pinjarra Rd road reserve boundary) from Pinjarra Road along Furnissdale Road such that it will allow for a western connection approximately 40m to the north as well as future 50m turn lanes on Furnissdale Road anticipated to be required as part of the future signalised intersection.

As noted in the previous section Pinjarra Road will be widened in the future, with a 10m road widening reserve allowed for the required turning pockets. The proposed design has taken this into account and will be able to accommodate the road widening in future.

2.3.3. Interim / Ultimate Access to Service Station site

The proposal includes an interim and ultimate access scenario to allow access to the service station from the internal road in the current configuration and in the eventual configuration once the Pinjarra Road widening and upgrade is completed. Figures 4 and 5 depict the indicative layouts within the interim and ultimate scenarios.

Interim Access

The interim access arrangement allows for access to the service station site via private internal roads with crossovers onto Pinjarra Road and Furnissdale Road. This allows vehicles to enter the site and access the fuel bowsers or parking areas. In the interim scenario these access points are sufficiently distanced from the intersection with Pinjarra Road to ensure there are no traffic and manoeuvring concerns. Furthermore, the proposal does not prejudice the ability for the remainder of the site to be developed and allows for an access easement across the front of the site to the adjacent Lot 24.

Ultimate Access

As discussed in Section 2.3.1, Pinjarra Road is to be widened from the current 40m wide road reserve to a 60m wide road reserve with a widening of 10m either side of the current road reservation. As part of this proposed development, this 10m land take will occur on the frontage of the subject site on Pinjarra Road. This will require amending the intersection with Pinjarra Road at the time of road widening.

In the ultimate scenario it is proposed that the principle roads through the site (intersecting with Pinjarra Road and Furnissdale Road) will be vested as local roads with the Shire of Murray. The widths allowed within the development plan for these roads is sufficient to allow for the construction of the roads, footpaths, verges and services in accordance with Shire of Murray specifications.

As noted above, an access to/from Pinjarra Road in an interim format with a proposed access easement across the front of the development site to provide road access to Lot 24, west of the proposed development. This will provide direct access to the lot ensuring this is not landlocked and can be utilised for development purposes. The provision of the truncations for the ultimate road reservation for Pinjarra Road due to the conversion of the private roadway to a public road will require an alternate access to continue to provide a legal right of access and thus maintenance of a legal agreement for an access easement across this proposed development to future development west of this site, nearer to Furnissdale Road.

2.4. SIGNAGE

A proposed 8m high pylon sign is proposed to be located at the north-eastern portion of the lot fronting onto Pinjarra Road.

The pylon sign is intended to be used primarily for the display of the fuel and convenience services available at site, including fuel costs etc. It is considered that such pylon signs are synonymous with similar service station developments.

On building signage relating to the proposed operator includes:

- Illuminated 'QuickSTOP' store fascia sign (3.5m x 0.8m) – South East elevation
- Illuminated 'United 25' canopy/fascia signs
    - 5.3m x 1.0m – South East elevation
    - 5.3m x 1.0m – North East elevation
- On building 'Pie face' signs
    - Square (1.5m x 1.5m) – South East elevation
    - Rectangular (5.4m x 0.5m) – South East elevation
    - Logo and slogan (1.5mx1.7m and 1.85m x 5.13m) – North East elevation

Additional considerations of the signage against the Shire's Local Planning Policy have been explored in Section 3.2.2.3 below.

2.5. FUTURE DEVELOPMENT – INDICATIVE LAYOUT PLAN

In recognising that the proposal seeks to develop only a portion of the subject site, indicative layout plans have been prepared in order to demonstrate the ability for the site to be developed in the manner intended by the local planning framework (refer to Figures 4 & 5 overleaf).

The indicative plan demonstrates the ability for the site to be developed in a coordinated manner which is functional for the range of uses anticipated, provides for suitable vehicle and pedestrian access and allows for high quality-built form to be established.

Access

The plan demonstrates that the proposed access to the lot, located toward the centre of the overall site will provide for access to the service station as well as access to the future development lots. This allows for access which is generally consistent with the Barragup Furnissdale Activity Centre Policy Plan and avoids the over roading of the subject site. The proposed movement network can operate either within the capacity of a gazetted road or private accessways, whichever is deemed required as part of the development.

The plan shows the interim access arrangements to the service station as noted in section 2.3 and demonstrates the ability for the site to retain access once the road widening to Pinjarra Road is undertaken.

Access to No. 626 (lot 24 D024314) is provided in both the interim and ultimate scenarios ensuring this parcel does not become landlocked. Access easements will be required over the subject site to facilitate shared access.

Layout

The indicative layout provides for a range of uses as anticipated by the Scheme, being primarily bulky goods and service-related uses. The indicative layout plan takes into account the size of built form generally associated with these uses and the car parking rates applicable. Whilst it is acknowledged the form and location of the built form will change as development is rolled out, the layout plan demonstrates sufficient developable area for a range of compliant built form outcomes to be achieved.

Figure 4 – Indicative Layout Plan (Interim)

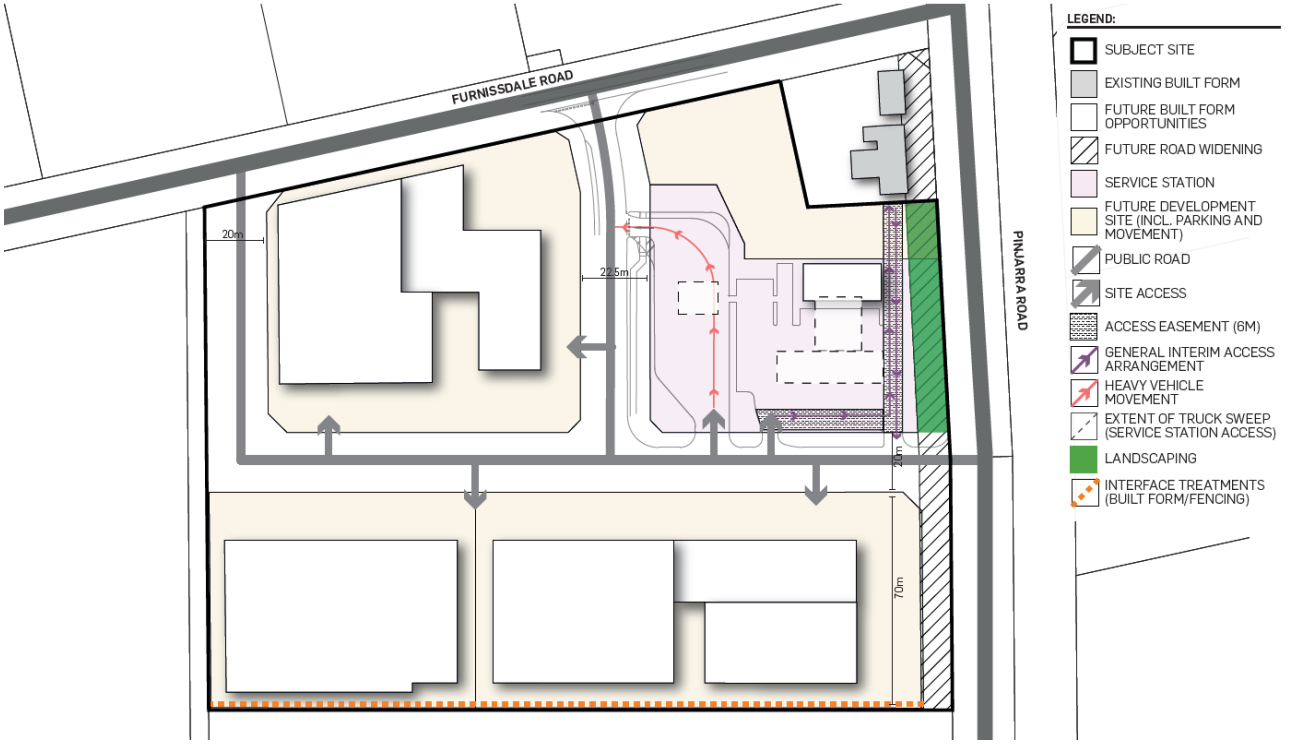
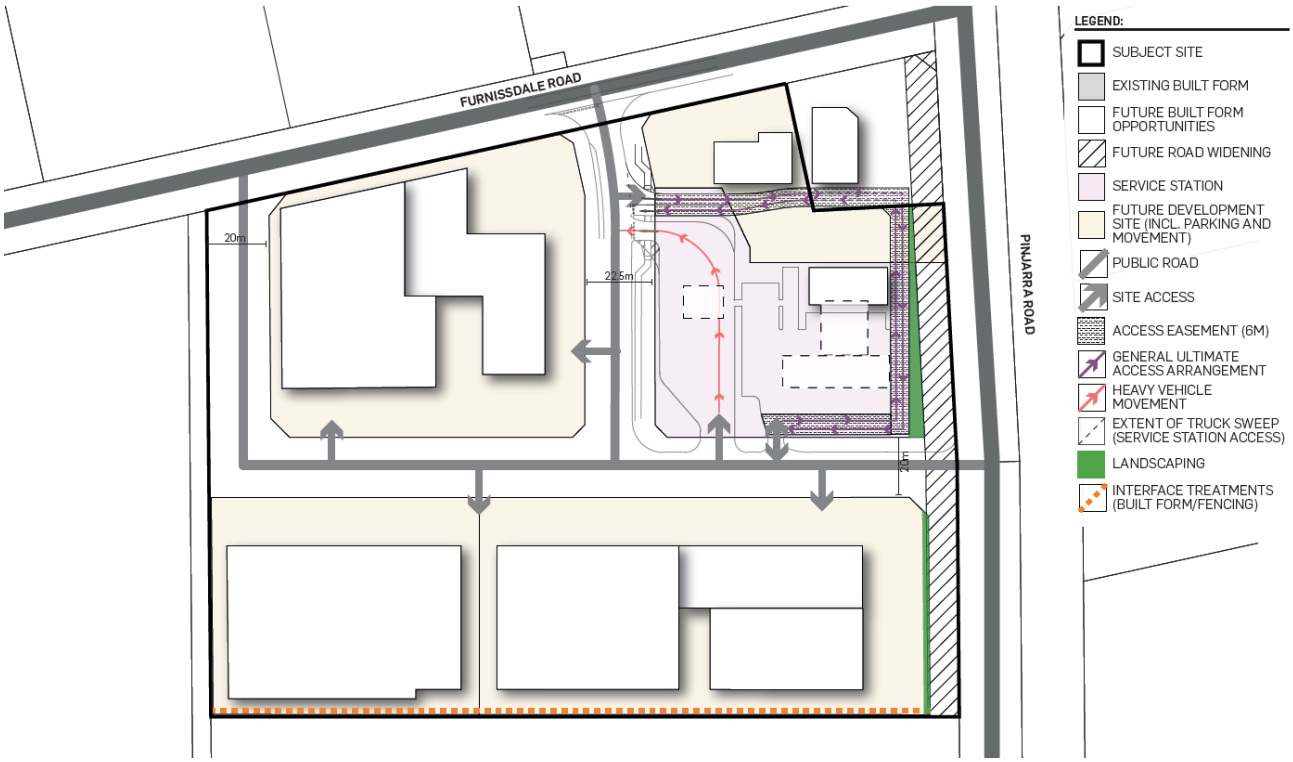


Figure 5 – Indicative Layout Plan (Ultimate)



3. PLANNING FRAMEWORK AND ASSESSMENT

3.1. STATE PLANNING

Table 4 – State Planning Frameworks

Document	Relevant Provisions/Objectives	Compliance
Peel Region Scheme *The Peel Region Scheme (PRS) is a high-level statutory land use plan over the Peel region*	The subject site is zoned 'Urban' (**Refer 6**). The purpose of this zone is to provide for a range of activities are undertaken, including residential, commercial recreational and light industry.	The proposed Service Centre is a commercial land use and is therefore considered consistent with the intentions of the PRS 'Urban' zoning.
Directions 2031 and Beyond *High level strategic spatial plan which sets the vision for the future expansion of the Perth and Peel area.*	This high-level spatial framework establishes a vision for the future expansion of Perth and a population of 3.5 million people by 2031. The subject site is located within the Peel-west subregion which is located immediately south of the Perth metropolitan region boundary. The subject site is zoned as Industry in the strategy. Directions 2031 estimates that the population subregion will increase to 133 000 by 2031. In addition, the document identifies a high level of employment self-sufficiency with target of 80% by 2031.	The proposed Service Centre and Commercial tenancies are consistent with the strategic intentions of Directions 2031 providing for necessary services within the Furnissdale locality. The proposed Service Centre will contribute to the area's employment sufficiency target with the creation of a number of new jobs.
Perth and Peel @ 3.5 Million *Key strategic land use document.*	Perth and Peel @ 3.5million is an overarching document that buildings on the objectives of Directions 2031 and Beyond and provides a common link between the four sub-regional planning frameworks. The subject site has been identified 'Urban' under the Perth and Peel @ 3.5million spatial plan. The 'Urban' zoning refers to areas that are identified for urban uses such as residential and associated activity and light industrial employment centres, recreation and open space.	The proposal will have no implications on the zoning of the subject site under the Perth and Peel @ 3.5million. Nor will the proposal have any implications on the indicative future locations of regional roads and public infrastructure

South-Metro-Peel-Sub-Regional Planning Framework (May 2015) *The draft framework considers the long-term strategic intentions for the Perth and Peel Region.*	The framework identifies key activity centres and community nodes whilst achieving a consolidated and robust urban form. The economy and employment are key objectives, building employment bases whilst utilising existing infrastructure in order to boost employment self-sufficiency within the sub-region. Key aspects relating to the site and surrounds include: ▪ Pinjarra Road as a priority transit route ▪ Pinjarra Road removed from the regional freight network.	The development of the site does not prejudice the ability for long term strategic intentions of the area to be realised. The proposal is consistent with the economic and employment objectives of the sub-regional planning framework. The proposal incorporates a range of land uses which will generate employment thus contributing to the local economy and employment self-sufficiency.
State Planning Policy 3.7 – Planning in Bush Fire Prone areas *SPP 3.7 aims to reduce the risk of bushfire to people, property and infrastructure by taking a risk minimisation approach to development proposed in bushfire prone areas.*	The subject site has been identified as bushfire prone by the Commissioner of Fire and Emergency Services. Therefore, consideration to SPP 3.7 is required.	Strategen JBS&G has prepared a Bushfire Management Plan (BMP) to address requirements under State Planning Policy 3.7 Planning in Bushfire-Prone Areas (SPP3.7) – Please refer **Appendix D**.

Figure 6 – PRS Extract

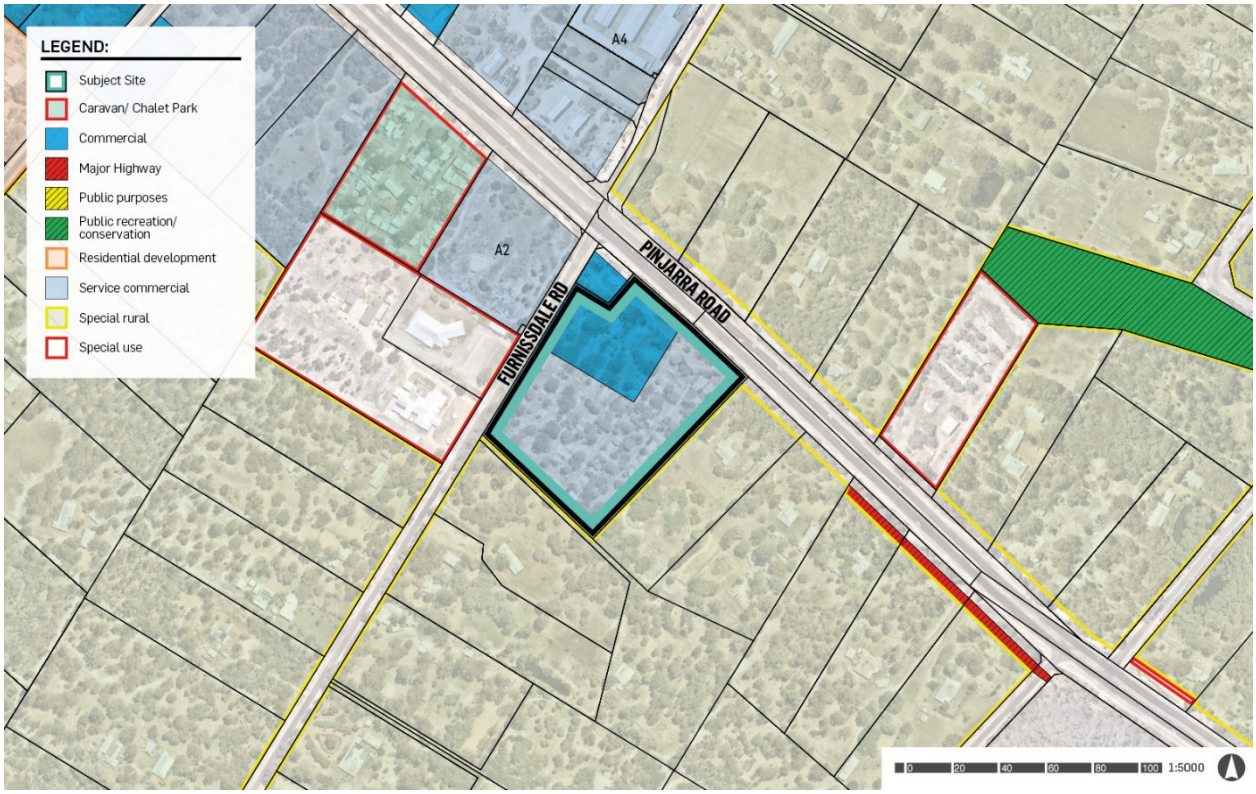
Source: Urbis / DPLH

3.2. LOCAL PLANNING

3.2.1. Shire of Murray Town Planning Scheme No.4

The subject site is located within the Shire of Murray local government area and is subject to the Town Planning Scheme No.4 (TPS 4). Under the provisions of TPS 4 the subject site is included within the 'Service Commercial' zone and 'Commercial' zone as indicated in **Figure 7** below.

Figure 7 – TPS4 Extract



Source: Urbis/DPLH 2019

The various land use permissibility considerations are outlined within the zoning table contained under Clause 5.2 of LPS4.

Accordingly, and in accordance with Clause 5.2.3, "*if a person proposes to carry out on a land any use that is not specifically mentioned in the Zoning Table and cannot reasonably be determined as falling within the type, class or genus of activity of any other use category the Council may:*

a) *determine that the use is consistent with the objectives of the particular zone and is therefore permitted;*
b) *determine that the use may be consistent with the objectives of the zone and thereafter follow one or more of the advertising procedures of subclause 5.2.2 in considering an application for approval to commence development; or*
c) *determine that the use is not consistent with the objectives of the particular zone and is therefore not permitted*".

The proposed use falls under the following land use definitions:

Petrol Filling Station *- means the land and buildings used for the supply of petroleum products and automotive accessories.*

Shop *- means any building wherein goods are kept exposed or offered for sale by retail and includes a cafe and a restaurant and receiving depot, but does not include a bank, fuel depot, a market, service station, petrol filling station, milk depot, marine store, timber yard, or land and buildings used for the sale of motor and other vehicles, or for any purpose falling within the definition of industry.*

Petrol Filling Station is an 'AA' use and Shop is a 'P' use within the Commercial Zone.

It is noted that the model provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* amends the definition of Service Station to include:

"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) They 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"

It is considered that the use can comfortably fit within subclause (a) and under the Regulations would be classified as a Service Station.

In regard to the above, further consideration of the objectives of both the Commercial and Service Commercial zoning have been considered below.

Table 5 – Zone Objectives

Zone	Objective	Comment
Commercial Zone	To provide for retail shopping, but also other associated non-bulky retail and local office uses that cater for the current and future residents of the Shire consistent with the Commercial Strategy	The proposal allows for the establishment of a use which is consistent with non-bulky retail and will provide a service for the residents within the locality as well as those passing along Pinjarra Road. The development does not prejudice the ability for the remainder of the commercial zone to provide for a wider range of retail and commercial uses, including office should the market allow this in the future. As such, the proposal is considered to be consistent with the objectives for the commercial zone.
Service Commercial Zone	To provide for a mix of non-retail business activities to service the community in planned and fully integrated locations.	The remainder of the subject site is sufficiently sized to accommodate a range of bulky retail and non-retail activities as demonstrated by the indicative layout plan prepared to support this proposal.

3.2.2. Local Planning Policies

3.2.2.1. Barragup Furnissdale Activity Centre Local Planning Policy

This Policy sets out to guide a coordinated approach to planning for this local area. The Policy seeks to coordinate a safe and functional accessibility for the area. The subject site falls within the 'Business' zone of the Activity Centre.

Requirement	Provision	Compliance
Height		
Development is to present a minimum two storey façade (or equivalent) and no more than three storeys (or equivalent).	The proposed 'convenience store building' will be 4m in height and attached to the fuel canopy of 6.2m in height.	**Variation to standard requested** The built form of the service station is directly related to the function it serves. Through this the form works as a type of recognition to those travelling along Pinjarra Road. It is considered the form of the building is suitable and generally consistent with the objectives of the policy. Further, this approach has been taken for service stations along Pinjarra Road.
Setbacks		
East of Ronlyn Road, buildings are to be setback a minimum of 15.5 metres and a maximum of 21 metres to the ultimate alignment of Pinjarra Road, being the boundary of the Primary Regional Road reservation identified under the Peel Region Scheme, and secondary streets with adjacent shared driveways as shown on the plan attached to this policy.	The proposal includes a setback of 19m to Pinjarra Road in the current alignment. In the ultimate scenario (once the Pinjarra Road widening is undertaken) the setback to Pinjarra Road will be 9.0m.	**Variation to standard requested (in the ultimate scenario).** The aim of the setback is to provide the opportunity for an access lane along the boundary to Pinjarra Road. The proposal provides adequate access for both vehicles and pedestrians pre and post road widening. The proposed design provides greater activation and passive surveillance onto Pinjarra Road.
Building Form and Character		
The elevation of buildings facing public streets is to be designed to address the street.	The requirement for large vehicle manoeuvring, fuel tanker manoeuvring, landscaping and drainage levels, along with the	Complies

Requirement	Provision	Compliance
	associated uses on the site restrict a direct frontage to Pinjarra Road, however these will address the future internal road. The nature of the service station use results in a high level of activation within the forecourt, therefore ensuring the intentions of the policy are met. Furthermore, the internal design of the service station has ensured sufficient glazing is provided along Pinjarra Road to ensure the street is addressed.	
Architectural form and character must avoid large unrelieved expanses of wall or roof, where they face the public realm.	The proposal includes a varied architectural form reflective of the use as a service station. The form of the structure and open nature of the forecourt ensures there are no unrelieved expanses of wall fronting to Pinjarra Road or the future internal road network.	Complies
Where more than one building is planned for a site, the design must result in the creation of a group of integrated buildings presenting a harmonious image.	Only one building is proposed for the site. However, the building's orientation and form has considered the potential future development of the remainder of the lot, and in consideration of the included indicative layout plan. The indicative layout plan demonstrates the ability for the remainder of the site to be developed in a cohesive and co-ordinated manner as required by the policy.	Complies
The main entrance to each building is to be on the front elevation or close to the front of the building, clearly visible from the street.	The entrance to the convenience store building will be directly accessed from the fuel bowsers and visible from a clearly defined entrance.	Complies
Entrances to buildings are to be obvious and provided with protection measures such as canopies.	The entrance of the convenience store building will be protected by the adjoining fuel canopy which will extent to the entrance of the building.	Complies

Materials and Colours		
Aim should be to divide up the façades into contrasting smaller areas by introducing differing colours, materials and forms. Consideration should be given to 'breaking up' the façade to create interest using: ▪ Different materials such as concrete panels, profiled metal cladding, fibre cement cladding, face brickwork, stone panels separately or in combination. ▪ Different materials to express changes in the form of the building. ▪ Feature elements such as the louvre vents and screens, exposed steel columns and bracing, careful placement of roller shutters. ▪ Vertical, horizontal and/or angled grids to break up unrelieved wall surfaces. These could be expressed feature joints in pre-cast concrete panels, fibre cement panel joints, brick banding or rendered panels. ▪ Division of the façade into top, middle and bottom elements using differing materials, grading of colours, horizontal lines such as dado line or parapet capping. ▪ Projecting features such as canopies, sun shading, overhanging roof etc to create shadows on the façades.	The proposal does not include any large bulky structures and as such by the nature of the design includes smaller facades and canopy elements which are broken up by form and colour.	Complies
Where a single development comprises, multiple units occupied by multiple independent tenancies, the use of colours, finishes and materials for each unit should be complementary, whilst allowing each tenancy to be easily distinguishable and identifiable.	The proposal includes on a single tenancy; however, it is considered that this development will not prejudice the ability for the remainder of the site to be developed in a manner which is co-ordinated and complementary as required by the policy.	Complies

Building colours should generally be sympathetic and complementary with the surrounding rural/natural environment and to site landscaping.	The proposal includes blue, red and white within the façade. A wood style cladded feature wall with glazing is provided to the primary façade facing the forecourt. This is considered to be generally consistent with the aims of the policy.	Complies
Large areas of one material should be treated with muted colours and tones avoiding strong hues. Large expanses of zincalume metal finished cladding will not be accepted.	The form of the building does not result in any large areas being established in one material/colour.	Complies
Small and important building elements such as a feature wall, canopies, steel bracing and columns, sunscreens, ventilation louvres etc should be treated with strong highlight colours to provide visual interest and relief on the building façades.	The proposal includes treatment to screening and operational aspects to ensure suitable visual consideration.	Complies
Landscaping		
A minimum 8% of the site is to be set aside for landscaping, including the first 2 metres of a site adjoining all public roads. Landscape areas should be designed and located to complement the building design.	The proposal includes in excess of 17% of landscaping for the portion of the site upon which the development is proposed including landscaping to Pinjarra Road. Further, the proposal does not prejudice the ability for the remainder of the site to be developed to the 10% landscaping requirement.	Complies
Existing significant trees should be maintained and incorporated in car parking areas and landscape areas where this is reasonably practical.	There is no vegetation retention proposed as part of the development. The previous use of the site as a caravan park had removed the site of any significant vegetation.	Complies
Car parking areas shall be provided with native trees at the rate of 1 per 4 car bays for shade and visual amenity. These trees shall be maintained on an ongoing basis.	There are no trees proposed as part of the car parking.	**Variation to standard requested** Due to the nature of the use and the location of the car bays there are no trees provided to this aspect.

		Shade is provided to a portion of the parking bays via the overhead canopy.
Landowners are to landscape all adjacent road verges and be responsible for verge maintenance.	The verge to Pinjarra Road will be landscaped as part of the proposal.	Complies
A landscape plan is to be prepared for each development site by a qualified landscape architect or designer as a condition of approval, with landscaping implemented in accordance with the approved plan prior to the development first being occupied.	A landscaping plan has been provided as part of the proposal.	Complies
Car Parking and Access		
Car parking shall be provided at the rate provided for in Town Planning Scheme No 4.	The proposal includes the following parking: 22 bays, inclusive of 1 disabled access bay. 8 small vehicle fuel bowsers 4 truck fuel bowsers	Complies
Car parking areas are to include the areas set aside for this purpose on the street side of service roads as shown on the plan attached to this policy.	Car parking areas have been located so as to provide access to the convenience store in a safe location. Car parking is limited to the service station use, however as demonstrated by the indicative layout plan this does not prejudice the ability of the remainder of the site to provide integrated parking opportunities.	Complies
Car parking areas are to be designed as far as practical to integrate with adjoining sites.		
Clear pedestrian paths are to be provided from the street pedestrian paths through the site to the main building entry.	Clear pedestrian paths are provided to the main building entry and throughout the subject site.	Complies
Parking areas and access driveways must be paved or sealed with asphalt.	Parking and access areas are sealed to the specifications of the Shire.	Complies
Bicycles		
Provision shall be made for secure bike parking for employees and the public and 'end of trip facilities' for employees.	Bicycle parking has been provided at the entrance of the development. No end of trip facilities have been provided as part of the proposal.	**Variation to standard requested** The nature of the proposal does not warrant end of trip facilities.
Public bike parking facilities are to be located so they do not disrupt pedestrian movements within the precinct.		

Servicing and Storage		
All plant and equipment areas should be screened or located away from public areas, particularly from the street. The exception to this may be where stacks or ductwork that are necessary for the building function are designed to be a feature design element of the building.	All plant and equipment areas are screened from public view and passing traffic, located behind aluminium slats and tied into the design of the building.	Complies
No open storage of goods, unserviceable vehicles or machinery shall be carried out on within the front boundary setback area (forward of the building line), which shall be used only for landscaping and drainage, car parking, servicing, loading and unloading, or where appropriate and subject to the approval of the Council, for trade display.	There are no storage areas forward of the building line.	Complies
All open storage areas shall be screened from the street and adjoining properties by landscaping, fencing and/or other means approved by the Shire. Service areas to be located and designed to minimise noise impacts on surrounding areas.	All storage areas are screened behind aluminium slats and tied into the design of the building.	Complies
Roof space shall be designed to conceal any plant, equipment, lift motor rooms etc.	There are no plant or equipment visible from the roof.	Complies
Fencing		
No fencing is to be constructed within the street setback area.	No fencing is proposed as part of this proposal.	Complies
The minimum fencing standard in the precinct where fencing is visible from the street is an 1800mm high metal tube framed vertical pale and horizontal rail fence with powder coat finish. All vertical pale fencing must feature a minimum nominal open area of 80%.	No fencing is proposed as part of this proposal.	Complies

Signage		
A high standard of signage is required as an integral part of achieving a high-quality urban form in the precinct.	The signage included as part of the proposal is directly associated with the function and operation of the proposed service station. The signage is considered to be of high quality and minimal in order to avoid proliferation of signage.	Complies
Signage shall be integrated into the design of the building, relate to the architectural design of the building and not obscure architectural features.	The on-building signage is fully integrated into the façade or fascia of the proposed building.	Complies
Signage shall be considered as part of building design and is to be restrained. Repetitive or portable freestanding advertising such as banners, A-Frames or flags are not permitted.	The proposal includes the provision of on building signage and a pylon sign for advertising purposes (ensuring compliance with the Petrol Pricing Regulations	

3.2.2.2. Local Planning Policy: General Development Provision – Building Setbacks, Car Parking Standards

The local planning policy builds upon the provision of LPS4 in prescribing various development requirements for particular development. Requirements applicable to the proposal (Petrol Filling Station) have been explored in the below **Table 6**.

Table 6 – Petrol Filling Station Development Requirements

Consideration	Standard	Requirement	Provision	Compliance
Minimum Setbacks from Boundaries	**Street:** 9m **Side:** 3m **Rear:** 9m	**Street:** 9m **Side:** 3m **Rear:** 9m	**Street:** 19m **Side:** 20m **Rear:** 154.5m	Complies
Car Parking	1 per staff member 1 per 20sq.m of shop	A total of 2 staff members will be on site at one time. 15 bays required for 300sq.m of shop **TOTAL 17 required**	22 bays, inclusive of 1 disabled access bay. The proposal also includes: - 8 vehicle bowsers - 4 truck bowsers	Complies

3.2.2.3. Local Planning Policy: Signs

The proposal incorporates a pylon sign, located on the northern boundary of the property adjacent to Pinjarra Road.

The below **Table 7** outlines the specific requirements for pylon signs within the Shire of Murray.

Table 7 – Signs LPP Assessment

Requirement	Provision	Compliance
Not have any part less than 2.75m, or more than 6m, above natural ground level immediately below the sign.	The proposed height of the pylon is 8m	**Variation to standards requested** The pylon sign has been designed in accordance with the regulatory requirements for signs relating to the sale of fuel (*Petroleum Products Pricing Regulations 2000*). These regulations require those selling fuel to allow passing motorists to make informed decisions on fuel purchases and as such require the following aspects within signage: ▪ Illumination ▪ Clearly legible sizing for passing motorists ▪ Description and price of each fuel type sold ▪ Prices for a minimum of 3 types of fuel and LPG if provided) In order to provide for the regulatory signage requirements in addition to identifying the operator of the convenience store and associated uses the pylon sign is required to be greater in height than the 5m set out. This is consistent with United Petroleum signage and ensures customers can make informed choices prior to reaching the site.
Have a maximum width of 2m measured horizontally across the face of the structure.	The proposed width of the pylon sign is 2.8m.	
Have a sign face area no greater than $4m^2$.	The total sign face equals 22.4 sq.m (8m (H) x 2.8m (W))	
Be limited to one sign on each property, per street frontage.	Only one pylon sign is proposed	Complies
Be at least 40m away from another pylon sign on either the same or adjacent site.	No pylon signs have been identified within 40m of the proposed location.	Complies

Requirement	Provision	Compliance
Be as far as practicable centrally located along the frontage of the lot and no closer than 3m to a side boundary.	Signage is centrally located for the proposed development and is not within 3m of a side boundary.	Complies
Where multiple tenancies exist on the same site the pylon sign should, as far as practicable, be designed to service the multiple tenancies.	The proposed sign is intended to display the United logo, as well as Pie Face logo. Additional fuel pricing information will also be displayed in connection with the service station function.	Complies

As noted within the signs local planning policy, "*in addition to Planning Approval, signs may also require the separate approval of Main Roads Western Australia pursuant to the Main Roads (Control of Advertisements) Regulations where signs are proposed within or within close proximity to Main Roads WA controlled roads (including Pinjarra Road, Pinjarra-Williams Road, South Western Highway, Forrest Highway, Kwinana Freeway) and Building Approval under the Building Act*".

In this regard, it is expected that further approvals will be required from Main Roads and applied via a relevant condition following the determination of the application.

4. CONCLUSION

The Service Centre has been designed to be site responsive with strong synergies to the surrounding rural and commercial character of Furnissdale. The proposal is consistent with the relevant state and local planning framework and will contribute to the will contribute to the diversity of land uses and employment opportunities currently offered in the Furnissdale locality.

The following key matters should be considered in the assessment of this development application:

- The proposed Service station use is consistent with the PRS 'Urban' zoning.
- The proposal will have no implications of the broader strategic planning of the Furnissdale area outlined in Perth and Peel @ 3.5 million and associated state planning documents.
- The proposed land use is afforded a 'AA' use for the petrol filling station and 'P' use for the shop, and are consistent with the subject site's zoning, objectives and development intentions under the TPS4 and the relevant Local Planning Policies.
- Variations to the Barragup Furnissdale Activity Centre Local Planning Policy have been addressed within the document and maintain consistency with the objectives of the policy.
- The Council has discretion to approve the application provided it is satisfied it meets proper and orderly planning and has been subject to an appropriate advertising period.
- The proposed development proposes an appropriately designed and laid out built form incorporating appropriate design features and high-quality landscaping outcomes.
- The proposed development fits within the overall intentions for the development of the wider site, ensuring development will be co-ordinated and present as a cohesive development.
- The proposal will provide the local community and broader area with an everyday commercial service, supporting the development of the surrounding industrial area and wider Furnissdale locality.
- The proposal will create a variety of employment opportunities suitable for residents of all ages.

For these reasons, and the reasons outlined in this report, it is respectfully requested that the Shire of Murray have regard to merits and broader benefits of the proposal when undertaking their assessment of the proposal and approve the application subject to fair and reasonable conditions.

DISCLAIMER

This report is dated 10 December 2021 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Yolk Property Group **(Instructing Party)** for the purpose of Development Application **(Purpose)** and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A CERTIFICATE OF TITLE

WESTERN AUSTRALIA

REGISTER NUMBER	
137/D71194	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
4	26/10/2017

VOLUME 1823 FOLIO 827

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

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

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 137 ON DIAGRAM 71194

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

MANDURAH SPOTLIGHT PROPERTY 2 PTY LTD OF LEVEL 6 111 CECIL STREET SOUTH MELBOURNE VIC 3205
(T N747774) REGISTERED 23/10/2017

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

1. N747775 MORTGAGE TO TASOVAC PTY LIMITED REGISTERED 23/10/2017.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

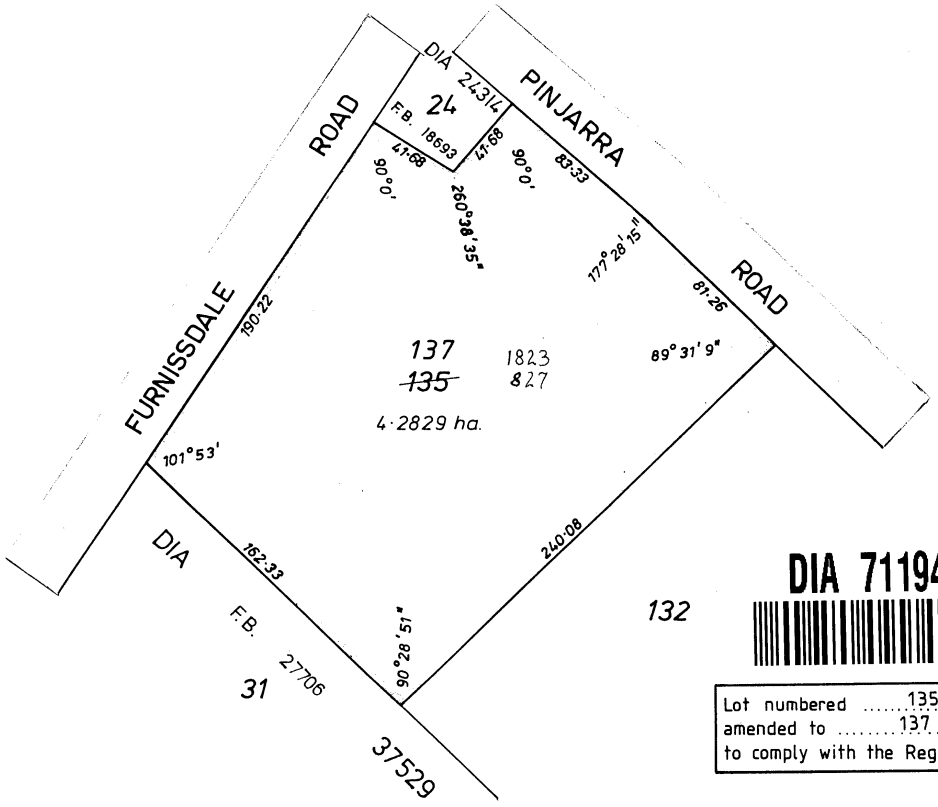
----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

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

SKETCH OF LAND:	1823-827 (137/D71194)
PREVIOUS TITLE:	1508-760, 1508-761
PROPERTY STREET ADDRESS:	630 PINJARRA RD, FURNISSDALE.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF MURRAY

Town or District.	Number of Lot or Location.	Field Book.	Scale.	Certificate in which Land is Vested.	Area
COCKBURN SOUND	LOTS 130 & 131 of LOC 16		1:2500	Vol. 1508 1508 Fol. 760 761	



DIA 71194

Lot numbered 135
amended to 137
to comply with the Regulations.

COMPILED FROM DIA. 54090

IN ORDER FOR DEALINGS
Two Owners
12.11.87

G.I. COLE & ASSOCIATES
Lic. Land Surveyors
Reg. Mining Surveyors
Unit 3, 47-49 Pinjarra Road,
Mandurah, W.A. 6210.

CERTIFICATE

I hereby certify that this survey was performed by me personally (or under my own personal supervision, inspection and field check) in strict accordance with the Licensed Surveyors (Guidance of Surveyors) Regulations, 1961.

Date 12·11·1986 COMPILED
Licensed Surveyor

Approved by State Planning Commission

STATE PLANNING COMMISSION
1 NOV 1988
FILE 69110

Date 25 Nov 1886

For Chairman

Approved APPROVED
Inspector of Plans and Surveys

Examined D.W. Haddow 12 80 Date 9-1-1989

On
Plan
Diagram 54090
Index Plan MURRAY 2000 09:38

Registered
OFFICE OF TITLES
FEE PAID

Diagram No. 71194

CP 22105/4/86-1000 Dkt. Dia. 18745

Police : Mandurah 9 Environs 9.38 WAD 18

REVISED

APPENDIX C TRAFFIC IMPACT ASSESSMENT

Porter
Consulting Engineers

TRAFFIC IMPACT ASSESSMENT

LOT 137, PINJARRA ROAD, FURNISSDALE

Porter

REPORT PREPARED FOR

Yolk Property

Prepared by	**Porter Consulting Engineers**
Postal address	PO Box 1036 Canning Bridge WA 6153
Phone	(08) 9315 9955
Email	office@portereng.com.au

Job number	21-06-080
Date	25 May 2022
Our reference	R77.21D
Checked	

HISTORY AND STATUS OF THE DOCUMENT

Revision	Date issued	Author	Issued to	Revision type
Rev A	30/11/2021	J Hopfmueller	Yolk Property Group	1st Issue
Rev B	2/12/2021	J Hopfmueller	Yolk Property Group	Figures Added
Rev C	8/12/2021	J Hopfmueller	Yolk Property Group	Figures Updated
Rev D	25/5/2022	JH/EW	Yolk Property Group	Pinjarra Rd Left-in only

CONTENTS

1.0 INTRODUCTION

1.1 Background

Porter Consulting Engineers has been commissioned to prepare a Traffic Impact Assessment (TIA) to inform the Development Application for a Service Station to be located within Lot 137 (No. 630) Pinjarra Road, Furnissdale within the Shire of Murray.

The Site is located approximately 7km to the east of Mandurah and 13km northwest of Pinjarra. The location of the site is shown in a regional context in **Figure 1** and in a local context in **Figure 2**.

1.2 Scope of Assessment

The intent of this report is to provide the approving authority with sufficient transport information to confirm that the proponent has adequately considered the transport aspects of the development application.

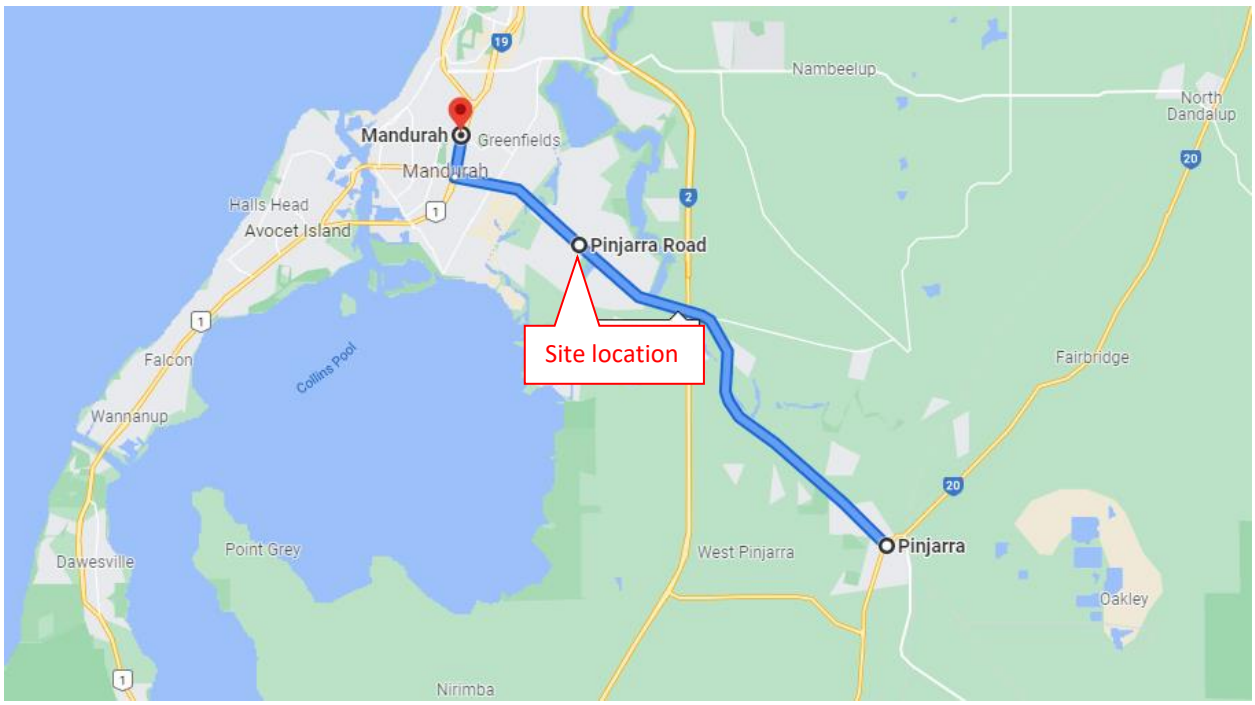


Figure 1: Site Location – Regional Context *(GoogleMaps)*

Figure 2: Site Location – Local Context

2.0 DEVELOPMENT PROPOSAL

2.1 Proposed Land Uses

The subject Site is currently vacant land that is proposed to be developed as a Service Station. The Service Station will comprise of the following:

- 8 refuelling positions for cars
- 4 refuelling positions for trucks (as-of-right vehicles i.e. rigid trucks/semi trailers)
- 300m^2 convenience store
- 22 car parking bays; and
- 1 service/loading bay.

The layout of the proposed development plan is included in **Appendix A.**

2.2 Context to the Surrounds

The Shire of Murray Town Planning Scheme designates service/commercial zoning for Lot 137. **Figure 3** outlines the zoning of the lot and the surrounds. The lot and its immediate surrounds form part of the *Barragup Furnissdale Activity Centre* (BFAC) as shown in **Figure 4.** The areas on the northwest, southwest and southeast of the intersection of Pinjarra Road and Furnissdale Road are zoned as service/commercial whilst the broader areas are zoned special rural with residential further to the south along Furnissdale Road.

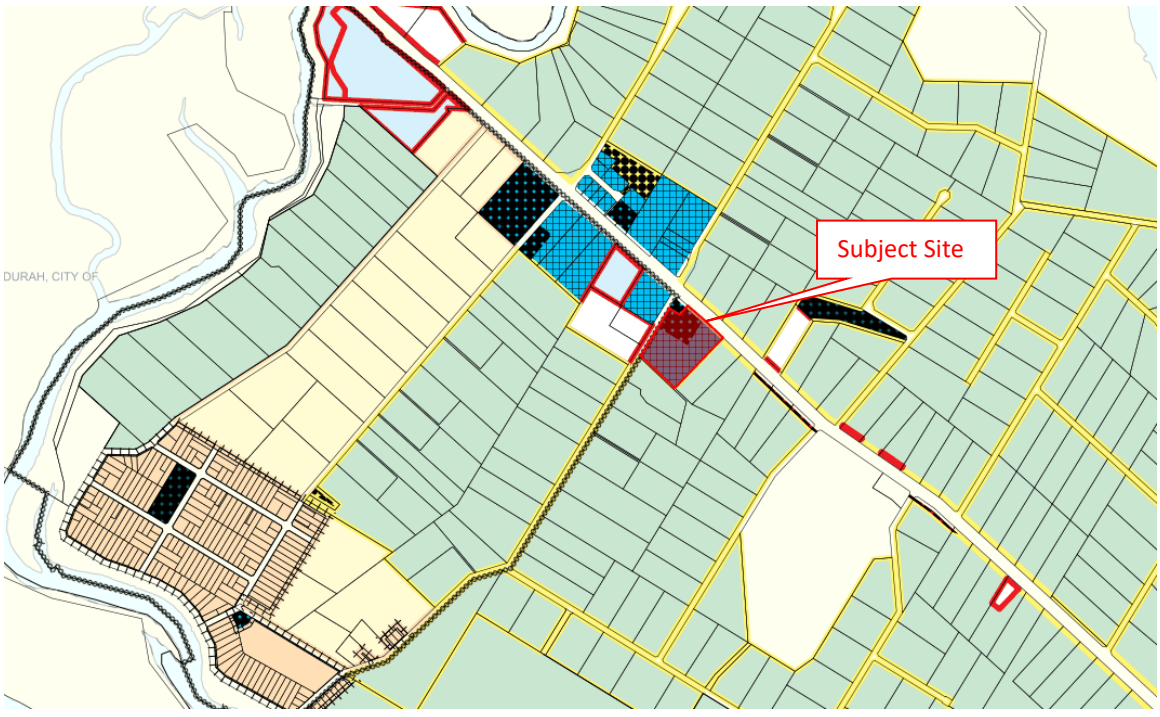


Figure 3: Lot 137 Pinjarra Road, Local Planning Scheme Zones – Shire of Murray

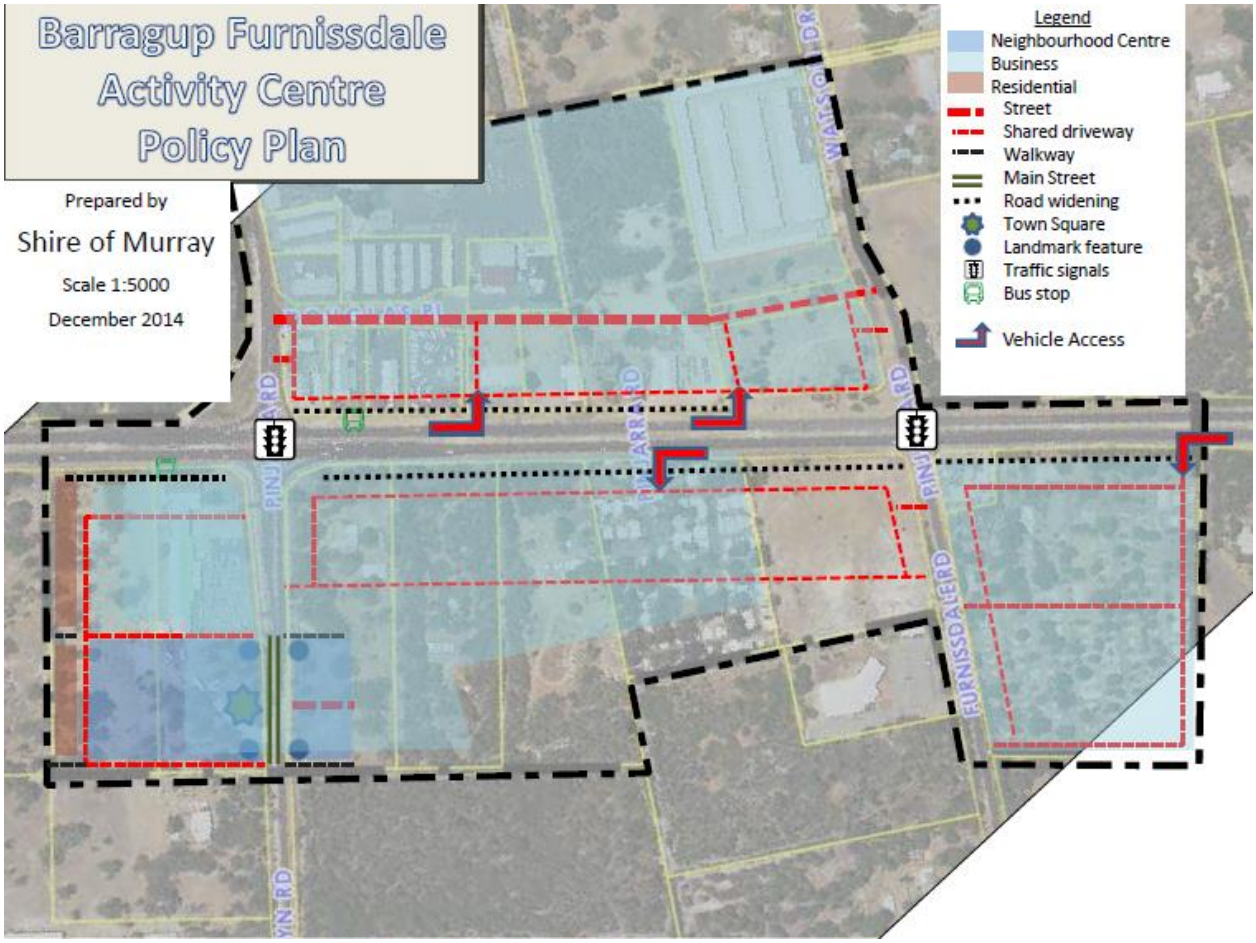


Figure 4: Barragup Furnissdale Road Activity Centre Policy Plan,– Shire of Murray

Town Planning Scheme 4 outlines that a service station/petrol filling station is an 'AA" land use in the commercial zone meaning that it can be considered by Council at its discretion if it is satisfied such use would not be contrary to the orderly and proper planning of the area. The BFAC outlines that the preferred uses for this area are highway focussed commercial and service activities (i.e. service stations and drive through take away food outlets).

Other service stations are located along Pinjarra Road including:

- Shell Coles Express - 11 Watson Drive, Barragup – on the southeast bound carriageway;
- Puma Barragup – 715 Pinjarra Road, Barragup - on the southeast bound carriageway;
- Ampol North Yunderup – 876 Pinjarra Road, North Yunderup – on the northwest bound carriageway.

3.0 EXISTING SITUATION

3.1 Road Hierarchy and Road Infrastructure

Pinjarra Road

Pinjarra Road is designated as a Primary Distributor road and is therefore managed by Main Roads WA. This main east-west route connects Mandurah to Pinjarra. Main Roads has designated "control of access" along Pinjarra Road, east of Mandurah Road (Mandurah) to George Street (Pinjarra). This classification as defined by Main Roads revokes the general right of adjoining land to have direct vehicle access. (Refer **Figure 5**). Within the Peel Region Scheme Pinjarra Road is defined as a Primary Regional Road i.e. 'red road'.

Pinjarra Road, adjacent to the Site is constructed to a four lane divided carriageway standard. A 10m road reserve widening is proposed adjacent to the Site to allow for future widening of Pinjarra Road and its upgrade to a six lane divided carriageway standard. There is an existing path located on the southern side of Pinjarra Road adjacent to the Site.

The posted speed limit is 80km/h currently decreasing to 60km/hr east of Lakes Road. **Figure 6** shows the changes in speed zones along this route in vicinity of the Site.

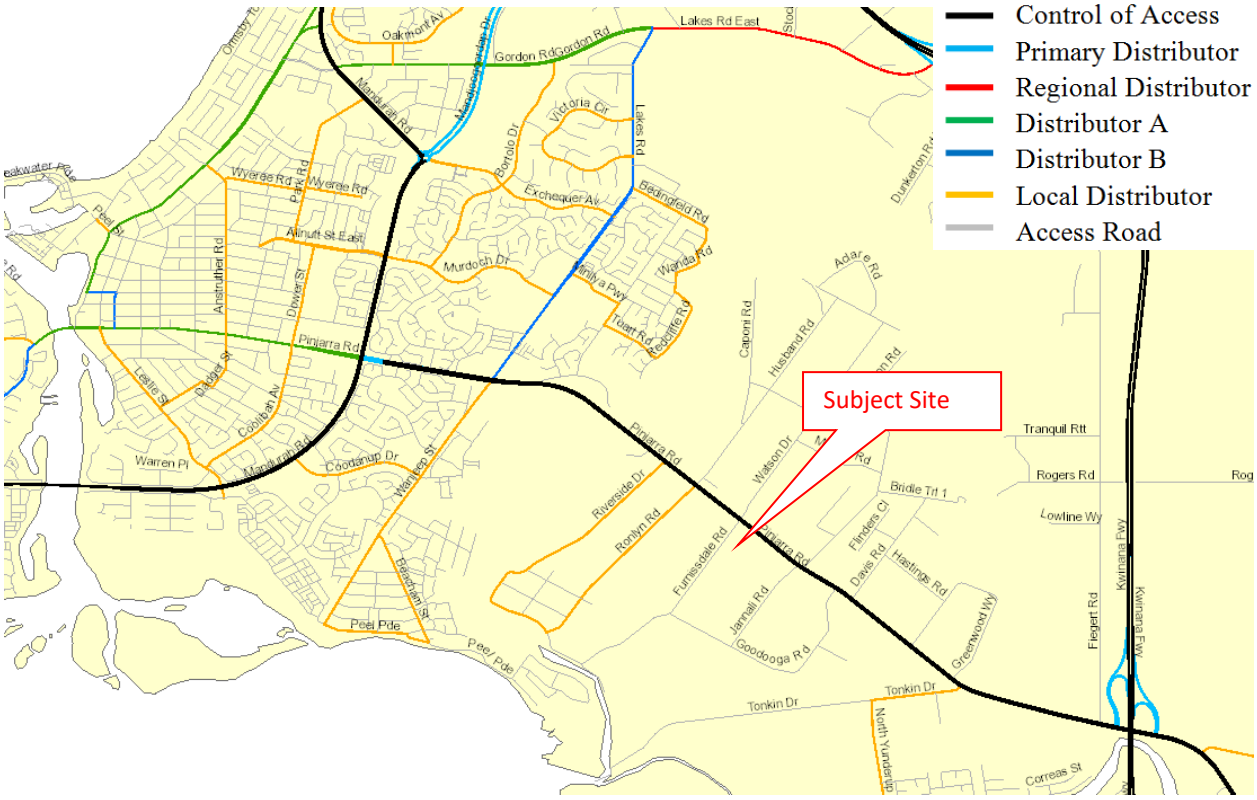


Figure 5: Road Hierarchy of Surrounding Road Network *(Main Roads website)*

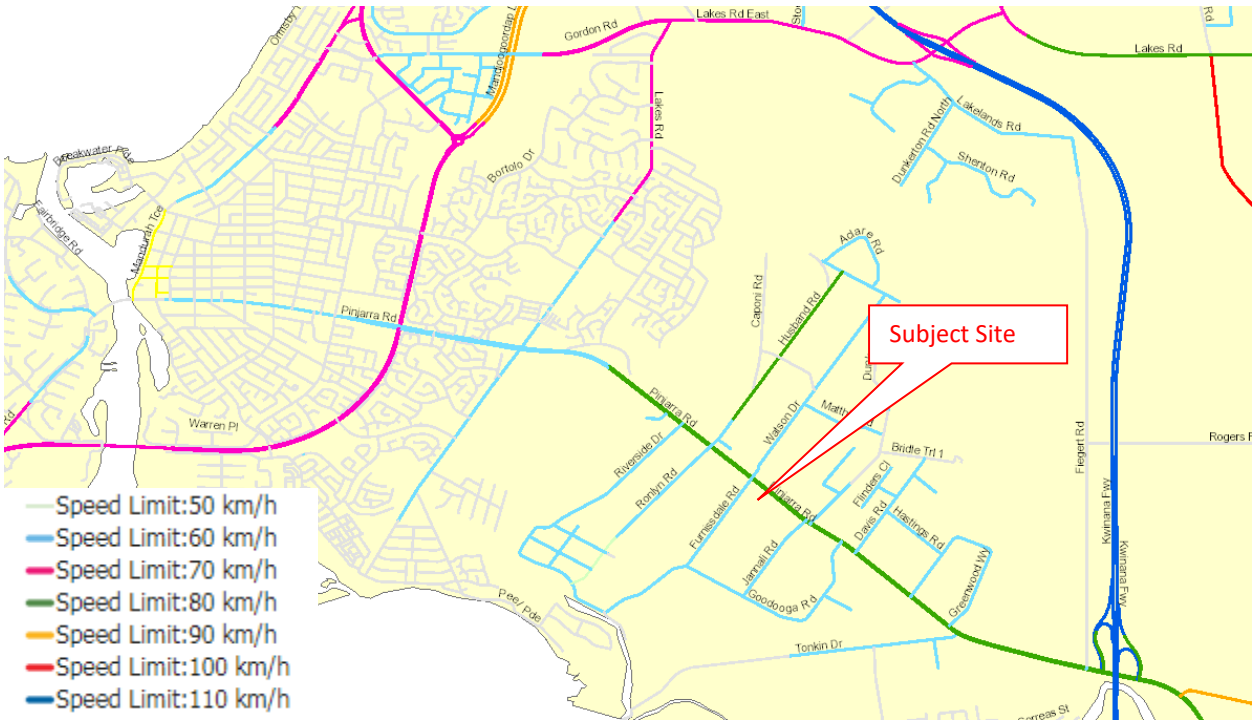


Figure 6: Speed Limits on Surrounding Road Network *(Main Roads website)*

Furnissdale Road

Furnissdale Road is designated as a Local Access road and hence by definition its function is to provide access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function.

Furnissdale Road is constructed to a two lane rural road standard. Localised widening occurs at its northern end at the intersection with Pinjarra Road (major road) creating a 4-way with Watson Drive under Stop Sign control. There are no pedestrian or cycle path facilities located along Furnissdale Road.

The BFAC document states that Furnissdale Road is to be ultimately widened and upgraded to a 26m wide two lane boulevard road with 5m verges and 5m traffic lanes incorporating a cycle lane and a 6m central median.

3.2 Existing Traffic Volumes

The most recently available traffic counts were sourced from the Main Roads WA traffic map website.

Table 1: Existing Traffic Data

Location	Year	AWT	85% Speed km/h	% HV	AM Peak Volume	PM Peak Volume
Pinjarra Road, east of Ronlyn Rd SLK 5.71	2020/21	8,452(E) 8,252 (W) 16,704	80.5 (E) 78.4 (W) 79.6	5.0%	663 (11.30am) (E) 746 (8.00am) (W) 1,275 (11.15am)	737 (3.15pm) (E) 765 (3.15pm) (W) 1,502 (3.15pm)
Pinjarra Road, east of Furnissdale SLK 6.5	2020/21	8,519(E) 8,323(W) 16,842	87.8 (E) 86.1 (W) 87.0	11.6%	666 (11.30am) (E) 752 (8.00am) (W) 1,273 (11.15am)	759 (3.15pm) (E) 800 (3.15pm) (W) 1,559 (3.15pm)

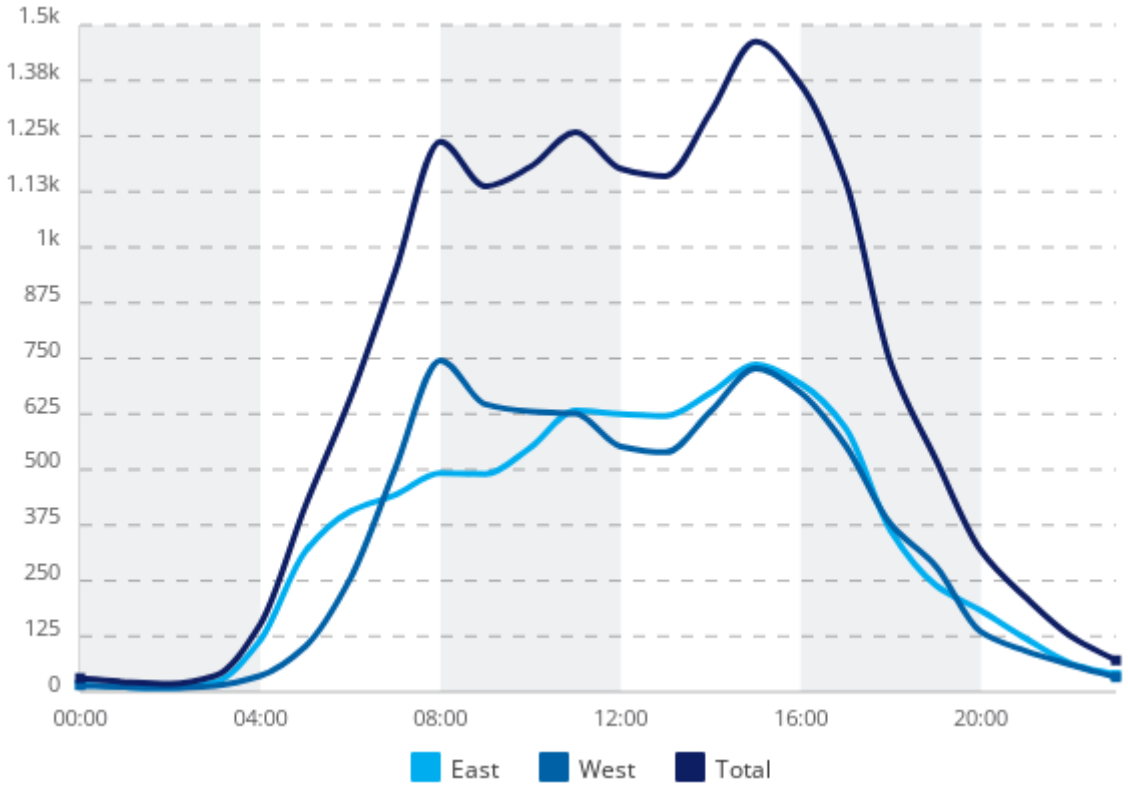


Figure 7: Hourly Flows (Monday to Friday) on Pinjarra Road, west of Ronlyn Road, SLK 5.71 *(Main Roads traffic map website)*

Intersection turn counts were conducted at Pinjarra Road/Furnissdale Road intersection on 17th September 2019. The results for the am and pm peak hours are included in **Appendix B.**

3.3 Crash History

A review of the available most recent crash history for Pinjarra Road from Riverside Drive to Jannali Road has been conducted for the five year period to the end of December 2020 from the Main Roads Western Australia Integrated Road Information System (IRIS) crash database.

Figure 8 shows the location and severity of crashes that have occurred over this period and are outlined in **Table 2**:

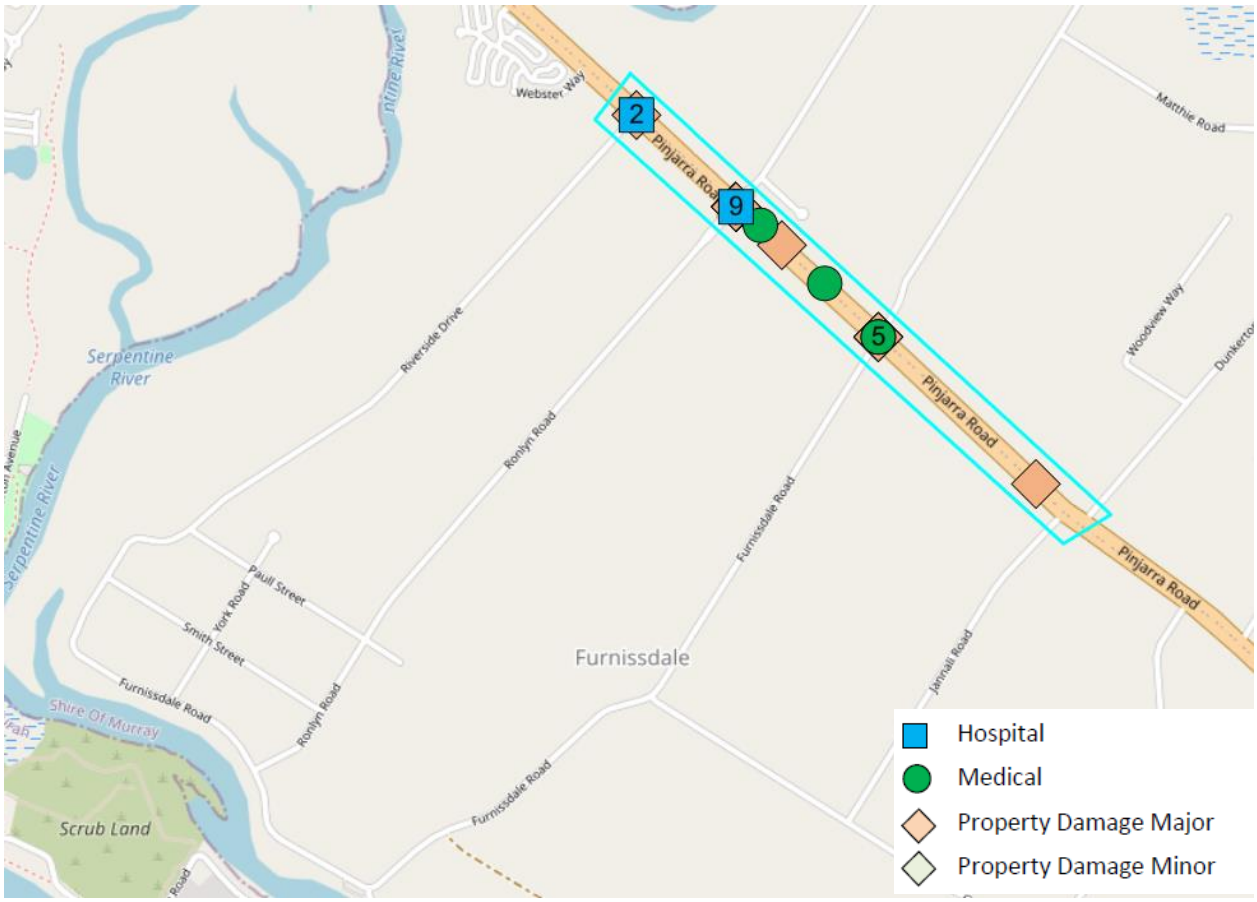


Figure 8: Five year Crash History along Pinjarra Road with Location and Severity

Table 2: Summary of Crash History along Pinjarra Road

	Pinjarra Rd/ Riverside Dr	Pinjarra Rd/ Ronlyn Rd	Pinjarra Rd/ Furnissdale Rd	Midblock
Total	**2**	**9**	**5**	**4**
Severity				
Hospital	1	1	-	-
Medical	-	2	2	2
Property Damage Major	1	3	2	2
Property Damage Minor	-	3	1	-
Crash Nature				
Rear End	2	6	-	4
Sideswipe	-	-	-	-
Right Angle	-	3	3	-
Right Turn Thru	-	-	-	-
Hit Object	-	-	-	-
Non Collision	-	-	2	-
Other/Unknown	-	-	-	-
Road Condition				
Dark	-	1	-	-
Wet	-	3	-	-

3.4 RAV Network

Main Roads Western Australia Restricted Access Heavy Vehicle routes mapping website indicates the following heavy vehicle combinations are permitted on Pinjarra Road.

- N4.3 – Tandem Drive RAV4 – Concessional Level 3 ≤ 27.5m
- TD3.1 – Tri Drive Category 3 – Concessional Level 1 ≤ 27.5m

The breakdown of light and heavy vehicles according to Austroads classifications on Pinjarra Road east of Furnissdale Road is outlined in **Table 3**.

Table 3: Austroads Vehicle Classification Pinjarra Road, east of Furnissdale Road

Classification	Description	Eastbound	Westbound	Total
Class 1	Standard Vehicle	84.4	88.1	86.2
Class 2	Vehicle towing trailer	2.0	2.2	2.1
Class 3-5	Rigid Trucks	12.5	8.8	10.7
Class 6-9	Articulated Vehicles up to 19m	1.1	0.8	0.9
Class 10	B-Double	<0.1 (1 vehicle)	<0.1 (2 vehicles)	<0.1 (2 vehicles)
Class 11	Double Road Train	<0.1 (2 vehicles)	<0.1 (2 vehicles)	<0.1 (2 vehicles)
Class 12	Triple Road Train	0	0	0

4.0 VEHICLE ACCESS, VEHICLE TYPES AND PARKING

4.1 Vehicle Access Location

The proposed Site forms part of the *Barragup Furnissdale Activity Centre* (BFAC) located on the southeast corner of the intersection of Pinjarra Road and Furnissdale Road (i.e. Lot 137). In order to develop the Site future internal access roads that are part of the BFAC are proposed to be used. These include:

- a north-south internal road from Pinjarra Road and
- a east-west internal road from Furnissdale Road (also referred to as the Furnissdale Road eastern connection).

The BFAC proposes a left turn ingress into the southeast area from Pinjarra Road. It is proposed to move this left turn ingress further to the west such that the internal access road provides better access to various properties within the future subdivision of Lot 137 i.e. direct access to lots created each side of the road.

The centreline of the proposed internal road of the BFAC is located approximately 155m from the centreline of the intersection of Pinjarra Road, Furnissdale Road and Watson Road. This distance will allow for the provision of a 125m long deceleration lane (including tapers) at the future traffic signals. This length is in accordance with "*Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections"* for a design speed of 90km/h i.e. 10km/hr above the posted speed limit of 80km/h.

The proposed left turn into the north-south internal road from Pinjarra Road will also require a left turn deceleration lane. A length of 120m is required based on an exit speed of 20km/hr for a design speed of 90km/h. This deceleration lane length will be provided in part along Lot 137 and the adjacent lot i.e. lot 132. Moving the internal road to the west as proposed ensures that one crossover can be maintained to Lot 132 clear of the deceleration lane.

Access to the Site is then proposed from this north-south internal road. Three crossovers are proposed to service the Site via this internal road. A separate entry only and exit only are proposed to service the car canopy whilst the third crossover on this road is the entry only for the truck canopy. Separating the crossovers for the car and truck canopies provides improved safety by separating light and heavy vehicles. The exit from the truck canopy is proposed via the internal west- east road connection to Furnissdale Road.

The Furnissdale Road eastern connection (to Lot 137) has been positioned approximately 112m (centreline of connection to Pinjarra Rd road reserve boundary) from the existing Pinjarra Road through lanes and approximates the location on the BFAC Policy Plan. The Policy Plan also indicates that two internal road connections on the western side of Furnissdale Road between this eastern connection and Pinjarra Road. The southern western

connection has been positioned 40m from the eastern connection. *"Liveable Neighbourhoods, WAPC, January 2009"* outlines an intersection spacing of 40m on a neighbourhood connector road and 20m on a local access road. Whilst Furnissdale Road is currently classified as a local access road, future development as outlined in the BFAC would suggest that its northern section would carry traffic volumes in line with a neighbourhood connector.

The northernmost western connection to Furnissdale Road is anticipated to be positioned too close to the traffic signals hence for the purpose of the assessment has been assumed not to be included.

The southernmost western connection to Furnissdale Road has been shown with full movements. SIDRA analysis in the following sections confirms that the proposed queuing at the future signals along Furnissdale Road - south approach is clear of this connection thus accommodating right turn access. Additionally, the SIDRA network model does not indicate that a right turn queue on Furnissdale Road into the western internal road will occur. In any instance the concept does allow for the storage of 1-2 right turning vehicles.

A concept sketch of the new road network configuration has been shown in **Figure 9**. Future planning and development of the BFAC will see the refinement of this concept to suit.

Figure 9: Indicative Future Layout along Furnissdale Road and Pinjarra Road

Under the existing situation Furnissdale Road is only constructed to a rural standard with approximately a 6m seal pavement. Localised widening on Furnissdale Road to allow for a single unit truck turning right onto Furnissdale Road from the new eastern connection (lane correct) is proposed. The larger design vehicle of a semi-trailer is adopted as the checking vehicle and can also turn (not lane correct) using the widened pavement. A concept sketch is shown in **Figure 10**.

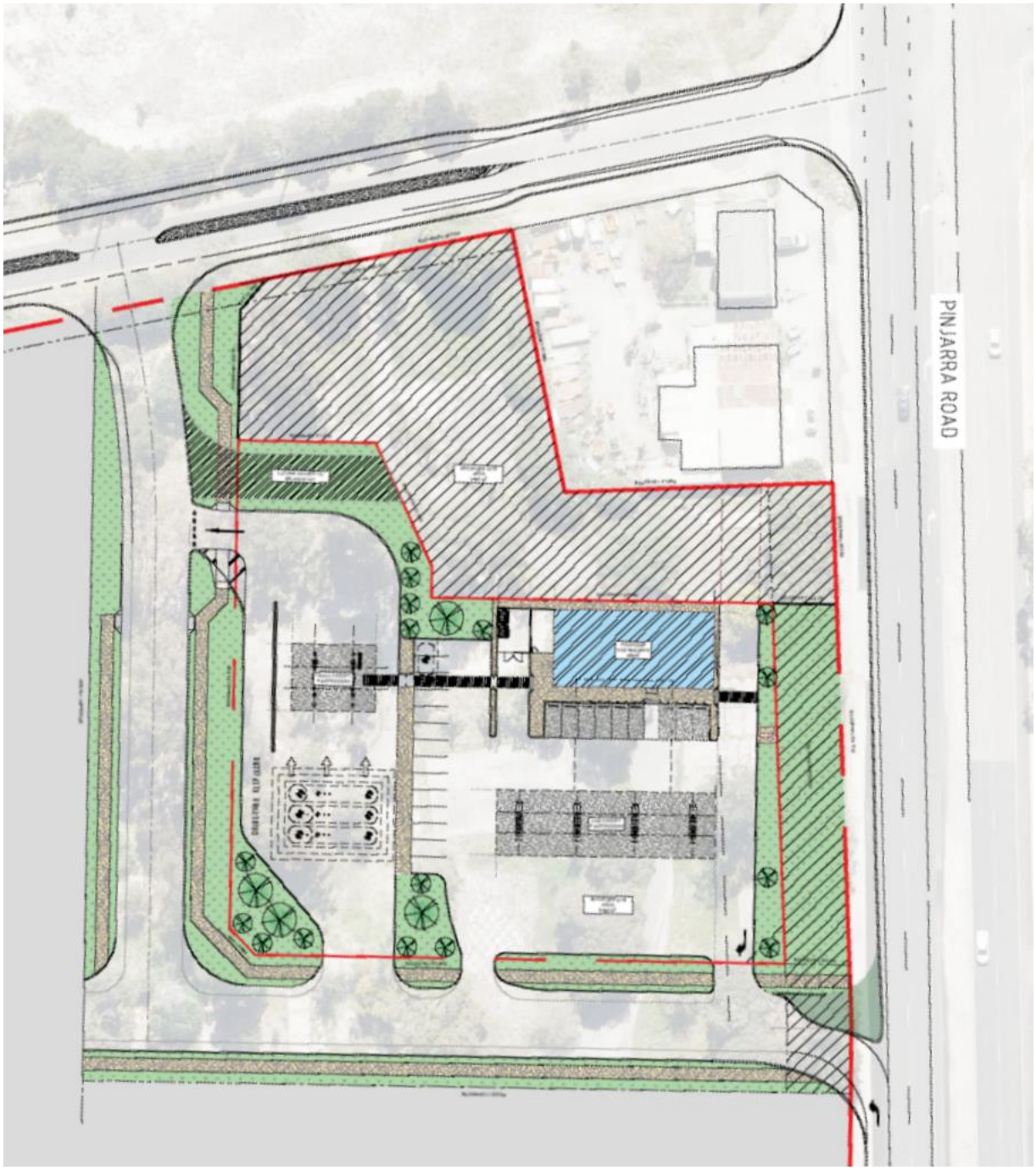


Figure 10: Indicative Existing Layout along Furnissdale Road and Pinjarra Road

Westbound vehicles on Pinjarra Road are likely to use the Pinjarra Road left turn ingress to the west of Furnissdale Road regardless of movements permitted at the western connection to Furnissdale Road. Eastbound traffic can readily access the future commercial area via a right turn at the previous signals at Ronlyn Road and turn left into the internal road running the length of the BFAC strip under the ultimate scenario. Similarly, vehicles wanting to exit right to Furnissdale could also use the internal road at the Ronlyn Road end to access the residential areas to the south. **Figure 11** shows diagrammatically how left turn movements to the BFAC on both Ronlyn Road and Furnissdale Road could be accommodated under an ultimate scenario if preferred.

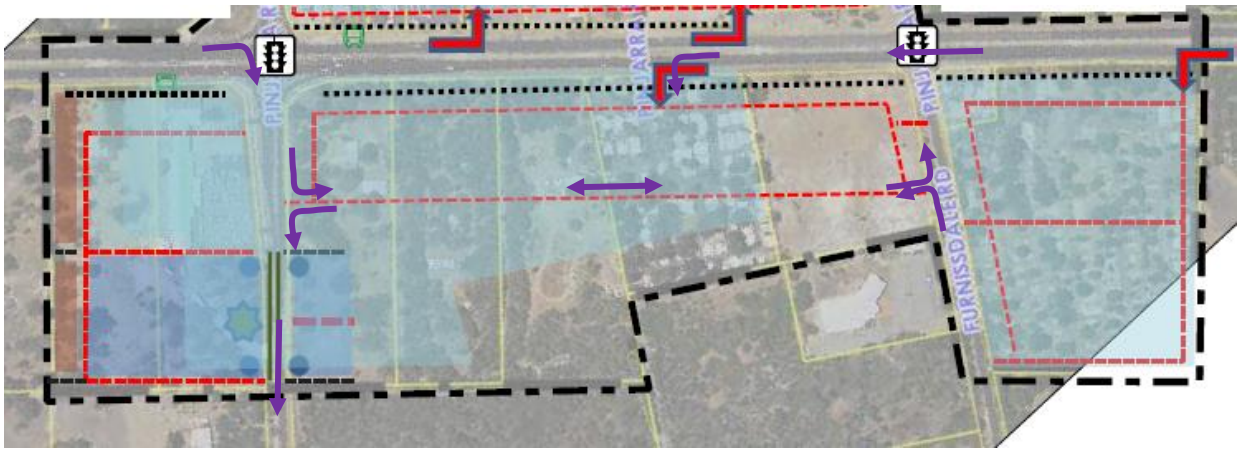


Figure 11: Potential Left Turn Access Arrangement on Side Roads for BFAC

The BFAC only shows a left in from Pinjarra Road. The BFAC outlines that the preferred uses for this area are highway focussed commercial and service activities (i.e. service stations and drive through take away food outlets.) These types of facilities typically require efficient access and egress from the primary road.

Photo 1: East along Pinjarra Road near proposed internal road connection *(Google streetview)*

4.2 Vehicle Types

The Service Station is proposed to include separate car and truck fueling canopies. Separating light and heavy vehicles provides improved safety to the Site's users.
Whilst Pinjarra Road is a designated RAV 4 network it is not proposed that the service station facilitate refuelling of these heavy vehicles but be limited to "as of right" vehicles i.e. up to semi-trailers. This reduces the requirement for Furnissdale Road and the internal roads to be designed and upgraded to a RAV category that can result in large open area pavements and/or intersections.

Swept paths for the various vehicles to/from the Site and on the adjoining road network are shown in **Figure 12**. It is envisaged that the majority of trucks will enter the Site via Pinjarra Road however these "as of right" vehicles could be accommodated via Furnissdale Road also i.e. eastbound traffic along Pinjarra Road. Given the location of the service station adjacent to the eastbound carriageway of Pinjarra Road to the west of Furnissdale Road it is not anticipated that a significant proportion of trucks or other vehicles will approach from this direction.

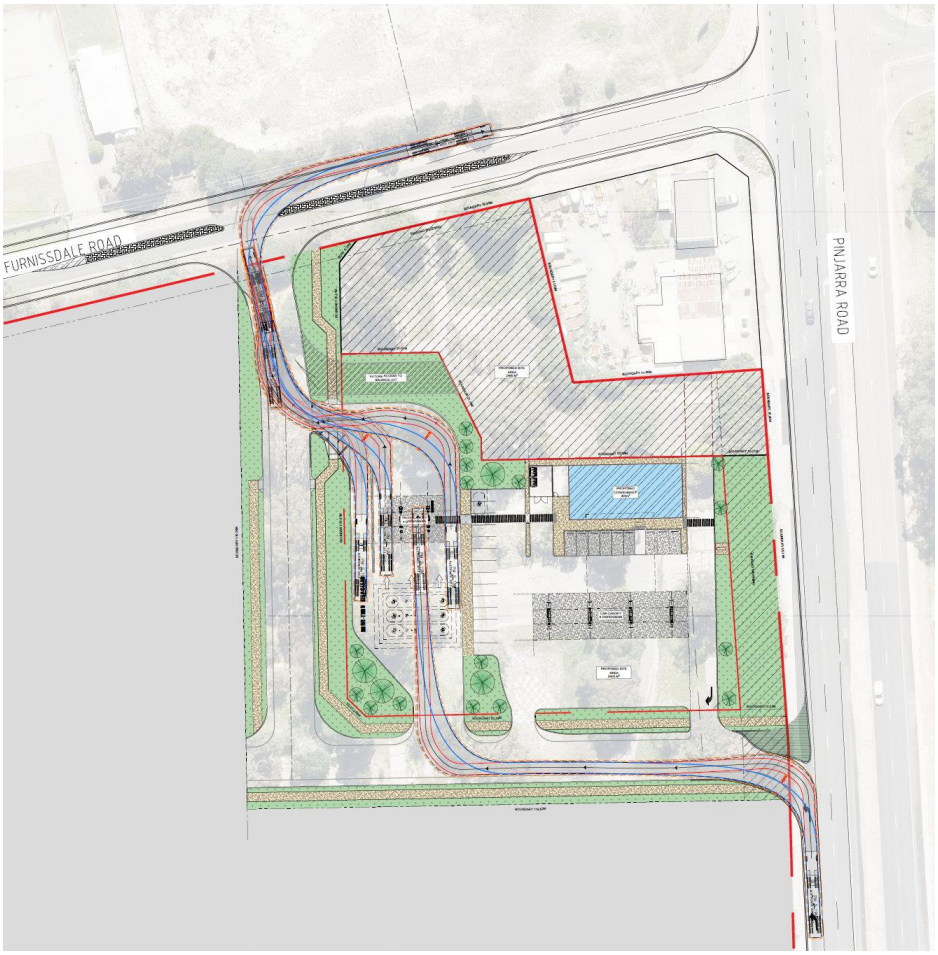


Figure 12: Swept Path for Semi-Trailer – Existing

Internal swept paths for a single unit truck - 12.5m and a service vehicle - 8.8m within the Site are shown in **Figures 14 and 15**. It is envisaged that trucks should be encouraged to use the Furnissdale Road and Pinjarra Road intersection similar to the truck canopy layout that directs these larger vehicles to exit along Furnissdale Road onto Pinjarra Road. The left-in arrangement on Pinjarra Road will be subject to detailed design based on the design vehicle to be confirmed by Main Roads WA. The layouts within this report are conceptual only and will be subject to detailed design.

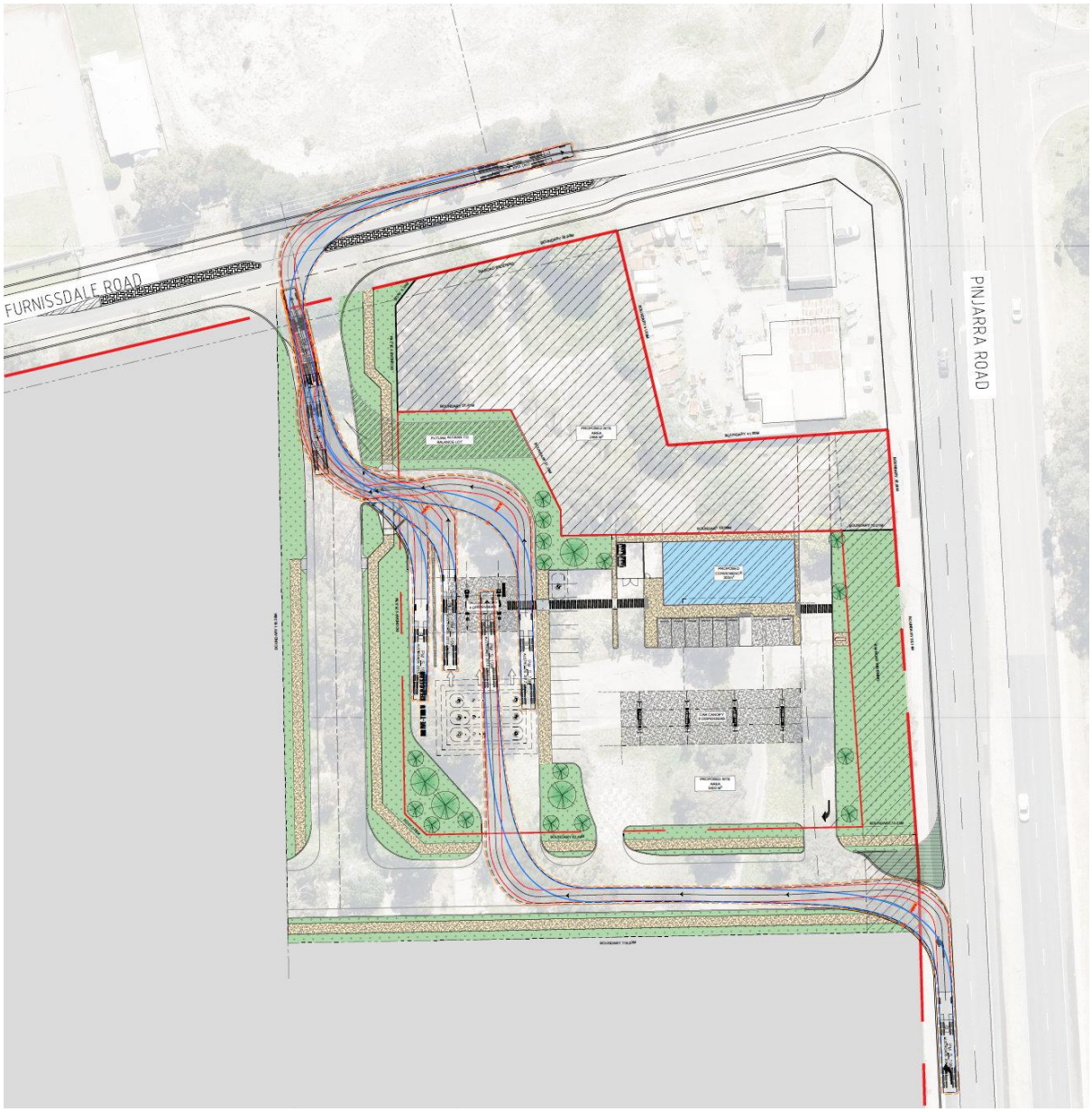


Figure 14: Swept Path for Single Unit Truck 12.5m

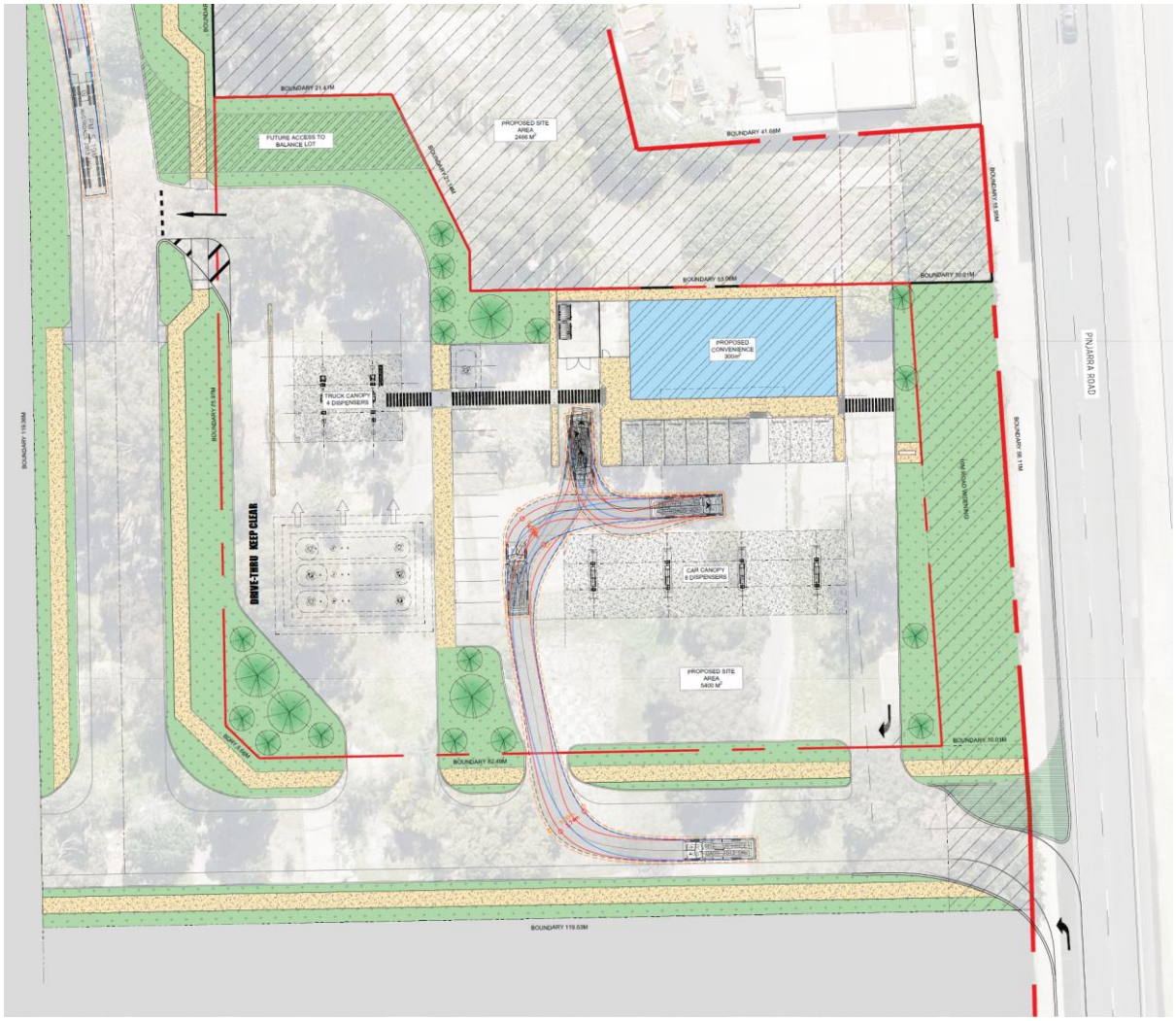


Figure 15: Swept Path for Service Vehicle – 8.8m

4.3 Parking

A total of 22 car parking bays are proposed to be provided on site including one universal access bay.

Parking requirements for a convenience store are 1 bay per 20m^2 that equates to 15 bays. The number of bays proposed exceed these requirements.

5.0 TRAFFIC ASSESSMENT

In order to assess the potential traffic impacts associated with the proposed development, a traffic generation exercise was undertaken. This establishes the levels of traffic that could potentially be generated from the proposed development and enables the assessment of anticipated effects that the additional traffic could have on the adjacent road network.

5.1 Assessment Years

The assessment years that have been adopted for this analysis are immediately post development at opening in 2022 and near 20 years post development scenario in 2041. The later scenario would reflect the full development of the surrounding region and adjoining commercial areas.

The proposed service station development is expected to generate the highest traffic volumes during the weekday pm peak hours of the adjacent road network.

5.2 Trip Generation

Service Station Development

The traffic volumes likely to be generated by the proposed development (service station with a convenience store) have been estimated based on trip rates sourced from *"ITE Trip Generation Rates, 9th Edition*" and are as follows:

Daily	162.78 trips per refuelling position
AM Peak	10.16 trips per refuelling position
PM Peak	13.51 trips per refuelling position

The proposed development incorporates a car canopy with 8 refuelling positions and a truck canopy with 4 refuelling positions. The standard trip generation rates are those typical for a car refuelling position which is likely to be higher than those for a dedicated truck refuelling position simply due to the proportion of heavy vehicles within the general traffic stream. Based on the existing traffic flows approximately 13% of traffic passing the Site are trucks. To ensure a robust assessment 25% of the trip rate for cars has been adopted for the truck canopy.

Due to the nature of a service station a significant proportion of trade would be considered passing trade and thus already travelling on the adjacent road network i.e. Pinjarra Road. Given the location it is anticipated that the majority of trips (say 80%) will be passing trade and already on the road network with the remaining being additional new trips to the road network.

The total trips estimated to be generated by the service station is 1,465 daily with approximately 91 and 122 during the am and pm peak hours. Of these only 645 daily trips are considered to be additional trips on the road network corresponding to 40 and 54 am and pm peak hour trips.

Table 4: Trip Generation for Proposed Service Station Development

	Car Canopy	Truck Canopy	Total	Passing Trips	Additional Trips
Daily Trips	1,302	163	1,465	1172	293
Am Peak Hour	81	10	91	73	18
Pm Peak Hour	108	14	122	97	24

Barragup Furnissdale Activity Centre

Main Roads has previously raised the need for a wider assessment of the traffic impacts at the intersection of Pinjarra Road and Furnissdale Road associated with the future development of the surrounding region in particular the BFAC.

The intersection of Pinjarra Road and Furnissdale Road will be impacted by the BFAC and specifically the areas proposed to be developed on the northwest, southwest and southeast corners of the intersection as shown in **Figure 14**. The proposed service station is within the southeast corner of the intersection. Additionally, future residential lots are proposed at the southern end of Furnissdale Road that will also use the Pinjarra Road intersection.

A trip generation review was undertaken for these future developable areas to be distributed onto the intersection of Pinjarra Road and Furnissdale Road. The BFAC outlines that the preferred uses for this area are those that provide for the retailing of bulky goods (i.e. showrooms, retail warehouses and open air displays) as well as highway focussed commercial and service activities (i.e. service stations and drive through take away food outlets.) On this basis a land use profile has been established for the purpose of the trip generation and future analysis. There are two existing facilities on the northwest corner that are estimated to remain unchanged; those being the storage facility and the service station.

Bulky goods trip generation rates were sourced from *"Trip Generation and Parking Generation Surveys, Bulky Goods/Hardware Stores, Analysis Report, Hyder Consulting for the NSW Roads and Traffic Authority, May 2009"*. The peak hour trip rate for bulky goods is typically 2.7 trips per 100m^2 GFA with a reduced rate of 1.3 trips per 100m^2 GFA during the pm peak hour of the adjacent road network. This report states the maximum observed pm peak rate of the sites surveyed for the adjacent road network was 0.81-2.25 trips per 100m^2 GFA. To adopt a robust assessment a rate of 2 trips per 100m2 GFA during the road network peak was used. This aligns with the typical commercial area trip rate outlined by *WAPC Transport Impact Assessment Guidelines – Volumes 5* that is also 2 trips per 100m^2 GFA.

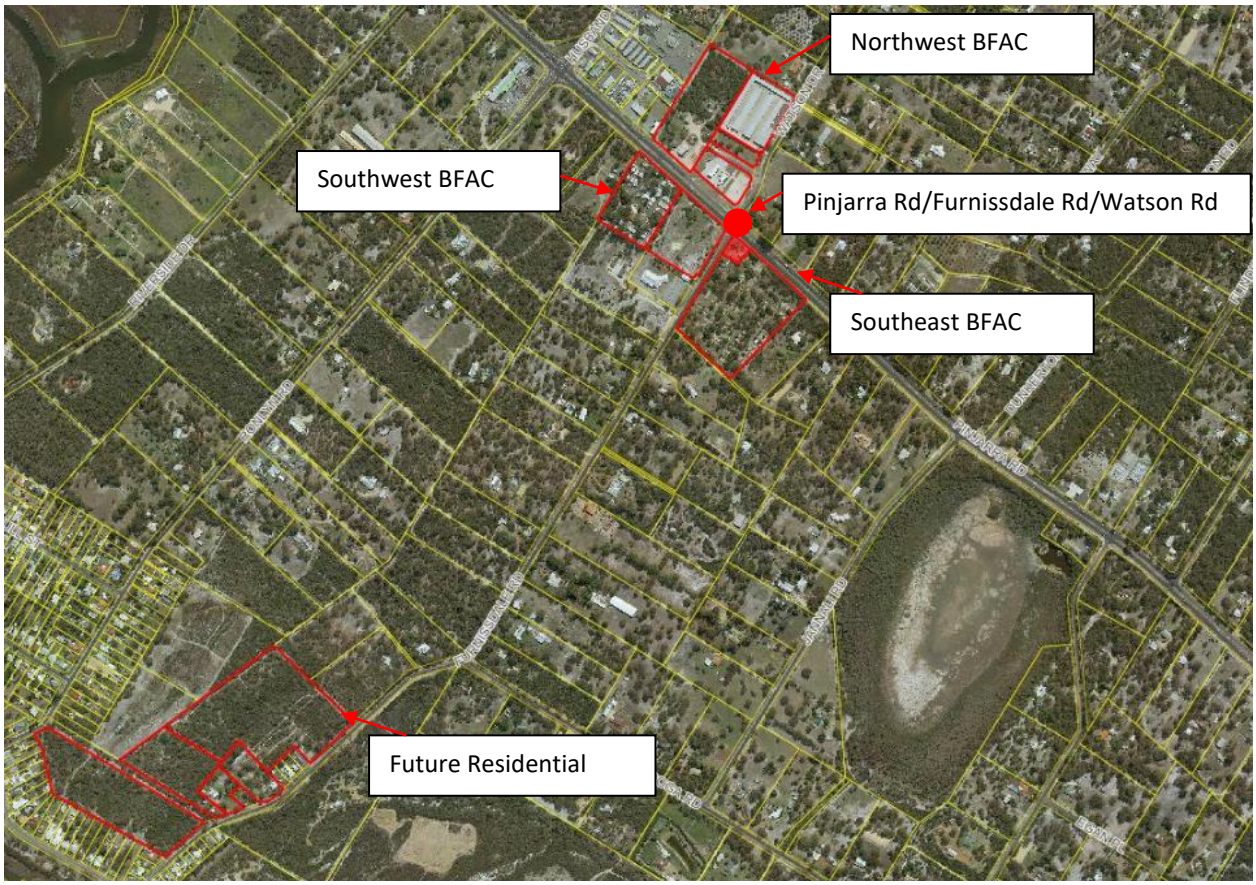


Figure 14: Future Developable Areas near Pinjarra Road and Furnissdale Road
(Shire of Murry Intramaps)

Typically bulky goods retail outlets are not open during the am peak hour of this road network hence the pm peak on the road network reflects the highest trip generation for assessment of the road network. The approximate GFA for the bulky goods has been based on reducing the site area to allow for future roads/servicing and then applying a plot ratio of 40%.

Fast food outlet trip generation can range based on the facility. "*RTA, Guide to Traffic Generating Developments, October 2002*" provides a range of 100 to 180 trips per hour and that has been used in this assessment. An allowance for up to 3 fast food outlets surrounding this intersection has been made for the purpose of trip generation.

It has been estimated that the future residential expansion area to the south along Furnissdale Road may comprise of up to 310 dwellings. This assumes a developable area of 75% of the site area and a residential density of R20. It is noted that the surrounding lots are R10 so this should also provide a robust assessment.

Table 5: Trip Generation for BFAC near Furnissdale Road

Land Uses		Lot Area	GFA	PM Peak	
Location	**Description**			**Rate**	**Trips**
Northwest Corner	Bulky Goods Fast Foods x 2 Service Station Storage Facility	55,692 m^2	11,800m^2 2x350m^2 Existing Existing	2/100m^2GFA 100-180trips Existing Existing	236 280 Existing Existing
Southwest Corner	Bulky Goods	38,313m^2	11,200m^2	2/100m^2GFA	224
Southeast Corner	Service Station Fast Food Bulky Goods	44,854 m^2	300m^2 350m^2 13,650m^2	As proposed 100-180trips 2/100m^2GFA	As proposed 150 273
Furnissdale Road residential growth	R20 assumed 75% developable	203,558 m^2	310 dwellings	0.8 per dwelling	198
					1,361

The total additional trips estimated to be generated by the BFAC immediately surrounding and impacting the intersection of Furnissdale Road and Pinjarra Road during the pm peak of the adjacent road network is 1,163 with approximately 198 residential trips to be generated from the southern area along Furnissdale Road.

5.3 Trip Distribution and Assignment

Service Station Development

The majority of traffic frequenting the Site is likely to come from Pinjarra Road – westbound as passing trade with some lesser traffic from Furnissdale Road and Pinjarra Road - eastbound. There is an existing service station to the west of Furnissdale Road adjacent to the eastbound carriageway hence minimal trade is expected from this direction. Additional trips are likely to come from the surrounding residential areas, primarily the residential area of Furnissdale. The trip distribution patterns have consequently been derived on this basis.

Figure 15 shows the indicative trip distribution expected on the adjacent road network and in particular the various turning movements at the intersection of Pinjarra Road and Furnissdale Road for the am and pm peak hours that allows for redistribution of some passing trips as vehicles enter and exit the Site.

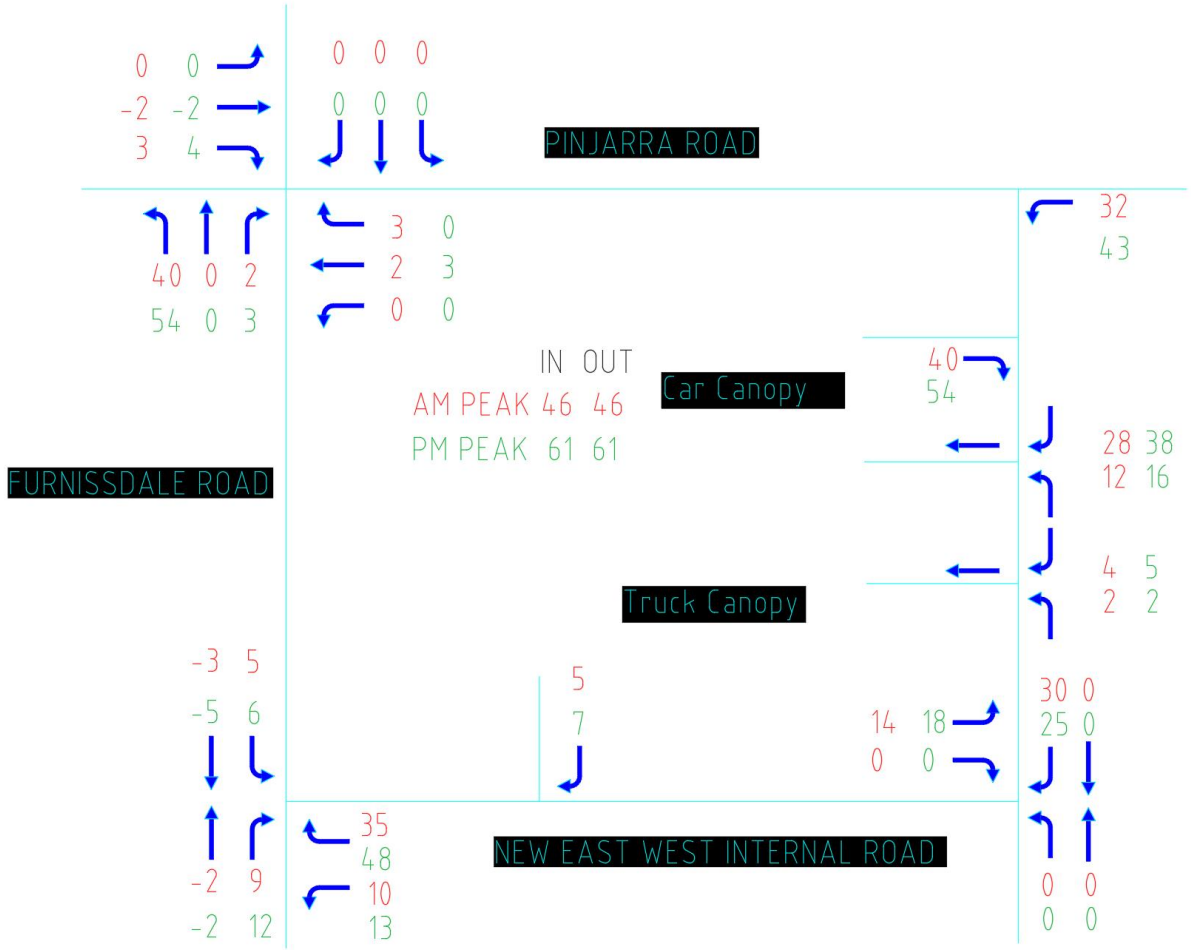


Figure 15: Service Station Trip Distribution – AM and PM Peak

Barragup Furnissdale Activity Centre

Whilst the BFAC will service the expanding residential areas of Furnissdale, given the nature of the majority of the anticipated land uses (i.e. bulky goods), it will also service the broader residential areas to the north and south along Pinjarra Road.

Figure 16 shows the indicative trip distribution expected on the adjacent road network and in particular the various turning movements at the intersection of Pinjarra Road and Furnissdale Road for the pm peak hours of the road network.

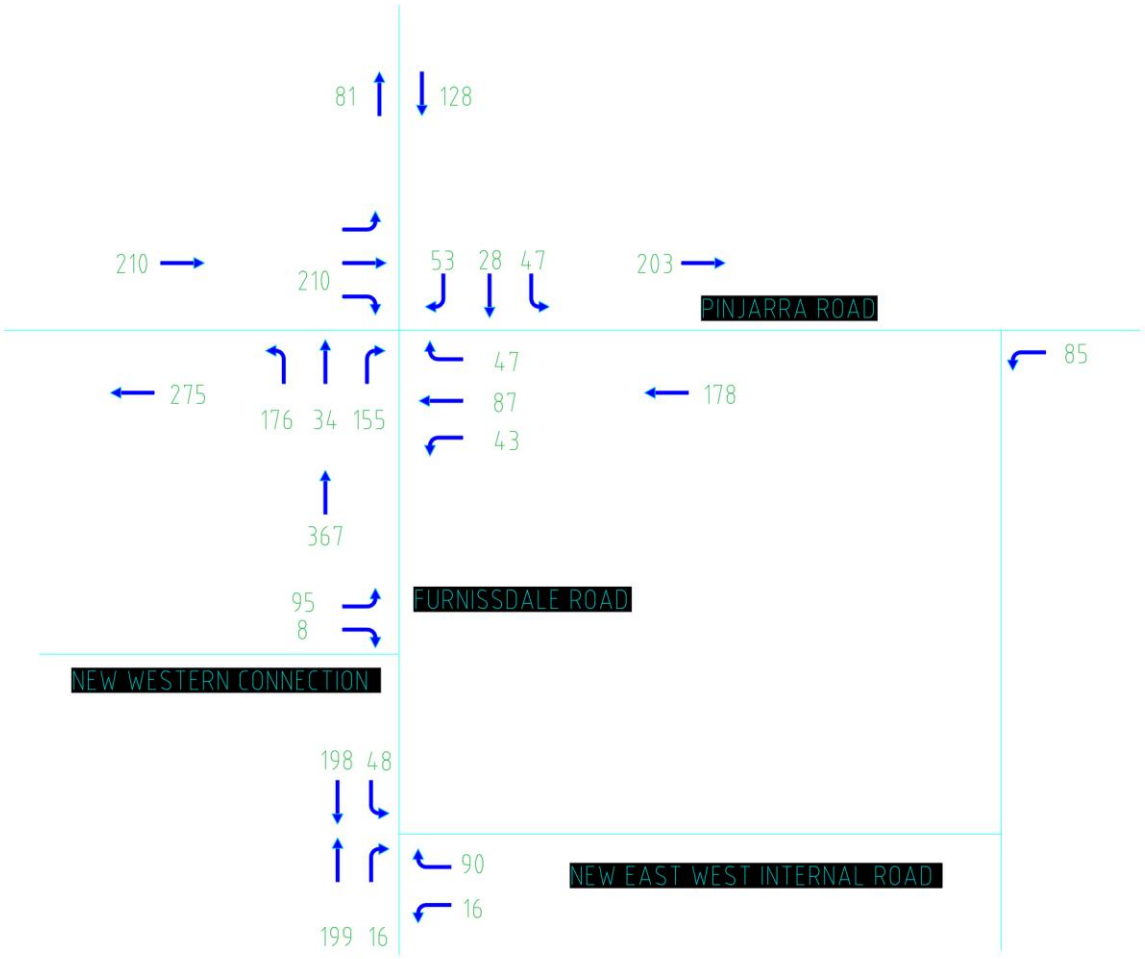


Figure 16: BFAC near Furnissdale Road Trip Distribution – PM Peak

5.4 Design Traffic Flows

Calibrated ROM24 daily traffic volumes predicts that traffic volumes on Pinjarra Road will be in the order of 30,200 vehicles per day (east of Furnissdale Road) and 33,000 vehicles per day (west of Furnissdale Road) in 2041. This corresponds to a growth range of 3.0-3.2% per annum up to 2041. **Appendix C** contains a copy of the ROM24 outputs.

Existing intersection turn counting from September 2019 has been used for the intersection of Pinjarra Road and Furnissdale Road. The future intersection turning volumes at the intersection have been derived based on the trip distribution of the future BFAC plus the existing traffic. Through traffic volumes have been estimated using the calibrated Pinjarra Road traffic volumes for the respective design years analysed.

The indicative hourly flows on Furnissdale Road, immediately south of Pinjarra Road are in the order of 650 vehicles and based on that peak as representing 10% of daily flows approximately 6,500 vehicles daily. As expected, these volumes decrease south of the BFAC to approximately 2,400 daily vehicles which can be attributed to the existing and future

residential development to the south in Furnissdale. These volumes of traffic are in line with a local distributor road at its northern end and a local access road south of the BFAC areas.

5.5 Intersection Analysis

SIDRA (version 9) has been used to analyse the operating conditions of the intersection of Pinjarra Road and Furnissdale Road. The proposed development also sees the creation of future internal roads associated with the BFAC on the southeast corner of Pinjarra Road and Furnissdale Road. These proposed internal road connections to Pinjarra Road and Furnissdale Road have also been assessed under a network configuration to confirm their operating conditions with respect to each other.

At Opening - 2022

The intersection of Pinjarra Road and Furnissdale Road has been tested under the existing layout as a 4-way intersection under Stop control permitting staged right turns onto Pinjarra Road i.e. vehicles cross the westbound traffic lanes, then store within the median opening until there is a sufficient gap in the near eastbound traffic lane to enter. This layout was adopted for the opening year 2022 that includes the service station development traffic plus an annual growth rate of 3.2% per annum on Pinjarra Road.

The key operating performance indicators for the 4-way stop control intersection for 2022 with the development traffic are satisfactory with a degree of saturation 0.197, highest average delay of 16 seconds associated with crossing the westbound carriageway into the median and minimum queuing experienced - less than one vehicle. Detailed results of the SIDRA analysis are included in **Appendix D**.

Sensitivity testing indicates that the 4-way stop control will be adequate from a capacity perspective for several years with increased growth along Pinjarra Road. This assumes that the minor roads i.e. Furnissdale Road and Watson Road will have minimum increase in traffic.

Future Scenario – 2041

There is a 10m widening adjacent to the Site to accommodate the upgrade of Pinjarra Road to a 6 lane divided carriageway standard from 4 lanes. The timing for this upgrade is unknown. Ultimately the 4-way intersection of Pinjarra Road and Furnissdale Road will be upgraded to operate under traffic signal control at that future time.

The future development year assessed is 2041 which assumes that the BFAC and Furnissdale residential areas will be fully developed.

The proposed service station development proposes to use two new internal roads within the BFAC to facilitate access and egress to/from the Site. These include a left in and left out on to Pinjarra Road and a new full movement connection to Furnissdale Road. The BFAC also indicatively shows two internal road connections to the BFAC on the southwest corner of the intersection of Pinjarra Road and Furnissdale Road. This does result in closely spaced intersections in close proximity to the future traffic signals hence for the purpose of the analysis it has been assumed that the northern most connection to the west would be deleted i.e. one connection to the west from Furnissdale Road and one to the east from Furnissdale Road.

SIDRA network modelling has been used to model the proposed road links along Pinjarra Road and Furnissdale Road including the traffic signals to ensure their associated impacts on each other is included. Detailed results of the SIDRA analysis are included in **Appendix D**.

SIDRA analysis has been undertaken based on the existing standard of Pinjarra Road i.e. 4 lanes divided carriageway as well as the future 6 lanes divided carriageway standard allowed for with the proposed 10m widening easement.

6 lanes divided carriageway standard - 2041

With the future 6 lanes divided carriageway standard the SIDRA results indicate that the traffic signals will operate satisfactorily with the highest degree of saturation being 0.789 associated with the westbound through traffic on Pinjarra Road. The right turn movement from Pinjarra Road onto Furnissdale Road and the right turn from Watson Road onto Pinjarra Road both have a level of service (LoS) D with an average delay of approximately 40 seconds. The intersection operates at an overall LoS C. Main Roads WA typically require signalised intersections to be designed with an overall LoS C with no individual movement worse than a LoS D for the design year. The analysis meets those requirements.

The longest 95th queue length within the pm peak hour is for the Pinjarra Road westbound traffic estimated by SIDRA to be 120m which is acceptable.

The queue lengths on Furnissdale Road at Pinjarra Road have been estimated to be in the order of 25m. On this basis there is sufficient space to provide the appropriate turning lanes on this approach clear of future internal road connections to both the western and eastern areas of the BFAC. A concept sketch has been shown in **Figure 9**. The western and eastern connections have been separated (centreline to centreline) indicatively by 40m as recommended by *"Liveable Neighbourhoods, WAPC, January 2009"* on a neighbourhood connector road i.e. Furnissdale Road. The SIDRA network model does not indicate that a right turn queue on Furnissdale Road into the western internal road will occur. In any instance the concept does allow for the storage of 1-2 right turning vehicles.

4 lanes divided carriageway standard - 2041

With the existing 4 lanes divided carriageway standard the SIDRA results indicate that the traffic signals will be approaching capacity with the highest degree of saturation being 0.857 associated with the westbound through traffic on Pinjarra Road. The right turn movement from Pinjarra Road onto Furnissdale Road and Watson Road and the right turn from Watson Road onto Pinjarra Road all have a level of service (LoS) D with an average delay of between 43-55 seconds. The intersection operates at an overall LoS C. Main Roads WA typically require signalised intersections to be designed with an overall LoS C with no individual movement less than a LoS D for the design year. The analysis meets those requirements.

The longest 95th queue length within the pm peak hour is for Pinjarra Road westbound vehicles and is estimated by SIDRA to be 196m which is acceptable.

4 lanes divided carriageway standard - 2032

SIDRA analysis for Pinjarra Road with 4 lanes with up to 75% of the BFAC developed by 2032 has also been undertaken. This reflects the scenario of at opening plus 10 years which is typically required for traffic assessments.

The SIDRA results indicate that the traffic signals will be satisfactory with spare capacity. The highest degree of saturation being 0.755 associated with the westbound through traffic on Pinjarra Road. The right turns movement from Pinjarra Road onto Furnissdale Road and Watson Road and the right turn from Watson Road onto Pinjarra Road all have a level of service (LoS) D with an average delay of between 38-42 seconds. The intersection operates at an overall LoS C. The analysis results meets Main Roads requirements.

The longest 95th queue length within the pm peak hour is for Pinjarra Road westbound vehicles and is estimated by SIDRA to be 126m which is acceptable.

6.0 OTHER ISSUES

6.1 Pedestrian and Cyclist Facilities

There is an existing path adjacent to the Site on Pinjarra Road. The Site will have good access to this existing facility along Pinjarra Road but given the nature of the Site it is not envisaged that pedestrian and cyclist movement to/from the Site will be high. New paths on the surrounding road network will cater for access to/from the Site from future development of the area.

Accordingly, there are opportunities for both staff and visitors to use the pedestrian and cycling facilities should they choose this mode of transport to and from the site at present along Pinjarra Road or in the future as the local paths network develops.

6.2 Public Transport

The Site has good access to public transport with a bus stop located on Pinjarra Road abutting the Site. Routes 600, 604 and 605 operate from this stop. These routes operate from Mandurah Station to Yunderup, Ravenswood and Pinjarra.

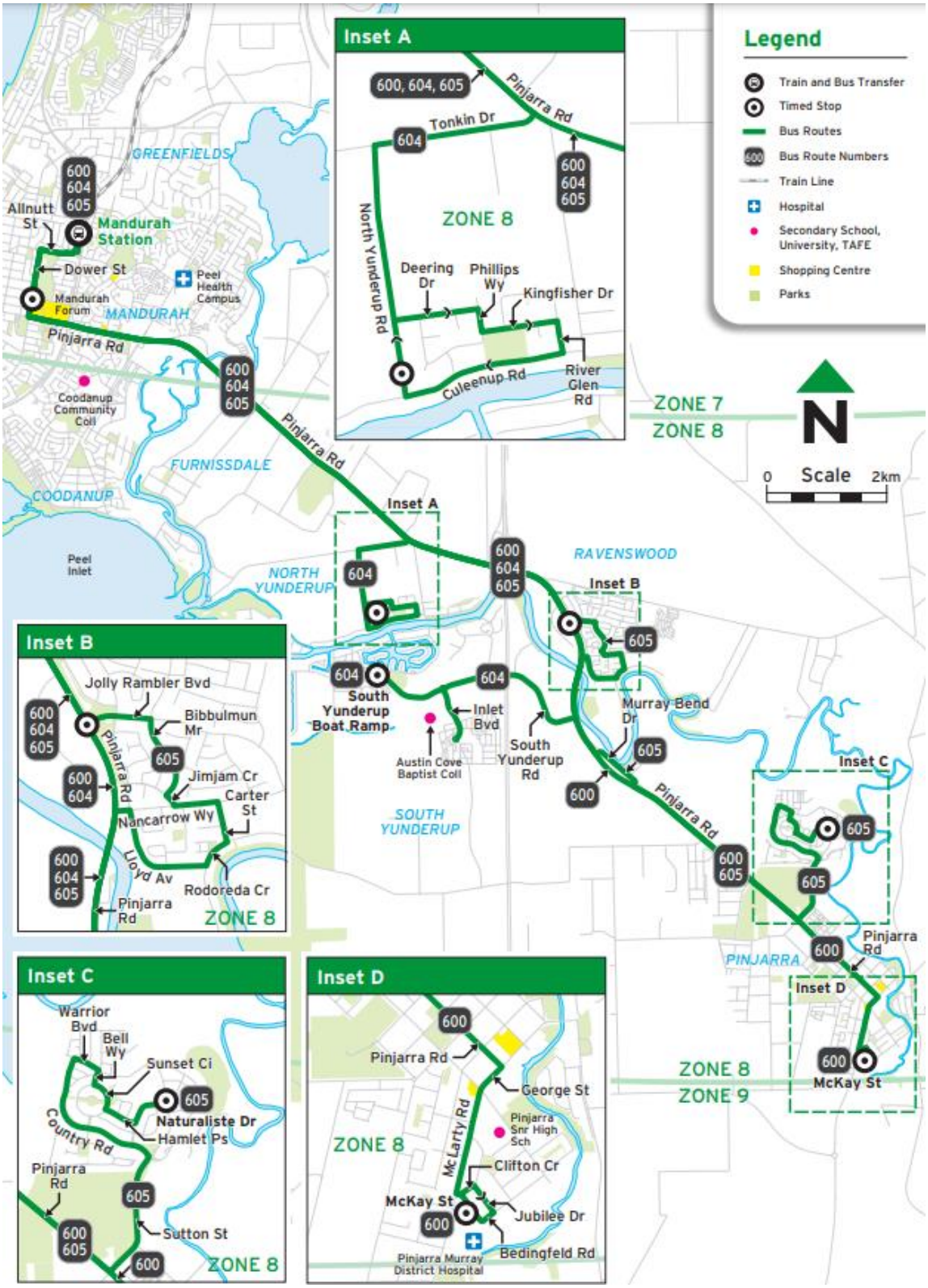


Figure 16: Public Transport Routes Along Pinjarra Road

7.0 SUMMARY AND CONCLUSION

Porter Consulting Engineers has been commissioned to prepare a Traffic Impact Assessment (TIA) to inform the development application for the proposed service station to be located within Lot 137 Pinjarra Road, Furnissdale within the Shire of Murray.

The proposed Site forms part of the *Barragup Furnissdale Activity Centre* (BFAC). Lot 137 is located on the southeast corner of the intersection of Pinjarra Road and Furnissdale Road. In order to develop the Site future internal roads that are part of the BFAC are proposed to be used. These include:

- a north-south internal road from Pinjarra Road and
- a east-west internal road from Furnissdale Road (also referred to as the Furnissdale Road eastern connection).

The north-south internal road has been positioned to the east of the intersection of Pinjarra Road, Furnissdale Road and Watson Road such that a left turn slip lane of 125m can be accommodated with the future signalisation of the existing 4 way intersection.

Similarly, the eastern connection has been positioned approximately 115m (centreline to Pinjarra Rd road reserve boundary) from Pinjarra Road along Furnissdale Road such that it will allow for a western connection approximately 40m to the north as well as future 50m turn lanes on Furnissdale Road anticipated to be required as part of the future signalised intersection.

SIDRA network modelling for the future scenarios indicates that the proposed road network configuration in conjunction with the signalisation of Pinjarra Road, Furnissdale Road and Watson Road will operate satisfactorily. Therefore the development of the service station site gives due consideration to the external road network associated with the future development of the BFAC.

The proposed service station development will comprise of a car canopy and truck canopy with separate crossovers to provide an improved level of safety. The car canopy is proposed to be serviced by two one way crossovers on the north-south internal road from Pinjarra Road. The truck canopy is proposed to be serviced by a one way entry on the north-south road and a one way exit on the eastern connection to Furnissdale Road.

The BFAC only shows a left-in from Pinjarra Road so exiting westbound traffic is anticipated to use the Furnissdale Rd/Pinjarra Rd intersection. The BFAC outlines that the preferred uses for this area are highway focussed commercial and service activities (i.e. service stations and drive through take away food outlets.) These types of facilities typically require efficient access operation. SIDRA network modelling confirms that vehicles turning left onto Pinjarra Road at the traffic signals will be able to find appropriate gaps in the westbound traffic.

The Site will have good access to the existing path facility along Pinjarra Road. New paths on the surrounding road network will cater for access to/from the Site from future development of the area.

The proposed service station site gives consideration to traffic flow and circulation of both light and heavy vehicles to provide a safe and efficient design. The proposal also demonstrates due consideration of the future road network of the broader BFAC area with respect to the location of the new internal road connections from both Pinjarra Road and Furnissdale Road that are to provide access to the Site and future adjoining developments.

APPENDIX A

Proposed Development Plan

FURNISSDALE ROAD

PINJARRA ROAD

BOUNDARY 38.95M

3M ROAD WIDENING

BERRY 0.68M

BOUNDARY 20.21M

VERGE TREES TO BE REMOVED

BOUNDARY 41.69M

BOUNDARY 21.41M

FUTURE ACCESS TO BALANCE LOT

PROPOSED SITE AREA 2466 M²

BOUNDARY 21.14M

BOUNDARY 41.68M

BOUNDARY 18.95M

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY

BOUNDARY 53.06M

BOUNDARY 10.01M

BIN STORE

PLANT AREA

PROPOSED CONVENIENCE 300m²

LINE OF CANOPY OVER SHOWN DASHED

FILL POINTS

TRUCK CANOPY 4 DISPENSERS

U/GROUND LPG TANK

SERVICE BAY

PEDESTRIAN CROSSING

BIKE RACK

FUTURE ACCESS ROAD

PROPOSED 8m HIGH PYLON SIGN

BOUNDARY 119.36M

BOUNDARY 75.97M

REFER CIVIL DRAWINGS FOR UNDER CANOPY DRAINAGE

LINE OF CANOPY LINK OVER SHOWN DASHED

REFER CIVIL DWGS FOR UNDER CANOPY DRAINAGE

BLACK OXIDE FINISH AND WHEEL STOPS TO ALL SHOP FRONT PARKING BAYS & PAVING

10M ROAD WIDENING

BOUNDARY 56.11M

DRIVE-THRU KEEP CLEAR

U/GROUND FUEL TANKS

CAR CANOPY 8 DISPENSERS

9000 SETBACK

LANDSCAPING

LINE OF CANOPY OVER SHOWN DASHED

PAVING TYPE, CUTS AND DRAINAGE TO CIVIL ENG'S DWGS

PROPOSED SITE AREA 5400 M²

BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

BERRY 5.66M

BOUNDARY 82.49M

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

LEFT OUT REMOVED

BOUNDARY 10.01M

LANDSCAPING

BOUNDARY 119.53M

SITE PLAN
SCALE 1:250 @ A1

A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE W.A.

drawn: MS
checked: NP
description: PROPOSED SITE PLAN
scale: 1:250 @A1
date: 30.11.2021
project no: 68.21
dwg no: SK13
rev: A

Hodge Collard Preston ARCHITECTS
Third Floor, 38 Richardson Street, West Perth, WA 6005
PO Box 743, West Perth, WA 6872
Ph: (08) 9322 5144
Fax: (08) 9322 5740
Email: admin@hcparch.com

APPENDIX B

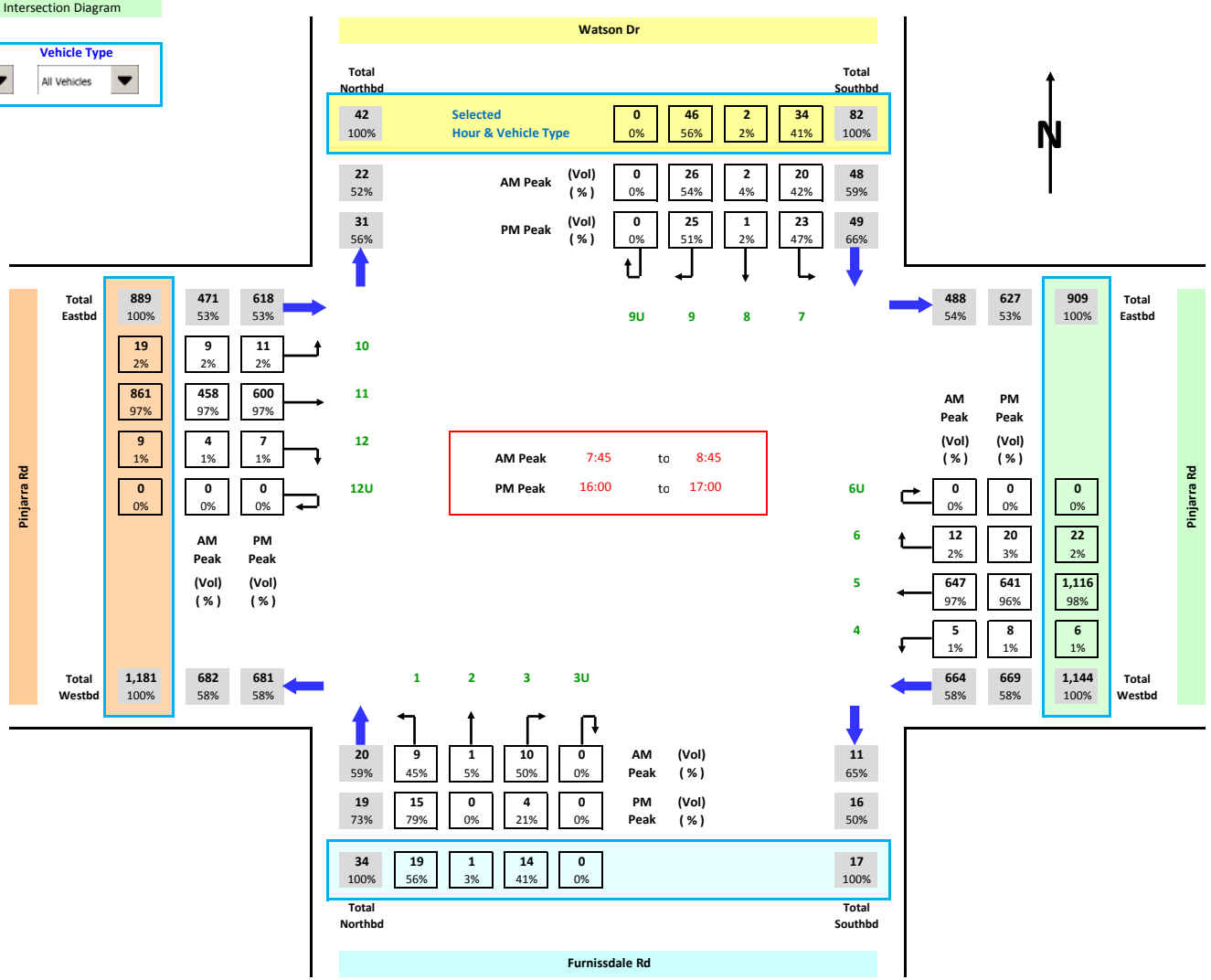
Existing Intersection Turn Counts

Job No. : W322
Client : GTA Consultants
Suburb : Pinjarra Road/Furnissdale Road
Location : 1. Pinjarra Rd / Furnissdale Rd / Watson Dr

Day/Date : Tue, 17th Sep 2019
Weather : Fine
Description : Classified Intersection Count
: Intersection Diagram

MATRIX Traffic and Transport Data

Hour Starting	Vehicle Type
AM Totals	All Vehicles



APPENDIX C

Main Roads ROM24 Output

2016 ROM24 Base Scenario - Link Volume Plot for for Pinjarra Rd, Furnissdale
All Day

MODEL ASSUMPTIONS

LANDUSE: 2016 MLUFS Land Use (Version 1.4 - August 2018)
NETWORK: 2016 ROM24 Network (20-Year Network Development Plan)
Reference #41283

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes (Factor X 100)

Terms & Conditions :
MRWA Traffic Modelling Data as supplied to approved clients is confidential and is not to be made available to unauthorised persons or organisations. This data should not be used for any purpose other than the stated purpose for which it was requested from MRWA. The MRWA ROM is for estimating regional traffic volumes on regional and major local roads, and it should not be used for estimating local traffic on local roads. The MRWA ROM includes local roads but this is to provide connectivity in the model. MRWA Traffic Modelling Data should be interpreted by an experienced/qualified person. This data should not be used in making decisions relating to commercial or residential developments.

1 Lane Each Direction
2 Lanes Each Direction
3 Lanes Each Direction
>=4 Lanes Each Direction

mainroads WESTERN AUSTRALIA

Transport Modelling Section
Enquiries Thomas Ng 9323 6366
MRWA Reference Job #41459
Thu 09 Apr 2020
T:\VOYAGER\JOBS_V2020\41459\Reports\LVP\41459_LVP_All Day_Y16_Pinjarra Rd_Furnissdale.VPR

MRWA ROM24 Base Network - Version 2014

cube

2031 ROM24 MLUFS Scenario - Link Volume Plot
All Day
Pinjarra Area study

MODEL ASSUMPTIONS

NETWORK: 2031 ROM24 Base Network (20 Year Development Plan)

LAND USE: 2031 ROM24 Base Land Use. (MLUFS Version 1.4 - August 2018)

Reference #41035

ROM24 Multi-Modal Model V4.40

24-Hour Traffic Volumes (Factor X 100)

Terms & Conditions :
MRWA Traffic Modelling Data as supplied to approved clients is confidential and is not to be made available to unauthorised persons or organisations. This data should not be used for any purpose other than the stated purpose for which it was requested from MRWA. The MRWA ROM is for estimating regional traffic volumes on regional and major local roads, and it should not be used for estimating local traffic on local roads. The MRWA ROM includes local roads but this is to provide connectivity in the model.
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mainroads WESTERN AUSTRALIA

Transport Modelling Section
Enquiries Clare Yu 9323 4967
MRWA Reference Job #41151
29/03/2019
T:\VOYAGER\JOBS_V2019\41151\Report\LVP\41151_LVP_ROM24_NetDev_V4.40_y31_MLUFS_V14_ Pinjarra Area study.VPR

- 1 Lane Each Direction
- 2 Lanes Each Direction
- 3 Lanes Each Direction
- >=4 Lanes Each Direction
- Zone Connector
- Zone Number

2041 ROM24 Base Scenario - Link Volume Plot for for Pinjarra Rd, Furnissdale
All Day

MODEL ASSUMPTIONS

LANDUSE: 2041 MLUFS Land Use (Version 1.4 - August 2018)
NETWORK: 2041 ROM24 Network (20-Year Network Development Plan)
Reference #41283

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes (Factor X 100)

Terms & Conditions :
MRWA Traffic Modelling Data as supplied to approved clients is confidential and is not to be made available to unauthorised persons or organisations. This data should not be used for any purpose other than the stated purpose for which it was requested from MRWA. The MRWA ROM is for estimating regional traffic volumes on regional and major local roads, and it should not be used for estimating local traffic on local roads. The MRWA ROM includes local roads but this is to provide connectivity in the model.
MRWA Traffic Modelling Data should be interpreted by an experienced/qualified person.
This data should not be used in making decisions relating to commercial or residential developments.

1 Lane Each Direction
2 Lanes Each Direction
3 Lanes Each Direction
>=4 Lanes Each Direction

mainroads WESTERN AUSTRALIA

Transport Modelling Section
Enquiries Thomas Ng 9323 6366
MRWA Reference Job #41459
Thu 09 Apr 2020
T:\VOYAGER\JOBS_V2020\41459\Reports\LVP\41459_LVP_All Day_Y41_Pinjarra Rd_Furnissdale.VPR

MRWA ROM24 Base Network - Version 2014

cube

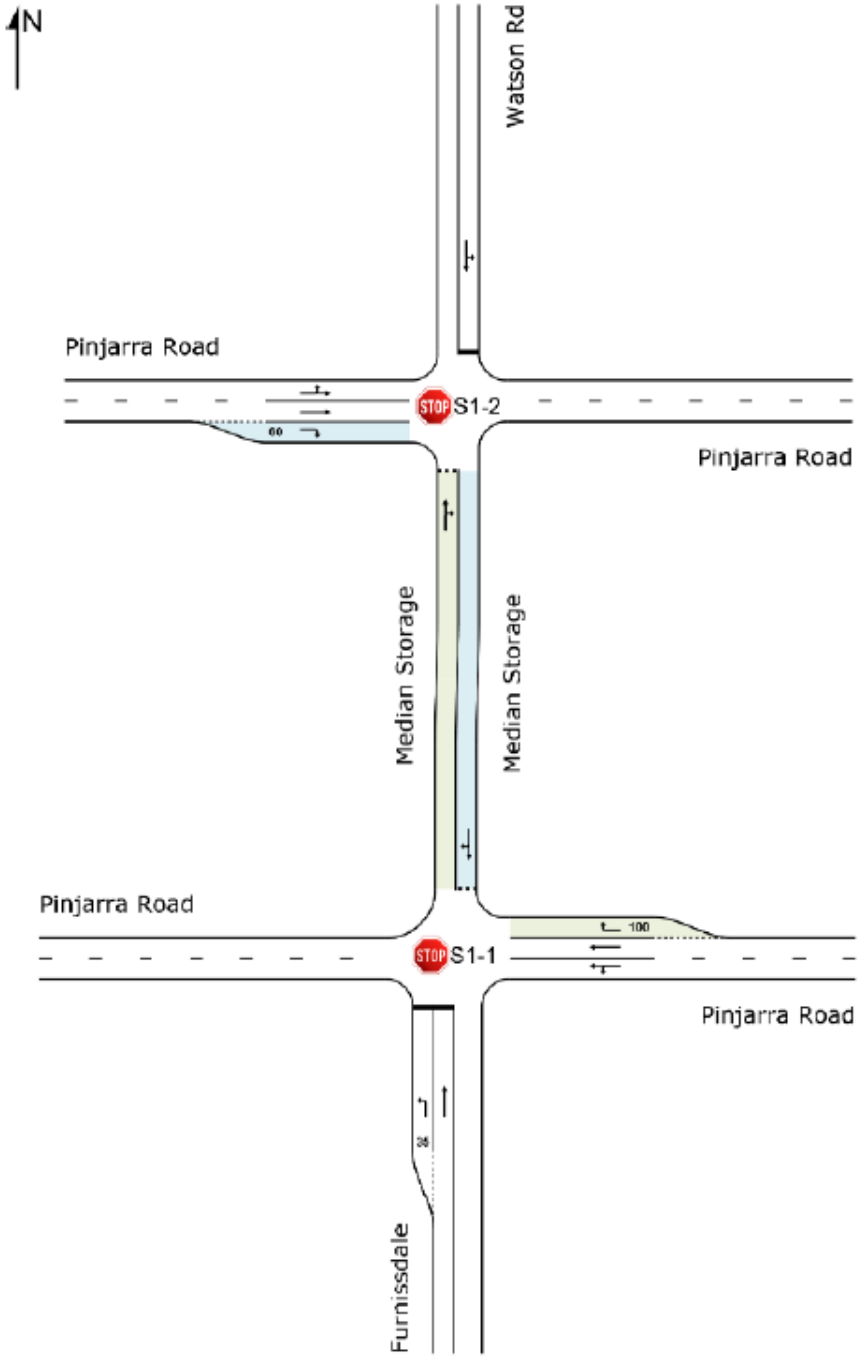
APPENDIX D

SIDRA Output

At Opening – 2022 With Service Station Development Traffic Under Existing Layout

Furnissdale Road and Pinjarra Road

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



At Opening – 2022 With Service Station Development Traffic Under Existing Layout

Furnissdale Road and Pinjarra Road

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: Furnissdale														
1	L2	76	3.0	76	3.0	0.079	9.9	LOS A	0.3	2.2	0.44	0.89	0.44	41.2
2	T1	8	3.0	8	3.0	0.020	16.3	LOS C	0.1	0.5	0.66	0.91	0.66	21.4
Approach		84	3.0	84	3.0	0.079	10.5	LOS B	0.3	2.2	0.46	0.89	0.46	39.6
East: Pinjarra Road														
3	L2	8	3.0	8	3.0	0.197	7.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.7
4	T1	705	11.8	705	11.8	0.197	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.4
5	R2	21	3.0	21	3.0	0.012	6.8	LOS A	0.0	0.0	0.00	0.67	0.00	41.1
Approach		735	11.4	735	11.4	0.197	0.3	NA	0.0	0.0	0.00	0.03	0.00	78.3
North: Median Storage														
6	T1	1	3.0	1	3.0	0.055	3.4	LOS A	0.2	1.2	0.61	0.60	0.61	23.8
7	R2	26	3.0	26	3.0	0.055	5.2	LOS A	0.2	1.2	0.61	0.60	0.61	31.4
Approach		27	3.0	27	3.0	0.055	5.1	LOS A	0.2	1.2	0.61	0.60	0.61	31.2
All Vehicles		846	10.3	846	10.3	0.197	1.5	NA	0.3	2.2	0.07	0.13	0.07	69.9

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: Median Storage														
1	T1	1	3.0	1	3.0	0.015	2.9	LOS A	0.0	0.3	0.54	0.53	0.54	35.6
2	R2	7	3.0	7	3.0	0.015	4.9	LOS A	0.0	0.3	0.54	0.53	0.54	37.4
Approach		8	3.0	8	3.0	0.015	4.6	LOS A	0.0	0.3	0.54	0.53	0.54	37.2
North: Watson Rd														
3	L2	24	3.0	24	3.0	0.083	9.8	LOS A	0.3	2.3	0.55	0.92	0.55	40.9
4	T1	27	3.0	27	3.0	0.083	14.5	LOS B	0.3	2.3	0.55	0.92	0.55	32.3
Approach		52	3.0	52	3.0	0.083	12.3	LOS B	0.3	2.3	0.55	0.92	0.55	37.3
West: Pinjarra Road														
5	L2	12	3.0	12	3.0	0.198	7.0	LOS A	0.0	0.0	0.00	0.02	0.00	66.2
6	T1	692	15.6	692	15.6	0.198	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.3
7	R2	12	3.0	12	3.0	0.006	6.9	LOS A	0.0	0.0	0.00	0.67	0.00	46.5
Approach		715	15.2	715	15.2	0.198	0.2	NA	0.0	0.0	0.00	0.02	0.00	78.6
All Vehicles		775	14.2	775	14.2	0.198	1.1	NA	0.3	2.3	0.04	0.09	0.04	73.9

After Opening – 2032 With Service Station Development Traffic Under Existing Layout

Furnissdale Road and Pinjarra Road

Allows for growth along Pinjarra Road – no traffic increase on minor roads.

Vehicle Movement Performance

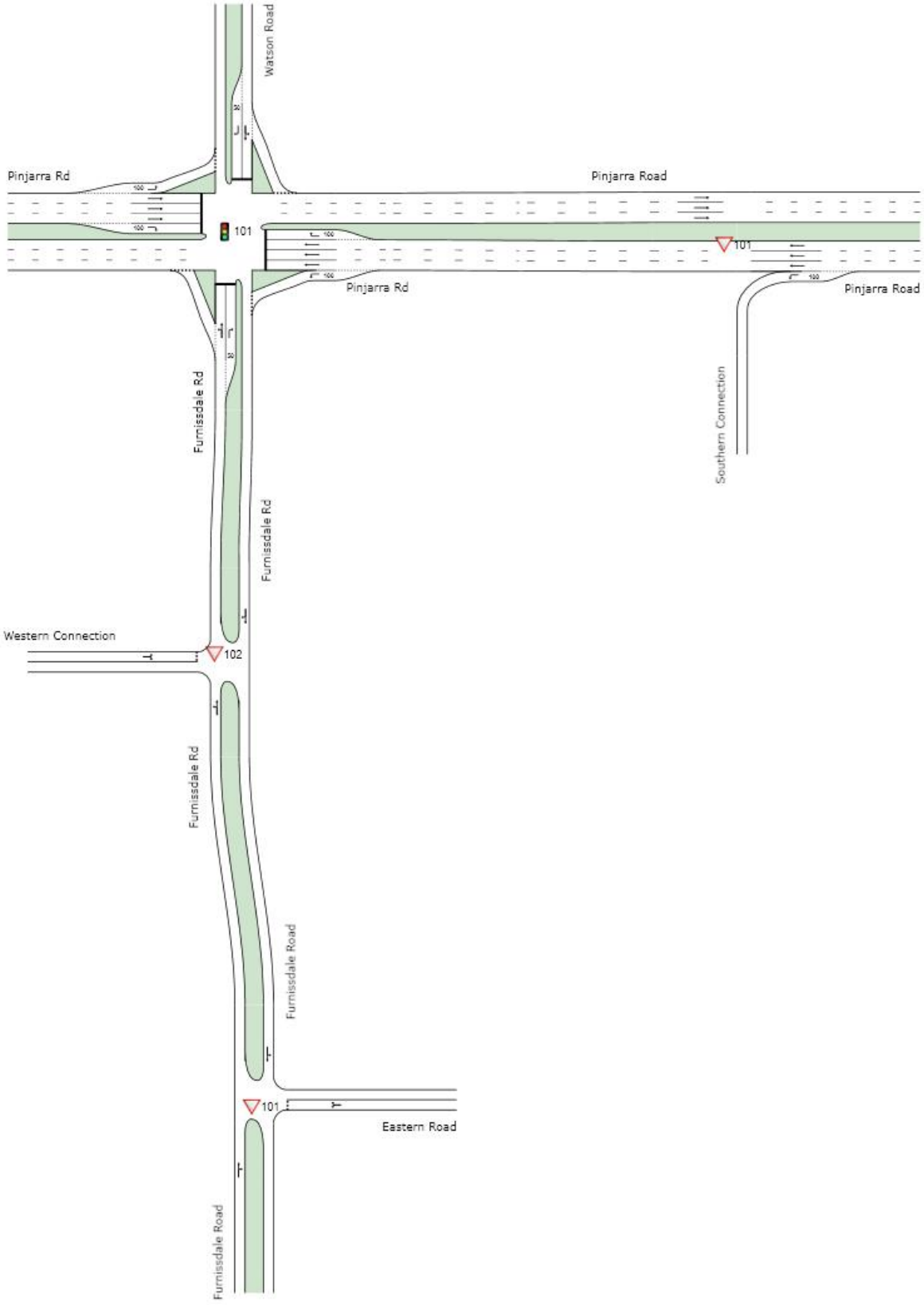
Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Furnissdale														
1	L2	76	3.0	76	3.0	0.095	11.0	LOS B	0.4	2.6	0.52	0.93	0.52	40.0
2	T1	8	3.0	8	3.0	0.033	22.8	LOS C	0.1	0.8	0.80	1.00	0.80	17.0
Approach		84	3.0	84	3.0	0.095	12.2	LOS B	0.4	2.6	0.55	0.94	0.55	37.8
East: Pinjarra Road														
3	L2	8	3.0	8	3.0	0.273	7.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
4	T1	980	11.8	980	11.8	0.273	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.5
5	R2	21	3.0	21	3.0	0.012	6.8	LOS A	0.0	0.0	0.00	0.67	0.00	41.1
Approach		1009	11.5	1009	11.5	0.273	0.2	NA	0.0	0.0	0.00	0.02	0.00	78.6
North: Median Storage														
6	T1	1	3.0	1	3.0	0.082	5.9	LOS A	0.2	1.8	0.74	0.74	0.74	20.2
7	R2	26	3.0	26	3.0	0.082	9.2	LOS A	0.2	1.8	0.74	0.74	0.74	27.2
Approach		27	3.0	27	3.0	0.082	9.0	LOS A	0.2	1.8	0.74	0.74	0.74	26.9
All Vehicles		1121	10.7	1121	10.7	0.273	1.3	NA	0.4	2.6	0.06	0.11	0.06	71.3

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: Median Storage														
1	T1	1	3.0	1	3.0	0.020	4.9	LOS A	0.1	0.5	0.67	0.69	0.67	31.6
2	R2	7	3.0	7	3.0	0.020	7.7	LOS A	0.1	0.5	0.67	0.69	0.67	33.1
Approach		8	3.0	8	3.0	0.020	7.4	LOS A	0.1	0.5	0.67	0.69	0.67	32.9
North: Watson Rd														
3	L2	24	3.0	24	3.0	0.119	10.8	LOS B	0.4	3.2	0.65	0.96	0.65	37.8
4	T1	27	3.0	27	3.0	0.119	19.7	LOS C	0.4	3.2	0.65	0.96	0.65	28.7
Approach		52	3.0	52	3.0	0.119	15.5	LOS C	0.4	3.2	0.65	0.96	0.65	33.8
West: Pinjarra Road														
5	L2	12	3.0	12	3.0	0.271	7.0	LOS A	0.0	0.0	0.00	0.02	0.00	66.3
6	T1	949	15.6	949	15.6	0.271	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.4
7	R2	12	3.0	12	3.0	0.006	6.9	LOS A	0.0	0.0	0.00	0.67	0.00	46.5
Approach		973	15.3	973	15.3	0.271	0.2	NA	0.0	0.0	0.00	0.02	0.00	78.9
All Vehicles		1033	14.6	1033	14.6	0.271	1.0	NA	0.4	3.2	0.04	0.07	0.04	74.6

2041 – 6 Lanes on Pinjarra Road – Network Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



2041 Pinjarra Road/ Furnissdale Road/Watson Rd Traffic Signals – - 6 lanes Pinjarra Rd

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: Furnissdale Rd														
1	L2	201	3.0	201	3.0	0.257	10.5	LOS B	3.6	25.5	0.56	0.67	0.56	38.0
2	T1	36	3.0	36	3.0	0.257	6.1	LOS A	3.6	25.5	0.56	0.67	0.56	46.8
3	R2	171	3.0	171	3.0	* 0.365	18.1	LOS B	3.4	24.6	0.86	0.77	0.86	13.0
Approach		407	3.0	407	3.0	0.365	13.3	LOS B	3.6	25.5	0.69	0.71	0.69	30.3
East: Pinjarra Rd														
4	L2	54	3.0	54	3.0	0.042	8.2	LOS A	0.4	2.8	0.31	0.65	0.31	34.9
5	T1	1347	11.8	1347	11.8	* 0.789	27.6	LOS C	15.6	120.4	0.97	0.92	1.12	28.1
6	R2	71	3.0	71	3.0	0.226	34.1	LOS C	2.2	15.5	0.90	0.75	0.90	32.0
Approach		1472	11.1	1472	11.1	0.789	27.2	LOS C	15.6	120.4	0.95	0.90	1.08	28.5
North: Watson Road														
7	L2	74	3.0	74	3.0	0.268	17.6	LOS B	1.5	11.0	0.83	0.72	0.83	39.8
8	T1	31	3.0	31	3.0	* 0.268	12.0	LOS B	1.5	11.0	0.83	0.72	0.83	39.8
9	R2	82	3.0	82	3.0	0.527	41.5	LOS D	2.9	21.0	1.00	0.77	1.02	30.7
Approach		186	3.0	186	3.0	0.527	27.2	LOS C	2.9	21.0	0.91	0.74	0.92	34.5
West: Pinjarra Rd														
10	L2	12	3.0	12	3.0	0.010	10.8	LOS B	0.1	0.8	0.39	0.64	0.39	50.1
11	T1	1263	15.6	1263	15.6	0.757	26.2	LOS C	14.1	112.0	0.96	0.89	1.06	21.5
12	R2	233	3.0	233	3.0	* 0.746	40.4	LOS D	8.3	59.8	1.00	0.88	1.17	15.7
Approach		1507	13.6	1507	13.6	0.757	28.3	LOS C	14.1	112.0	0.96	0.88	1.07	20.6
All Vehicles		3573	10.8	3573	10.8	0.789	26.1	LOS C	15.6	120.4	0.92	0.86	1.02	26.0

2041 Furnissdale Road Western Connection to BFAC - 6 lanes Pinjarra Rd

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: Furnissdale Rd														
1	L2	18	3.0	18	3.0	0.141	2.7	LOS A	0.0	0.0	0.00	0.04	0.00	32.7
2	T1	252	3.0	252	3.0	0.141	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	54.6
Approach		269	3.0	269	3.0	0.141	0.2	NA	0.0	0.0	0.00	0.04	0.00	47.2
North: Furnissdale Rd														
8	T1	267	3.0	267	3.0	0.175	0.3	LOS A	0.3	2.4	0.10	0.09	0.10	48.3
9	R2	47	3.0	47	3.0	0.175	5.3	LOS A	0.3	2.4	0.10	0.09	0.10	39.4
Approach		315	3.0	315	3.0	0.175	1.0	NA	0.3	2.4	0.10	0.09	0.10	45.2
West: Western Connection														
10	L2	100	3.0	100	3.0	0.089	6.4	LOS A	0.4	2.5	0.34	0.60	0.34	30.0
12	R2	8	3.0	8	3.0	0.089	8.0	LOS A	0.4	2.5	0.34	0.60	0.34	30.0
Approach		108	3.0	108	3.0	0.089	6.6	LOS A	0.4	2.5	0.34	0.60	0.34	30.0
All Vehicles		693	3.0	693	3.0	0.175	1.6	NA	0.4	2.5	0.10	0.15	0.10	40.4

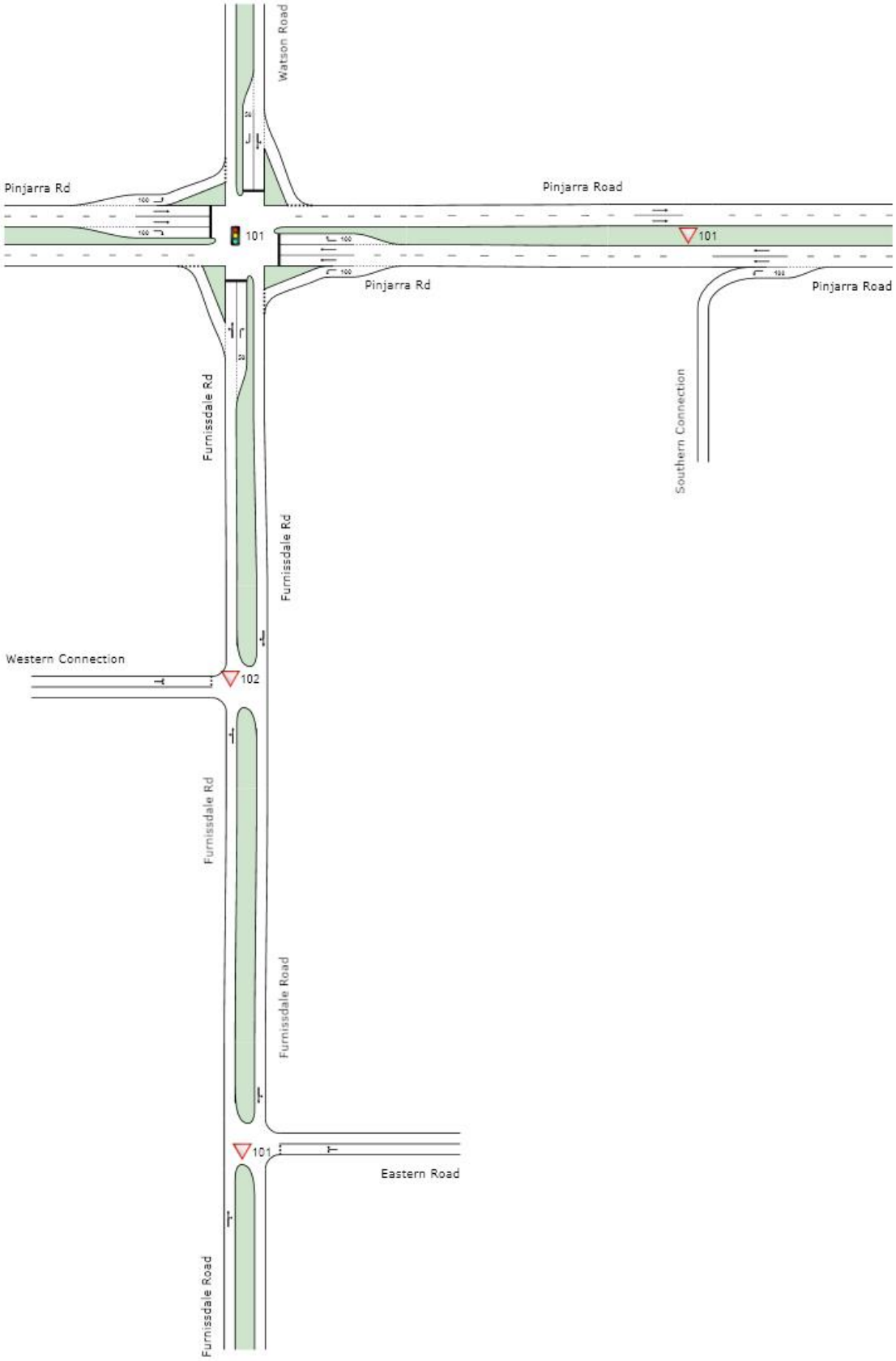
2041 Furnissdale Road Eastern Connection to BFAC - 6 lanes Pinjarra Rd

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: Furnissdale Road														
2	T1	226	3.0	226	3.0	0.141	0.2	LOS A	0.2	1.8	0.11	0.07	0.11	53.8
3	R2	29	3.0	29	3.0	0.141	6.6	LOS A	0.2	1.8	0.11	0.07	0.11	46.0
Approach		256	3.0	256	3.0	0.141	0.9	NA	0.2	1.8	0.11	0.07	0.11	52.5
East: Eastern Road														
4	L2	31	3.0	31	3.0	0.100	4.7	LOS A	0.3	2.5	0.38	0.65	0.38	37.6
6	R2	60	3.0	60	3.0	0.100	6.1	LOS A	0.3	2.5	0.38	0.65	0.38	23.9
Approach		91	3.0	91	3.0	0.100	5.6	LOS A	0.3	2.5	0.38	0.65	0.38	31.1
North: Furnissdale Road														
7	L2	57	3.0	57	3.0	0.146	2.7	LOS A	0.0	0.0	0.00	0.11	0.00	17.3
8	T1	220	3.0	220	3.0	0.146	0.0	LOS A	0.0	0.0	0.00	0.11	0.00	57.0
Approach		277	3.0	277	3.0	0.146	0.6	NA	0.0	0.0	0.00	0.11	0.00	46.1
All Vehicles		623	3.0	623	3.0	0.146	1.4	NA	0.3	2.5	0.10	0.17	0.10	46.2

2041 – 4 Lanes on Pinjarra Road – Network Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



2041 Pinjarra Road/ Furnissdale Road/Watson Rd Traffic Signals – 4 lanes Pinjarra Rd

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: Furnissdale Rd														
1	L2	201	3.0	201	3.0	0.304	17.1	LOS B	5.9	42.7	0.67	0.72	0.67	30.5
2	T1	36	3.0	36	3.0	0.304	12.6	LOS B	5.9	42.7	0.67	0.72	0.67	40.8
3	R2	171	3.0	171	3.0	* 0.422	26.2	LOS C	5.2	37.6	0.90	0.78	0.90	9.3
Approach		407	3.0	407	3.0	0.422	20.5	LOS C	5.9	42.7	0.77	0.74	0.77	23.8
East: Pinjarra Rd														
4	L2	54	3.0	54	3.0	0.040	8.4	LOS A	0.5	3.4	0.27	0.65	0.27	34.6
5	T1	1347	11.8	1347	11.8	* 0.857	31.6	LOS C	25.4	195.8	0.95	0.96	1.10	25.7
6	R2	71	3.0	71	3.0	0.249	43.0	LOS D	2.8	20.1	0.92	0.76	0.92	28.3
Approach		1472	11.1	1472	11.1	0.857	31.3	LOS C	25.4	195.8	0.93	0.94	1.06	26.0
North: Watson Road														
7	L2	74	3.0	74	3.0	0.347	23.7	LOS C	2.5	17.9	0.89	0.75	0.89	35.2
8	T1	31	3.0	31	3.0	* 0.347	18.1	LOS B	2.5	17.9	0.89	0.75	0.89	35.2
9	R2	82	3.0	82	3.0	0.677	54.5	LOS D	3.9	27.9	1.00	0.82	1.16	26.5
Approach		186	3.0	186	3.0	0.677	36.4	LOS D	3.9	27.9	0.94	0.78	1.01	30.1
West: Pinjarra Rd														
10	L2	12	3.0	12	3.0	0.009	10.3	LOS B	0.1	0.9	0.31	0.64	0.31	50.7
11	T1	1263	15.6	1263	15.6	0.839	29.7	LOS C	29.0	230.2	0.93	0.92	1.06	19.5
12	R2	233	3.0	233	3.0	* 0.822	53.2	LOS D	11.2	80.1	1.00	0.91	1.26	12.3
Approach		1507	13.6	1507	13.6	0.839	33.2	LOS C	29.0	230.2	0.94	0.92	1.08	18.2
All Vehicles		3573	10.8	3573	10.8	0.857	31.1	LOS C	29.0	230.2	0.91	0.90	1.03	23.0

2041 Furnissdale Road Western Connection to BFAC – 4 lanes Pinjarra Rd

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: Furnissdale Rd														
1	L2	18	3.0	18	3.0	0.141	2.7	LOS A	0.0	0.0	0.00	0.04	0.00	32.7
2	T1	252	3.0	252	3.0	0.141	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	54.6
Approach		269	3.0	269	3.0	0.141	0.2	NA	0.0	0.0	0.00	0.04	0.00	47.2
North: Furnissdale Rd														
8	T1	267	3.0	267	3.0	0.175	0.3	LOS A	0.3	2.4	0.10	0.09	0.10	48.3
9	R2	47	3.0	47	3.0	0.175	5.3	LOS A	0.3	2.4	0.10	0.09	0.10	39.4
Approach		315	3.0	315	3.0	0.175	1.0	NA	0.3	2.4	0.10	0.09	0.10	45.2
West: Western Connection														
10	L2	100	3.0	100	3.0	0.089	6.4	LOS A	0.4	2.5	0.34	0.60	0.34	30.0
12	R2	8	3.0	8	3.0	0.089	8.0	LOS A	0.4	2.5	0.34	0.60	0.34	30.0
Approach		108	3.0	108	3.0	0.089	6.6	LOS A	0.4	2.5	0.34	0.60	0.34	30.0
All Vehicles		693	3.0	693	3.0	0.175	1.6	NA	0.4	2.5	0.10	0.15	0.10	40.4

2041 Furnissdale Road Eastern Connection to BFAC - 4 lanes Pinjarra Rd

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: Furnissdale Road														
2	T1	226	3.0	226	3.0	0.141	0.2	LOS A	0.2	1.8	0.11	0.07	0.11	53.8
3	R2	29	3.0	29	3.0	0.141	6.6	LOS A	0.2	1.8	0.11	0.07	0.11	46.0
Approach		256	3.0	256	3.0	0.141	0.9	NA	0.2	1.8	0.11	0.07	0.11	52.5
East: Eastern Road														
4	L2	31	3.0	31	3.0	0.100	4.7	LOS A	0.3	2.5	0.38	0.65	0.38	37.6
6	R2	60	3.0	60	3.0	0.100	6.1	LOS A	0.3	2.5	0.38	0.65	0.38	23.9
Approach		91	3.0	91	3.0	0.100	5.6	LOS A	0.3	2.5	0.38	0.65	0.38	31.1
North: Furnissdale Road														
7	L2	57	3.0	57	3.0	0.146	2.7	LOS A	0.0	0.0	0.00	0.11	0.00	17.3
8	T1	220	3.0	220	3.0	0.146	0.0	LOS A	0.0	0.0	0.00	0.11	0.00	57.0
Approach		277	3.0	277	3.0	0.146	0.6	NA	0.0	0.0	0.00	0.11	0.00	46.1
All Vehicles		623	3.0	623	3.0	0.146	1.4	NA	0.3	2.5	0.10	0.17	0.10	46.2

2032 – 4 Lanes on Pinjarra Road

Pinjarra Road/ Furnissdale Road/Watson Rd Traffic Signals – 4 lanes

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: Furnissdale Rd														
1	L2	165	3.0	165	3.0	0.217	10.7	LOS B	2.8	20.3	0.56	0.67	0.56	37.7
2	T1	26	3.0	26	3.0	0.217	6.2	LOS A	2.8	20.3	0.56	0.67	0.56	46.6
3	R2	129	3.0	129	3.0	* 0.356	20.3	LOS C	2.8	20.3	0.90	0.76	0.90	11.4
Approach		321	3.0	321	3.0	0.356	14.2	LOS B	2.8	20.3	0.69	0.71	0.69	29.3
East: Pinjarra Rd														
4	L2	43	3.0	43	3.0	0.031	7.6	LOS A	0.2	1.7	0.26	0.64	0.26	36.4
5	T1	1016	11.8	1016	11.8	* 0.755	23.1	LOS C	16.3	125.9	0.93	0.86	1.01	31.5
6	R2	58	3.0	58	3.0	0.279	38.3	LOS D	1.9	13.8	0.95	0.75	0.95	30.0
Approach		1117	11.0	1117	11.0	0.755	23.3	LOS C	16.3	125.9	0.91	0.85	0.98	31.4
North: Watson Road														
7	L2	61	3.0	61	3.0	0.209	17.0	LOS B	1.2	8.7	0.81	0.70	0.81	40.3
8	T1	23	3.0	23	3.0	* 0.209	11.3	LOS B	1.2	8.7	0.81	0.70	0.81	40.3
9	R2	68	3.0	68	3.0	0.439	41.1	LOS D	2.4	17.3	0.99	0.75	0.99	30.7
Approach		153	3.0	153	3.0	0.439	26.9	LOS C	2.4	17.3	0.89	0.73	0.89	34.6
West: Pinjarra Rd														
10	L2	12	3.0	12	3.0	0.010	10.9	LOS B	0.1	0.9	0.38	0.64	0.38	50.1
11	T1	952	15.6	952	15.6	0.724	21.9	LOS C	14.7	117.0	0.92	0.83	0.97	24.4
12	R2	142	3.0	142	3.0	* 0.684	42.4	LOS D	5.1	36.8	1.00	0.84	1.14	14.9
Approach		1105	13.8	1105	13.8	0.724	24.4	LOS C	14.7	117.0	0.92	0.83	0.98	22.9
All Vehicles		2696	10.8	2696	10.8	0.755	22.9	LOS C	16.3	125.9	0.89	0.82	0.94	28.3

2032 Furnissdale Road Western Connection to BFAC – 4 lanes Pinjarra Rd

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: Furnissdale Rd														
1	L2	14	3.0	14	3.0	0.116	2.7	LOS A	0.0	0.0	0.00	0.03	0.00	32.8
2	T1	208	3.0	208	3.0	0.116	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	55.0
Approach		222	3.0	222	3.0	0.116	0.2	NA	0.0	0.0	0.00	0.03	0.00	47.8
North: Furnissdale Rd														
8	T1	205	3.0	205	3.0	0.133	0.2	LOS A	0.2	1.7	0.09	0.09	0.09	49.3
9	R2	36	3.0	36	3.0	0.133	5.0	LOS A	0.2	1.7	0.09	0.09	0.09	39.7
Approach		241	3.0	241	3.0	0.133	0.9	NA	0.2	1.7	0.09	0.09	0.09	46.0
West: Western Connection														
10	L2	75	3.0	75	3.0	0.063	6.2	LOS A	0.2	1.8	0.30	0.58	0.30	30.3
12	R2	6	3.0	6	3.0	0.063	7.3	LOS A	0.2	1.8	0.30	0.58	0.30	30.3
Approach		81	3.0	81	3.0	0.063	6.3	LOS A	0.2	1.8	0.30	0.58	0.30	30.3
All Vehicles		544	3.0	544	3.0	0.133	1.4	NA	0.2	1.8	0.09	0.14	0.09	41.1

2032 Furnissdale Road Eastern Connection to BFAC - 4 lanes Pinjarra Rd

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: Furnissdale Road														
2	T1	175	3.0	175	3.0	0.109	0.1	LOS A	0.2	1.4	0.10	0.08	0.10	53.7
3	R2	25	3.0	25	3.0	0.109	6.2	LOS A	0.2	1.4	0.10	0.08	0.10	45.9
Approach		200	3.0	200	3.0	0.109	0.9	NA	0.2	1.4	0.10	0.08	0.10	52.3
East: Eastern Road														
4	L2	26	3.0	26	3.0	0.073	4.5	LOS A	0.3	1.8	0.32	0.60	0.32	38.7
6	R2	47	3.0	47	3.0	0.073	5.4	LOS A	0.3	1.8	0.32	0.60	0.32	25.4
Approach		74	3.0	74	3.0	0.073	5.1	LOS A	0.3	1.8	0.32	0.60	0.32	32.8
North: Furnissdale Road														
7	L2	44	3.0	44	3.0	0.112	2.7	LOS A	0.0	0.0	0.00	0.11	0.00	17.3
8	T1	168	3.0	168	3.0	0.112	0.0	LOS A	0.0	0.0	0.00	0.11	0.00	57.0
Approach		213	3.0	213	3.0	0.112	0.6	NA	0.0	0.0	0.00	0.11	0.00	46.0
All Vehicles		486	3.0	486	3.0	0.112	1.4	NA	0.3	1.8	0.09	0.17	0.09	46.3

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Email: office@portereng.com.au

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APPENDIX D BUSHFIRE MANAGEMENT PLAN

FPA AUSTRALIA | Fire Protection Association Australia | Life. Property. Environment.

BPAD Bushfire Planning & Design

Bushfire Management Plan Coversheet

This Coversheet and accompanying Bushfire Management Plan has been prepared and issued by a person accredited by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme.

Bushfire Management Plan and Site Details

Site Address / Plan Reference: Lot 137 (No 630) Pinjarra Road

Suburb: Furnissdale **State:** WA **P/code:** 6209

Local government area: Shire of Murray

Description of the planning proposal: Development Application for service station

BMP Plan / Reference Number: 61981/58305 **Version:** R01 Rev 0 **Date of Issue:** 10/12/2021

Client / Business Name: Yolk Property Group

Reason for referral to DFES	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?	☐	☒
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the BPC elements)?	☐	☒
Is the proposal any of the following special development types (see SPP 3.7 for definitions)?		
Unavoidable development (in BAL-40 or BAL-FZ)	☐	☒
Strategic planning proposal (including rezoning applications)	☐	☒
Minor development (in BAL-40 or BAL-FZ)	☐	☒
High risk land-use	☒	☐
Vulnerable land-use	☐	☒

If the development is a special development type as listed above, explain why the proposal is considered to be one of the above listed classifications (E.g. considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

The proposed service station constitutes a high-risk land use

Note: The decision maker (e.g. local government or the WAPC) should only refer the proposal to DFES for comment if one (or more) of the above answers are ticked "Yes".

BPAD Accredited Practitioner Details and Declaration

Name	Accreditation Level	Accreditation No.	Accreditation Expiry
Louisa Robertson	Level 3	BPAD 36748	28/02/2022
Company		**Contact No.**	
Strategen-JBS&G		08 9792 4797	

I declare that the information provided within this bushfire management plan is to the best of my knowledge true and correct

Signature of Practitioner LMRobertson **Date** 10/12/2021

Yolk Property Group

Bushfire Management Plan (Development Application)

Lot 137 (630) Pinjarra Road, Furnissdale

10 December 2021

58305/128,707 (Rev 0)

JBS&G Australia Pty Ltd T/A Strategen-JBS&G

BPAD Bushfire Planning & Design Accredited Practitioner Level 3

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1. Proposal details

1.1 Background

Yolk Property Group is seeking to lodge a development application in relation to proposed development of a service station at Lot 137 (630), Pinjarra Road, Furnissdale (the project area), located in the Shire of Murray. The site plan (Figure 1) identifies that the proposed development will comprise the following elements:

- convenience building (habitable building)
- landscaping
- crossover to Pinjarra Road
- crossover to Furnissdale Road
- car parking bays
- entirely paved surface aside from peripheral landscaping
- underground fuel tank farm (3 tanks)
- underground LPG tank
- car canopy (8 fuel dispensers)
- truck canopy (4 fuel dispensers).

The north/north-eastern portion of the project area is designated as a future development site with internal road connections in to the main service station development and potentially an additional connection to Furnissdale Road.

1.2 Site description

The project area is zoned 'Commercial', comprises approximately 0.81 ha within Lot 137 and is surrounded by (see Figure 2):

- Geoff's Hire Service, Pinjarra Road, Coles Express service station and other commercial land uses to the north
- 'Service Commercial' zoned portion of Lot 137 and special rural lots to the south
- Pinjarra Road and special rural lots to the east
- Furnissdale Road, vacant land Peel Caravan Park and special land uses (i.e. Masonic Centre Furnissdale) to the west.

The proposed development is designated as bushfire prone on the *Map of Bush Fire Prone Areas* (DFES 2019; see Plate 1).

1.3 Purpose

This Bushfire Management Plan (BMP) has been prepared to address requirements under Policy Measure 6.5 of *State Planning Policy 3.7 Planning in Bushfire-Prone Areas* (SPP 3.7; WAPC 2015) and *Guidelines for Planning in Bushfire-Prone Areas* (the Guidelines; WAPC 2017), which are triggered through the proposed development of a 'Habitable building' (as defined in *Planning and Development (Local Planning Schemes) Regulations 2015* under the *Planning and Development Act 2005*) in a designated bushfire prone area.

The proposed development is considered to be a high-risk land use which triggers additional requirements under Policy Measure 6.6 of SPP 3.7. This BMP has been prepared in accordance with

Sections 5.4 and 5.6 of *Guidelines for Planning in Bushfire Prone Areas* (the Guidelines; WAPC 2017), which require development applications for high-risk land uses to be accompanied by a BMP that includes the results of a Bushfire Attack Level (BAL) or BAL Contour Map assessment and a Bushfire Risk Management Plan (BRMP).

1.4 Other plans/reports

This BMP was originally drafted in April 2020 and has been updated in December 2021 in response to a modified site plan and development layout.

Strategen-JBS&G has prepared a BRMP (Strategen-JBS&G 2021) as a requirement of Policy Measure 6.6 of SPP 3.7. The BRMP should be read in conjunction within this BMP.

Strategen-JBS&G is not aware of any bushfire or environmental reports or assessments that have been prepared previously for the project area.

Plate 1: Map of Bush Fire Prone Areas (DFES 2019)

FURNISSDALE ROAD

PINJARRA ROAD

BOUNDARY 38.95M

3M ROAD WIDENING

BDRY 6.68M

BOUNDARY 20.21M

BOUNDARY 41.68M

VERGE TREES TO BE REMOVED

BOUNDARY 21.41M

FUTURE ACCESS TO BALANCE LOT

PROPOSED SITE AREA 2466 M²

BOUNDARY 21.74M

BOUNDARY 41.68M

BOUNDARY 18.95M

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

2000

6000

BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY

9400 1000 8725 25000

BOUNDARY 53.06M

BOUNDARY 10.01M

1360

DP DP DP

BIN STORE 5150

PLANT AREA 3574

PROPOSED CONVENIENCE 300m²

13000

3500 6000 3500

LINE OF CANOPY OVER SHOWN DASHED

BoQ FILL POINTS

DP DP

TRUCK CANOPY 4 DISPENSERS

BoQ BoQ

10350

3500 3500 2500

10 U/GROUND LPG TANK

11

12

2000

SERVICE BAY

PEDESTRIAN CROSSING

BIKE RACKS

1 9

5500 TYP.

1200

2500

12000

FUTURE ACCESS ROAD

PROPOSED 8m HIGH PYLON SIGN

BOUNDARY 119.36M

4800 1500 8900 7300 4500 1500

22500

BOUNDARY 75.57M

4500 6000 6000 7057

REFER CIVIL DRAWINGS FOR UNDER CANOPY DRAINAGE

2600

5400 6500 1000 5000 2541 25600

2600 2600 2600 2600 2600 2400 2400 2600 2600 2600

LINE OF CANOPY LINK OVER SHOWN DASHED

10080

REFER CIVIL DWGS FOR UNDER CANOPY DRAINAGE

BLACK OXIDE FINISH AND WHEEL STOPS TO ALL SHOP FRONT PARKING BAYS & PAVING

10M ROAD WIDENING

BOUNDARY 56.11M

DRIVE-THRU KEEP CLEAR

7830 12000 15000 7000

3500 3150 3500 10150

BoQ BoQ BoQ BoQ

DP DP DP DP

CAR CANOPY 8 DISPENSERS

9000 SETBACK

LINE OF CANOPY OVER SHOWN DASHED

LANDSCAPING

U/GROUND FUEL TANKS

22

3500 9000 9000 9000 3500

34000

BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY

PAVING TYPE, CUTS AND DRAINAGE TO CIVIL ENG'S DWGS

PROPOSED SITE AREA 5400 M²

17570

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

11000 5000 34300 6000

BDRY 6.68M

BOUNDARY 82.49M

BOUNDARY 10.01M

1000 4800 1500 7400 4500 4800 20000

PAINTED LINEMARKING TO FORECOURT PAVING

PROPOSED CROSSOVER TO COUNCIL REQUIREMENTS

11560

LANDSCAPING

BOUNDARY 119.53M

N

INTERIM ISSUE ONLY
DATE: 02.12.2021

SITE PLAN
SCALE 1:250 @ A1

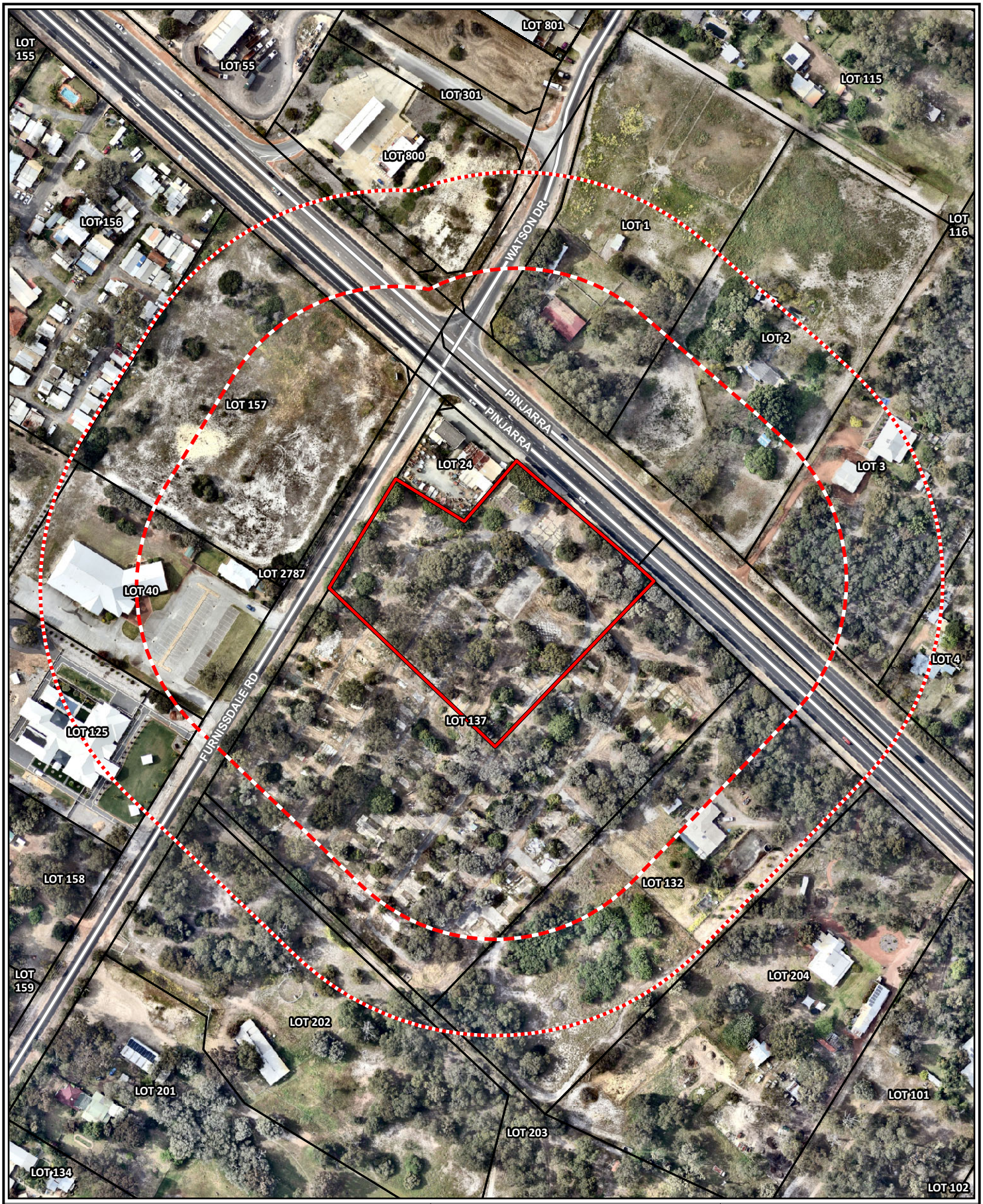
revision/ issue	description	drawn	checked	date
x	x	x	x	x

project
PROPOSED UNITED SERVICE STATION
location
FURNISSDALE W.A.

drawn MS
checked NP
description PROPOSED SITE PLAN

Hodge Collard Preston ARCHITECTS
Third Floor, 38 Richardson Street, West Perth, WA 6005
PO Box 743, West Perth, WA 6872
Ph: (08) 9322 5144
Fax: (08) 9322 5740
Email: admin@hcparch.com

scale 1:250 @A1
date 30.11.2021
project no 68.21
dwg no SK13 rev –



Legend

- Project area
- 100m assessment area
- 150m assessment area
- Cadastral boundary
- Roads (MRWA)

Scale 1:2,600 at A4 (0 25 50 metres)		**Petrol Station, 630 Pinjarra Road, Furnissdale, WA**
Coord. Sys. GDA 1994 MGA Zone 50		**SITE OVERVIEW**
Job No: 61981		
Client: Yolk Property Group		**FIGURE 2**
Version: A	Date: 08-Dec-2021	strategen JBS&G
Drawn By: jcrute	Checked By: CT	

File Name: W:\Projects\1)Open\Yolk Property Group\61981 Lot 137 Pinjarra Rd Furnissdale BMP update\GIS\Maps\R01_Rev_A\61981_02_SiteOverview.mxd
Image Reference: www.nearmap.com© - Imagery Date: 24. October 2021.

2. Environmental considerations

2.1 Native vegetation – modification and clearing

The entirety of the project area (including the future development site) will be cleared and/or modified as part of the proposed development to a low threat state, as depicted in Figure 3.

Lot 137 was previously a caravan park, with remanence of the previous land use visible throughout the site in the form of bitumen driveways and paved caravan hardstands. Lot 137 has previously been parkland cleared, and predominantly consists of sparsely retained trees, introduced shrubs and unmanaged grassland. On this basis, Strategen-JBS&G understands that clearing the project area will have limited impact on conservation significant species. A search of publicly available environmental data relating to the project area has been undertaken and is summarised in Table 1.

Table 1: Summary of environmental values

Environmental value	Mapped as occurring within or adjacent to the project area		Description
	Within	Adjacent	
Environmentally Sensitive Area	✗	✓	An Environmentally Sensitive Area is mapped as occurring 450 m to the south-east (Barragup Swamp Conservation Reserve).
Swan Bioplan Regionally Significant Natural Area	✗	✓	Swan Bioplan areas are mapped as occurring 500 m to the south-east of the project area associated with Barragup Swamp, and 200 m to the south-west.
Ecological linkages	Unknown	Unknown	N/A.
Wetlands	✗	✓	A Conservation Category Wetland is mapped as occurring 450 m to the south-east associated with Barragup Swamp Conservation Reserve.
Waterways	✗	✗	N/A.
Threatened Ecological Communities listed under the EPBC Act	Potentially	Potentially	The project area and adjacent areas are mapped as potentially containing Threatened Ecological Communities. The Endangered Banksia Woodlands of the Swan Coastal Plain TEC is mapped as being likely to occur within project area. However due to the degraded nature of the vegetation is considered unlikely to be present.
Threatened and priority flora	Unknown	Unknown	N/A.
Fauna habitat listed under the EPBC Act	Potentially	Potentially	With respect to Carnaby's Black Cockatoo, the project area (and adjacent areas) is mapped as containing: • possible breeding areas • confirmed roosting areas • potential feeding areas.
Threatened and priority fauna	Unknown	Unknown	N/A.
Bush Forever Site	✗	✗	N/A.
DBCA managed lands and waters (includes legislated lands and waters and lands of interest)	✗	✗	N/A.
Conservation covenants	✗	✗	N/A.

2.2 Revegetation / Landscape Plans

No revegetation is proposed as part of the proposal.

Future landscaping proposed will consist of low threat and managed gardens in accordance with *AS 3959—2018* Clause 2.2.3.2 (f) and Schedule 1 of the Guidelines (refer to Appendix A) as demonstrated in the landscaping plan (refer to Appendix B). The landscaping plan identifies planting of small shade trees, shrubs, low shrubs and groundcovers within narrow cells around the perimeter of the proposed development. Strategen-JBS&G considers the proposed landscaping to be low threat and excludable under Clause 2.2.3.2 (f) based on the following factors:

- proportion of low flammability groundcovers (i.e. succulents)
- distance between shrubs
- completely mulched surface between shrubs
- ongoing management in low threat state including removal of dead plant material.

In addition, the future development site (to the north/north-east of the service station) will be landscaped to and maintained in a low threat as condition of this BMP.

3. Bushfire assessment results

3.1 Assessment inputs

3.1.1 Vegetation classification

Strategen-JBS&G assessed classified vegetation and exclusions within the 150 m assessment area through on-ground verification on 26 February 2020 in accordance with *AS 3959—2018 Construction of Buildings in Bushfire-Prone Areas* (AS 3959; SA 2018) and the *Visual Guide for Bushfire Risk Assessment in Western Australia* (DoP 2016). Georeferenced site photos and a description of the vegetation classifications and exclusions are contained in Appendix C and depicted in Figure 3.

Regional vegetation surveys and mapping of the Swan Coastal Plain indicate that intact native vegetation east and southeast of the project area is contained within the Bassendean Complex – Central and South. This vegetation complex is described as:

- Vegetation ranges from woodland of jarrah (*Eucalyptus marginata*) – WA sheoak (*Allocasuarina fraseriana*) – banksia (Banksia spp.) to low woodland of paperbark (*Melaleuca spp.*) and sedgelands on the moister sites. This area includes the transition of jarrah (*Eucalyptus marginata*) to coastal blackbutt (*Eucalyptus todtiana*) in the vicinity of Perth.

Some indicator species identified in the Bassendean Complex – Central and South were identified within intact remnant vegetation and previously parkland cleared land during the site investigation. Classified vegetation identified within the project area and adjacent 150 m assessment area includes the following:

- Class A Forest: forest vegetation to the southeast within Lot 132 is dominated by banksia and sheoak with a shrubby understorey and jarrah overstorey
- Class B Woodland: woodland vegetation on-site and within Lot 202 which was previously parkland cleared
- Class D Scrub: scrub vegetation to the east within Lot 3 is dominated by tea-tree thicket with sparse banksia, introduced scrub species within Lot 2 and acacia, banksia and sheoak within Lot 157/Furnissdale Road reserve.
- Class G Grassland: unmanaged grassland vegetation on-site and managed grassland vegetation within surrounding special rural lots which is not required to be managed in perpetuity under the Shire's firebreak notice.

Exclusions identified within the project area and adjacent 150 m assessment area include the following:

- Clause 2.2.3.2 (e): non-vegetated areas (i.e. buildings, roads, mulched road verges, mineral earth firebreaks, driveways, carparks)
- Clause 2.2.3.2 (f): low threat vegetation (i.e. manicured lawns, managed gardens, slashed road verges).

Post-development vegetation classifications and exclusions depicted in Figure 3 will be achieved through clearing/vegetation modification within the project area, which will modify on-site woodland vegetation to a low threat state (i.e. excluded under Clauses 2.2.3.2 (e) and (f)).

3.1.2 Effective slope

Strategen-JBS&G assessed effective slope under classified vegetation within the 150 m assessment area through on-ground verification on 26 February 2020 in accordance with AS 3959. Results were cross-referenced with DPIRD 2 m contour data and are depicted in Figure 4.

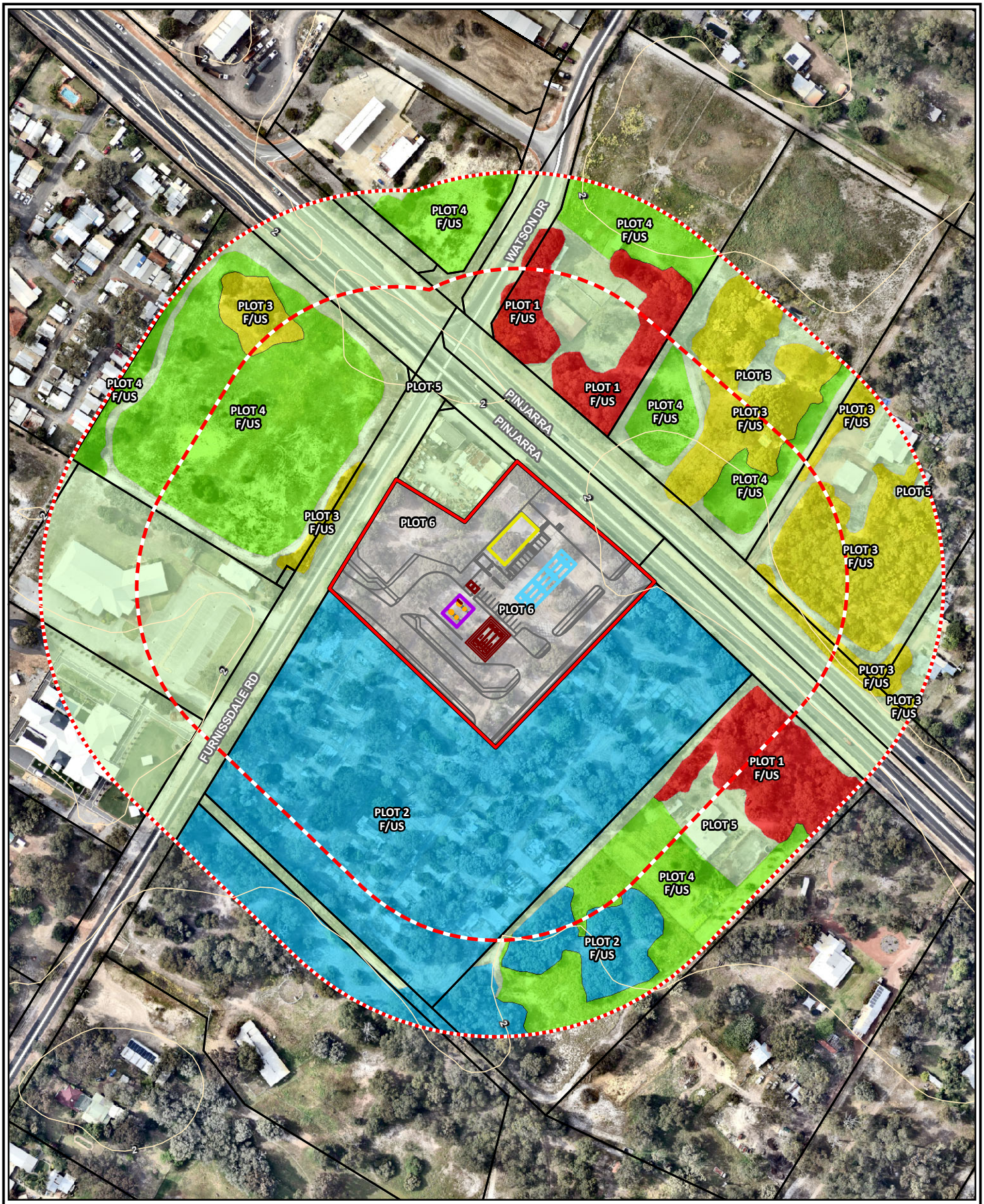
Site observations indicate that land within the project area and adjacent 150 m assessment area is predominantly flat. All classified vegetation has therefore been assigned an effective slope of flat/upslope (see Table 2).

3.1.3 Summary of inputs

Figure 4 illustrates the anticipated post-development vegetation classifications and exclusions following completion of development works and associated clearing and implementation of low threat landscaping/APZs throughout the project area and adjacent 150 m. The post-development vegetation classifications/exclusions and effective slope are summarised in Table 2.

Table 2: Summary of post-development vegetation classifications, exclusions and effective slope

Vegetation plot	Vegetation classification	Effective slope	Comments
1	Class A Forest	Flat/upslope (0°)	Forest vegetation dominated by banksia and sheoak with a multi-tiered fuel structure including a shrubby understorey, scrub mid-storey and jarrah overstorey.
2	Class B Woodland	Flat/upslope (0°)	Woodland vegetation dominated by sparse eucalypts with a grassy understorey and lacking a shrubby middle layer. Understorey regrowth on-site is limited given the remnant caravan park infrastructure (i.e. network of bitumen driveways and paved hardstands).
3	Class D Scrub	Flat/upslope (0°)	Scrub vegetation predominantly 2-6 m in height dominated in some areas by tea tree thicket with sparse banksia, and by introduced scrub species and remnant acacia in other areas.
4	Class G Grassland	Flat/upslope (0°)	Unmanaged grassland vegetation on-site and managed grassland vegetation within surrounding special rural lots which is not required to be managed in perpetuity under the Shire's firebreak notice.
5	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Non-vegetated areas (i.e. buildings, roads, mulched road verges, mineral earth firebreaks, driveways, carparks) and low threat vegetation (i.e. manicured lawns, managed gardens, slashed road verges).
6	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Area to be modified to a low threat state (full extent of project area).



Legend

- Project area
- 100m assessment area
- 150m assessment area
- Cadastral boundary

Proposed layout

- Proposed car dispensers and car fuel canopy
- Proposed convenience
- Truck dispenser
- Truck fuel canopy
- Underground fuel tanks
- Plan layout

Vegetation classification

- Class A Forest
- Class B Woodland
- Class D Scrub
- Class G Grassland
- Excluded under Clauses 2.2.3.2 (e) & (f)
- Area to be modified to a low threat state
- Topographic contours (mAHD)
- Roads (MRWA)

Scale 1:2,600 at A4 — 0 25 50 metres

Coord. Sys. GDA 1994 MGA Zone 50

Job No: 61981

Client: Yolk Property Group

Version: A | Date: 08-Dec-2021

Drawn By: jcrute | Checked By: CT

Petrol Station,
630 Pinjarra Road,
Furnissdale, WA

VEGETATION CLASSIFICATION AND EFFECTIVE SLOPE

FIGURE 3

strategen JBS&G

File Name: W:\Projects\1)Open\Yolk Property Group\61981 Lot 137 Pinjarra Rd Furnissdale BMP update\GIS\Maps\R01_Rev_A\61981_03_VegClass.mxd
Image Reference: www.nearmap.com© - Imagery Date: 24. October 2021.

3.2 Assessment outputs

3.2.1 Bushfire Attack Level (BAL) contour assessment

Strategen-JBS&G has undertaken a BAL contour assessment in accordance with Method 1 of AS 3959 for the project area (Figure 4). The Method 1 procedure incorporates the following factors:

- state-adopted FDI 80 rating
- vegetation classification
- effective slope
- distance maintained between proposed development areas and the classified vegetation.

The BAL rating gives an indication of the level of bushfire attack (i.e. the radiant heat flux) that may be received by proposed future development and subsequently informs the standard of building construction and/or setbacks required for proposed habitable development to potentially withstand such impacts and is used a determination of suitable siting of habitable development (i.e. in BAL-29 or lower).

The BAL contours are based on:

- the post-development vegetation classifications at maturity and effective slope of vegetation to be retained, as observed at the time of inspection
- implementation and maintenance of the paved and low threat landscaped portions of the project area in accordance with the development layout (see Figure 4) and landscaping plan (see Appendix B) to achieve exclusion under Clauses 2.2.3.2 (e) and (f) of AS 3959
- separation distances from classified vegetation achieved in line with the site plan.

Should there be any changes in development design or classified vegetation extent that results in a modified BAL outcome, then the BAL contours will need to be reassessed.

Results of the overall BAL contour assessment are detailed in Table 3 and illustrated in Figure 4. On completion of development, the highest BAL applicable to the proposed habitable building and high-risk elements of the service station is BAL-12.5.

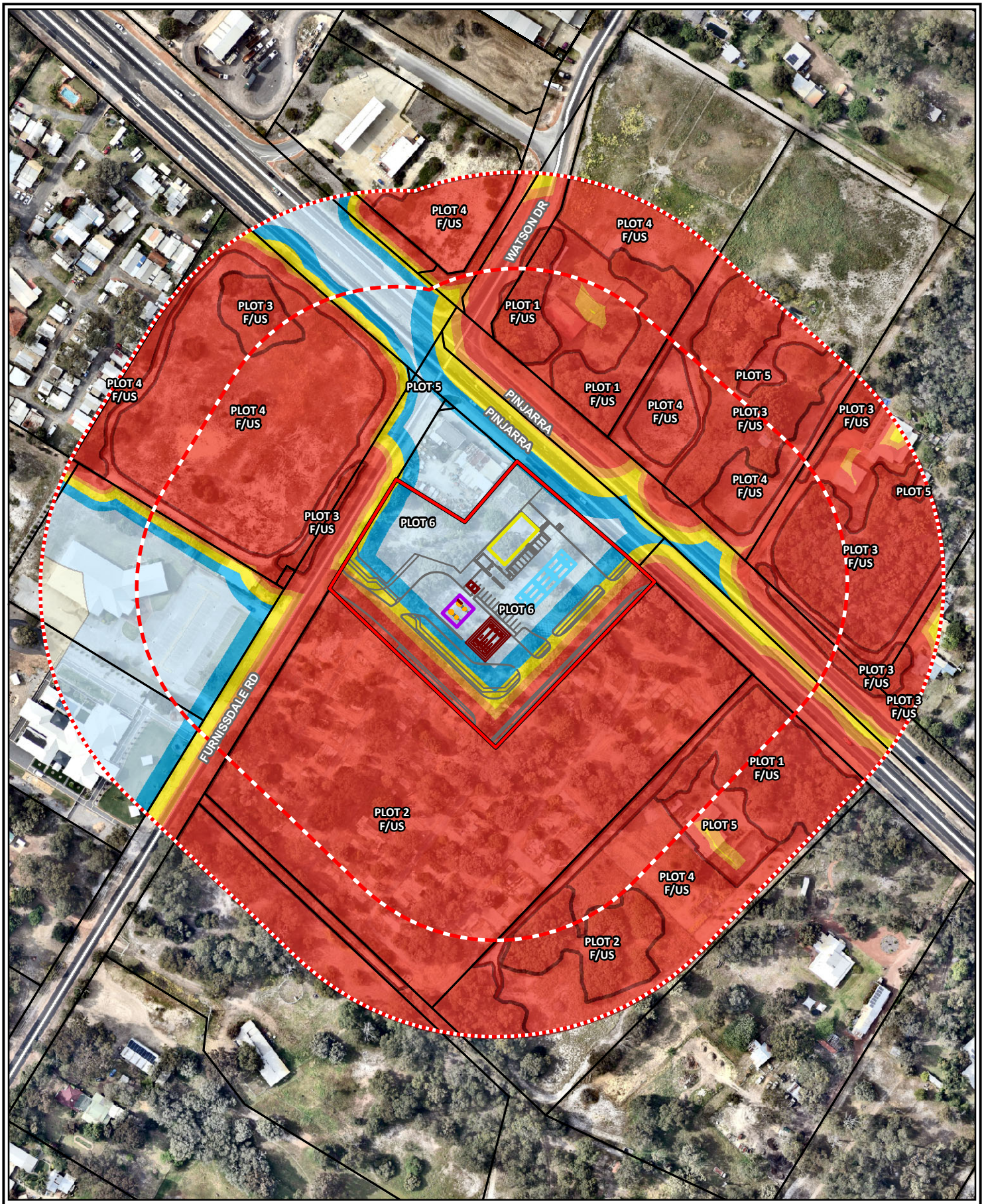
Table 3: BAL contour assessment results

Method 1 BAL determination				
Plot	**Vegetation classification**	**Effective slope**	**Separation distance (to nearest building/element)**	**Highest BAL (to nearest building/element)**
1	Class A Forest	Flat/upslope (0°)	59 m	BAL–12.5
2	Class B Woodland	Flat/upslope (0°)	31 m	BAL–12.5
3	Class D Scrub	Flat/upslope (0°)	59 m	BAL–12.5
4	Class G Grassland	Flat/upslope (0°)	66 m	BAL–Low
5	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A
6	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A

Table 4 lists the BAL applicable to each building or element within the proposed development.

Table 4: BAL applicable to each building/element

Building / element	BAL
Convenience building (habitable building)	BAL–12.5
Underground fuel tank farm (3 tanks)*	BAL–19
Underground LPG tank*	BAL–12.5
Car canopy dispensers	BAL–12.5
Truck canopy and fuel dispensers	BAL–12.5
NOTES: *BAL assessments do not apply to underground infrastructure but the BALs have been included in this table for reference.	



Legend

- Project area
- 100m assessment area
- 150m assessment area
- Cadastral boundary
- Classified vegetation

BAL contours

- BAL FZ
- BAL 40
- BAL 29
- BAL 19
- BAL 12.5
- BAL Low

Proposed layout

- Proposed car dispensers and car fuel canopy
- Proposed convenience
- Truck dispenser
- Truck fuel canopy
- Underground fuel tanks
- Plan layout
- Roads (MRWA)

Scale 1:2,600 at A4 (0 25 50 metres)		**Petrol Station, 630 Pinjarra Road, Furnissdale, WA**
Coord. Sys. GDA 1994 MGA Zone 50		**BAL CONTOUR MAP**
Job No: 61981		
Client: Yolk Property Group		**FIGURE 4**
Version: A	Date: 08-Dec-2021	strategen JBS&G
Drawn By: jcrute	Checked By: CT	

File Name: W:\Projects\1)Open\Yolk Property Group\61981 Lot 137 Pinjarra Rd Furnissdale BMP update\GIS\Maps\R01_Rev_A\61981_04_BALs.mxd
Image Reference: www.nearmap.com© - Imagery Date: 24. October 2021.

4. Identification of bushfire hazard issues

4.1 Bushfire context

The greatest threat to the proposed development is from woodland vegetation adjacent to the project area and forest vegetation, retained within nearby special rural properties. Separation to the forest vegetation is provided by Pinjarra Road which forms a permanent and substantial buffer to the proposed development. Impacts from woodland vegetation within Lot 132 are limited as on-site fuel accumulation and regrowth are restricted by a network of bitumen private driveways/paved hardstands, which will not enable the accumulation of a significant fuel structure.

Vegetation within the remainder of the 150 m assessment area, and throughout the surrounding Furnissdale landscape, comprises predominantly woodland and scrub vegetation interspersed between areas of managed and unmanaged grassland. This vegetation is linked with on-site woodland vegetation and has the potential to support fire runs of over 1 km. However, fire behaviour within the landscape has limited potential to escalate over the course of the fire run as there are a number of roads, firebreaks and well-maintained properties that fragment understorey fuels and will reduce the intensity of a bushfire. Notwithstanding, bushfire behaviour has the potential to impact the project area with radiant heat and ember attack.

4.2 Bushfire hazard issues

It is acknowledged that the bushfire risk to the proposed development posed by the hazards identified in Section 4.1 can be managed through standard application of acceptable solutions under the Guidelines and AS 3959, as well as through a direct bushfire suppression response if required. Bushfire mitigation strategies applicable to the proposed development are discussed below:

1. Current woodland vegetation on Lot 137 identified in Figure 3 as 'area to be modified to a low threat state' will exclude the vegetation from classification. Conditional ongoing management will be required to ensure that this land is altered to and managed to remain as low threat vegetation on an ongoing basis.
2. The proposed development will be serviced by the existing public road network with proposed crossovers to Pinjarra Road and Furnissdale Road, which will provide future occupants with two access routes to two different destinations.
3. The proposed development will be serviced by an emergency water supply in the form of existing reticulated town main supply with street hydrants along Pinjarra Road (see Figure 4).
4. The proposed development constitutes a high-risk land uses and requires additional consideration of bushfire management in accordance with Policy Measure 6.6 of SPP 3.7. A BRMP has been prepared to support the DA in this regard.

A compliance assessment against the bushfire protection criteria of the Guidelines is provided in Section 5.1 of this BMP to further demonstrate application of the above measures in accordance with Guideline acceptable solutions.

5. Assessment against the bushfire protection criteria

5.1 Compliance table

An acceptable solutions assessment against the bushfire protection criteria is provided in Table 5.

Table 5: Compliance with the bushfire protection criteria of the Guidelines

Bushfire protection criteria	Method of compliance Acceptable solutions	Proposed bushfire management strategies	Compliance achieved
Element 1: Location	A1.1 Development location	The BAL contour map (Figure 4) indicates that all proposed lots can achieve BAL-29 or lower.	✓
Element 2: Siting and design	A2.1 Asset Protection Zone	On completion of development, the developed portion of project area will be paved, landscaped and maintained in a low threat state in accordance with Schedule 1 of the Guidelines (refer to Appendix A) and Clause 2.2.3.2 (e) and (f) of AS 3959 as per the landscaping plan (see Appendix B). The future development area will also be reduced to and managed in a low threat condition in accordance with Clause 2.2.3.2 (e) and (f) of AS 3959 on an ongoing basis as a condition of this BMP.	✓
Element 3: Vehicular access	A3.1 Two access routes	A combination of existing perimeter roads (i.e. Pinjarra Road and Furnissdale Road), two proposed crossovers to Pinjarra Road and Furnissdale Road and the proposed trafficable surface of the project area will provide all occupants with the option of travelling to more than two different destinations (see Figure 4). In this regard, the proposed development is provided with two access routes which meets the requirements of Acceptable Solution A3.1 (see Appendix D).	✓
	A3.2 Public road	No public roads are proposed as part of the development.	N/A
	A3.3 Cul-de-sac (including a dead-end-road)	No cul-de-sacs are proposed as part of the development and the project area is not serviced by an existing cul-de-sac.	N/A
	A3.4 Battle-axe	No battle-axes are proposed as part of the development and the project area is not serviced by an existing battle-axe.	N/A
	A3.5 Private driveway longer than 50 m	The proposed habitable building (convenience building) will be located within 50 m of a public road (i.e. Pinjarra Road). The project area will be serviced by crossovers from Pinjarra Road and Furnissdale Road and a predominantly paved surface which enables fire appliances to safely turn around and exceeds the requirements of the Guidelines for private driveways (see Appendix D).	N/A
	A3.6 Emergency access way	The proposed development does not require Emergency Access Ways (EAWs) to provide through access to a public road.	N/A
	A3.7 Fire service access routes (perimeter roads)	The proposed development does not require fire service access routes (FSARs) to achieve access within and around the perimeter of the project area.	N/A
	A3.8 Firebreak width	Lot boundary firebreaks that are 3 m wide, with 4.5 m vertical clearance, are required to be installed and maintained within the balance of Lot 137 in accordance with the Shire of Murray annual firebreak notice as amended (see Appendix F). Gates sufficient in width to allow type 3.4 fire appliances to enter will need to be installed along the perimeter fencing of Lot 137 to ensure fire appliances can access the remainder of the subject lot.	✓

Bushfire protection	Method of compliance	Proposed bushfire management strategies	Compliance achieved
Element 4: Water	A4.1 Reticulated areas	The proposed development will be connected to reticulated water supply via extension of existing services from adjacent development in accordance with Water Corporations Design Standard 63 requirements (refer to Appendix D).	✓
	A4.2 Non-reticulated areas	N/A – the proposed development is located within an existing reticulated area.	N/A
	A4.3 Individual lots within non-reticulated areas (Only for use if creating 1 additional lot and cannot be applied cumulatively)	N/A – the proposed development is located within an existing reticulated area.	N/A

5.2 Additional management strategies

Strategen-JBS&G makes the following additional bushfire management recommendations to inform ongoing planning stages of the development and increase the level of bushfire risk mitigation across the site.

5.2.1 Management of future develompent area

The future development area to the north/north-east of the proposed service station development is to be established in a low threat state in accordance with Clause 2.2.3.2 (f) of AS 3959 on an ongoing basis. This land is expected to be developed at a later time in which case the vegetation will constitute non-vegetated and low threat elements excludable under Clauses 2.23.2 (e) & (f) which will be acconuted for in a future/updated BMP.

5.2.2 Road verge fuel management

Existing and proposed road verges that have been excluded as low threat are to be managed to ensure the understorey and surface fuels remain in a low threat, minimal fuel condition in accordance with Clause 2.2.3.2 (f) of AS 3959. Ongoing road verge management is the responsibility of the Shire.

5.2.3 Building construction standards

The proposed development does not include any Class 1, 2, or 3 residential buildings and associated Class 10a structures, and as such, there is no statutory requirement for proposed buildings to meet the construction requirements of AS 3959. It is recommended, however, that where practical, non-residential habitable buildings also adopt bushfire construction measures relevant to the assessed BAL rating.

5.2.4 High-risk land uses

The proposed development constitutes a high-risk land use. On this basis, a Bushfire Risk Management Plan (BRMP) has been prepared to address the requirements of Policy Measure 6.6. The BRMP addresses bushfire risk management measures for flammable on-site hazards associated with the fuel storage component of the proposed development. The BRMP demonstrates that the risk associated with the proposed development is manageable.

5.2.5 Compliance with annual firebreak notice

The developer/land manager and prospective land purchasers are to comply with the current Shire of Murray annual firebreak notice as amended (refer to Appendix F).

The project area is zoned ‘Commercial’ and the remainder of Lot 137 is zoned ‘Service Commercial’, which are required to meet the following requirements of the Shire’s firebreak notice:

1. Where the area of land is more than 4001m2 in size, a three (3) metre wide firebreak shall be installed and maintained immediately inside all external boundaries of the land and also immediately surrounding all buildings situated on the land.
2. A three (3) metre wide private driveway is to be installed and maintained.

The Shire of Murray annual firebreak notice also requires that for properties subject to a BMP, compliance with all requirements of the BMP are required in addition to any further requirements of the firebreak notice.

6. Responsibilities for implementation and management of the bushfire measures

Implementation of the BMP applies to the developer, prospective landowners and the Shire to ensure bushfire management measures are adopted and implemented on an ongoing basis. A bushfire responsibilities table is provided in Table 6 to drive implementation of all bushfire management works associated with this BMP.

Table 6: Responsibilities for implementation and management of the bushfire measures

Implementation/management table	
Developer – prior to occupation of buildings	
No.	Implementation action
1	Establish low threat landscaping as per Clause 2.2.3.2 (e) and (f) across the project area to the standard stated in this BMP.
2	Construct the proposed paved extent within the project area and crossovers to Pinjarra Road and Furnissdale Road to the standards stated in this BMP.
3	Implement all management measures proposed within the Strategen-JBS&G (2021) BRMP.
Landowner/occupier – ongoing	
No.	Implementation action
1	Maintain project area in a low threat state as per Clause 2.2.3.2 (e) and (f) through spraying of weeds. mowing and ongoing pruning of vegetation.
2	Comply with all management measures proposed within the Strategen-JBS&G (2021) BRMP.
3	Comply with the Shire of Murray annual firebreak notice as amended.
Local government – ongoing management	
No.	Implementation action
1	Maintain verges excluded from classification in a low threat minimal fuel condition as per Clause 2.2.3.2 (f) of AS 3959.

7. References

Department of Fire and Emergency Services (DFES) 2019, *Map of Bush Fire Prone Areas*, [Online], Government of Western Australia, available from: https://maps.slip.wa.gov.au/landgate/bushfireprone/ , [31/03/2020].

Department of Planning (DoP) 2016, *Visual guide for bushfire risk assessment in Western Australia*, Department of Planning, Perth.

Standards Australia (SA) 2018, *Australian Standard AS 3959–2018 Construction of Buildings in Bushfire-prone Areas*, Standards Australia, Sydney.

Strategen-JBS&G 2021, *Bushfire Risk Management Plan: Lot 137 (630) Pinjarra Road, Furnissdale (Rev 0)*, Strategen-JBS&G, Bunbury/Perth.

Western Australian Planning Commission (WAPC) 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth.

Western Australian Planning Commission (WAPC) 2017, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.3 August 2017, Western Australian Planning Commission, Perth.

8. Limitations

Scope of services

This report ("the report") has been prepared by Strategen-JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen-JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen-JBS&G has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen-JBS&G has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen-JBS&G has also not attempted to determine whether any material matter has been omitted from the data. Strategen-JBS&G will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen-JBS&G. The making of any assumption does not imply that Strategen-JBS&G has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen-JBS&G disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

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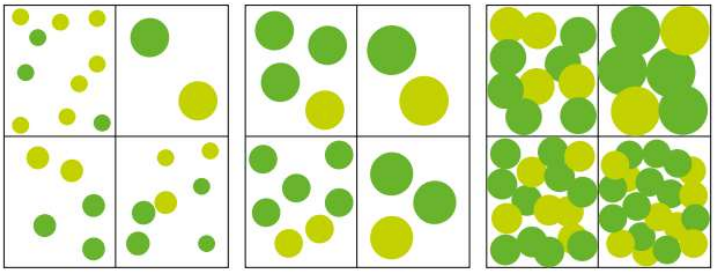
Appendix A APZ standards (Schedule 1 of the Guidelines)

Schedule 1: Standards for Asset Protection Zones

- **Fences:** within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.
- **Objects:** within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.
- **Fine Fuel load:** combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare.
- **Trees (> 5 metres in height):** trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy.



- **Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m2 in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.
- **Ground covers (<0.5 metres in height):** can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.
- **Grass:** should be managed to maintain a height of 100 millimetres or less.

Appendix B Landscaping plan

FURNISSDALE ROAD

PINJARRA ROAD

BOUNDARY 38.95M

3M ROAD WIDENING

RDRY 5.38M

BOUNDARY 20.21M

VERGE TREES TO BE REMOVED

BOUNDARY 41.68M

BOUNDARY 21.41M

FUTURE ACCESS TO BALANCE LOT

PROPOSED SITE AREA 2466 M²

BOUNDARY 21.14M

BOUNDARY 41,68M

BOUNDARY 18.95M

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

BOUNDARY 53.06M

1480

BOUNDARY 10.01M

BOUNDARY 119,36M

BOUNDARY 75.57M

FILL POINTS

U/GROUND LPG TANK

BIN STORE

PLANT AREA

PROPOSED CONVENIENCE 300m²

TRUCK CANOPY 4 DISPENSERS

10350

5150

3575

12500

25000

2500

5500

2600

PROPOSED 8m HIGH PYLON SIGN

BOUNDARY 56.11M

10M ROAD WIDENING

4800 1500 8900 1500 2000 4150 1500 4500 500 2500 13000

5400 6500 1000 5000 1900 7800 2400 2400 13000 2070

ACROD BAY, SHARED SPACE & KERB RAMP TO AS1428 & AS2890 REQS

10360

DRIVE-THRU KEEP CLEAR

12000 15000 7000

CAR CANOPY 8 DISPENSERS

10150

34000

U/GROUND FUEL TANKS

BUS

PROPOSED SITE AREA 5400 M²

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

11000 5000 6000

RDRY 5.68M

BOUNDARY 82.49M

BOUNDARY 10.01M

1650 2000 1150 2500 7400 2500 1150 2000 1650

BOUNDARY 119,53M

LANDSCAPE LEGEND

SHOPFRONT PAVING (CONCRETE)

FORECOURT PAVING

ZYGOPHYLLUM BILLARDIERII (COAST TWINLEAF)
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~0.6M
PLANTS TO SPREAD ~1M

BANKSIA DRYANDROIDES (DRYANDRA-LEAVED BANKSIA)
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~2M
PLANTS TO SPREAD ~2M

ANIGOZANTHOS 'BUSH SUNSET' (KANGAROO PAW - BUSH SUNSET)
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~1M
PLANTS TO SPREAD ~1M

SENECIO HYBRID TRIDENT BLUE
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~0.3M
PLANT SPREAD ~1M

ALYXIA BUXIFOLIA (SEA BOX)

75MM MULCH COVER
MATURE GROWTH HEIGHT ~3M
PLANT SPREAD ~3M

ACACIA PYCNANTHA (GOLDEN WATTLE)

75MM MULCH COVER
MATURE GROWTH HEIGHT ~5M
PLANT SPREAD ~5M

A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE, W.A.

drawn: MS
checked: NP
scale: 1:250 @ A1
date: 08.10.2021
description: PROPOSED LANDSCAPING PLAN
project no: 68.21
dwg no: SK09
rev: A

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Email: admin@hcparch.com

Appendix C Vegetation plot photos and description

Photo ID: 1a

Photo ID: 1b

Photo ID: 1c

Photo ID: 1d

Plot number		Plot 1
Vegetation classification	**Pre-development**	Class A Forest
	Post-development	Class A Forest
Description / justification		Forest vegetation dominated by banksia and sheoak with a multi-tiered fuel structure including a shrubby understorey, scrub mid-storey and jarrah overstorey.

Photo ID: 2a

Photo ID: 2b

Photo ID: 2c

Photo ID: 2d

Plot number		Plot 2
Vegetation classification	**Pre-development**	Class B Woodland
	Post-development	Class B Woodland
Description / justification		Woodland vegetation dominated by sparse eucalypts with a grassy understorey and lacking a shrubby middle layer. Understorey regrowth on-site is limited given the remnant caravan park infrastructure (i.e. network of bitumen driveways and paved hardstands).

Photo ID: 3a

Photo ID: 3b

Photo ID: 3c

Photo ID: 3d

Photo ID: 3e

Plot number		Plot 3
Vegetation classification	**Pre-development**	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Scrub vegetation predominantly 2-6 m in height dominated in some areas by teatree thicket with sparse banksia, and by introduced scrub species and remnant acacia in other areas.

Photo ID: 4a

Photo ID: 4b

Photo ID: 4c

Photo ID: 4d

Plot number		Plot 4
Vegetation classification	**Pre-development**	Combination of Class G grassland and excluded – Low threat (Clause 2.2.3.2 [f])
	Post-development	Class G Grassland
Description / justification		Unmanaged grassland vegetation on-site and managed grassland vegetation within surrounding special rural lots which is not required to be managed in perpetuity under the Shire's firebreak notice.

Photo ID: 5a

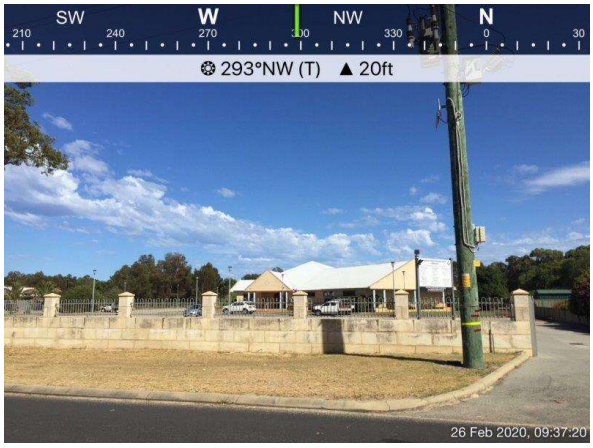


Photo ID: 5b

Photo ID: 5c

Photo ID: 5d

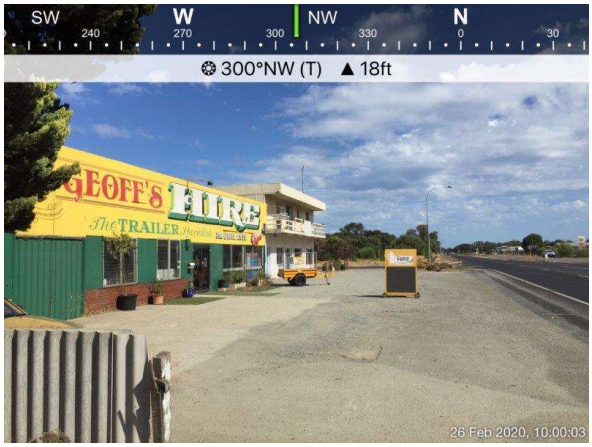


Photo ID: 5e

Photo ID: 5f

Plot number		Plot 5
Vegetation classification	**Pre-development**	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
	Post-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
Description / justification		Non-vegetated areas (i.e. buildings, roads, mulched road verges, mineral earth firebreaks, driveways, carparks) and low threat vegetation (i.e. manicured lawns, managed gardens, slashed road verges).

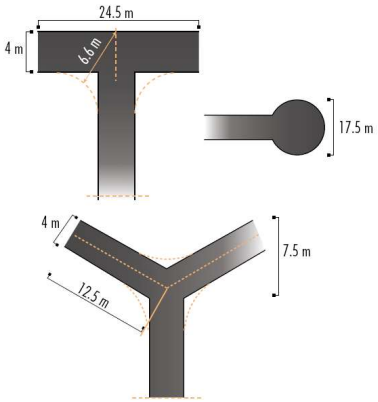
Photo ID: 6a

Photo ID: 6b

Plot number		Plot 6
Vegetation classification	**Pre-development**	Class B Woodland
	Post-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
Description / justification		Area to be modified to a low threat state.

Appendix D Vehicular access technical standards of the Guidelines

Two access routes	
Acceptable solution A3.1	Two different vehicular access routes are provided, both of which connect to the public road network, provide safe access and egress to two different destinations and are available to all residents/the public at all times and under all weather conditions.
Explanatory note E3.1	Two access routes: It is essential that residents and the community, as well as emergency services, have safe access and egress from both the subdivision and individual houses/development. It is the developer's responsibility, as part of the Bushfire Hazard Level assessment, to ensure that subdivision and development design allow for bushfire protection criteria to be met regarding driveways and turnaround areas at house sites. It is also necessary that the public have two safe access options leading to two different destinations that can withstand all weather conditions. This applies to access routes leading into a subdivision, as well as those within a subdivision. This acceptable solution allows for the situation if a vehicular access/egress route to a subdivision or lot becomes blocked during a fire then there is an alternative vehicular access/egress route which provides access to a different destination. Accordingly, road widening in lieu of providing two different access routes should not be supported. All access should be suitable to accommodate type 3.4 fire appliances (i.e. fire trucks with a four-wheel-drive 7-tonne chassis). Two-way access should be provided as a public road; however, where a public road cannot be provided, (this will need to be demonstrated by the proponent providing justification for why this cannot be achieved) an emergency access way may be considered

Private driveway longer than 50 metres	
Acceptable solution A3.5	A private driveway is to meet all of the following requirements: • Requirements in Table 1, Column 3 • Required where a house site is more than 50 metres from a public road • Passing bays: every 200 metres with a minimum length of 20 metres and a minimum width of two metres (i.e. the combined width of the passing bay and constructed private driveway to be a minimum six metres) • Turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres (i.e. kerb to kerb 17.5 metres) and within 50 metres of a house • Any bridges or culverts are able to support a minimum weight capacity of 15 tonnes • All-weather surface (i.e. compacted gravel, limestone or sealed).
Explanatory note E3.5	For a driveway shorter than 50 metres, fire appliances typically operate from the street frontage however where the distance exceeds 50 metres, then fire appliances will need to gain access along the driveway in order to defend the property during a bushfire. Where house sites are more than 50 metres from a public road, access to individual houses and turnaround areas should be available for both conventional two-wheel drive vehicles of residents and type 3.4 fire appliances. Turn-around areas should be located within 50 metres of a house. Passing bays should be available where driveways are longer than 200 metres and turn-around areas in driveways that are longer than 500 metres. Circular and loop driveway designs may also be considered. These criteria should be addressed through subdivision design. Passing bays should be provided at 200 metre intervals along private driveways to allow two-way traffic. The passing bays should be a minimum length of 20 metres, with the combined width of the passing bay and the access being a minimum of six metres. Turn-around areas should allow type 3.4 fire appliances to turn around safely (i.e. kerb to kerb 17.5 metres) and should be available at the house sites and at 500 metre intervals along the driveway. 

Technical requirement	1	2	3	4	5
	Public road	Cul-de-sac	Private driveway longer than 50 m	Emergency access way	Fire service access routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal distance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5
Maximum grade <50 m	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius	8.5	8.5	8.5	8.5	8.5
* Refer to E3.2 Public roads: Trafficable surface					

Appendix E Water technical standards of the Guidelines

Reticulated areas	
Acceptable solution A4.1	The subdivision, development or land use is provided with a reticulated water supply in accordance with the specifications of the relevant water supply authority and Department of Fire and Emergency Services.
Explanatory note E4.1	Water supply authorities in Western Australia include the Water Corporation, Aqwest and the Busselton Water Board. The Water Corporation's 'No. 63 Water Reticulation Standard' is deemed to be the baseline criterion for developments and should be applied unless local water supply authorities' conditions apply.

Appendix F Shire of Murray annual firebreak notice

Shire of Murray

Firebreak Notice and Bushfire Information

2020 - 2021

Report All Fires: Phone 000

Important Dates

Restricted Burning Time One

Permits Required
1 October — 30 November (inclusive)

Permits: Permit Issuing Officer — details page five

Fire Prevention Work Due

Installed on or before 30 November
Maintained up to and including 30 April

Prohibited Burning Time

Burning Prohibited
1 December — 31 March (inclusive)

Restricted Burning Time Two

Permits Required
1 April — 15 May (inclusive)

Permits: Permit Issuing Officer — details page five

Note

- Unseasonal weather conditions may necessitate a variation to the dates above.
- Burning is prohibited on days where the Fire Danger Rating is Very High or above and if either a Total Fire Ban/Harvest and Vehicle Movement Ban is declared.
- Prior to any burning, please advise the Department of Fire and Emergency Services' Communication Centre on 08 9395 9209 as well as a Permit Issuing Officer (page five).
- Please monitor the Shire's website murray.wa.gov.au or contact the Shire's Ranger and Emergency Services on 08 9531 7777.

Camping/Cooking/ Garden Refuse

Outdoor Cooking

Gas and Electric Barbeques

Permitted at any time.

Solid Fuel Barbecues, Spit Roasts, Webers, Pizza Ovens and Other Cooking Fires

Prohibited Burning Time:

× Prohibited at all times.

Restricted Burning Times:

× Prohibited when the Fire Danger Rating is Very High or above, or when a Total Fire Ban has been declared.

✓ Permitted at all other times, if constructed in a way which prevents the escape of sparks or burning material and is within a three (3) metre fuel free zone.

✓ Somebody must be in attendance at all times and a means of extinguishing the fire must be on hand.

Burning of Garden Refuse or Rubbish

Includes incinerators and on the ground.

Prohibited Burning Time:

× Prohibited at all times.

Restricted Burning Times:

× Prohibited on land < 4,000m^2.

× Prohibited when the Fire Danger Rating is Very High or above or if a Total Fire Ban has been declared.

✓ Permitted at all other times on land ≥ 4,000m^2: One small heap (up to one (1) cubic metre) may be burnt on the ground, without a 'Permit to Set Fire to the Bush', between 6:00pm and 11:00pm but only if it is completely extinguished before midnight on the same day, a five (5) metre firebreak has been cleared and at least one able bodied person remains in attendance.

The Shire of Murray Health Local Law prohibits the burning of the following materials which cause the generation of smoke or odour in such quantities as to cause a nuisance to other persons:

× Plastic
× Rubber
× Food scraps
× Green garden materials

Smoke Management

Considerations prior to burning:

- Weather conditions — Always check with the Bureau of Meteorology for haze alerts and weather conditions in your area.
- Tell your neighbours — Give sufficient notice of your intention to burn to ensure adequate preparation time especially for relocating any persons with respiratory issues.
- Condition of refuse — Only burn dry dead material to minimise the amount of smoke produced.
- Control the load — Do not burn more than you can manage, commence with a smaller fire and gradually add more material.

Residents are encouraged to remove and dispose of potential flammable material — bush, garden rubbish or refuse, from their properties before the onset of summer.

Example of Dry Burn

Permit to Burn

During Restricted Burning Times, a Permit to Burn is required and is obtainable free of charge from:

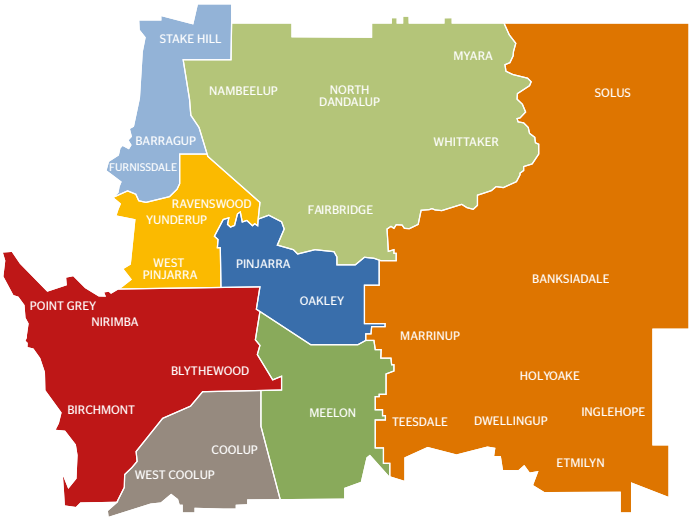
- Local Bush Fire Brigade Fire Control Officers
- Locality Permit Issuing Officer

Note:

- No permits are issued during the Prohibited Burning Time.
- Permits to Burn **will not** be issued in relation to properties < 4,000m^2.
- Permit holders are required to adhere to all conditions on the permit.
- Special conditions may apply.

Even when a Permit to Burn has been issued, **no fire is to be lit when the fire danger rating is Very High or above.**

Permit Issuing Officer Contact Details



Zone 1 Jim Camplin | 0409 909 063

Zone 2 Robert Wilson | 0417 916 468
Christine Thompson | 0429 447 341
Brian Bird | 0417 081 781

Zone 3 Peter Thurkle | 0427 882 201
Michael Webster | 0439 920 882
Brendan Webster | 0418 930 986
Lorraine Webster | 0448 135 671

Zone 4 Kevin Jones | 0417 996 806

Zone 5 Ben Armstrong | 0429 777 500
David Turner | 0427 775 914

Zone 6 Lance Pitter | 0438 246 500

Zone 7 Douglas McLarty | 0407 728 446

Zone 8 Chris Sattler | 0428 625 066

Stay Informed

EmergencyWA

emergency.wa.gov.au

Total Fire Bans

- Total Fire Ban Information Line 1800 709 355
- dfes.wa.gov.au
- emergency.wa.gov.au
- ABC720AM Local Radio

Harvest and Vehicle Movement Bans

- Shire of Murray 08 9531 7777
- ABC720AM Local Radio
- Local Fire Control Officer

SMS Alerts

Broadcast of local Harvest and Vehicle Movement Bans, Total Fire Bans and other information:

Email: mailbag@murray.wa.gov.au

Please note:

SMS alerts do not include alerts about fires or other emergencies.

Fire Danger Ratings

The Fire Danger Rating (FDR) is based on forecast weather conditions and offers advice about the level of bushfire threat on a particular day. When the rating is High, the threat of a bushfire increases.

If the FDR is Extreme or Catastrophic, residents should leave the day or hours before a fire might threaten, as this is the best option for survival.

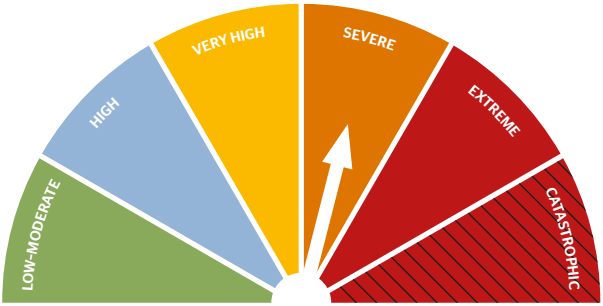
Shire of Murray Fire Weather District

- Lower West Coast
- Lower West Inland

Daily Fire Danger Rating (FDR)

- dfes.wa.gov.au
- bom.gov.au/wa
- emergency.wa.gov.au

Understanding Fire Danger Ratings



CATASTROPHIC **100+**

Total Fire Bans will be declared. Some fires will be unpredictable, difficult to control and fast moving. A well prepared, well constructed and actively defended home may not survive a fire.

EXTREME **75-99**

Total Fire Bans will be declared. Some fires will be unpredictable, difficult to control and fast moving. A well prepared, well constructed and actively defended home may not survive a fire.

SEVERE **50-74**

Total Fire Bans are likely. Some fires will be unpredictable, difficult to control and fast moving.

VERY HIGH **32-49**

Total Fire Bans are likely. Some fires will be unpredictable, difficult to control and may be fast moving.

HIGH **12-31**

Fires can be controlled but there is still a potential threat.

LOW-MODERATE **0-11**

Fires can be easily controlled and are slow moving.

Bans

Total Fire Ban

A Total Fire Ban (TFB) is declared by the Department of Fire and Emergency Services (DFES) following consultation with local governments because of extreme weather conditions or when widespread fires are seriously stretching firefighting resources.

During a TFB the lighting of any fires in the open air and any other activities that may start a fire, are prohibited, this includes:

- × All open air fires for the purpose of cooking or camping (i.e. wood fuel barbeques, candles and pizza ovens).
- × Incinerators, welding, grinding, soldering or gas cutting, angle grinders and lawnmowers.

Penalty: Up to $25,000 fine and/or a 12 month jail term.

Exemptions may be granted by DFES and must be requested in writing.

Harvest and Vehicle Movement Ban

Harvest and Vehicle Movement Bans (HVMB) are imposed by local government under the *Bush Fires Regulations 1954* Section 38A, and/or Section 24C, when prevailing and/or anticipated weather conditions and/or when availability and/or response capacity of the local firefighting resources are reduced.

A HVMB may be imposed for any length of time but is generally imposed for 'heat of the day' periods and may be extended or revoked as weather conditions change.

During a HVMB the use of the following items is prohibited, in order to mitigate the associated risk of causing or contributing to the spread of a bushfire:

- × Engines, vehicles, plant and machinery.

Preparing Your Property

Preparing for fires is essential to living in our fire prone landscape. Having a **plan** is the primary step to ensuring the survivability of your property and the welfare of you and your family, including pets and livestock.

In a bushfire, every minute counts especially the next five. Visit **firechat.wa.gov.au** to prepare a plan, by having a five minute fire chat with your family.

It will be too late to prepare your property when a serious fire is threatening. **Fuel loads** influence bushfire intensity.

If you are planning to build or to undertake any building work, you are advised to comply with Australian Standard AS 3959 Building in Bush Fire Prone Areas.

Public utilities such as telephone, power and water supplies are often damaged during major bushfires and may not be available to you when you need them.

If you are well prepared, your property has a greater chance of surviving a bushfire. Having an Asset Protection Zone is one way to ensure this.

Asset Protection Zone

Asset Protection Zone (APZ) is the area within 20 metres, measured from any external wall, of any habitable building. The zone is within the boundaries of the lot on which the habitable building is situated.

Where an APZ is required as part of an approved Bushfire Attack Level (BAL) assessment, it must be maintained in accordance with the BAL report. A BAL report is required as part of all new planning and/or building license approvals for habitable buildings constructed in bushfire prone areas.

Shire of Murray planning approval is not required for the purpose of implementing an APZ.

Note: Building Protection Zone and Asset Protection Zone are synonymous.

Within the APZ, ensure:

- Tree crowns are a minimum of 10 metres apart.
- Low trees are pruned to a height of two (2) metres.
- The fuel load (flammable material) is reduced and maintained to a height of less than five (5) centimetres or less than two (2) tonnes per hectare.
- No tall shrubs or trees are located within two (2) metres of a building (including windows).
- Fences and sheds are constructed using non-combustible materials (e.g. colorbond iron, brick, limestone).
- Sheds or other outbuildings do not contain flammable materials.
- Tall shrubs are not planted in clumps within three (3) metres of a habitable building.
- Tree crowns do not overhang a dwelling and shrubs and trees do not have dead material within the plant.
- Lawns are kept short and green where possible.

Alternatives to Burning

There are a range of alternatives to burning waste which will not harm the environment or cause health problems for you or your neighbours.

- Grass can be slashed, grazed or reduced with herbicide to decrease fuel loads. This may be a practical alternative particularly if erosion is a concern or in areas which are difficult to access.
- Ratepayers and residents are encouraged to dispose of green waste and garden refuse via the two annual Green Waste Verge Collections.
- Shire of Murray ratepayers and residents are also able to dispose of their green waste and garden refuse at the Corio Road and Dwellingup Waste Transfer Stations.
- Garden refuse (particularly grass clippings, leaves and twigs) can also be used as a mulch or compost in the garden to improve soils and the growth of plants.

  If you have large quantities of green waste (branches, tree trunks) you can arrange for mobile mulching services for the material on-site.

  Mulching and composting at home avoids the need to burn off and is an environmentally friendly way to deal with green waste. For information regarding composting, please contact the Shire of Murray Environmental Services on 08 9531 7777.

  Mulch piles should be no larger than five (5) cubic metres to reduce the risk of spontaneous combustion and piles should have a three (3) metre firebreak surrounding the pile.

Advice is Available

Further advice on when and how to burn off is available from your local Fire Control Officer, the Shire of Murray Community Emergency Services Coordinator or Ranger Services on 08 9531 7777.

Can We Access Your Property?

Did You Know?

In order for fire appliances to access your property safely, firebreaks are required to be no less than three (3) metres wide and have no less than four and a half (4.5) metres vertical clearance. Fire appliances must be able to fit through gates on your property.

The average fire appliance is nine (9) metres long.

Firebreak Notice

Bush Fires Act 1954

Notice is hereby given to all owners and/or occupiers of land within the Shire of Murray that Council pursuant to the powers conferred in Section 33(1), 25(1a) and 24G(2) of the *Bush Fires Act 1954*, approved the following requirements at its Ordinary Council Meeting on 25 June, 2020 to prevent the outbreak, spread or extension of a bush fire within the district and deal with other fire related preparedness and prevention matters.

Pursuant to Section 33 of the *Bush Fires Act 1954*, all owners and/or occupiers of land are required to carry out fire prevention work in accordance with the requisitions of this notice on or before 30 November each calendar year or within 14 days of the date of becoming the owner or occupier of the land, should this be after 30 November. All work specified in this notice is to be maintained up to and including 30 April the following calendar year.

Definitions

For the purpose of this notice the following definitions apply:

Authorised Officer — an employee of the Shire of Murray appointed as a Bush Fire Control Officer.

Bushfire Management Plan — a plan that has been developed and approved by the Shire of Murray to reduce and mitigate fire hazards within a particular subdivision, lot or other area of land anywhere in the district.

Driveway — the point of access (driveway) to a habitable building that is accessible for both conventional two wheel drive vehicles and firefighting appliances that is totally clear of all vegetation, trees, bushes, shrubs and other objects or things encroaching into the vertical axis of the driveway. If a driveway to a habitable building is longer than 50 metres in length from a public road, a clear turn around area with a 10 metre radius is to be provided.

Firebreak — an area of ground, of a prescribed width, constructed to a trafficable surface that is kept and maintained totally clear of all flammable material and includes the pruning and removal of any living or dead

trees, scrub or any other material encroaching into the vertical axis of the firebreak area.

Fire Management Plan — the same as Bushfire Management Plan.

Fuel Depot/Storage Area — an area of land, a building or structure where fuel (i.e. petrol, diesel, kerosene, liquid gas or any other fossil fuel) is kept in any container or other manner.

Flammable Material — any plant, tree, grass, vegetable, substance, object, thing or material (except living flora including live standing trees) that may or is likely to catch fire and burn or any other thing deemed by an Authorised Officer to be capable of combustion.

Habitable Building — a dwelling, work place, place of gathering or assembly and includes a building used for storage or display of goods or produce for sale by wholesale in accordance with classes 1 — 9 of the Building Code of Australia.

The term habitable building includes attached and adjacent structures like garages, carports, verandahs or similar roofed structure(s) that are attached to, or within six (6) metres of the dwelling or primary building.

Haystack — any collection of hay including fodder rolls placed or stacked that exceeds 100m^3 in size (e.g. five (5) metres x five (5) metres x four (4) metres), whether in a shed, other structure or in the open air.

Hills Landscape Protection Land — land zoned or defined in the Local Planning Scheme or Shire of Murray property rate database as Hills Landscape Protection Land.

Plantations — any area of planted pines, eucalypt, hardwood or softwood trees exceeding three (3) hectares in area.

Size — the size of an individual parcel or lot of land as recorded in the Shire of Murray property rate database.

- 1 hectare = 10,000m^2 = 2.47 acres
- 1 acre = 4,046.86m^2 = 0.4046 hectare

Trafficable — to be able to travel from one point to another in a four wheel drive fire appliance on a clear surface, unhindered without any obstruction that may endanger resources. A firebreak is not to terminate in a dead end without provision for egress to a safe place or a cleared turn around area of 17.5 metre radius.

Vertical Axis — a continuous vertical uninterrupted line at a right angle to the horizontal line of the firebreak to a minimum height of four and a half (4.5) metres from the ground.

Zoning — the land zoning description as recorded in the Shire of Murray property rate database.

Fire Prevention Requirements

1. Rural Zoned Land — 10 Hectares or Greater

a. A three (3) metre wide firebreak is to be constructed and maintained as close as practicable, but within 50 metres of the boundaries of the land, where the land abuts all made roads or railway reserves, Crown land which is the responsibility of a state agency, held in leasehold by a third party or otherwise unmanaged or a plantation.

b. If the rural zoned land abuts or adjoins any other type of zoned land a three (3) metre wide firebreak is to be constructed and maintained along that portion of the rural land that abuts the other zoned land and the firebreak(s) is to be located immediately, where practical inside the boundary of the rural land where it abuts the above mentioned land.

c. A three (3) metre wide firebreak is to be constructed and maintained immediately surrounding all outbuildings, sheds, haystacks, groups of buildings and fuel depots/storage areas situated on the land.

d. All flammable material within 20 metres of a habitable building is to be reduced and maintained to a height of less than five (5) centimetres.

e. A three (3) metre wide driveway to be installed and maintained.

2. **Special Rural, Special Residential, All Special Use, Farmlet, Hills Landscape Protection Land, Rural Townsite and Rural Zoned Land Less than 10 Hectares**

   a. Where the area of land in this zoning category is 10,000m^2 or less in size, all flammable material on the entire property is to be reduced and maintained to a height of less than five (5) centimetres.

   b. Where the area of land in this zoning category is between 10,001m^2 and 25,000m^2 in size all flammable material on the entire property is to be reduced and maintained to a height of less than five (5) centimetres. Alternatively, a firebreak is to be installed and maintained in accordance with clause 2(c).

   c. Where the area of land in this zoning category is 25,001m^2 or more in size, a three (3) metre wide firebreak is to be installed and maintained immediately:

      i. Inside all external boundaries of the land.

      ii. Around all outbuildings, sheds, haystacks, groups of buildings and fuel depots/storage areas situated on the land.

      iii. All flammable material within 20 metres of a habitable building is to be reduced and maintained to a height of less than five (5) centimetres.

   d. If land within this zoning category adjoins any of the land described in Clause 3, all flammable material shall be reduced and maintained to a height of less than five (5) centimetres, for a distance of 20 metres, immediately inside the installed and maintained firebreak.

   e. All land within this zoning category, irrespective of size, requires a three (3) metre wide driveway to be installed and maintained.

   Exception: Where there is green maintained and reticulated lawn, inclusive of any living trees, shrubs or plants immediately adjacent to an external boundary of any land within this zoning category, a firebreak is not required to be installed or maintained, immediately inside that particular land boundary.

3. **Residential, Residential Development, Special Development, Industry and all Other Zoned Land Not Specified**

   a. Where the area of land in this zoning category is 4,000m^2 or less, all flammable material on the entire property shall be reduced and maintained to a height of less than five (5) centimetres.

   b. Where the area of land in this zoning category is more than 4,001m^2 in size, a three (3) metre wide firebreak shall be installed and maintained immediately inside all external boundaries of the land and also immediately surrounding all buildings situated on the land.

   c. A three (3) metre wide driveway to be installed and maintained.

4. **Plantations**

   a. Boundary Firebreaks — all property boundaries must have a 15 metre firebreak installed. The outer 10 metres will be cleared of all flammable material while the inner five (5) metres (i.e. that portion closest to the trees) may be kept in a reduced fuel state by slashing or grazing grass to a height of less than five (5) centimetres. This includes the trimming back of all overhanging limbs, bushes, shrubs and any other object encroaching into the vertical axis above the outer 10 metres of the firebreak area.

   b. Internal Firebreaks — plantation area must be subdivided into areas not greater than 30 hectares, separated by six (6) metre wide firebreaks. This includes the trimming back of all overhanging limbs, bushes, shrubs and any other object encroaching into the vertical axis of the firebreak area.

   c. Special Risks —

      i. Public road and railway reserve firebreaks 15 metres wide shall be maintained where the planted area adjoins public roads and railway reserves. The specification will be as for boundary firebreaks on planted areas.

      ii. Firebreaks shall be provided along power lines where they pass through or lie adjacent to planted areas. The specification of the width and

height of clearing shall be in accordance with Western Power specifications.

d. Furthermore, all plantations shall comply with requirements contained in the Department of Fire and Emergency Services (DFES) guidelines or standards for Plantation Fire Protection.

5. Storage of Cut or Stockpiled Timber Products

On all land in the district except land specified as industrial, non-rateable or reserve land, the owner or occupier of the land shall not keep or permit to be kept any cut, stockpiled or windrowed timber products (manufactured or natural), unless the material is in piles of less than 15 metres long, five (5) metres wide and three (3) metres high. Every pile of cut, stockpiled or windrowed timber product larger than 12m^3 is to be completely surrounded by a 10 metre wide firebreak.

6. Variations

If it is considered to be impractical for any reason to clear firebreaks or establish other arrangements as required by this notice, the owner and/or occupier of land in the district may apply for a variation by contacting the appropriate area Fire Control Officer prior to 14 November each calendar year to arrange an onsite inspection to discuss alternate methods of fire prevention. Variations may be approved by the Shire of Murray for a one, three or five year period, subject to the owner and/or occupier of the land remaining the same. If a request to vary this notice is not approved, the requirements of this notice apply.

7. Bushfire Management Plans

Where a Bushfire Management Plan (BMP) exists for a specified area or property as required by the Local Planning Scheme or subdivision approval or for an individual or group of properties, compliance with all requirements of the BMP are required in addition to any further requirements within this notice.

8. Special Works Order

The requirements of this notice are considered to be the minimum requirement for fire prevention work, not only to protect individual properties but the district generally.

A separate Special Works Order may be issued to individual landowners pursuant to Section 33 of the *Bush Fires Act 1954* to carry out further hazard removal and/or reduction work with respect to anything upon the land, where in the opinion of an Authorised Officer, it is likely to be conducive to the outbreak and/or the extension of a bushfire.

9. Dates to Remember

Restricted Burning Time:

1 October to 30 November each year (inclusive) and 1 April to 15 May each year (inclusive and as varied pursuant to Section 18 of the *Bush Fires Act 1954*).

Prohibited Burning Time:

1 December to 31 March each year (inclusive and as varied pursuant to Section 17 of the *Bush Fires Act 1954*).

The above dates are subject to variation and any alterations will be published in a local newspaper circulating within the district.

10. Camp or Cooking Fires (s.25(1a) *Bush Fires Act 1954*)

The lighting of camp or cooking fires is prohibited on all land within the Shire of Murray during the Prohibited Burning Time. This prohibition does not apply to a gas appliance that does not consume solid fuel comprising of a fire, the flame of which is encapsulated by the appliance.

11. Burning of Garden Refuse and Rubbish (s.24G *Bush Fires Act 1954*)

The burning of garden refuse or rubbish is prohibited on all land under 4,000m^2 in size during the Limited Burning Time that would otherwise be permitted under Section 24F.

For the purposes of this clause, Limited Burning Time means 1 October each calendar year through until 15 May the following calendar year (inclusive and as varied pursuant to Sections 17 and 18 of the *Bush Fires Act 1954*).

On land larger than 4,001m^2 the burning of garden waste and rubbish that would otherwise be permitted under Section 24F is prohibited absolutely during the Prohibited Burning Time.

The effect of this clause is that the burning of garden refuse or rubbish in an incinerator or on the ground on land that is 4,000m^2 or less in size is prohibited during the Limited Burning Time and the burning of garden refuse or rubbish in an incinerator or on the ground is prohibited on all land within the district during the Prohibited Burning Time.

Any time when there is in force a fire danger forecast issued for the district by the Bureau of Meteorology in Perth of Catastrophic, Extreme, Severe or Very High, a Total Fire Ban (TFB) or any other prohibition is in effect under the *Bush Fires Act 1954,* burning of garden refuse or rubbish in an incinerator or on the ground is prohibited on all land within the district.

In addition to the above restrictions, garden refuse burnt on the ground is burnt in accordance with this clause if:

a. There is no flammable material, other than that being burnt, within five (5) metres of the fire at any time while the fire is burning.

b. The fire is lit between 6:00pm and 11:00pm and is completely extinguished before midnight on the same day.

c. At least one person is present at the site of the fire at all times until it is completely extinguished.

d. One pile (up to one (1) cubic metre in size) can only be burnt at a time.

e. When the fire is no longer required, the person ensures that the fire is completely extinguished by the application of water or earth.

f. The person intending to light the fire must telephone the Department of Fire and Emergency Services' Communications Centre (COMCEN) immediately prior to igniting on 08 9395 9209.

The Shire of Murray Health Local Law 2018 further restricts and or prohibits burning of rubbish or refuse on land in the district.

12. Penalties

The penalty for failing to comply with this notice is a fine not exceeding $5,000. A person in default is also liable whether prosecuted or not, to pay the costs of performing the work directed by this notice if it is not carried out by the owner and/or occupier by the date required by this notice.


EXTINGUIS
DAVE TURNER
CAPTAIN

Shire of Murray

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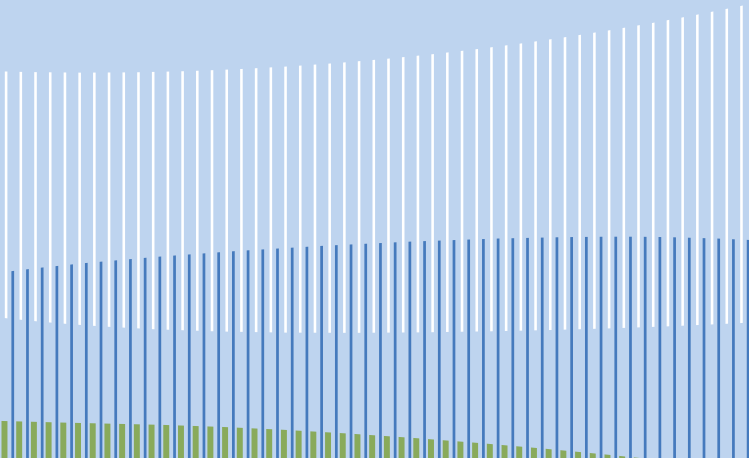
Report All Fires: Phone 000

Department of Fire and Emergency Services	
General Enquiries	08 9395 9300
Emergency Information	133 337 (13DFES)
Register your Controlled Burn	08 9395 9209
Department of Biodiversity, Conservation and Attractions	
General Enquiries	08 9290 6100
Shire of Murray Ranger and Emergency Services	08 9531 7709
Chief Bush Fire Control Officer	
Robert Wilson	0417 916 468
Deputy Chief Bush Fire Control Officer	
Ben Armstrong	0429 777 500
Pinjarra Volunteer Fire and Rescue	
Ken Jones—Brigade Captain	0409 205 071

www.emergency.wa.gov.au



Document Status

Report version	Rev No.	Purpose	Author	Reviewed and Approved for Issue	
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Final Report	**Rev 0**	**For use to accompany the DA**	**Jasmin Culverwell**	**Louisa Robertson (BPAD 36748, Level 1)**	**10 December 2020**

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Yolk Property Group

Bushfire Risk Management Plan (High-risk land use)

Lot 137 (630) Pinjarra Road, Furnissdale

10 December 2021

58305/128,657 (Rev 0)

JBS&G Australia Pty Ltd T/A Strategen-JBS&G

BPAD Bushfire Planning & Design Accredited Practitioner Level 3

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1. Introduction

1.1 Background

Yolk Property Group is seeking to lodge a development application in relation to proposed development of a service station within a portion of Lot 137 (630), Pinjarra Road, Furnissdale (the project area), located in the Shire of Murray. The proposed development will comprise the following elements:

- convenience store (habitable building)
- landscaping
- crossover to Pinjarra Road
- crossover to Furnissdale Road
- car parking bays
- entirely paved surface aside from peripheral landscaping
- underground fuel tank farm (3 tanks)
- underground LPG tank
- car canopy (8 dispensers)
- truck canopy (4 dispensers).

The north/north-eastern portion of the project area is designated as a future development site with internal road connections in to the main service station development and potentially an additional connection to Furnissdale Road.

The project area is designated as bushfire prone on the WA *Map of Bush Fire Prone Areas* (DFES 2019) due to native vegetation located within 100 m of the site, which triggers bushfire planning requirements under *State Planning Policy 3.7 Planning in Bushfire-Prone Areas* (SPP 3.7; WAPC 2015). In accordance with SPP 3.7 Policy Measure 6.5, a Bushfire Management Plan (BMP) is required to accompany the development application to inform planning at that stage.

Additionally, SPP 3.7 Policy Measure 6.6 requires development applications for high-risk land uses (such as service stations) in areas between BAL-12.5 and BAL-29, to have a BMP which is accompanied by a Bushfire Risk Management Plan (BRMP). The BMP prepared for the development (Strategen-JBS&G 2021) identifies the project area as being located within an area of BAL-12.5 or greater, and as such, the development requires the preparation of a BRMP.

Under the *Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007*, the operator will also be required to complete a separate risk assessment that addresses risks other than bushfire for the proposed service station and the associated storage of Dangerous Goods.

1.2 Aim and objectives

The aim of this BRMP is to guide the bushfire protection measures within the project area through mitigation responses developed on the basis of a comprehensive bushfire risk assessment.

Key objectives include:

1. Undertake a bushfire risk assessment of the potential bushfire scenarios that could affect the proposed development, as well as assets on adjoining land.
2. Undertake a bushfire risk assessment of the potential scenarios at the proposed development that could result in increased likelihood of bushfire.

3. Provide independent advice and recommendations on the location, method and timing of appropriate bushfire mitigation measures that promote protection of life and property as a priority.

2. Potential fire scenarios

The BMP (Strategen-JBS&G 2021) identifies and classifies the existing bushfire hazards within 150 m of the proposed development, based on separation from existing and future proposed vegetation and effective slope beneath the classified vegetation.

Within the 150 m assessment area, the proposed fuel station site is surrounded by rural-residential and commercial properties that support varying degrees of remnant native vegetation, comprising a combination of grassland, scrub, woodland and forest classifications.

On completion of the proposed development, built elements of the fuel station will be afforded separation from these hazards by the existing Furnissdale Road and Pinjarra Roadreserves, including managed road verges as well as on-site management of the entirety of the project area. In this regard, the habitable and above-ground high-risk components of the proposed will be subject to a BAL 12.5 ratingwhich achieves compliance with Elements 1 and 2 of *Guidelines for Planning in bushfire Prone Areas* (WAPC 2017; the Guidelines).

At a broader scale, bushfire hazards occur within a patchy distribution throughout the surrounding properties in all directions, however, the patches remain contiguous enough to be capable of supporting bushfire spread between the patches, as well as from larger areas of remnant vegetation within reserves throughout the wider landscape. Vegetation within the wider landscape is anticipated to comprise predominantly Banksia/ Jarrah woodland with fuel loads varying depending on the level of degradation due to rural-residential, commercial and other land management practices.

The largest patches of remnant vegetation within the surrounding area occur approximately:

- 1 km to the south in association with the Serpentine River and Murray River mouths
- 1.3 km to the northwest adjacent to Serpentine River
- 1.1 km to the northeast in association with Black Lake and Geogrup Lake Nature Reserve
- 450 m to the east within Barragup Swamp Conservation Reserve.

Based on information regarding vegetation hazards within both immediate proximity and the wider area, Strategen-JBS&G has assessed the potential bushfire scenarios that could affect the project area. The potential bushfire scenarios have been used to inform a bushfire risk assessment (refer to Section 4) and assist in development of appropriate bushfire mitigation responses (refer to Section 5). The following bushfire scenarios were assessed:

1. Bushfire approaching the project area from the north.
2. Bushfire approaching the project area from the west, south and southeast.
3. Bushfire approaching the project area from the northeast.
4. Fire originating within the project area, igniting a bushfire.

A description of each potential bushfire scenario is provided in the following subsections.

2.1 Scenario 1: Bushfire approaching the project area from the north

Vegetation hazards immediately to the northwest and north of the project area are fairly restricted as the majority of lots are developed with commercial buildings and associated hard stand areas or cleared for rural-residential development with only small patches of scrub and forest vegetation or grassland remaining.

Although there is potential for a bushfire to occur within this vegetation, the convenience store and fuel canopies are sufficiently separated from these hazards by Furnissdale Road in the west and Pinjarra Road in the east and are expected to be impacted by moderate radiant heat impact

(BAL-12.5 equivalent as a worst case scenario) and ember attack, based on the presence of this vegetation. Additionally, the project area will comprise non-vegetated and low-threat elements only. In this regard, it is considered highly unlikely that a bushfire would spread to the project area.

The internal vehicular access route and surrounding public roads will provide opportunity for a direct fire suppression response by firefighters at all vegetation interfaces, if required.

On the basis of proximity and extent of vegetation to the north; separation provided by Furnissdale and Pinjarra Roads; management of the future development area; and lack of flammable vegetation within the development site itself, the potential impact from a bushfire approaching the project area from this direction is considered to be low.

The bushfire risk to the project area from the north is expected to be sufficiently managed through the bushfire management measures proposed in the BMP (Strategen-JBS&G 2021). The entirety of the project area will be established as low threat to ensure the proposed convenience store and fuel canopies are not exposed to conditions exceeding BAL-12.5.

2.2 Scenario 2: Bushfire approaching the project area from the west, south and southeast

Unmanaged vegetation currently exists within the remainder of Lot 137, immediately south of the project area. This vegetation was assessed as predominantly Banksia woodland (Class B Woodland) and constitutes the primary bushfire hazard within immediate proximity of the project area.

At a broader scale, a bushfire has potential to approach the project area from the west, south and southeast through remnant vegetation fragments that would be capable of spreading a bushfire originating in larger remnant patches associated with Serpentine River, Murray River and Barragup Swamp Conservation Reserve as well as Black Lake, further to the east . A bushfire occurring through this vegetation may support potential fire runs of up to 2.1 km to the west, 2.7 km to the south and 3.5 km to the southeast.

As discussed, fragmentation of unmanaged vegetation occurs throughout the mosaic of rural-residential and other properties as well as the public road network which would reduce bushfire behaviour at a fine scale, however, significant vegetation exists in the wider area for fire runs to be relatively continuous.

The Banksia woodland vegetation immediately south of the development site has potential to be involved in a bushfire occurring within the wider area, however, as discussed previously, management of the entirety of the project area as a low threat state will ensure the proposed convenience store building and fuel canopies will achieve a maximum BAL rating of BAL-12 meaning there would only be minor radiant heat impact and moderate ember attack on these elements.

On the basis of the more significant vegetation extents to the south and in consideration of low threat and non-vegetated landscaping within the project area, the potential impact from a bushfire approaching the project area from the south is considered to be moderate.

The proposed internal vehicular access route will provide direct access to vegetation to the south which will allow for a direct fire suppression response in this vegetation if required. The proposed 14 m APZ within the balance of the subject lot and landscaping/construction works within the project area will ensure fire spread to the service station is inhibited using non-vegetated elements and low threat vegetation. Vehicular egress and firefighter access to the site will be similar to Scenario 1.

2.3 Scenario 3: Bushfire approaching the project area from the northeast

A bushfire approaching from the northeast during adverse bushfire conditions has potential to extend through remnant bush vegetation which is part of Geogrup Lake Nature Reserve and Black Lake. These large areas of vegetation would be capable of supporting long narrow fire runs of up to 3 km and significant bushfire behaviour.

Despite the potential for significant bushfire behaviour through this vegetation, the rural-residential properties to the northeast of the project area are predominantly cleared, with only patchy areas of remnant forest and woodland vegetation remaining, which reduces the bushfire risk to the project area (this is also discussed under Scenario 1, which considers a bushfire approaching from the north). There is potential for a bushfire to occur within this vegetation, however, the convenience store and fuel canopies are sufficiently separated from these hazards by Pinjarra Road and the project area will comprise non-vegetated and low-threat elements only. In this regard, it is considered unlikely that a bushfire would spread to the project area.

As discussed in Scenario 1, Pinjarra Road would provide a substantial buffer between the proposed service station and a bushfire occurring from the north and the proposed on-site low threat landscaping would further act to reduce bushfire impacts over the site. On this basis, the potential impact from a bushfire approaching the project area from the northeast is considered to be low, with only minor radiant heat impact and ember attack expected.

2.4 Scenario 4: Fire originating within project area

The previous scenarios have reviewed the likelihood of bushfire impacting on the proposed development. Scenario 4 reviews the potential risk of the proposed development to increase the likelihood of bushfire.

One potential risk is the likelihood of increased ignition sources at the proposed development by igniting nearby vegetation, flammable liquids or other combustible items to create a bushfire. Due to the nature of the proposed development, and the presence of Dangerous Goods within the site, the operators will be required to ensure there are strict controls on the potential ignition sources, such as hot works and electrical equipment, within any on-site hazardous areas.

The intent of these controls is primarily to ensure that life safety is maintained at an appropriate level, in addition to providing a level of property protection, rather than to specifically prevent bushfire ignition. However, the trickledown effect is that reducing the likelihood of fire ignition on the site also ensures the likelihood of bushfire ignition is not increased from that of other built environment land uses.

Should a fire ignite at the service station, the service station staff are able to use the following measures to control the emergency:

- press ‘Stop Pump’ button at the point of sale to stop individual fuel dispensers and turn off dispenser/s at switchboard to prevent accidental usage
- press ‘Emergency Stop All Pumps’ button at the point of sale to stop all fuel dispensers
- turn Mains Power off at switchboard
- warn customers using PA system to not start cars and clear 15m away from area
- if emergency escalates, evacuate all people and customers from the site and advise them to assemble at the Evacuation Assembly Area. Customers to remain at assembly area until site is declared safe by emergency services, at which time they may return to their cars
- use spill kit for small spills to absorb spill and prevent from entering the drain by blocking entrance to drain using kit
- if fire in store:
    - ensure everyone has evacuated
    - if safe to do so, fight fire with fire extinguisher ensuring egress route is maintained
    - do not let anyone enter store until it is declared safe by emergency services.

In the highly unlikely event that there was ignition of the fuel canopies, and a significant fire or explosion event did occur, the chance of igniting a bushfire is considered a relatively low likelihood given the closest classified vegetation (Class G Grassland and Class B woodland) would be at least 14 m from the proposed fuel pumps. It is also very unlikely that any future on-site vegetation would support steady state bushfire behaviour due to it comprising low-threat, managed vegetation as required by this BMP.

If a fire were to ignite at the site, it is expected that staff would immediately contact the fire brigade and that fire brigade would turnout quickly to attend a fire at the service station. Fire brigade notification would also be likely from customers and other nearby public should a fire breakout in the service station. Fire brigade access to the site is readily achievable via Anketell Road and Albina Avenue. Given the quick onsite turnout expected for a fire at the proposed development, it is anticipated that fire brigade will address any spot fires, including fire ignition in adjacent vegetation, whether classified or low threat.

2.5 Summary of potential bushfire scenarios

Due to the presence of Class B Woodland vegetation within the subject lot, immediately south of the project area, Scenario 2 is considered the most high-risk bushfire event with the potential to impact life and property assets within the project area. Given the separation from this vegetation provided by the management of on-site vegetation, Scenario 2 is only expected to produce moderately elevated radiant heat and ember attack.

Scenario 1 is considered to present a low bushfire hazard to the project area, given the distance between proposed develompent and predominantly grassland hazards to the north of Furnissdale Road which will limit potential impacts to low to moderate radiant heat and minor ember attack.

Scenario 3 is considered the lowest risk bushfire event given the separation provided by Pinjarra Road in addition to cleared lots currently under development.

All scenarios are considered manageable through standard bushfire protection measures and fire suppression operations. Management of on-site vegetation and landscaping will ensure that a rating of BAL-29 is not exceeded (elements are subjected to worst case BAL-12.5 impacts), with compliant vehicular access and water supply for bushfire fighting purposes provided.

The presence of Dangerous Goods on the site ensures that strict controls will be required to prevent ignition of the flammable liquids and other combustible items at the site. On this basis, and in addition to separation from bushfire prone vegetation, Scenario 4 is considered a relatively low risk of igniting a bushfire.

3. Bushfire risk assessment methodology

Australian Standard *AS ISO 31000:2018 Risk Management–Principles and Guidelines* (SA 2018) provides an internationally recognised approach to risk management. ISO 31000 was adopted by the Department of Fire and Emergency Services (DFES) Office of Bushfire Risk Management (OBRM), as documented in the agency's *Guidelines for Preparing a Risk Management Plan* (DFES 2015) to formalise and communicate the approach of managing bushfire risk across the department in the aim of leading to improved coordination and effectiveness of bushfire risk management processes. These Guidelines have been designed for use by Local Governments as a framework to develop bushfire specific risk management plans for their local area.

Plate 1 provides a summary of the risk management process in accordance with the DFES Guidelines. Each of the steps in the process are further described in the following subsections.

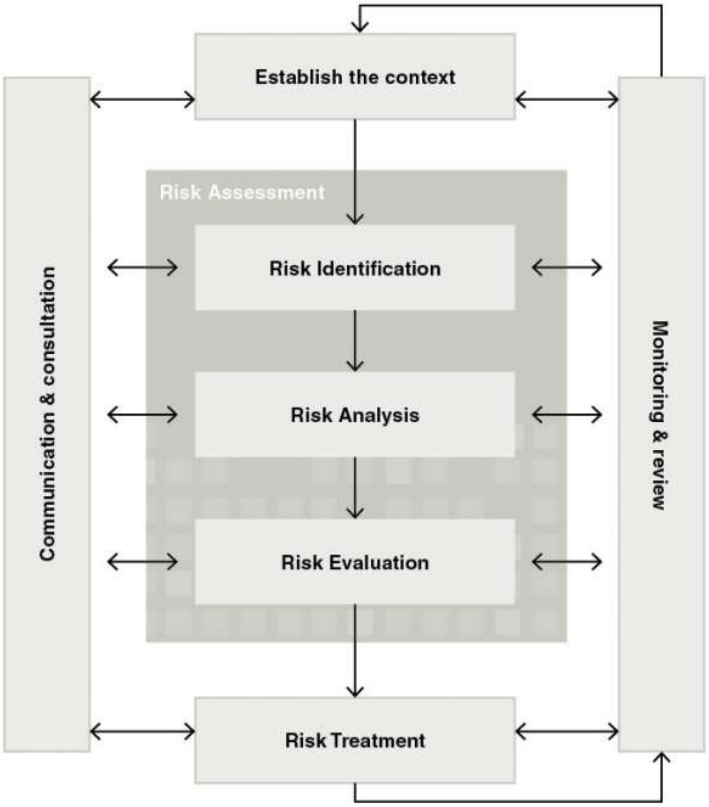

Plate 1: Risk management process as per ISO 2018 (Source: ISO, 2018)

Strategen-JBS&G has adopted the methodology described in the DFES Guidelines on the basis that this approach provides a bushfire specific assessment of risk. Some of the definitions for likelihood and consequence ratings have been modified to suit the scope of this BRMP which is at the facility level, rather than the community level which is relevant to Local Governments.

From a bushfire management perspective, this methodology can be useful in determining:

1. The *inherent* bushfire risk (i.e. the initial level of risk prior to risk treatment and mitigation).
2. The *residual* bushfire risk (i.e. the level of risk remaining following risk treatment and mitigation).

3.1 Assessing likelihood

Likelihood is defined as the chance of a bushfire igniting, spreading and reaching an asset.

Table 3.1: Likelihood rating system

Likelihood rating	Description
Almost certain (sure to happen)	• Expected to occur in most circumstances • High level of recorded incidents and/or strong anecdotal evidence; and/or • Strong likelihood that event will recur; and/or • Great opportunity, reason or means to occur • May occur more than once in five years.
Likely (probable)	• Regular recorded incidents and strong anecdotal evidence and/or • Considerable opportunity, reason or means to occur • May occur at least once in five years.
Possible (feasible but less than probable)	• Should occur at some stage; and/or • Few, infrequent, random recorded incidents or little anecdotal evidence; and/or • Some opportunity, reason or means to occur.
Unlikely (improbable, not likely)	• Would only occur under exceptional circumstances.

3.2 Assessing consequence

Consequence is defined as *the outcome or impact of a bushfire event on people, property and the environment, taking into consideration the degree and severity of potential bushfire scenarios, location of bushfire hazard areas, assets present in the area and the level of management and suppression response available*.

Table 3.2: Consequence rating system

Consequence rating	Description
Catastrophic	• Multiple cases of fatalities and extensive number of severe injuries. • Large proportion of people requiring hospitalisation. • Extensive displacement of persons for extended duration. • Extensive resources required for personal support. • Extensive damage to assets that will require significant ongoing recovery efforts and extensive external resources. • Facility unable to function without significant support. • Long-term failure of significant infrastructure and service delivery affecting all parts of the facility. • Permanent damage to environmental or cultural assets.
Major	• Isolated cases of fatalities. • Multiple cases of serious injuries. Significant hospitalisation. • Large number of persons displaced for more than 24 hours. • Significant resources required for personal support. • Significant damage to assets, ongoing recovery efforts and external resources required. • Facility only partially functioning, widespread inconvenience with services unavailable. • Mid-to long term failure of significant infrastructure and service delivery affecting large parts of the facility. • Economic impacts for a significant period of time with significant financial assistance required. • Significant damage to environmental or cultural assets that require major rehabilitation or recovery efforts.
Moderate	• Isolated cases of injuries, but no fatalities. Some hospitalisations required. • Isolated cases of displaced persons who return within 24 hours. • Personal support satisfied through facility arrangements. • Localised damage to assets rectified by routine arrangements. • Facility functioning as normal with some inconvenience. • Isolated cases of short to mid-term failure of infrastructure and disruption to service delivery. • Economic impacts with additional financial support required to recover. • Isolated cases of damage to environmental or cultural assets.
Minor	• No fatalities.

Consequence rating	Description
	• Near misses or minor injuries with first aid treatment possibly being required. • No persons displaced. • Little or no personal support required. • Inconsequential or no damage to an asset, with little or no specific recovery effort required beyond the immediate clean-up. • Inconsequential or no disruption to facility. • Inconsequential short-term failure of infrastructure or service delivery. • Inconsequential or no financial loss.

3.3 Determining the risk rating

The five bushfire scenarios discussed in Section 2 have been subject to bushfire risk assessment through determination of likelihood and consequence in accordance with the rating tables outlined in Table 3.1. andTable 3.2.

This process determines the inherent bushfire risk of the event and informs the level of mitigation or management response required to reduce the risk to an acceptable level. The risk assessment matrix used to determine inherent and residual bushfire risk is outlined in Table 3.3.

Table 3.3: Risk assessment matrix and treatment priorities

		Consequence rating			
		Minor	Moderate	Major	Catastrophic
Likelihood rating	Almost certain	High (3D)	Very High (2C)	Extreme (1C)	Extreme (1A)
	Likely	Medium (4C)	High (3A)	Very High (2A)	Extreme (1B)
	Possible	Low (5A)	Medium (4A)	High (3B)	Very High (2B)
	Unlikely	Low (5C)	Low (5B)	Medium (4B)	High (3C)

The risk ratings also provide a treatment priority which determines the order, importance or urgency for allocation of resources to apply the treatment strategies. Treatment of assets with an extreme risk rating should be addressed before assets with lower risk ratings. A treatment priority of 1A is the highest priority and a treatment priority of 5C is the lowest priority.

3.4 Risk evaluation

The purpose of evaluating risk is to confirm that the risk ratings for each asset are appropriate, identify treatment priorities (as discussed previously) and identify which assets require treatment.

The acceptability of a risk level can be evaluated using the criteria listed in Table 3.4. Some risk ratings may be acceptable without any treatment (e.g. Low risk ratings) while the risk to others may be suitable with standard management controls (e.g. Medium and High risk ratings). Determining the acceptability of risk allows decisions to be made on whether treatment is required or whether routine controls are sufficient.

Table 3.4: Risk acceptability

Risk rating	Priority	Risk acceptability
Extreme	1A, 1B, 1C	Unacceptable risk – only acceptable with excellent controls. An urgent mitigation response is required to lower the risk level.
Very High	2A, 2B, 2C	Unacceptable risk – only acceptable with excellent controls. A mitigation response is required to lower the risk level.
High	3A, 3B, 3C, 3D	Potentially unacceptable risk - only acceptable with adequate controls. Development of a mitigation response may be required to lower the risk level.
Medium	4A, 4B, 4C	Potentially unacceptable risk - only acceptable with adequate controls. A mitigation response may not be required to lower the risk level but the risk must be monitored regularly.
Low	5A, 5B, 5B	Acceptable risk with routine controls. Application of standard management measures will ensure risk level remains low. Treatment action is not required, but the risk must be monitored.

3.4.1 Risk treatment

The purpose of risk treatment is to reduce the likelihood of a bushfire occurring and/or the potential impact of a bushfire on and asset or facility. This is achieved by implementing treatment strategies that modify the characteristics of the risk, the asset/facility or the environment.

Treatment strategies will depend on the level of risk to the asset and the type of asset being treated. Asset specific bushfire mitigation strategies are generally based on fuel management, ignition management, preparedness, planning and engagement of personnel.

3.4.2 Monitoring and review:

The effectiveness of each stage and effectiveness of risks and treatment strategies are monitored and any new risks are detected.

4. Bushfire risk assessment

4.1 Risk context

Risk is being assessed to inform bushfire mitigation for the project area for the protection of life and property within and adjacent to the site. The risk assessment adopts a broad area and supports a tenure blind approach to ensure wider risk impacts and adjoining lands are captured to suitably address potential risk.

4.2 Risk identification

Bushfire risk is identified in the potential bushfire scenarios outlined in Section 2, which indicate the potential bushfire events that could impact life and property within the project area and adjacent land. These scenarios are considered to cover the majority of bushfire events that could occur in order to develop suitable mitigation and manage as much of the bushfire risk as possible.

4.3 Risk analysis and evaluation

Risk analysis and evaluation for each of the potential bushfire scenarios is provided in Table 4.1, which specifies the likelihood and consequence of each scenario with and without management measures to determine inherent and residual risks.

Due to the storage and handling of flammable materials within the project area, the potential consequence of a bushfire entering the site would be greater than if flammable materials were not present.

Strategen-JBS&G is of the view that following implementation of management measures, the risk of ignition will not be reduced due to the ongoing level of staff and visitor occupancy and presence of off-site bushfire prone vegetation and on-site flammable goods. Therefore, bushfire risk management measures are likely to reduce the level of consequence resulting from the bushfire event, rather than the likelihood of the event occurring. For example, an evacuation plan will reduce the potential impacts on life; thus reducing the level of consequence received from the bushfire event, but the likelihood of the event occurring will not be reduced.

4.4 Risk treatment

Risk treatment is discussed in Section 5, which outlines the management measures that will be implemented.

As with all bushfire management work, protection of life and property is afforded the highest priority.

Table 4.1: Bushfire risk assessment

Bushfire scenario	Comments	Likelihood	Consequence	Inherent risk level	Mitigation/management	Likelihood	Consequence	Residual risk level
Scenario 1 Bushfire approaching the project area from the north	See Section 2.1	Possible	Moderate	Medium (4A)	Implementation of management measures identified in Section 5	Possible	Minor	Low (5A)
Scenario 2 Bushfire approaching the project area from the west, south and southeast	See Section 2.2	Possible	Moderate	Medium (4A)	Implementation of management measures identified in Section 5	Possible	Minor	Low (5A)
Scenario 3 Bushfire approaching the project area from the northeast	See Section 2.3	Possible	Minor	Low (5A)	Implementation of management measures identified in Section 5	Possible	Minor	Low (5A)
Scenario 4 Fire originating within project area	See Section 2.4	Unlikely	Major	Medium (4A)	Implementation of management measures identified in Section 5	Unlikely	Moderate	Low (5B)

5. Bushfire management measures

Implementation of the management measures provided in the following subsections prioritises protection of life and property and will mitigate inherent bushfire risk within the project area.

5.1 Management of on-site vegetation

As detailed in the BMP, the entirety of the project area will be modified to and maintained in a low threat or non-vegetated state in accordance with Clauses 2.2.3.2 (e) and (f) of AS 3959 on an ongoing basis. This includes all landscaping being established in low threat state in accordance with Schedule 1 of the Guidelines and the Landscaping Plan (Appendix A of the BMP). This will ensure all areas within the service station site will be subject to BAL-29 or lower.

The proposed convenience store, canopies and dispensers will be subject to BAL-12.5 which limits potential bushfire impact to low levels of radiant heat and ember attack.

5.2 Fuel control measures

Should a fire ignite at the service station, trained staff are able to use the following measures to control the flow of fuel to the dispensers:

- press 'Stop Pump' button at the point of sale to stop individual fuel dispensers and turn off dispenser/s at switchboard to prevent accidental usage
- press 'Emergency Stop All Pumps' button at the point of sale to stop all fuel dispensers
- turn Mains Power off at switchboard.

5.3 Fire protection and suppression equipment

Fire extinguishers are to be located within the project area, in accordance with the National Construction Code and AS 2444. Only personnel trained in the use of extinguishers should be utilising this equipment and only if safe to do so.

Spill Response Kits are to be maintained at the proposed development and are to be utilised by onsite staff for minor and major spills, where safe to do so.

Fire services are to be called in the event of a spill is too large to control and cannot be cleaned with a spill kit at site or it is not considered safe to do so.

5.4 Emergency evacuation

It is expected that trained staff will be able manage the evacuation of the site in an onsite fire emergency including the following:

- warn customers using PA system to not start cars and clear 15 m away from area.
- if emergency escalates, evacuate all people and customers from the site. Customers are to remain offsite until the service station is declared safe by emergency services, at which time they may return to their cars.
- if the fire is within the proposed building:
    - ensure everyone has evacuated
    - if safe to do so, fight fire with fire extinguisher ensuring egress route is maintained
    - do not let anyone enter store until it is declared safe by emergency services.

The facility emergency management plan shall also include a plan for evacuation of the site in a bushfire emergency. Once staff become aware of bushfire that may impact the site, the emergency management procedure should, as a minimum, include the fuel and power control measures in

Section 5.1 and the evacuation of occupants from the site. It is noted that the evacuation assembly area nominated for bushfire emergencies may be different to that for onsite fire emergencies, and should be sufficiently far from the service station and the bushfire risk. Any evacuation plan for bushfire should ensure that staff advise occupants to evacuate north to Furnissdale Road or east to Pinjarra Road and either northwest toward Mandurah, or southeast toward Kwinana Freeway in a direction away from the bushfire threat.

5.5 Personnel training

All occupants working at the project area must be trained in responding to and managing all emergency incidents in accordance with the facility emergency management plan for the site. A record of training must be kept up to date and debrief sessions held after all training exercises.

5.6 Bushfire suppression

The Metropolitan Career Fire and Rescue is stationed at Mandurah, approximately 10 km northwest of the site (12 minutes travel time under normal conditions).

The West Murray Volunteer Fire and Rescue station) is located approximately 850 m southeast of the site on Pinjarra Road (1 minute travel time under normal conditions).

The brigades are expected to provide a best-case emergency suppression response time of less than 20 minutes should a bushfire threaten lives or buildings within or adjacent to the project area.

5.7 Additional measures

5.7.1.1 Manifest

Dangerous goods sites must maintain a current manifest and a dangerous goods site plan, to allow an appropriate response by DFES in the event of an emergency, such as a fire.

Information retained onsite should include the Emergency Plan, Dangerous Goods Manifest, Register of Dangerous Goods and Hazardous Materials, Safety Data Sheets for bulk products kept on site and dangerous goods site layout plan.

5.7.1.2 Ignition sources

Operators of dangerous goods sites are required to manage potential ignition sources, such as hot works and electrical equipment, within any on-site hazardous areas.

5.7.1.3 Placard and marking

A placard, readily visual for DFES personnel and providing visual warnings of the hazards associated with storage of diesel, will be required at the proposed tank site in accordance with DMP Storage and handling of dangerous materials Code of Practice (DMP 2010) and National Code of Practice for the Storage and Handling of Workplace Dangerous Goods [NOHSC: 2017 (2001)].

Signage and notices will also be required in accordance with AS 1940-2004.

5.7.1.4 Emergency information for neighbours

Neighbours adjacent to the proposed development shall be provided with a document detailing the project area emergency response actions and contact numbers.

5.7.1.5 Building Construction Recommendation

The BAL contour assessment over the project area indicates that the proposed convenience store and fuel dispensers are partially affected by BAL-19 and BAL-12.5 ratings which is compliant with the Acceptable Solution A1.1 and A1.2 of the Guidelines.

Bushfire construction provisions of the National Construction Code require that buildings comply with the AS 3959 construction requirements, in accordance with the assessed BAL under AS 3959,

provided the building is a Class 1, 2 or 3 building, or a Class 10a building associated with a Class 1, 2 or 3 building.

The proposed building will likely be Class 6 in accordance with the National Construction Code, and as such, there is no statutory requirement for proposed building to meet the construction requirements of AS 3959. Notwithstanding, given the high-risk nature of the proposed use, and like all buildings, there is potential vulnerability to ember attack, and as such Strategen-JBS&G recommend that compliance with the AS 3959 construction requirements is achieved wherever practicable. Strategen-JBS&G recommend that as a minimum, the requirements of BAL-12.5 are strongly considered for implementation as the construction requirements associated with this rating are primarily related to ember protection.

5.8 Document review

This BRMP will be reviewed and updated after five years following endorsement, or after major fire events or changes to site conditions such as the type and amount of stored flammable goods.

5.9 Residual bushfire risk

Strategen-JBS&G expects that through implementation of the management measures outlined in this BRMP, inherent bushfire risk to life and property within and surrounding the project area can be mitigated to suitable levels.

6. Limitations

Scope of services

This report ("the report") has been prepared by Strategen-JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen-JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen-JBS&G has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen-JBS&G has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen-JBS&G has also not attempted to determine whether any material matter has been omitted from the data. Strategen-JBS&G will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen-JBS&G. The making of any assumption does not imply that Strategen-JBS&G has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen-JBS&G disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

Strategen-JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by Strategen-JBS&G, and should not be relied upon by other parties, who should make their own enquiries.

7. References

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Western Australian Planning Commission, Department of Planning and Fire and Emergency Services Authority (WAPC et al.) 2017, *Guidelines for Planning in Bushfire Prone Areas*, Western Australian Planning Commission and Fire and Emergency Services Authority, Perth.

Document Status

Report version	Rev No.	Purpose	Author	Reviewed and Approved for Issue	
				Name	Date
Draft Report	Rev A	For client review	Louisa Robertson (BPAD 36748, Level 1)	Linden Wears (BPAD 19809, Level 3)	2 April 2020
Final Report	**Rev 0**	**To accompany the DA submission**	**Jasmin Culverwell**	**Louisa Robertson (BPAD 36748, Level 3)**	**10 December 2020**

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URBIS

Porter
Consulting Engineers

STORMWATER MANAGEMENT PLAN AND CONCEPTUAL DRAINAGE AND WASTEWATER DESIGN

PROPOSED SERVICE STATION, LOT 137 (#630) PINJARRA ROAD, FURNISSDALE

Porter

REPORT PREPARED FOR

YOLK PROPERTY GROUP

Prepared by	**Porter Consulting Engineers**
Postal address	PO Box 1036 Canning Bridge WA 6153
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Date	11 May 2022
Our reference	R023.22
Job Number	21-06-080
Checked	*BH*

HISTORY AND STATUS OF THE DOCUMENT

Revision	Date issued	Author	Issued to	Revision type
Rev A	04/05/2022	M. Cook	Yolk Property Group	1st submission
Rev B	18/05/2022	M. Cook	Yolk Property Group	2nd Submission

CONTENTS

1.0 INTRODUCTION

Porter Consulting Engineers (PCE) have been engaged by Yolk Property Group to prepare a Stormwater Drainage Management Plan to support a proposed service station to Lot 137 (#630) Pinjarra Road, Furnissdale (the Site) within the Shire of Murray, adjacent to the intersection of Pinjarra Road and Furnissdale Road. The proposed service station will include a convenience store, 8 car filling forecourt and a 4 truck filling forecourt as shown in **Appendix A**. The proposed development also allowed for a future balance lot of 2466m^2 in area.

The Site is bound by Pinjarra Road to the north, Furnissdale Road to the west, residential farmlet lots to the south and east. A commercial site abuts the far northern portion of the site as shown in **Figure** 1.

Figure 1: Lot 137 (#630) Pinjarra Road, Furnissdale (shaded in blue)

2.0 SITE CHARACTERISTICS

2.1 Former Land Use

The site was previously a caravan park, which appears to have ceased operating circa 2011. Clusters of trees and the concrete ground slabs to original caravan sites remain throughout the site.

2.2 Landform

Based on the survey in **Appendix B**, the site is considered flat with a slight fall from approximately 3.5m AHD by Furnissdale Road to 3.3m by the eastern boundary. The survey did not include Pinjarra Road or Furnisdale Road.

A geotechnical investigation has not been conducted on the site, but a review of regional geology mapping[1] indicates that the expected in-situ soil is Bassendean Sand (Q_{pb}).

The Murray hydrological studies by the Department of Water note:

- the superficial groundwater level[2] is approximately 0m AHD; and
- the Average Annual Maximum Groundwater level[3] is approximately 0m AHD.

This indicates that the maximum groundwater level is expected to be approximately 3m below the existing ground surface.

The floodplain development strategy[4] prepared by GHD for the Department of Water indicates that the site is beyond the 1 in 500 year AEP flood extent.

A search on the Contaminated Sites Database[5] did not identify any known contamination on the site.

[1] Geological Survey of Western Australia, *Pinjarra Urban Geology 2032-I,* Department of Mines, Perth 1978
[2] Hall, J, Kretschmer, P, Quinton, B & Marillier, B, 2010, *Murray hydrological studies: Surface water, groundwater & environmental water, Conceptual model report*, Department of Water, Western Australia, Water Science Technical Series, WST 16 (Figure 5.2)
[3] Hall, J, Kretschmer, P, Quinton, B & Marillier, B 2010, *Murray hydrological studies: surface water, groundwater and environmental water – land development, drainage and climate scenario report*, Water Science Technical Series, report no. 26, Department of Water, Western Australia. (Figure 3.1)
[4] GHD, 2010, *Floodplain Development Strategy,, Murray Drainage and Water Management Plan and Associated Studies.* (Figure 38)
[5] Department of Water and Environmental Regulation, *Contaminated Sites Database, viewed 26 April 2022,* <https://www.der.wa.gov.au/your-environment/contaminated-sites/58-finding-information-on-contaminated-sites-in-western-australia>

3.0 STORMWATER MANAGEMENT POST DEVELOPMENT

3.1 Management Criteria

It is expected that the Shire of Murray will require the 1% Annual Exceedance Probability (AEP) (1 in 100 year) rainfall event to be managed and disposed of within the site for the service station site, the proposed new adjacent internal road and proposed balance lot. With appropriate management measures of hydrocarbons for the service station.

It is expected that Main Roads WA (MRWA) will require the 10% AEP (1 in 10 year) rainfall event to be appropriately managed for Pinjarra Road and Furnissdale Road.

3.2 Stormwater Management-Service Station Site

Stormwater to the proposed service station site shall be retained, managed and disposed of onsite up to and including the 1% AEP (1 in 100 year) rainfall event as illustrated in the conceptual general arrangement in **Appendix C**. The use of ridge lines (high points) and kerbing shall ensure that stormwater is contained onsite. Collection pits and pipes shall convey the stormwater to the underground infiltration chambers.

The combination of soakwell collection pits and the underground infiltration chamber provides the 1% AEP (1 in 100 year) capacity, allowing for the following design parameters:

- 0.9 Runoff coefficient; and
- 5m / day permeability rate, which is a typical conservative rate for sandy soils, which can have permeability rates of over 20m per day.

The calculations (Table T057.22) in **Appendix D** indicated the combination of an underground drainage infiltration structure of 32.18m long by 4.74m wide by 1.5m high and the use of 8 soakwells (1.8m diameter by 1.8m high) will dispose of the 1% AEP. The use of a 1.5m high infiltration structure with 600mm nominal cover will allow for approximately 900mm separation to the Annual Average Maximum Groundwater level for infiltration.

As much of the service station site is trafficable pavement areas, the underground infiltration structure will need to be trafficable rated, provide sufficient strength and durability. There are several proprietary products on the market that would be considered appropriate. For the purpose of this assessment, consideration has been had to the concrete Hume-Stormtrap (see Figure 2) for it's highway load rating (SM1600), superior durability and ability to support the heavy tanker vehicle loads.

Figure 2: Hume-Stormtrap (Single Trap)

3.2.1 Forecourt and Tank Fill Point Management

The car and truck filling forecourt and fill point to the underground tanks represent the highest risk of hydrocarbon spills due to the action of hydrocarbons being pumped for filling.

The forecourt will have an overhead canopy that extends typically beyond 10° (vertical angle) of the forecourt court confines which will minimise any rainfall falling within the extent of the forecourt. The forecourt and fill point will be confined by defined ridgelines (high points) which will contain any spills within these areas.

Any spills within the forecourt and fill point will drain into collection drains and be piped to the SPEL-Puraceptor which is a wholly contained Class 1 hydrocarbon treatment and capture unit. The SPEL-Puraceptor shall treat influent with the processed effluent being discharged to drainage for disposal via infiltration. Further details of the SPEL-Puraceptor are provided in **Appendix E**.

Any spills that occur within the site will be managed in accordance with service station's management policy and procedures.

3.3 Internal Access Road

It is assumed that the internal access road to the immediate south of the service station will be a private internal road and not in a gazetted road. Therefore, the Shire of Murray will expect this internal road to manage and dispose of the 1% AEP (1 in 100 year) rainfall event.

A combination of linked soakwells and an underground infiltration chamber will provide the 1% AEP capacity allowing for the following parameters:

- 0.9 Runoff coefficient; and
- 5m / day permeability rate, which is a typical conservative rate for sandy soils.

The calculations (T060.22) in **Appendix F**, indicate that the combination of an underground drainage infiltration structure of 16.1m long by 7.11m wide by 1.5m high and the use of 8 soakwells (1.5m diameter by 1.8m high) will manage and dispose of the 1% AEP. As the underground infiltration structure will be located within trafficable pavement areas, the concrete Hume-Stormtrap or equivalent approved is suggested.

3.4 Proposed 2,466m^2 Site Area

It is expected that the 2466m^2 site will need to manage and dispose of the 1% AEP stormwater for this lot. A combination of linked soakwells and an underground infiltration chamber will provide the 1% AEP capacity allowing for the following parameters:

- 0.9 Runoff coefficient; and
- 5m / day permeability rate, which is a typical conservative rate for sandy soils.

The calculations (T061.22) in **Appendix G** indicate that the combination of an underground drainage infiltration structure of 12.08m long by 7.11m wide by 1.5m high will and 2 soakwells (1.5m diameter by 1.8m deep) will manage and dispose of the 1% AEP.

3.5 Furnissdale Road

The intersection of Furnissdale Road and Pinjarra Road is expected to be upgraded to a signalised intersection as a separate future MRWA project by with an unknown timeframe.

Nevertheless, Furnissdale Road is expected to be upgraded as part of the service station works to allow for a central median, with the upgrade works to be suitable for further minor modifications to accommodate the future signalised intersection.

There appears to be shallow 300mm to 500mm deep roadside swales in both verges of Furnissdale Road.

The roadworks upgrade is expected to incorporate kerbing by the eastern verge. It has been assumed that the southbound carriageway of the upgraded Furnisdale Road will utilise soakwells to manage and dispose of the 10% AEP (1 in 10 year) rainfall event.

The calculation (T063.22) in **Appendix H** indicates that for the southbound carriageway 5 equally spaced soakwells (1.5m diameter by 1.8m deep) will dispose of the 10% AEP 6 minute storm event. Storm events greater than the 10 year event are expected to follow the existing topography and head in the southerly direction along Furnisdale Road.

For the northbound carriageway, it has been assumed the edge of pavement will be unkerbed with a 500mm deep roadside swale in the verge.

The calculations (T064.22) in **Appendix H** indicate that for the northbound carriageway a 500mm deep roadside swale will manage and infiltrate the 10% AEP (1 in 10 year) rainfall event.

3.6 Pinjarra Road

Along the northbound carriageway to Pinjarra Road, there are gully pits located in the median with the right-hand lane appearing to drain towards the median. The left-hand lane appears to drain towards the western verge. The western verge does not appear to have any formal drainage treatments with the stormwater likely to flow off the shoulder into the sandy verge and adjacent private property.

MRWA will require the 10% AEP (1 in 10 year) rainfall event to be appropriately managed for the runoff from the left-hand lane, since the right-hand lane drains away into the median.

It has been assumed that kerbs will be applied to the proposed left turning lanes. As there is no existing formal drainage treatments in the western verge, the use of soakwells along the kerbline of the left turn lanes has been assumed.

The calculations (T062.22) in **Appendix I** indicate that 10 equally spaced soakwells (1.5m diameter by 1.8m deep) will dispose of the 10% AEP 6 minute storm event. Storm events greater than the 10 year event is expected to follow the existing topography and head in the southeast direction along Pinjarra Road.

The installation of the soakwells will need to be cognisant of an existing 250mm Water Corporation sewer pressure main.

4.0 WASTEWATER MANAGEMENT AND DISPOSAL

There are no Water Corporation scheme reticulation sewers within the vicinity of the site with the nearest sewers some 1500m to the west along Pinjarra Road. A pump station would need to be constructed from the service station with a 1,500m long pressure main.

Alternatively, the wastewater from the service station site could be managed and disposed of onsite via the use of Aerobic Treatment Units (ATU) and leach drains.

Expected patronage, staff numbers and water fixtures quantities have not been provided at this preliminary design phase. However, Porter Consulting Engineers has undertaken a preliminary assessment to determine the nominal wastewater management requirements based on our experience with other service stations.

The preliminary assessment has indicated:

Item	Size	Comments
1800 Litres per day capacity ATU	Nominal dimensions: • 2.5m wide by 6.5m long ATU • located 1.2m clear of buildings	If located within trafficable pavement areas, a concrete ATU with Class D trafficable covers would be required.
Flatbed leach drain	• 2 x 2.5m wide by 8m long flatbed leach drain (footprint 6m by 9m) for sandy soils with 1.8m offset to buildings and boundaries	Generally, leach drains are not trafficable rated and located in non-trafficable areas
Clearance to groundwater		With the invert of the flatbed leach drain nominally 300mm below the surface, clearance to groundwater is expected to be in the order of 2.5m, well in excess of the minimum 500mm clearance

Based on the current layout of the services station site and due to the limited extent of non-trafficable areas as shown in **Appendix J**:

- The ATU has been located within an area of trafficable pavement near the service station convenience store, requiring the ATU to be a concrete unit with Class D (AS3996-2019) trafficable lids.
- The non-trafficable leach drains have been located in an area clear of the trafficable pavement. However, this area is noted as potential future access to the balance lot, which may result in covernsion of this area to trafficable pavement. If this area is to become trafficable, then consideration should be made to provide suitable non-trafficable areas with adequate offsets[6] to kerbs, buildings and other structures as an alternative location for the placement of non-trafficable leach drains. Generally, leach drains are not trafficable rate. However, if leach drains are to be located in trafficable areas, suitable engineering certification to support trafficable loads would be required. The Tunnellwell Arch System or equivalent approved may be suitable.

5.0 CONCLUSION

Based on the information reviewed, there does not appear to be any factors that would prevent the development of Lot 137 (#630) Pinjarra Road, Furnissdale into a service station. However, further evaluations and assessments should be undertaken to better inform future designs:

a. Undertake a geotechnical investigation and land capability assessment for wastewater disposal to verify the subterranean conditions including groundwater and soil permeability. It would be preferable to undertake the investigation in spring when the groundwater is likely near the seasonal maximum.
b. A feature survey of Furnissdale Road and Pinjarra Road including verification of the position of existing services / in-ground assets.
c. Confirm the road upgrade requirements for Pinjarra Road and Furnissdale Road.
d. Consider providing more non-trafficable areas to ensure the leach drains are in non-trafficable areas.
e. Prepare preliminary stormwater and wastewater designs to confirm the stormwater arrangement.
f. Confirm expected wastewater flows to the service station site.

[6] Government of Western Australia, Department of Health, *Guidance note on the sizing and installation of leach drains*, 26 November 2015

APPENDIX A - Service Station General Layout

PROJECT:

PROPOSED SERVICE STATION
CNR FURNISSDALE & PINJARRA RD

No.	DATE	REVISION	BY
B	11-5-2022	FOR DRAINAGE MANAGEMENT PLAN REPORT	MEG
A	5-2-2022	ISSUED FOR APPROVAL	MJV

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CLIENT:

YOLK PROPERTY GROUP

DRAWING:

INDICATIVE FUTURE LAYOUT (LEFT IN ONLY)

STATUS: **FOR DRAINAGE MANAGEMENT PLAN REPORT**

SCALE 1:500
DATE FEB 2022
DESIGN JH
DRAWN MJV
CHECK

DRAWING No. **21-6-80/804**
REV No. **B**
ORIGINAL DRAWING SIZE **A1**

FILE NAME S:\ACTIVE PROJECTS\21-06-080\ACAD\20680-800-805.dwg
APP'D

CONSULT AUSTRALIA

FURNISSDALE ROAD

PINJARRA ROAD

LOT 24
D24314

LOT 137
4.2829 ha

LOT 202
P37459

LOT 132
D54090

TBM 9002
Deck Spike
3.484 (AHD)

TBM 9000
Deck Spike
3.489 (AHD)

Bitumen
X-over

Bitumen
X-over

Invert
Not Visible

Dirt
X-over

Approx. Position of Water Main (DBYD)

Approx. Position of Sewer Main (DBYD)

Multiple Concrete Pads in this Area

Multiple Concrete Pads in this Area

Multiple Concrete Pads in this Area

Multiple Concrete Pads in this Area

Multiple Concrete Pads in this Area

Multiple Concrete Pads in this Area

90°

90°

41.68

41.68

260°38'35"

83.33

177°28'15"

81.26

89°31'9"

190.22

101°53'

162.33

240.07

3.45
3.45
3.43
3.25
3.27
3.36
3.36
3.30
3.33
3.33
3.35
3.26
3.30
3.25
3.13
3.09

This survey has been completed to CLASS 3 Accuracy
Horizontal Accuracy ± 30mm
Vertical Accuracy ± 50mm
This note is an integral part of this plan

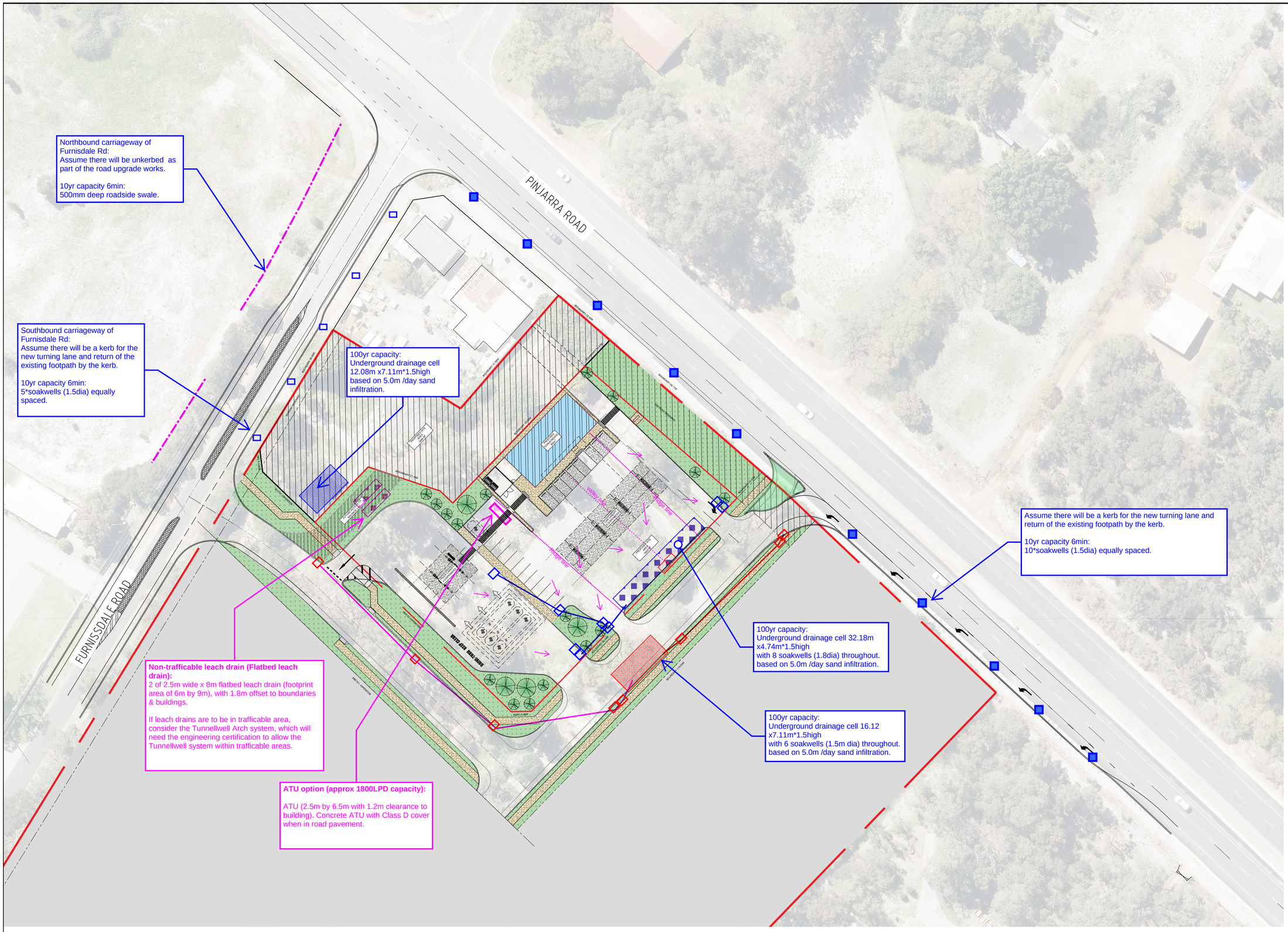
Surface features and levels have been surveyed to meet the requested scope of works accuracy. The surface may be contoured to depict topography or defined only by spot heights. For clarity on hard copy some level information is not shown, refer to 3D digital file. Above ground indicators (markers) of underground services are located where visible. Third parties utilising this information should confirm the capture accuracies meet requirements prior to use. This note is an integral part of this plan.

Underground services have been compiled from information obtained from a Dial-Before-You-Dig search. Service locations have not been verified by MNG. Alignments are indicative only. Prior to demolition, excavation or construction, users should satisfy themselves to the currency of services, which may have been altered or new services installed on or near the subject site. Refer to the date and method of acquisition. This note is an integral part of this plan.

Existing boundaries have been extracted from Landgate?s Spatial Cadastral Database, which is only a model of the cadastre. The depicted boundary locations are a graphical representation only and as they have not been re-established by survey. MNG does not guaranteed the position unless stated otherwise. Re-establishment of lot boundaries by a Licensed Surveyor is recommended for any works on or about a boundary. This note is an integral part of this plan

Note: numerous large trees on site not surveyed

APPENDIX C - Conceptual General Arrangement for Stormwater Management



INFORMATION AND LAYOUT SUBJECT TO CHANGE

PROJECT:

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TUSMO Pty Ltd ACN 070 097 148 as trustee for the Consulting Engineering Unit Trust trading as Porter Consulting Engineers ABN 78 636 396 385

CLIENT:

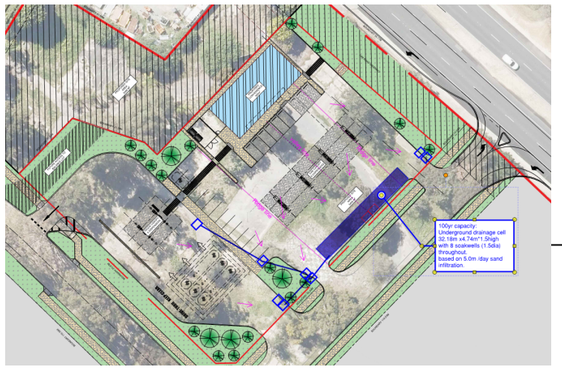
YOLK PROPERTY GROUP

CONCEPTUAL GENERAL ARRANGEMENT FOR STORMWATER AND ONSITE WASTEWATER MANAGEMENT
21-6-80/804

3 MAY 2022

APPENDIX D - Service Station Stormwater Calculations (T057.22)

Project	**630 Pinjarra Road, Furnissdale 6209**
Job Number	**21-06-080**
Date	**23 April 2022**
Engineer	**Michael Cook**
Summary	**For service station site only**
Scenario	**Underground structures-Box culverts**
File Name	**T057.22**
Revision	**A**
Reference Document	**R023.22**
IFD Used	**630 Pinjarra Road, Furnisdale IFD used (32°33'13.40"S, 115°46'45.99"E) generated from BoM website**
Ground Conditions	**permeability due to Q_{pb} Bassendean sand(1:250000 Geological series mapping)**
Groundwater	**approx 0m AHD (Murrary Hydrological Studies, Department of Water, Aug 2010)**



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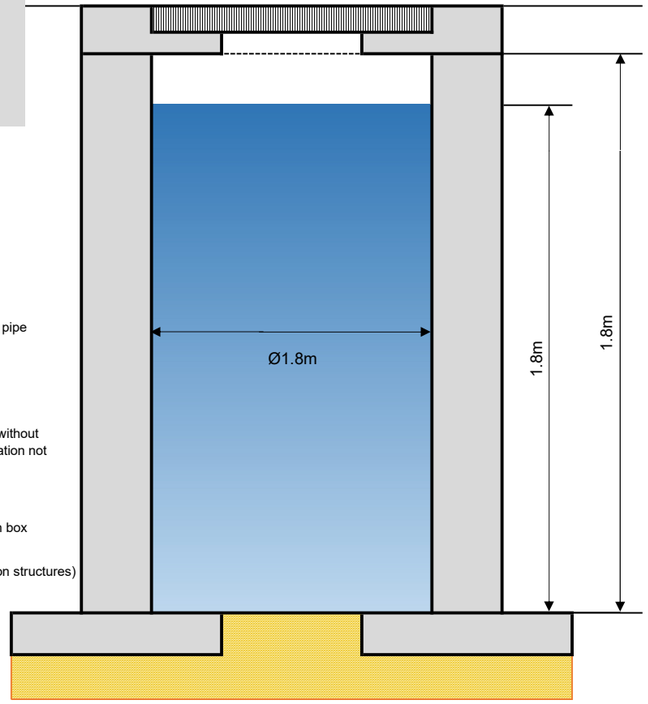

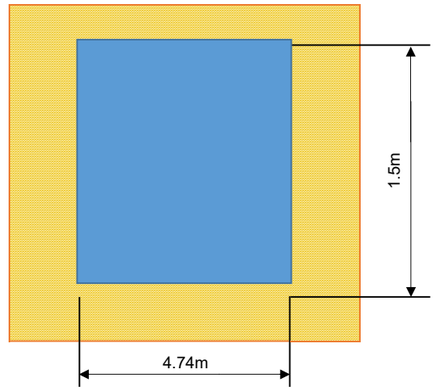

Intensities (mm/hr)			
1 EY (1 year)	6 minute	67.50
	30 minute	28.10
	1 hour	18.30
	3 hour	9.06
	6 hour	5.75
	12 hour	3.60
0.2 EY (5 year)	6 minute	96.50
	30 minute	40.20
	1 hour	25.70
	3 hour	12.70
	6 hour	8.20
	12 hour	5.25
10% AEP (10 Year)	6 minute	109.00
	30 minute	45.40
	1 hour	28.90
	3 hour	14.30
	6 hour	9.31
	12 hour	6.04
	24 hour	3.79
	72 hour	1.91
1% AEP 100 Year	6 minute	156.00
	30 minute	65.30
	1 hour	31.30
	3 hour	20.50
	6 hour	14.00
	12 hour	9.50
	24 hour	6.09
	72 hour	2.49

Catchment Details

Area (ha) =	0.595
Co-efficient of Runoff =	0.90

Soakwell details

Soakwell Diameter (m) =	1.8
Liner Depth (m) =	1.8
Effective Depth (m) =	1.8
Soakwell base area (m^2) =	2.54
Soakwell Volume (m^3) =	4.58
No of Soakwells =	8

Infiltration

Rate of Soakage (m/day) =	5

Storage Cells

Length (m) =	32.180	length of box structure or pipe
Width (m) =	4.740	For Box style structure
Height (m) =	1.500	For Box style structure
	Or	
Diameter (m)=		For a solid circular pipe (without perculation slots, ie infiltration not available for pipe option)
Volume (m^3) =	228.80	(total linear storage within box structure or pipe)
Base Area (m^2) =	152.53	(for the box style infiltration structures)

Event	1 EY(1 year)						0.2 EY(5 year)						10% AEP(10 Year)								1% AEP100 Year							
Duration	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour
Intensities	67.5	28.1	18.3	9.06	5.75	3.60	96.50	40.2	25.7	12.70	8.20	5.25	109	45.4	28.9	14.30	9.31	6.04	3.79	1.91	156	65.30	31.30	20.50	14.00	9.5	6.09	2.49
Q (m^3/s)	0.1005	0.0418	0.0272	0.0135	0.0086	0.0054	0.1437	0.0599	0.0383	0.0189	0.0122	0.0078	0.1623	0.0676	0.0430	0.0213	0.0139	0.0090	0.0056	0.0028	0.2323	0.0972	0.0466	0.0305	0.0208	0.0141	0.0091	0.0037
Volume	**36.18**	**75.31**	**98.09**	**145.69**	**184.93**	**231.56**	**51.73**	**107.74**	**137.76**	**204.22**	**263.72**	**337.69**	**58.43**	**121.68**	**154.91**	**229.95**	**299.42**	**388.51**	**487.56**	**737.13**	**83.62**	**175.01**	**167.77**	**329.65**	**450.26**	**611.06**	**783.44**	**960.97**
SW Vol.	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64	36.64
Soak Vol	0.42	2.12	4.24	12.72	25.45	50.89	0.42	2.12	4.24	12.72	25.45	50.89	0.42	2.12	4.24	12.72	25.45	50.89	101.79	305.36	0.42	2.12	4.24	12.72	25.45	50.89	101.79	305.36
SW Total	37.07	38.76	40.88	49.37	62.09	87.54	37.07	38.76	40.88	49.37	62.09	87.54	37.07	38.76	40.88	49.37	62.09	87.54	138.43	342.01	37.07	38.76	40.88	49.37	62.09	87.54	138.43	342.01
Cell Vol	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80	228.80
Cell Soak	3.18	15.89	31.78	95.33	190.67	381.33	3.18	15.89	31.78	95.33	190.67	381.33	3.18	15.89	31.78	95.33	190.67	381.33	762.67	381.33	3.18	15.89	31.78	95.33	190.67	381.33	762.67	2288.00
Cell Total	231.98	244.69	260.58	324.13	419.47	610.13	231.98	244.69	260.58	324.13	419.47	610.13	231.98	244.69	260.58	324.13	419.47	610.13	991.47	610.13	231.98	244.69	260.58	324.13	419.47	610.13	991.47	2516.80
Total Vol	**269.05**	**283.45**	**301.46**	**373.50**	**481.56**	**697.67**	**269.05**	**283.45**	**301.46**	**373.50**	**481.56**	**697.67**	**269.05**	**283.45**	**301.46**	**373.50**	**481.56**	**697.67**	**1129.90**	**952.14**	**269.05**	**283.45**	**301.46**	**373.50**	**481.56**	**697.67**	**1129.90**	**2858.80**
	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
If I have	**8**	**soakwells, the following above ground volumetric storage is required for the 1:10 year event**					0	0	0	0	0	0	0	0														
If I have	**8**	**soakwells, the following above ground volumetric storage is required for the 1:100 year event**																			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

SPEL Puraceptor™

Petrol Stations - Pollution Prevention
Stormwater Treatment & Hydrocarbon Capture

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SPEL ENVIRONMENTAL
INTEGRATED WATER SOLUTIONS

Standards & Guidelines for Petrol Station Stormwater Pollution Control

There is no Australian Standard for oil/water separators. There are only guidelines for hydrocarbon discharge limits for stormwater discharge.

All State and territory regulating environmental authorities (or EPA) have guidelines with varying terminology stating that hydrocarbons are not to be visual (10ppm) in stormwater and receiving waters.

European Standard

(oil and petrol separators)

In the absence of an Australian Standard, the European British Standard BSEN 858-1:2002 applies when compliance is the regulating issue.

It is the world's most stringent standard for hydrocarbons separation for the use of oil/petrol separators in surface water drainage systems. Prevents the emission of petrol odours.

Australian Runoff Quality

The Australian Runoff Quality A Guide to Water Sensitive Urban Design (Engineers Australia) ISBN 0 85825 852 8 Chapter 9 `Hydrocarbon Management` refers to The Standard and the European Agency UK Oil Separator Selection and Design` for petrol stations.

Non-Compliant Sites

Petrol stations with the following defects.

- Canopy drip line that does not allow for the 10 degree inset
- Fuel hose line that reaches outside the drip line
- Fuel bowsers that have no canopy
- Defective Oil/Water plate separator (Sewer connected)

Picture shows an undersized canopy with fuel pumps outside the canopy dripline

Picture shows a common site at petrol stations - uncovered fuel pumps.

Picture shows a defective forecourt design with oils and fuels discharging directly to the street drain.

Unseemly & highly visible hydrocarbons polluting the stormwater. The concentration in the picture is in excess of 10ppm

Solution for Non-Compliant Petrol Stations

SPEL Puraceptor Class 1 stormwater treatment system is a solution for the treatment, capture and retention of hydrocarbons off petrol stations.

SPEL Puraceptor Class 1 Existing operations can be retro-fitted with the SPEL Puraceptor Class 1 to ensure compliance with relevant environmental guidelines, and capture any potential spills.

SPEL`s Puraceptor Class 1 oil/ water separator is connected to the stormwater provides the site with the highest degree of environmental protection; - a protection that complies with council and EPA guidelines.

Petrol forecourt and surrounds at a busy metropolitan petrol station rendered compliant. The catchment consists of a grated drain encompassing the complete perimeter of the under-sized canopy. Surface water and forecourt runoff drains to the Puraceptor located under the two trafficable covers in the foreground.

Puraceptor Certification

Australian Independent Tests

The Puraceptor has been independently tested at the internationally-respected University of South Australia (UNISA) and at the UK`s leading hydraulics research faculty HR Wallingford.

- Water quality analyses at NATA-certified laboratories demonstrated no overall detection (0.032mg/L) of hydrocarbons from inflow concentrations of >5,000ppm

Council Approvals

The compliance of the SPEL Puraceptor with the stringent Class 1 requirements of BSEN 858-1:2002 has been welcomed by many regulators and approvals have been granted for more than 100 installations to date.

In-Situ Testing

NATA analysis of Puraceptors operating at similar applications in Australia reveal `no detection` of hydrocarbons from a captured concentration of >8,000ppm.

Puraceptor Benefits

- Full retention Class 1 treatment oil/water separator. It treats all liquid. There is no bypass.
- Complies with regulating requirements for no visable sheen.
- University tested and certified to independent European Standard BSEN 858-1:2002 for the capture and retention of hydrocarbons with a discharge quality of no visible trace from a tested inflow concentrator of >5,000ppm.
- Capture and contain oil/fuel spillages.
- Can be sized to capture and contain a spill from a refuelling tanker and prevent discharge to stormwater.
- Passive gravity function ensuring treatment is continuous.
- Equipped with an intrinsically safe oil alert probe providing regular detection for oil build-up. Set to alarm when oil hydrocarbons occupy 10% of the chamber`s volume.
- Oil alert probe enables `self-monitoring`, suitable for unmanned and remote locations.
- Equipped with a dipped inlet pipe ensuring fire water is extinguished.
- Equipped with a vapour trap preventing vapours from discharging and preventing the emission of odours.
- Water tight structure.
- 50 year design life.
- Annual maintenance interval using low-cost technology.
- Operations & Maintenance manual with a ledger for accurate recording of maintenance operations.
- Maintenance performed from ground level; no entering of tank is required, satisfying O.H.& S. requirements.

Independently tested for reducing the average annual loads:

- ✔ 97% total suspended solids (TSS)
- ✔ 100% > 5mm gross pollutant solids (GP)
- ✔ 99.9% light liquids (TPH) (certified discharge quality of 5ppm or less, European standard BSEN 858-1:2002
- ✔ >30% particulate specialisation of phosphorus & nitrogen

1 Maintenance

- Designed for high performance and low maintenance over a long life span
- Visible oils (TPH) are skimmed from the surface of the water level
- Easy and safe to access and clean, with access shafts positioned on all chambers.
- Entry of the unit is not required.
- Recommended maintenance intervals are 12 months or after major spills.
- Only oils, sediment and gross pollutants need to be removed. All stormwater does not require removal.
- The cylindrical design ensures sediment collects centrally on the floor of the chambers effecting easy, quick removal. There are no square corners or unreachable cavities and recesses.
- Waste is removed by a vacuum loading truck. (Suction truck)

2 SPEL ® PURACEPTOR

units are glass reinforced plastic vessels made by the technical advanced chop hoop filament winding process (patented) producing circumferential and longitudinal strength complying with AS 2634 1983 for tank design.

3 Stormwater discharge

quality is <0.1mg/L hydrocarbon content exceeding the Environmental Protection Agency (E.P.A.) requirements of 10mg/l hydrocarbon content.

Onsite Testing: The Puraceptor is designed to provide easy access for Site Personnel to collect water samples for regulatory compliance.

4 The AUTOMATIC CLOSURE DEVICE (A.C.D.)

is a precisely engineered device comprising a water-buoyant ball that is sensitive to any change in the water density as a consequence of light liquids build up, thereby automatically activating a process of depressing the A.C.D. to SHUT OFF the separator, preventing pollutants from discharging to drains and waterways.

5 SPEL PURACEPTOR Class 1 separators incorporate coalescer units.

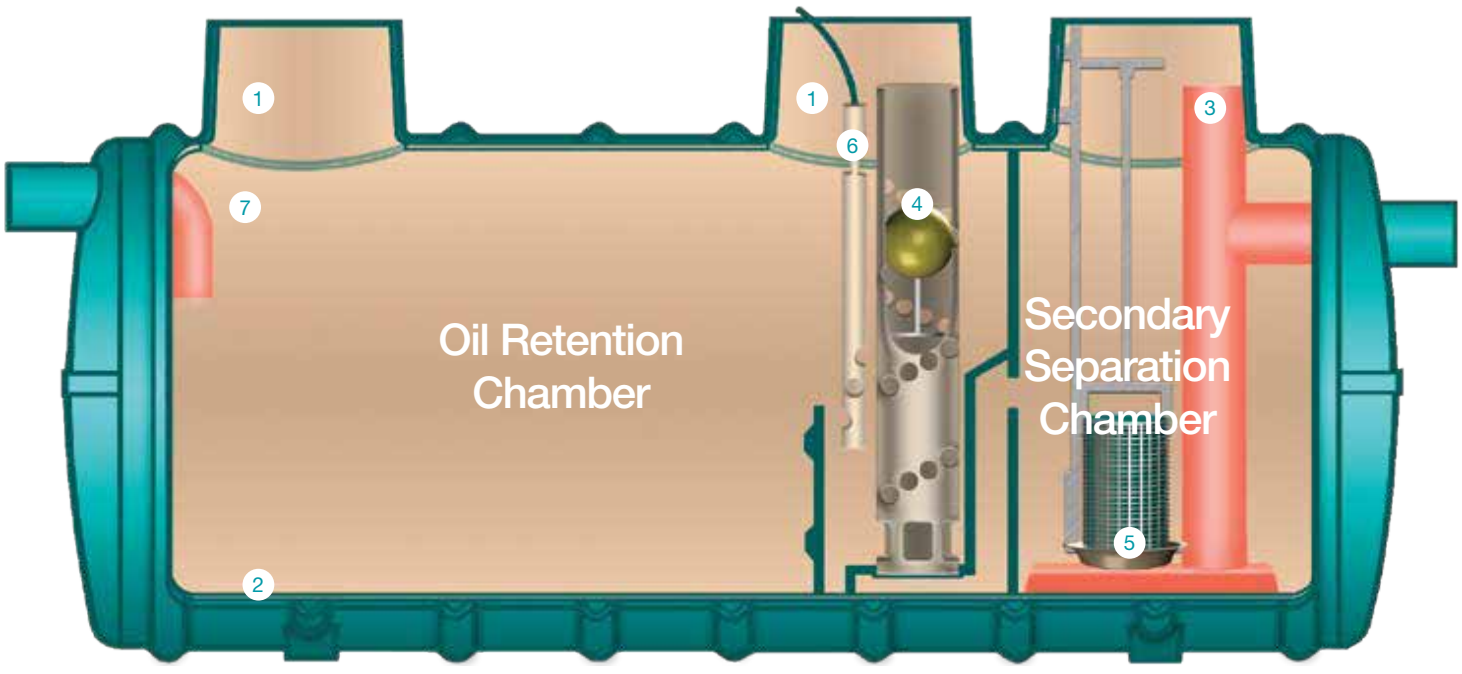
They consist of a quality stainless steel mesh container with an adjustable handle and high volume reticulated foam insert.

The coalescer unit is mounted in the second chamber, providing a coalescence process for the separation of smaller globules of light liquid pollutants before final discharge to stormwater.

6 An oil sensing probe is installed within a protective guard to continually monitor hydrocarbon depth in the Puraceptor. Once the level reaches the pre-determined depth, the alarm is triggered signalling the need for maintenance.

7 SPEL® PURACEPTOR

tanks contain an immersed dipped inlet pipe to extinguish flames and prevent inflammable vapours from passing through to the drainage system. Complies with Section 6.3.4 of BSEN 858-1:2002 SPEL PURACEPTOR can withstand temperatures of up to 140ºC.



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West Australia	61 8 9350 1000
Northern Territory	61 2 8705 0255
New Zealand	64 9 276 9045

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0033.8 Puraceptor_Petrolstations

SPEL ENVIRONMENTAL
INTEGRATED WATER SOLUTIONS

SPEL Puraceptor

Stormwater Treatment & Hydrocarbon Capture

www.spel.com.au

SPEL ENVIRONMENTAL
INTEGRATED WATER SOLUTIONS

Stormwater Treatment

SPEL PURACEPTOR Class 1 stormwater treatment separators cater for potential hazards to the environment including sites where there is a risk of oil and fuel spills.

Oils and all petroleum hydrocarbons are treated to the highest discharge quality exceeding EPA standards ensuring it safe for stormwater discharge.

Major Oil spills from a petrol tanker or a transformer rupture are captured and contained preventing any stormwater discharge.

- Independently tested (laboratory) and certified to discharge < 1.86ppm or less petroleum hydrocarbons (TPH),from 5,000ppm ingress
- Independently field tested to discharge 'no detection' from >33,000.0ppm

The results obtained at HR Wallingford, U.K. are certified to European Standard EN BS858.1 (2006) and are in line with the designed performance criteria for high performance and long service life between maintenance periods, achieving results averaging between 0.1 - 1.86mg/L

SERVICE STATION FIELD TEST

Service station forecourt after 3 months operation. Includes capture and treatment of unleaded fuel, diesel and engine oil.

Total Petroleum Hydrocarbons

Results expressed in mg/l

	EQL*	Test 1		
		Inflow	Outflow	
C6-C9	0.05	2.4	<0.05	No Detection
C10-C14	0.05	302	<0.05	
C15-C28	0.4	1820	<0.4	
C29-C36	0.1	8.3	<0.1	

*Sensitivity: Estimated Quantitation Limit

- Analysis was conducted at a NATA certified laboratory

1 Maintenance

- Designed for high performance and low maintenance over a long life span
- Visible oils (TPH) are skimmed from the surface of the water level
- Easy and safe to access and clean, with access shafts positioned on all chambers.
- Entry of the unit is not required.
- Recommended maintenance intervals are 12 months or after major spills.
- Only oils, sediment and gross pollutants need to be removed. All stormwater does not require removal.
- The cylindrical design ensures sediment collects centrally on the floor of the chambers effecting easy, quick removal. There are no square corners or unreachable cavities and recesses.
- Waste is removed by a vacuum loading truck. (Suction truck)

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units are glass reinforced plastic vessels made by the technical advanced chop hoop filament winding process (patented) producing circumferential and longitudinal strength complying with AS 2634 1983 for tank design.

3 Stormwater discharge

quality is < 1.86 mg/l hydrocarbon content exceeding the Environmental Protection Agency (E.P.A.) requirements of 10mg/l hydrocarbon content.

Onsite Testing: The Puraceptor is designed to provide easy access for Site Personnel to collect water samples for regulatory compliance.

4 The AUTOMATIC CLOSURE DEVICE (A.C.D.)

is a precisely engineered device comprising a water-buoyant ball that is sensitive to any change in the water density as a consequence of light liquids build up, thereby automatically activating a process of depressing the A.C.D. to SHUT OFF the separator, preventing pollutants from discharging to drains and waterways.

5 SPEL PURACEPTOR Class 1 separators incorporate coalescer units.

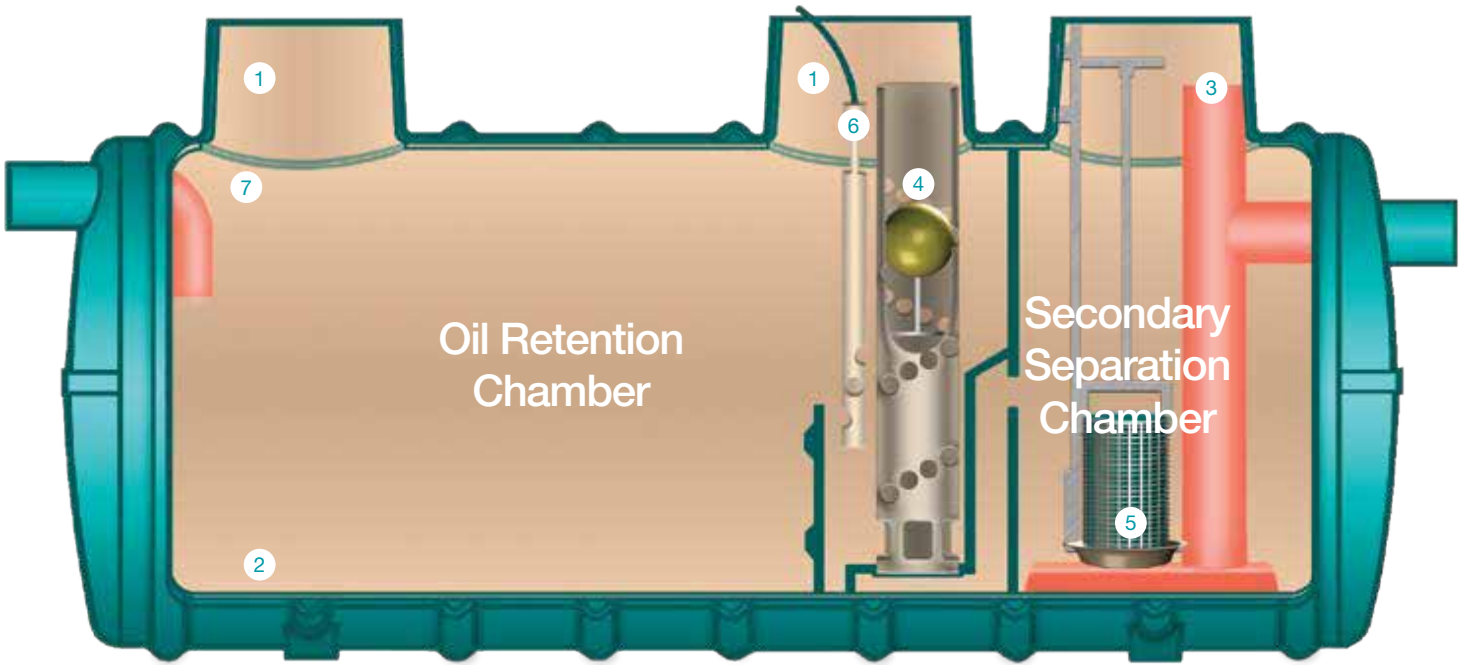
They consist of a quality stainless steel mesh container with an adjustable handle and high volume reticulated foam insert.

The coalescer unit is mounted in the second chamber, providing a coalescence process for the separation of smaller globules of light liquid pollutants before final discharge to stormwater.

6 An oil sensing probe is installed within a protective guard to continually monitor hydrocarbon depth in the Puraceptor. Once the level reaches the pre-determined depth, the alarm is triggered signalling the need for maintenance.

7 SPEL® PURACEPTOR

tanks contain an immersed dipped inlet pipe to extinguish flames and prevent inflammable vapours from passing through to the drainage system. Complies with Section 6.3.4 of BS EN 858.1.2006. SPEL PURACEPTOR can withstand temperatures of up to 140ºC.



Oil Capture & Containment

High Risk

Ararat Wind Farm

Site	Ararat Wind Farm, VIC.
Application	Transformers
Risk	High
Pollutants	Transformer oil
Discharge	Stormwater
Units supplied	P006 - Puraceptor™ Class 1 with 20,000 litre retention tank
T.F.R.	6 L/s
Operation	Due to the remote position of this transformer and the impact on the environment in the event of a failure, it was essential to the power provider to have a proven and reliable system. SPEL PURACEPTORTM was selected due to its proven “track record” in supplying the power industry, overall reliability and the necessity to have optimum quality discharge. Whilst the design of 6 LPS from the bund area caters for the nominal flow, a 20,000L spill retention was built into the system to hold the capacity of a transformer rupture.

Cranbourne Switchyard

Site	Cranbourne Switchyard, VIC.
Application	Transformer Switchyard
Risk	High
Pollutants	Transformer oil (70,000 litres)
Discharge	Stormwater to river
Units supplied	P040 - PuraceptorTM Class 1 - oil capacity 70,000 litre
T.F.R.	40 L/s
Operation	This unit was installed to treat stormwater and firewater from the deluge system simultaneously. The unit caters for a 40 LPS flow rate, and has the capacity to capture a 70,000L transformer spillage and remain operational. SPEL units are designed and built to BS EN 858.1. 2006 it was able to be used as a designated flame trap, further enhancing its selection for this site.

Fuel Station

Site	Fuel Service Station, NSW.
Application	Stormwater runoff from forecourt and immediate adjacent surfaces.
Risk	High
Pollutants	Petrol, diesel, oils, suspended solids
Discharge	Stormwater drain to Georges River
Units supplied	P006 Puraceptor™ Class 1
T.F.R.	6 L/s
Operation	Functions by gravity, will continue to be treated in the event of a power failure. Equipped with an oil/fuel alert probe for maintenance monitoring and to alert in the event of an emergency spill.

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0033.8 Puraceptor_StormwaterTreatment

SPEL ENVIRONMENTAL
INTEGRATED WATER SOLUTIONS

APPENDIX F - Private Internal Road Stormwater Calculations (T060.22)

Project	**630 Pinjarra Road, Furnissdale 6209**
Job Number	**21-06-080**
Date	**23 April 2022**
Engineer	**Michael Cook**
Summary	**For private internal access road abutting the south of the service station lot**
Scenario	**Underground structures-Box culverts**
File Name	**T060.22**
Revision	**A**
Reference Document	**R023.22**
IFD Used	**630 Pinjarra Road, Furnisdale IFD used (32°33'13.40"S, 115°46'45.99"E) generated from BoM website**
Ground Conditions	**permeability due to Q_{pb} Bassendean sand(1:250000 Geological series mapping)**
Groundwater	**approx 0m AHD (Murrary Hydrological Studies, Department of Water, Aug 2010)**

Porter Consulting Engineers
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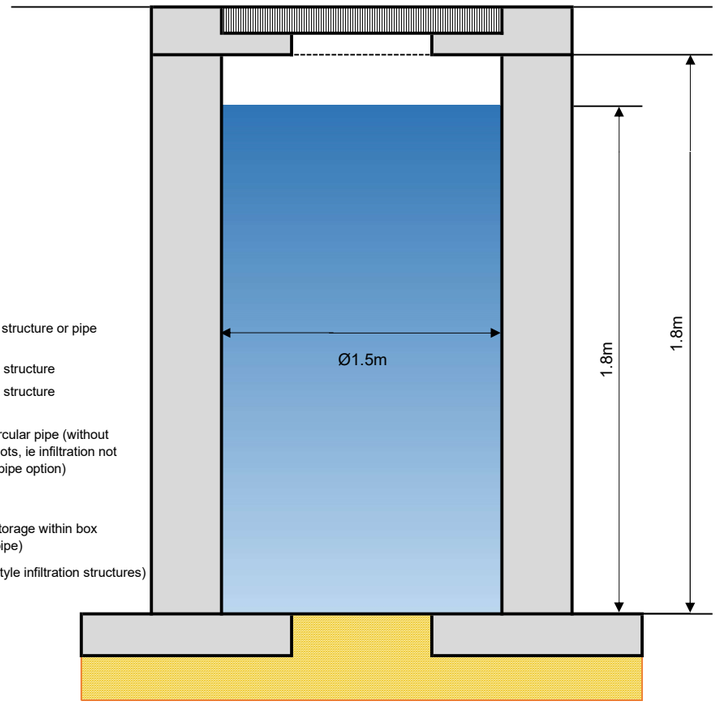
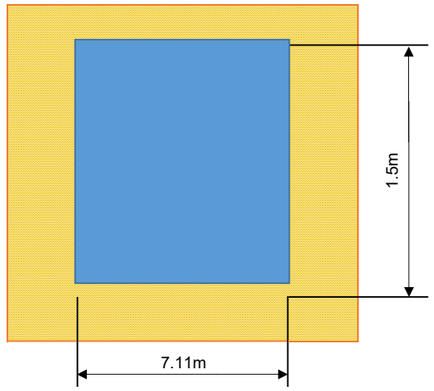
Mount Pleasant WA 6153
PO Box 1036
Canning Bridge WA 6153
Tel: (08) 9315 9955
Fax: (08) 9315 9959
office@portereng.com.au
www.portereng.com.au





Intensities (mm/hr)

1 EY (1 year)	6 minute	67.50
	30 minute	28.10
	1 hour	18.30
	3 hour	9.06
	6 hour	5.75
	12 hour	3.60
0.2 EY (5 year)	6 minute	96.50
	30 minute	40.20
	1 hour	25.70
	3 hour	12.70
	6 hour	8.20
	12 hour	5.25
10% AEP (10 Year)	6 minute	109.00
	30 minute	45.40
	1 hour	28.90
	3 hour	14.30
	6 hour	9.31
	12 hour	6.04
	24 hour	3.79
	72 hour	1.91
1% AEP 100 Year	6 minute	156.00
	30 minute	65.30
	1 hour	31.30
	3 hour	20.50
	6 hour	14.00
	12 hour	9.50
	24 hour	6.09
	72 hour	2.49

Catchment Details

Area (ha) = 0.464
Co-efficient of Runoff = 0.80

Soakwell details

Soakwell Diameter (m) = 1.5
Liner Depth (m) = 1.8
Effective Depth (m) = 1.8
Soakwell base area (m^2) = 1.77
Soakwell Volume (m^3) = 3.18
No of Soakwells = 8

Infiltration

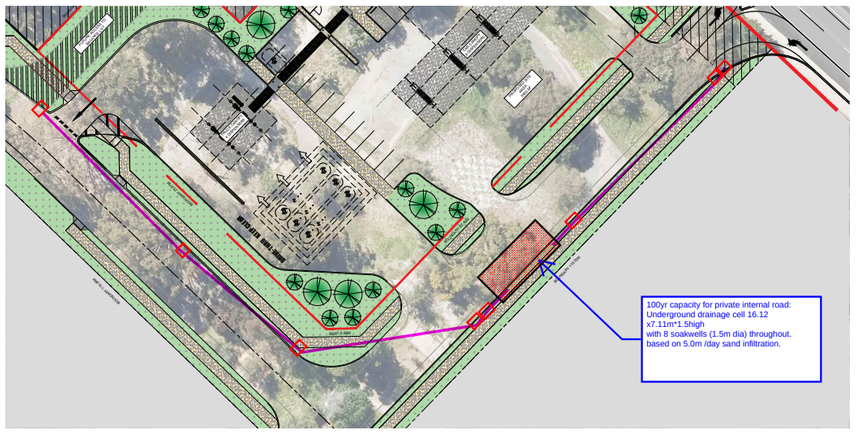
Rate of Soakage (m/day) = 4

Storage Cells

Length (m) = 16.100 length of box structure or pipe
Width (m) = 7.110 For Box style structure
Height (m) = 1.500 For Box style structure
Or
Diameter (m)= For a solid circular pipe (without perculation slots, ie infiltration not available for pipe option)

Volume (m^3) = 171.71 (total linear storage within box structure or pipe)
Base Area (m^2) = 114.47 (for the box style infiltration structures)

Event	1 EY(1 year)						0.2 EY(5 year)						10% AEP(10 Year)								1% AEP100 Year							
Duration	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour
Intensities	67.5	28.1	18.3	9.06	5.75	3.60	96.50	40.2	25.7	12.70	8.20	5.25	109	45.4	28.9	14.30	9.31	6.04	3.79	1.91	156	65.30	31.30	20.50	14.00	9.5	6.09	2.49
Q (m^3/s)	0.0697	0.0290	0.0189	0.0094	0.0059	0.0037	0.0997	0.0415	0.0265	0.0131	0.0085	0.0054	0.1126	0.0469	0.0298	0.0148	0.0096	0.0062	0.0039	0.0020	0.1611	0.0674	0.0323	0.0212	0.0145	0.0098	0.0063	0.0026
Volume	**25.10**	**52.24**	**68.04**	**101.06**	**128.28**	**160.63**	**35.88**	**74.74**	**95.56**	**141.66**	**182.93**	**234.24**	**40.53**	**84.40**	**107.46**	**159.51**	**207.70**	**269.49**	**338.20**	**511.32**	**58.00**	**121.40**	**116.38**	**228.67**	**312.33**	**423.87**	**543.45**	**666.59**
SW Vol.	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45	25.45
Soak Vol	0.24	1.18	2.36	7.07	14.14	28.27	0.24	1.18	2.36	7.07	14.14	28.27	0.24	1.18	2.36	7.07	14.14	28.27	56.55	169.65	0.24	1.18	2.36	7.07	14.14	28.27	56.55	169.65
SW Total	25.68	26.62	27.80	32.52	39.58	53.72	25.68	26.62	27.80	32.52	39.58	53.72	25.68	26.62	27.80	32.52	39.58	53.72	82.00	195.09	25.68	26.62	27.80	32.52	39.58	53.72	82.00	195.09
Cell Vol	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71	171.71
Cell Soak	1.91	9.54	19.08	57.24	114.47	228.94	1.91	9.54	19.08	57.24	114.47	228.94	1.91	9.54	19.08	57.24	114.47	228.94	457.88	228.94	1.91	9.54	19.08	57.24	114.47	228.94	457.88	1373.65
Cell Total	173.61	181.25	190.79	228.94	286.18	400.65	173.61	181.25	190.79	228.94	286.18	400.65	173.61	181.25	190.79	228.94	286.18	400.65	629.59	400.65	173.61	181.25	190.79	228.94	286.18	400.65	629.59	1545.36
Total Vol	**199.30**	**207.87**	**218.59**	**261.46**	**325.76**	**454.37**	**199.30**	**207.87**	**218.59**	**261.46**	**325.76**	**454.37**	**199.30**	**207.87**	**218.59**	**261.46**	**325.76**	**454.37**	**711.59**	**595.74**	**199.30**	**207.87**	**218.59**	**261.46**	**325.76**	**454.37**	**711.59**	**1740.45**
	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
If I have	**8**	**soakwells, the following above ground volumetric storage is required for the 1:10 year event**											0	0	0	0	0	0	0	0								
If I have	**8**	**soakwells, the following above ground volumetric storage is required for the 1:100 year event**																			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**



APPENDIX G - Proposed 2,466m^2 lot Stormwater Calculations (T061.22)

Project	**630 Pinjarra Road, Furnissdale 6209**
Job Number	**21-06-080**
Date	**23 April 2022**
Engineer	**Michael Cook**
Summary	**For 2466m2 proposed lot**
Scenario	**Underground structures-Box culverts**
File Name	**T061.22**
Revision	**A**
Reference Document	**R023.22**
IFD Used	**630 Pinjarra Road, Furnisdale IFD used (32°33'13.40"S, 115°46'45.99"E) generated from BoM website**
Ground Conditions	**permeability due to Q_{pb} Bassendean sand(1:250000 Geological series mapping)**
Groundwater	**approx 0m AHD (Murrary Hydrological Studies, Department of Water, Aug 2010)**

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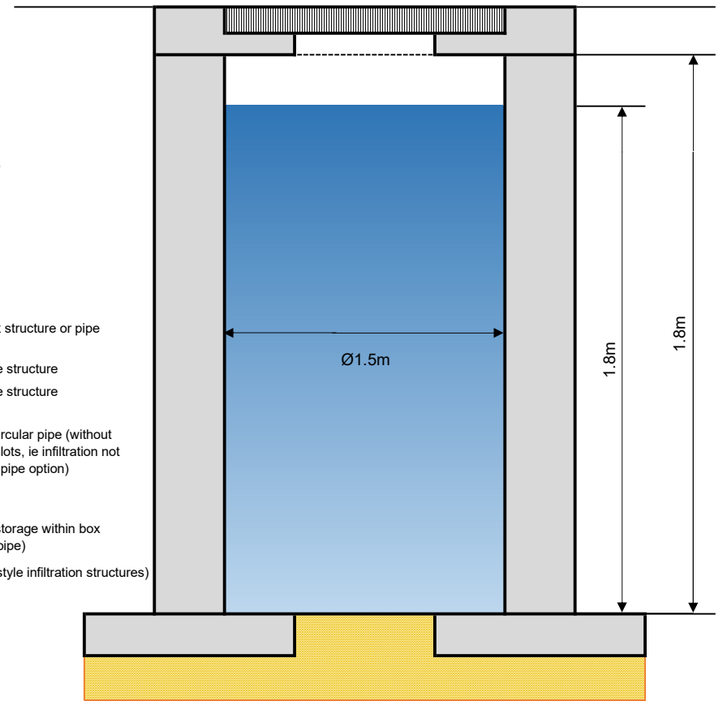
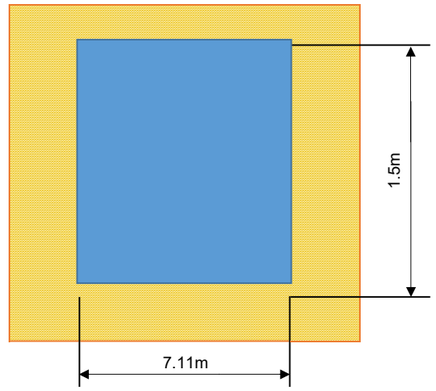




Intensities (mm/hr)

1 EY (1 year)	6 minute	67.50
	30 minute	28.10
	1 hour	18.30
	3 hour	9.06
	6 hour	5.75
	12 hour	3.60
0.2 EY (5 year)	6 minute	96.50
	30 minute	40.20
	1 hour	25.70
	3 hour	12.70
	6 hour	8.20
	12 hour	5.25
10% AEP (10 Year)	6 minute	109.00
	30 minute	45.40
	1 hour	28.90
	3 hour	14.30
	6 hour	9.31
	12 hour	6.04
	24 hour	3.79
	72 hour	1.91
1% AEP 100 Year	6 minute	156.00
	30 minute	65.30
	1 hour	31.30
	3 hour	20.50
	6 hour	14.00
	12 hour	9.50
	24 hour	6.09
	72 hour	2.49

Catchment Details

Area (ha) = 0.247
Co-efficient of Runoff = 0.90

Soakwell details

Soakwell Diameter (m) = 1.5
Liner Depth (m) = 1.8
Effective Depth (m) = 1.8
Soakwell base area (m^2) = 1.77
Soakwell Volume (m^3) = 3.18
No of Soakwells = 2

Infiltration

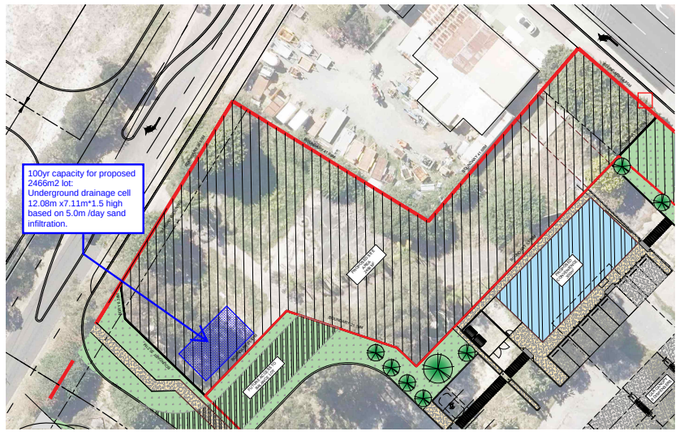
Rate of Soakage (m/day) = 5

Storage Cells

Length (m) = 12.080 — length of box structure or pipe
Width (m) = 7.110 — For Box style structure
Height (m) = 1.500 — For Box style structure
Or
Diameter (m)= — For a solid circular pipe (without perculation slots, ie infiltration not available for pipe option)

Volume (m^3) = 128.83 (total linear storage within box structure or pipe)
Base Area (m^2) = 85.89 (for the box style infiltration structures)

Event	1 EY(1 year)						0.2 EY(5 year)						10% AEP(10 Year)								1% AEP100 Year							
Duration	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour
Intensities	67.5	28.1	18.3	9.06	5.75	3.60	96.50	40.2	25.7	12.70	8.20	5.25	109	45.4	28.9	14.30	9.31	6.04	3.79	1.91	156	65.30	31.30	20.50	14.00	9.5	6.09	2.49
Q (m^3/s)	0.0416	0.0173	0.0113	0.0056	0.0035	0.0022	0.0595	0.0248	0.0159	0.0078	0.0051	0.0032	0.0673	0.0280	0.0178	0.0088	0.0057	0.0037	0.0023	0.0012	0.0963	0.0403	0.0193	0.0126	0.0086	0.0059	0.0038	0.0015
Volume	**14.99**	**31.21**	**40.65**	**60.37**	**76.63**	**95.95**	**21.43**	**44.65**	**57.08**	**84.63**	**109.28**	**139.93**	**24.21**	**50.42**	**64.19**	**95.29**	**124.07**	**160.99**	**202.04**	**305.46**	**34.65**	**72.52**	**69.52**	**136.60**	**186.58**	**253.21**	**324.65**	**398.21**
SW Vol.	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36
Soak Vol	0.07	0.37	0.74	2.21	4.42	8.84	0.07	0.37	0.74	2.21	4.42	8.84	0.07	0.37	0.74	2.21	4.42	8.84	17.67	53.01	0.07	0.37	0.74	2.21	4.42	8.84	17.67	53.01
SW Total	6.44	6.73	7.10	8.57	10.78	15.20	6.44	6.73	7.10	8.57	10.78	15.20	6.44	6.73	7.10	8.57	10.78	15.20	24.03	59.38	6.44	6.73	7.10	8.57	10.78	15.20	24.03	59.38
Cell Vol	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83	128.83
Cell Soak	1.79	8.95	17.89	53.68	107.36	214.72	1.79	8.95	17.89	53.68	107.36	214.72	1.79	8.95	17.89	53.68	107.36	214.72	429.44	214.72	1.79	8.95	17.89	53.68	107.36	214.72	429.44	1288.33
Cell Total	130.62	137.78	146.73	182.51	236.19	343.56	130.62	137.78	146.73	182.51	236.19	343.56	130.62	137.78	146.73	182.51	236.19	343.56	558.28	343.56	130.62	137.78	146.73	182.51	236.19	343.56	558.28	1417.17
Total Vol	**137.06**	**144.51**	**153.82**	**191.08**	**246.97**	**358.75**	**137.06**	**144.51**	**153.82**	**191.08**	**246.97**	**358.75**	**137.06**	**144.51**	**153.82**	**191.08**	**246.97**	**358.75**	**582.31**	**402.93**	**137.06**	**144.51**	**153.82**	**191.08**	**246.97**	**358.75**	**582.31**	**1476.54**
	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
If I have	**2**	**soakwells, the following above ground volumetric storage is required for the 1:10 year event**											0	0	0	0	0	0	0	0								
If I have	**2**	**soakwells, the following above ground volumetric storage is required for the 1:100 year event**																			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**



- Southbound carriageway (T063.22)
- Northbound carriageway (T064.22)

Project	**630 Pinjarra Road, Furnissdale 6209**
Job Number	**21-06-080**
Date	**23 April 2022**
Engineer	**Michael Cook**
Summary	**Furnissdale Road-southbound carriageway**
Scenario	**Soakwells**
File Name	**T063.22**
Revision	**A**
Reference Document	**R023.22**
IFD Used	**630 Pinjarra Road, Furnisdale IFD used (32°33'13.40"S, 115°46'45.99"E) generated from BoM website**
Ground Conditions	**permeability due to Q_{pb} Bassendean sand(1:250000 Geological series mapping)**
Groundwater	**approx 0m AHD (Murrary Hydrological Studies, Department of Water, Aug 2010)**

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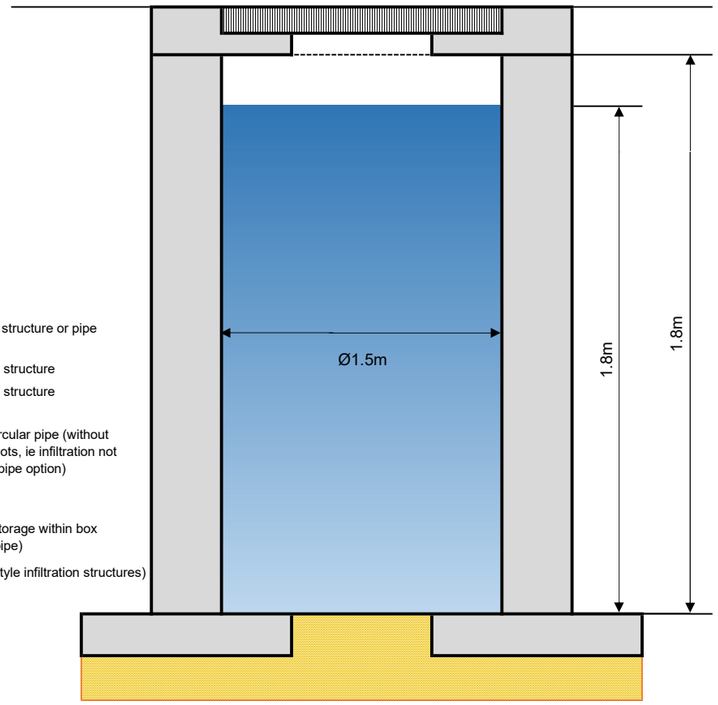
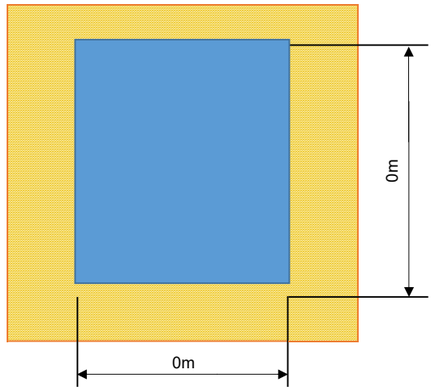




Intensities (mm/hr)

1 EY (1 year)	6 minute	67.50
	30 minute	28.10
	1 hour	18.30
	3 hour	9.06
	6 hour	5.75
	12 hour	3.60
0.2 EY (5 year)	6 minute	96.50
	30 minute	40.20
	1 hour	25.70
	3 hour	12.70
	6 hour	8.20
	12 hour	5.25
10% AEP (10 Year)	6 minute	109.00
	30 minute	45.40
	1 hour	28.90
	3 hour	14.30
	6 hour	9.31
	12 hour	6.04
	24 hour	3.79
	72 hour	1.91
1% AEP 100 Year	6 minute	156.00
	30 minute	65.30
	1 hour	31.30
	3 hour	20.50
	6 hour	14.00
	12 hour	9.50
	24 hour	6.09
	72 hour	2.49

Catchment Details

Area (ha) =	0.158
Co-efficient of Runoff =	0.90

Soakwell details

Soakwell Diameter (m) =	1.5
Liner Depth (m) =	1.8
Effective Depth (m) =	1.8
Soakwell base area (m^2) =	1.77
Soakwell Volume (m^3) =	3.18
No of Soakwells =	5

Infiltration

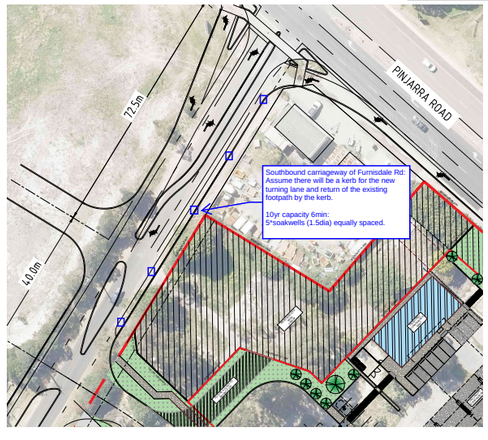
Rate of Soakage (m/day) =	5

Storage Cells

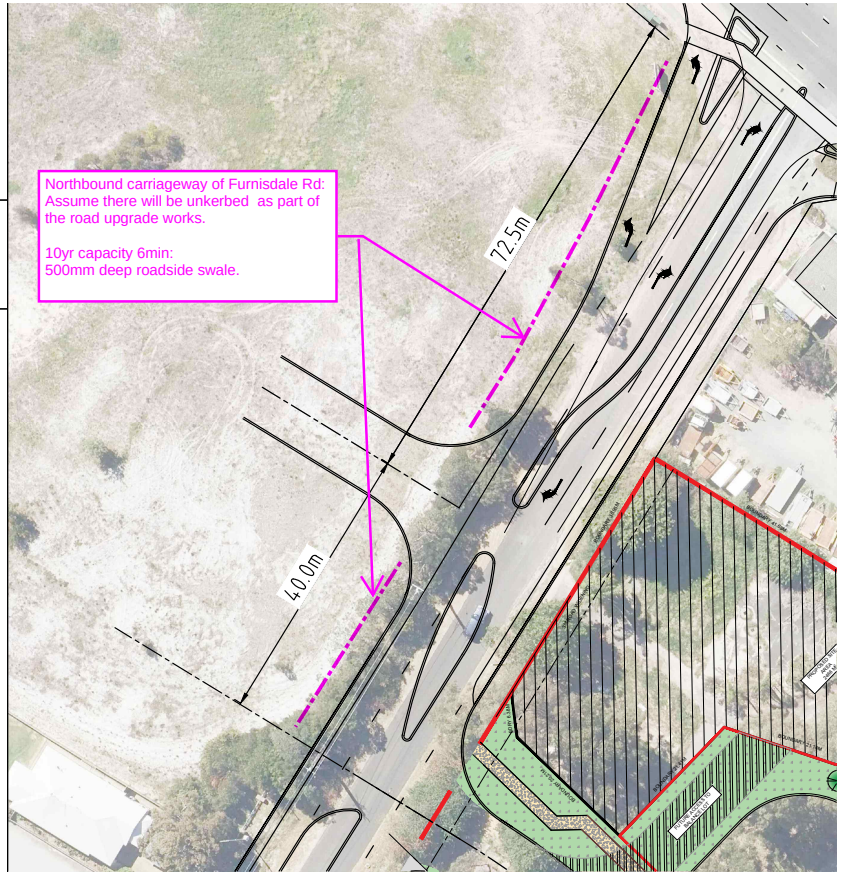
Length (m) =	0.000	length of box structure or pipe
Width (m) =	0.000	For Box style structure
Height (m) =	0.000	For Box style structure
	Or	
Diameter (m)=		For a solid circular pipe (without perculation slots, ie infiltration not available for pipe option)
Volume (m^3) =	0.00	(total linear storage within box structure or pipe)
Base Area (m^2) =	0.00	(for the box style infiltration structures)

Event	1 EY(1 year)						0.2 EY(5 year)						10% AEP(10 Year)								1% AEP100 Year							
Duration	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour
Intensities	67.5	28.1	18.3	9.06	5.75	3.60	96.50	40.2	25.7	12.70	8.20	5.25	109	45.4	28.9	14.30	9.31	6.04	3.79	1.91	156	65.30	31.30	20.50	14.00	9.5	6.09	2.49
Q (m^3/s)	0.0267	0.0111	0.0072	0.0036	0.0023	0.0014	0.0382	0.0159	0.0102	0.0050	0.0032	0.0021	0.0432	0.0180	0.0114	0.0057	0.0037	0.0024	0.0015	0.0008	0.0618	0.0259	0.0124	0.0081	0.0055	0.0038	0.0024	0.0010
Volume	**9.62**	**20.03**	**26.09**	**38.75**	**49.19**	**61.60**	**13.76**	**28.66**	**36.64**	**54.32**	**70.15**	**89.83**	**15.54**	**32.37**	**41.21**	**61.17**	**79.65**	**103.34**	**129.69**	**196.08**	**22.24**	**46.55**	**44.63**	**87.69**	**119.77**	**162.55**	**208.40**	**255.62**
SW Vol.	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90	15.90
Soak Vol	0.18	0.92	1.84	5.52	11.04	22.09	0.18	0.92	1.84	5.52	11.04	22.09	0.18	0.92	1.84	5.52	11.04	22.09	44.18	132.54	0.18	0.92	1.84	5.52	11.04	22.09	44.18	132.54
SW Total	16.09	16.82	17.75	21.43	26.95	37.99	16.09	16.82	17.75	21.43	26.95	37.99	16.09	16.82	17.75	21.43	26.95	37.99	60.08	148.44	16.09	16.82	17.75	21.43	26.95	37.99	60.08	148.44
Cell Vol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell Soak	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Vol	**16.09**	**16.82**	**17.75**	**21.43**	**26.95**	**37.99**	**16.09**	**16.82**	**17.75**	**21.43**	**26.95**	**37.99**	**16.09**	**16.82**	**17.75**	**21.43**	**26.95**	**37.99**	**60.08**	**148.44**	**16.09**	**16.82**	**17.75**	**21.43**	**26.95**	**37.99**	**60.08**	**148.44**
	PASS	FAIL	FAIL	FAIL	FAIL	FAIL	PASS	FAIL	FAIL	FAIL	FAIL	FAIL	PASS	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL

If I have	**5**	**soakwells, the following above ground volumetric storage is required for the 1:10 year event**	0	15.5419	23.46	39.74	52.70	65.3512	69.6114	47.6412			
If I have	**5**	**soakwells, the following above ground volumetric storage is required for the 1:100 year event**									**6**	**30**	**27**	**66**	**93**	**125**	**148**	**107**



PC-SUMP CALCULATION



Project Details	
Project	Furnisdale Road
Job Number	21/06/1980
Task	Northbound verge of Furnisdale
Designer	Michael Cook

Catchment Area Details				
Land Form	Area (m2)	Runoff Coeff	Aimp (m2)	Comments
Road pavement	1583	0.8	1266	
Verge	0	0	0	
	0	0	0	
TOTAL	1583		1266	

INPUT DATA

Location	Mandurah	
$A_{impervious}$	0.1266	ha
GWL	0.000	m AHD
Depth to GWL from base	2.800	m
Max Allowable TWL	3.300	m AHD
Sump Base Level	2.800	m AHD
Sump Width at base	0.01	m
Sump Length at base	100	m
Side Slope	4.0	1 in --
Soil Permeability, K	5	m/d
Permeability Clogged Layer	0.15	m/d
Thickness of Clogged Layer	200	mm
Reduction Factor - Shallow	0.800	
Reduction Factor - Deep	0.333	
Reduction Factor - Clogged	1.000	

SUMMARY OUTPUT

ARI (years)	Duration (hours)	Rainfall Intensity (mm/h)	Total Inflow (m3)	Infiltration q0 (m3/day)	Total Outflow (m3)	Storage Required (m3)	Water Depth, H (m)	TWL (m AHD)	Freeboard (m)	Critical Model	Comments
5	24	3.17	96	35.86	36	60	0.383	3.183	0.117	Clogged base model	5 year water level 383mm deep within 500mm deep swale
10	24	3.51	107	38.69	39	68	0.406	3.206	0.094	Clogged base model	10 year water level 406mm deep within 500mm deep swale
20	24	4.01	122	42.83	43	79	0.438	3.238	0.062	Clogged base model	20 year water level 438mm deep within 500mm deep swale
50	36	3.68	168	48.58	73	95	0.480	3.280	0.020	Clogged base model	50 year water level 480mm deep within 500mm deep swale
100	36	4.13	188	53.06	80	109	0.511	3.311	-0.011	Clogged base model	100 year water level 511mm deep overtops 500mm deep swale

APPENDIX I - Pinjarra Road Drainage Calculations (T062.22)

Project	**630 Pinjarra Road, Furnissdale 6209**
Job Number	**21-06-080**
Date	**23 April 2022**
Engineer	**Michael Cook**
Summary	**Pinjarra Road-western verge**
Scenario	**Soakwells only**
File Name	**T062.22**
Revision	**A**
Reference Document	**R023.22**
IFD Used	**630 Pinjarra Road, Furnisdale IFD used (32°33'13.40"S, 115°46'45.99"E) generated from BoM website**
Ground Conditions	**permeability due to Q_{pb} Bassendean sand(1:250000 Geological series mapping)**
Groundwater	**approx 0m AHD (Murrary Hydrological Studies, Department of Water, Aug 2010)**

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www.portereng.com.au

Intensities (mm/hr)

1 EY (1 year)	6 minute	67.50
	30 minute	28.10
	1 hour	18.30
	3 hour	9.06
	6 hour	5.75
	12 hour	3.60
0.2 EY (5 year)	6 minute	96.50
	30 minute	40.20
	1 hour	25.70
	3 hour	12.70
	6 hour	8.20
	12 hour	5.25
10% AEP (10 Year)	6 minute	109.00
	30 minute	45.40
	1 hour	28.90
	3 hour	14.30
	6 hour	9.31
	12 hour	6.04
	24 hour	3.79
	72 hour	1.91
1% AEP 100 Year	6 minute	156.00
	30 minute	65.30
	1 hour	31.30
	3 hour	20.50
	6 hour	14.00
	12 hour	9.50
	24 hour	6.09
	72 hour	2.49

Catchment Details

Area (ha) = 0.233
Co-efficient of Runoff = 0.90

Soakwell details

Soakwell Diameter (m) = 1.5
Liner Depth (m) = 1.8
Effective Depth (m) = 1.8
Soakwell base area (m^2) = 1.77
Soakwell Volume (m^3) = 3.18
No of Soakwells = 10

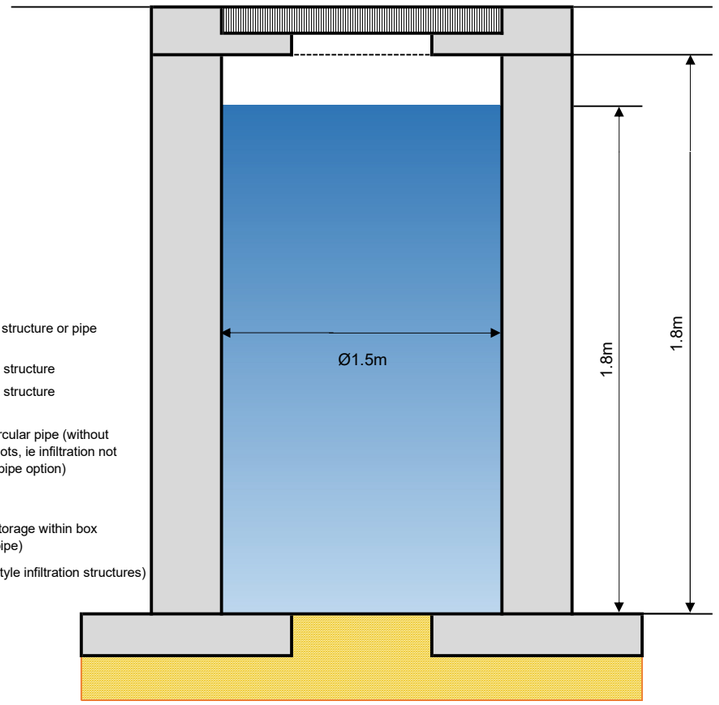
Infiltration

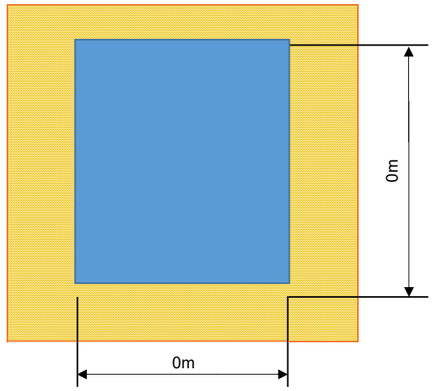
Rate of Soakage (m/day) = 5

Storage Cells

Length (m) = 0.000 length of box structure or pipe
Width (m) = 0.000 For Box style structure
Height (m) = 0.000 For Box style structure
Or
Diameter (m)= For a solid circular pipe (without perculation slots, ie infiltration not available for pipe option)

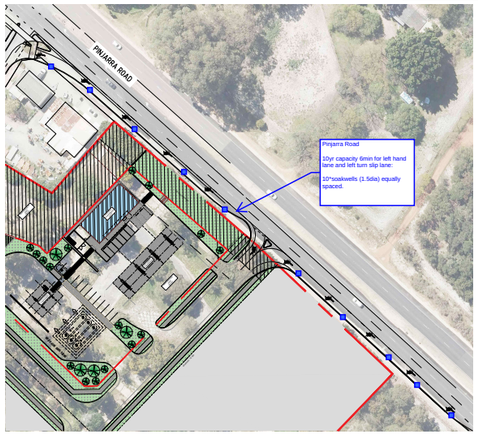
Volume (m^3) = 0.00 (total linear storage within box structure or pipe)
Base Area (m^2) = 0.00 (for the box style infiltration structures)





Event	1 EY(1 year)						0.2 EY(5 year)						10% AEP(10 Year)								1% AEP100 Year							
Duration	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour	6 min	30 min	1 hour	3 hour	6 hour	12 hour	24 hour	72 hour
Intensities	67.5	28.1	18.3	9.06	5.75	3.60	96.50	40.2	25.7	12.70	8.20	5.25	109	45.4	28.9	14.30	9.31	6.04	3.79	1.91	156	65.30	31.30	20.50	14.00	9.5	6.09	2.49
Q (m^3/s)	0.0394	0.0164	0.0107	0.0053	0.0034	0.0021	0.0564	0.0235	0.0150	0.0074	0.0048	0.0031	0.0637	0.0265	0.0169	0.0084	0.0054	0.0035	0.0022	0.0011	0.0911	0.0381	0.0183	0.0120	0.0082	0.0055	0.0036	0.0015
Volume	**14.19**	**29.54**	**38.47**	**57.14**	**72.53**	**90.82**	**20.29**	**42.26**	**54.03**	**80.10**	**103.43**	**132.44**	**22.91**	**47.72**	**60.76**	**90.19**	**117.43**	**152.37**	**191.22**	**289.11**	**32.80**	**68.64**	**65.80**	**129.29**	**176.59**	**239.66**	**307.27**	**376.90**
SW Vol.	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81	31.81
Soak Vol	0.37	1.84	3.68	11.04	22.09	44.18	0.37	1.84	3.68	11.04	22.09	44.18	0.37	1.84	3.68	11.04	22.09	44.18	88.36	265.07	0.37	1.84	3.68	11.04	22.09	44.18	88.36	265.07
SW Total	32.18	33.65	35.49	42.85	53.90	75.99	32.18	33.65	35.49	42.85	53.90	75.99	32.18	33.65	35.49	42.85	53.90	75.99	120.17	296.88	32.18	33.65	35.49	42.85	53.90	75.99	120.17	296.88
Cell Vol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell Soak	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Vol	**32.18**	**33.65**	**35.49**	**42.85**	**53.90**	**75.99**	**32.18**	**33.65**	**35.49**	**42.85**	**53.90**	**75.99**	**32.18**	**33.65**	**35.49**	**42.85**	**53.90**	**75.99**	**120.17**	**296.88**	**32.18**	**33.65**	**35.49**	**42.85**	**53.90**	**75.99**	**120.17**	**296.88**
	PASS	PASS	FAIL	FAIL	FAIL	FAIL	PASS	FAIL	FAIL	FAIL	FAIL	FAIL	PASS	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	PASS	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL

If I have	**10**	**soakwells, the following above ground volumetric storage is required for the 1:10 year event**	0	14.0724	25.27	47.33	63.54	76.386	71.0575	0				
If I have	**10**	**soakwells, the following above ground volumetric storage is required for the 1:100 year event**									**1**	**35**	**30**	**86**	**123**	**164**	**187**	**80**



APPENDIX J - ATU and Leach Drain Sketch Arrangement

Flatbeds are an innovative way to reuse 100% of your water

- Subsurface irrigation for your lawn or garden areas
- Gravity driven and distribution options
- Low profile system; suitable for shallow excavation
- Great for rocky or high water tables
- Minimise imported fill requirements
- No need for costly chlorination
- Maximum efficiency reduces area required
- Low transport costs, light weight and flat packed
- Complies with Australian Standard 1547;2012

FLATBED LEACH DRAINS

Standard 2 x 5m Lengths

Available from Aquarius Wastewater Systems Pty Ltd

AQUARIUS®
WASTEWATER SYSTEMS

EASY INSTALLATION

In a prepared level bed, the 50mm cell units are joined by clipping together on either side of the perforated pipe. Ensuring the flatbeds are level, cover with geotextile cloth supplied, connect the pipe and then backfill.

Phone: 9240 8545 Email: admin@aquariuswastewater.com.au

AQUARIUS®
WASTEWATER SYSTEMS

PROJECT:

PROPOSED SERVICE STATION
CNR FURNISSDALE & PINJARRA RD

No.	DATE	REVISION	BY
A	5-2-2022	ISSUED FOR APPROVAL	MJV

Porter Consulting Engineers

Level 2 Kishorn Court
58 Kishorn Road
Mt Pleasant 6153 WA

PO Box 1036
Canning Bridge 6153 WA

Tel (08) 9315 9955
Email office@portereng.com.au
www.portereng.com.au

TUSNO Pty Ltd ACN 070 097 148 as trustee for the Consulting Engineering Unit Trust trading as Porter Consulting Engineers ABN 78 636 396 385

CLIENT:

YOLK PROPERTY GROUP

DRAWING:

INDICATIVE FUTURE LAYOUT

STATUS: **FOR APPROVAL**

SCALE	1:500
DATE	FEB 2022
DESIGN	JH
DRAWN	MJV
CHECK	

DRAWING No.	REV No.	ORIGINAL DRAWING SIZE
20-6-80/804	A	A1

FILE NAME S:\ACTIVE PROJECTS\21-06-080\ACAD\20680-800-805.dwg

APP'D

CONSULT AUSTRALIA

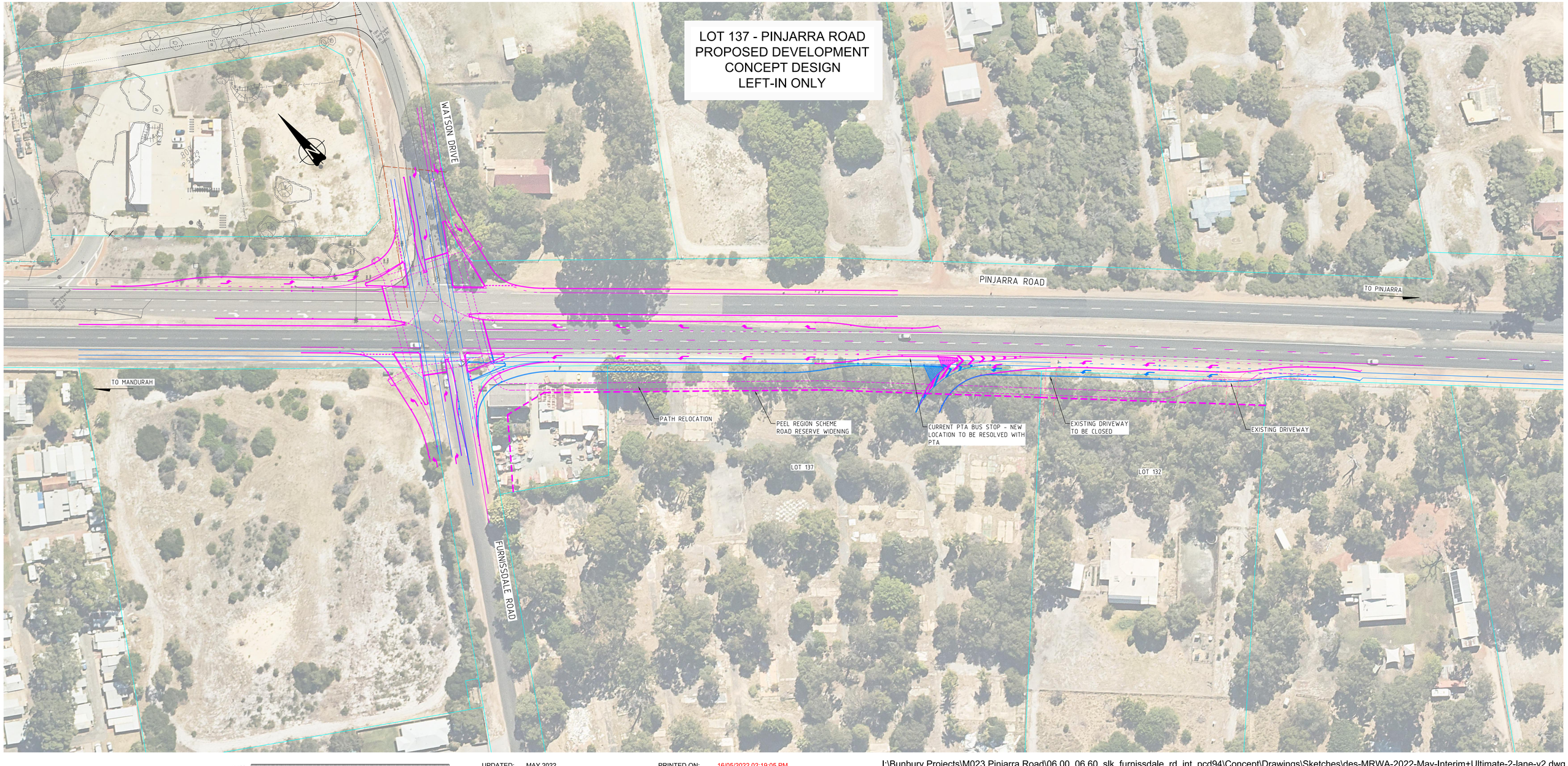
Porter
Consulting Engineers

Level 2 Kishorn Court
58 Kishorn Road
Mount Pleasant 6153
Western Australia

PO Box 1036
Canning Bridge 6153
Western Australia

Tel: (08) 9315 9955
Email: office@portereng.com.au

www.portereng.com.au



1:500 0 5m 10 15 20 25 30 35 40 45 50 55 60 65 70 75

UPDATED: MAY 2022

PRINTED ON: 16/05/2022 02:19:05 PM

I:\Bunbury Projects\M023 Pinjarra Road\06.00_06.60_slk_furnissdale_rd_int_pcd94\Concept\Drawings\Sketches\des-MRWA-2022-May-Interim+Ultimate-2-lane-v2.dwg

From:	[redacted]
[redacted]	Shire of Murray; Susan Cowling
Subject:	Reference P304/2021 - Application For Planning Approval For Service Station Lot 137 (no. 630) Pinjarra Rd Furnissdale
Date:	Thursday, 7 April 2022 8:40:53 PM

Dear Sir / Madam,

Good evening, in reference to this submission I am working remotely in the Pilbara and cannot submit or mail the paper work sent to the Shire of Murray to meet the required deadline and hoping this email will suffice. I will call tomorrow to ensure this email can be used as my submission.

Name - [redacted]
Email – [redacted]
Postal Address – 644 Pinjarra Rd Furnissdale WA 6209
Phone – [redacted]

Subject of Submission

I am the owner/occupier of 644 Pinjarra Rod Furnissdale which is the property directly next to the application submitted for a service station to be built

Address of Property Affected

644 Pinjarra Rd Furnissdale WA 6209, near the intersection of Pinjarra Rd and Furnissdale Rd and next door to the proposes application at 630 Pinjarra Rd Furnissdale.

Submission

As the owner and occupier next door, I can confirm I am a FIFO father with my 2 daughters and my wife residing permanently at 644 Pinjarra rd. As I am away from home constantly and majority of the time, this home is primarily occupied by 3 females and also 2 border collies in the back yard. MI willy wife works shift work at Bedingfeld Aged Care facility and has irregular sleep patterns that require a level of noise management to ensure she gets adequate rest before and after her shifts. The property where this application has been submitted for (630 Pinjarra Rd Furnissdale WA 6209) remains an active area resided by squatters and visited by frequent drug users. The shire of murray has been contacted, as has the ranger and also the police on may and multiple occasions to remove squatters. Typically the drug users are connected to a nearby rehabilitation facility who frequent the property and exercise drug use leaving significant drug paraphernalia on the property.

I have the following concerns regarding this application;

- A Service stations will expose my domestic residence to a level of risk regarding various noises, excessive lighting, explosion and excessive traffic
- With 2 driveways this service station can impact my drive way access or even require modifications to the council crossover on my property
- This service station will continue and perhaps enhance the attraction squatters and drug users under the influence to 630 Pinjarra Rd Furnissdale

- My K9 companions will be continually barking at noises, lighting and factors coming form the service station whilst it is operating and illuminated
- It has the potential to decrease the value of my property, not that I am looking at selling but I value what I have.
- Given the quantity of service stations currently in the area, this additional service station maybe border lining 1 too many.

Can I please request the following to be taken into consideration of our living circumstances;

1. Can a solid wall of some kind be built by the applicant to ensure the security of my premise from squatters, drug users, excessive noise, commercial lighting and reduce potential damage from risk of explosion. This will ensure the security of the 3 females residing alone and also prevent my dogs from barking all day and night and keep the occupants awake. To ensure my property doesn't decrease in value from the service station construction can I request this be done in a limestone or brick and mortar construction.
2. Can I also request that my driveway not be compromised or modified by this construction, if such modifications are required that a consultation process with myself be established.
3. Should local or mature trees need to be cut down, can I suggest that they be dug up professionally and I am more than happy to have them replanted at my residence

I further note this is the second application from the company to build a service station in the proposed address.

I will call to ensure this email suffices your requirements and happy to discuss any of these matters further.

Regards – [redacted]

[redacted]

[redacted]

Email: [redacted]
Web: [redacted]

Shire of Murray

TO: Chief Executive Officer
Post to: PO Box 21, Pinjarra WA 6208
Email to: mailbag@murray.wa.gov.au

Submission

Service Station
Lot 137 (No. 630) Pinjarra Road, Furnissdale

Submission required by 4.30pm, 08 April 2022

Before completing this form, please refer to privacy statement at bottom of page

Name: [redacted] **Email:** [redacted]

Postal Address: P.O. Box 14 MANDURAH 6210 **Phone:** [redacted]

Subject of Submission (State how your interests are affected, whether as a private citizen, on behalf of a company or other organisation, or as an owner or occupier of property)

MURMAN PROPERTY PTY LTD
16 FURNISSDALE ROAD FURNISSDALE

Address of Property Affected: (Include lot number and nearest street intersection)

Submission: (Give in full your comments and any arguments supporting your comments - continue on additional sheets if necessary)

WE THE ABOVE HAVE NO OBJECTIONS TO THIS PLANNING APPROVAL

Signature: [signature] **Date:** 1ST APRIL 2022

PRIVACY STATEMENT

Please note: The Shire of Murray is subject to the Freedom of Information Act 1992 and as such, submissions may be subject to applications for access under the Act. Copies of your submission, including name and address may be made public and included in the minutes of Committee/Council meetings unless otherwise requested that this not occur.

From:	Kevin Purcher
To:	Greg Delahunty
Cc:	Shire of Murray
Subject:	RE: P304/2021 - JDAP Application for Service Station - Lot 137 (630) Pinjarra Road, Furnissdale
Date:	Monday, 24 January 2022 1:18:39 PM
Attachments:	image001.jpg image002.jpg image003.jpg image004.jpg image005.png

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Attn Greg Delahunty

Thank you for your email. We offer the following comments regarding this proposal.

Water

Reticulated water is currently available within the vicinity of the subject site. All water main extensions, if required for the development site, must be laid within the existing and proposed road reserves, on the correct alignment and in accordance with the Utility Providers Code of Practice.

Wastewater

Reticulated sewerage is not available to serve the subject site. Significant infrastructure would be required if a reticulated sewerage service is required.

General Comments

This proposal will require approval by our Building Services section prior to commencement of works. Infrastructure contributions and fees may be required to be paid prior to approval being issued.

For further information about building applications, the developer should follow this link:
https://www.watercorporation.com.au/home/builders-and-developers/building/lodging-a-building-application

The developer is expected to provide all water and sewerage reticulation if required. In addition, the developer may be required to fund new works or the upgrading of existing works and protection of all works.

The information provided above is subject to review and may change. If the proposal has not proceeded within the next 6 months, please contact us to confirm that this information is still valid.

Please provide the above comments to the landowner, developer and/or their representative.

Should you have any queries or require further clarification on any of the above issues, please do not hesitate to contact us.

Regards

Kevin Purcher
Snr Plnr - Land Planning
Development Services

Our Ref: D14315
Your Ref: P304/2021

Susan Cowling
Shire of Murray
mailbag@murray.wa.gov.au

Dear Ms Cowling

RE: HIGH RISK LAND USE - LOT 137 (630) PINJARRA ROAD, FURNISSDALE - PROPOSED SERVICE STATION - JDAP

I refer to your email dated 23 December 2021 regarding the submission of a revised Bushfire Management Plan (BMP) (Version O) prepared by Strategen JBS&G and dated 10 December 2021, for the above development application.

This advice relates only to *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines). It is the responsibility of the proponent to ensure the proposal complies with relevant planning policies and building regulations where necessary. This advice does not exempt the applicant/proponent from obtaining approvals that apply to the proposal including planning, building, health or any other approvals required by a relevant authority under written laws.

Recommendation – supported compliant application

DFES advises the proponent has adequately identified issues arising from the bushfire risk assessment and considered how compliance with the bushfire protection criteria can be achieved within the submitted BMP.

As this planning decision is to be made by a Joint Development Assessment Panel please forward notification of the decision to DFES for our records.

If you require further information, please contact Craig Scott, Senior Land Use Planning officer on telephone number 9395 9713

Yours sincerely

Naomi Mynott
DIRECTOR LAND USE PLANNING

2 February 2022

CC: po5@murray.wa.gov.au

Enquiries: Steve Fernandez on (08) 9323 4517
Our Ref: 22/798 (D21#)
Your Ref:

1 April 2022

Chief Executive Officer
Shire of Murray
PO Box 21
PINJARRA WA 6208

Email: mailbag@murray.wa.gov.au

Dear Sir/Madam,

INFORMATION REQUEST: PROPOSED SERVICE STATION – LOT 137 (630) PINJARRA ROAD, FURNISSDALE – REF: P304/2021

In reference to our meeting on the 21 March 2022, Main Roads has reviewed the information in the Traffic Impact Assessment and is unable to provide a recommendation at this point in time, based on the information currently provided.

Please provide the following.

1. A preliminary intersection design (15% concept) for the proposed turn pocket and intersection of the proposed left in left out access onto Pinjarra Road and the future turn pocket into Furnissdale Road.

   Justification for additional Information

   The Traffic Impact Assessment reviewed by Main Roads does not supply enough evidence to justify if the design of the access road associated with the Service Station will function safely. Moreover, Pinjarra Road is a 'Control of Access' road and the 'Barragup-Furnissdale Activity Centre Policy' ('BFAC Policy'), aligns with this limiting the intersection to left in only. This is the supported scenario.

   Additional information is required to justify the location and functionality of the new road intersection as left in left out. This scenario is not currently supported as left out vehicles will conflict with vehicles entering Furnissdale Road via the left turn pocket in the ultimate concept for the signalised intersection.

Please provide the above information at your earliest convenience, noting that Main Roads will require 30 days to review this information once the additional information is received.

Main Roads is not in a position to support the subject proposal until the above information has been received and reviewed.

If you have any further queries please do not hesitate to contact Steve Fernandez email planninginfo@mainroads.wa.gov.au

Yours sincerely

Robert Barnsley
Director South West Operations

From:	FERNANDEZ Steve (PAO/A)
To:	Kris Nolan; NAUDE Daniel (RCPM); MCLEAN Owen (MAMO/A)
Cc:	BARNSLEY Robert (DSWO); DAVIES Paul (Con); WALTON Amy (NM/A); THORNELY Maryanne (RAPM/A); Matthew Filov; Jennie Hopfmueller; Sheldon Day; Greg Delahunty; Susan Cowling
Subject:	RE: Interim access concept for Left In access: Development Referral - Lot 137 Pinjarra Road, Furnissdale (Proposed Service Station Development)
Date:	Monday, 13 June 2022 3:17:43 PM
Attachments:	image002.png image003.png image004.png image005.png image006.png image007.gif image019.png image031.png image032.png image033.png image034.png image035.png image036.png image037.png image038.png image039.png image040.png image041.png image042.png image043.png image044.png image045.png image046.png image047.png image048.png image049.png image050.png image051.png image052.png image053.png image054.png image009.png image011.png image014.png image016.png image018.png image020.jpg image022.png image024.png image026.png image028.png image030.png

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Kris,
As stated previously, we have not received your acknowledgement of support for the access location plan Main Roads prepared.
Main Roads position is we require your acceptance of this plan, at which point we will refer our comments on the application to the Shire.

I have discussed this approach with Maryanne and Owen.

Kind regards,

Steven Fernandez
Planning Assessment Officer
Metropolitan and Southern Regions
p: +61 8 9323 4517
w: www.mainroads.wa.gov.au

From: Kris Nolan <knolan@urbis.com.au>
Sent: Monday, 13 June 2022 2:26 PM
To: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Cc: BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>; Greg Delahunty <Gregory.Delahunty@murray.wa.gov.au>; Susan Cowling <po5@murray.wa.gov.au>
Subject: RE: Interim access concept for Left In access: Development Referral - Lot 137 Pinjarra Road, Furnissdale (Proposed Service Station Development)

Hi Steve
It's not ideal but we just need a MRWA position now (working through with landowner) and to progress to a JDAP meeting.
Regards

KRIS NOLAN
DIRECTOR
D +61 8 9346 0508
M +61 416 162 448
E knolan@urbis.com.au

LEVEL 14, 1 WILLIAM STREET
PERTH, WA 6000, AUSTRALIA
T +61 8 9346 0500

Urbis recognises the traditional owners of the land on which we work.
Learn more about our **Reconciliation Action Plan.**

From: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>
Sent: Monday, 13 June 2022 12:40 PM
To: Kris Nolan <knolan@urbis.com.au>; NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Cc: BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>; Greg Delahunty <Gregory.Delahunty@murray.wa.gov.au>; Susan Cowling <po5@murray.wa.gov.au>
Subject: RE: Interim access concept for Left In access: Development Referral - Lot 137 Pinjarra Road, Furnissdale (Proposed Service Station Development)

Kris,
As you are aware conditions for this development will be issued by Main Roads to the Local Government.

Please confirm with Main Roads you are happy with the location of the access plan as prepared by Main Roads and we will prepare our set of conditions to be referred to the Shire of Murray.

Kind regards,

Steven Fernandez
Planning Assessment Officer
Metropolitan and Southern Regions
p: +61 8 9323 4517
w: www.mainroads.wa.gov.au

From: Kris Nolan <knolan@urbis.com.au>
Sent: Monday, 13 June 2022 12:27 PM
To: NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert

(DSWO) <robert.barnsley@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>; Greg Delahunty <Gregory.Delahunty@murray.wa.gov.au>; Susan Cowling <po5@murray.wa.gov.au>
Subject: RE: Interim access concept for Left In access: Development Referral - Lot 137 Pinjarra Road, Furnissdale (Proposed Service Station Development)

Hi Daniel
For procedural and Shire of Murray purposes, can you please confirm that MRWA's support for our proposal is conditional on the adoption of the attached road access arrangements?
Regards

KRIS NOLAN
DIRECTOR
D +61 8 9346 0508
M +61 416 162 448
E knolan@urbis.com.au

From: NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>
Sent: Tuesday, 17 May 2022 9:12 AM
To: Kris Nolan <knolan@urbis.com.au>; MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>

Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>; Greg Delahunty <Gregory.Delahunty@murray.wa.gov.au>
Subject: Interim access concept for Left In access: Development Referral - Lot 137 Pinjarra Road, Furnissdale (Proposed Service Station Development)

Dear Kris,

Further to recent discussions, please find attached a PDF of the interim concept design (shown in magenta) for a left in for your consideration. The concept also includes reference to the future additional 3rd lane (blue) requirements for Pinjarra Road to provide further context to network location.

It is important to highlight that further investigation is required to determine ultimate drainage requirements for the network location as a result of the impacts of the subject development/ proposed
access impacts, which will be further investigated through the pending detailed design process.

Please do not hesitate to contact me should you require any further assistance in the matter.

Regards,

Daniel Naude
ROAD CORRIDOR PLANNING MANAGER
Metropolitan and Southern Regions / South West
p: +61 9724 5724 | **m:** +61 4189 31078
w: www.mainroads.wa.gov.au

From: Kris Nolan <knolan@urbis.com.au>
Sent: Monday, 9 May 2022 1:33 PM
To: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Cc: NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: RE: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hi Owen
We are accepting of the design exercise for the Left-In to Pinjarra road and trust the 16 May timeline is achievable.

In the context of Furnissdale Road, Porter Consulting are working through detailed concept design with the Shire (being under their control).

Regards

KRIS NOLAN
DIRECTOR

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M +61 416 162 448
E knolan@urbis.com.au

From: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Sent: Friday, 6 May 2022 4:46 PM
To: Kris Nolan <knolan@urbis.com.au>
Cc: NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A)

<amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: FW: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hi Kris,

Further to below and phone conversations we understand you've had today with Rob Barnsley and Maryanne, we can confirm the following:

Understanding the scope, layout and potential impacts of access for the proposed development is important prior to setting of conditions for any approval, given this location is complex and, subject to the concept layout, has a high potential of impacting services, footpath infrastructure, raising additional drainage requirement and, importantly, raising land requirements for the adjacent property and their existing accesses arrangements.

The intent of 15% concept is to better understand these aspects to assist with progressing assessment/approvals and to identify land requirements outside of the subject land, as discussed with the Shire. Main Roads is willing to progress a 2D left-in concept from Pinjarra Road which, if you are agreeable, should be completed by Monday 16 May 2022. Preparation of this concept will allow further discussion prior to further details being progressed.

With regard to any access requirements on Furnissdale Road relating to the planning proposal and planned movement network interface with the ACP Area, it is Main Roads' expectation that the proponent will need to provide a similar concept to resolve a number of issues previously raised with the Shire (original application) given the development interface between multiple properties/developments, overall coordination of ACP accesses to minimise potential traffic impacts on the Pinjarra Rd/Furnissdale Rd (planned signalisation) should these aspects not be carefully managed. These details are important and require resolution by the proponent in parallel to the left-in.

We understand a number of requirements associated with this proposed development have been raised in the past, where if you require any relevant from Main Roads, please feel free to contact Daniel Naude (cc'ed into this email) who can provide previous correspondence and advice.

Regards

Owen McLean
A/Manager Asset Management and Operations
Main Roads WA – South West
Ph (08) 9323 5868 Mob 0427 382 166

From: MCLEAN Owen (MAMO/A)
Sent: Friday, 6 May 2022 9:48 AM
To: 'Kris Nolan' <knolan@urbis.com.au>
Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; NAUDE Daniel (RCPM)

<Daniel.Naude@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: RE: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Thanks Kris,

We'll follow up and confirm details but I understand this is a complex site.

Regards

Owen McLean
A/Manager Asset Management and Operations
Main Roads WA – South West
Ph (08) 9323 5868 Mob 0427 382 166

From: Kris Nolan <knolan@urbis.com.au>
Sent: Friday, 6 May 2022 9:18 AM
To: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: RE: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hello Owen
I am struggling with this. The LI only is consistent with the approved ACP. You yourself in your email below (19/4) say MRWA would be supportive of LI only.
What other access arrangements could be had for a commercial development such as this that is entirely consistent with the planning for the area?
Regards

KRIS NOLAN
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To support this, everyone attending our offices must confirm they are fully vaccinated against COVID-19 and check in via Sine Pro.

Urbis Website

LEVEL 14, 1 WILLIAM STREET
PERTH, WA 6000, AUSTRALIA
T +61 8 9346 0500

Urbis recognises the traditional owners of the land on which we work.
Learn more about our **Reconciliation Action Plan.**

From: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Sent: Friday, 6 May 2022 9:05 AM
To: Kris Nolan <knolan@urbis.com.au>
Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: RE: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hi Kris,

My apologies – I understood someone was giving you a call but there may have been a misunderstanding at our end.

I will follow up but my understanding is a condition can't be finalised until there's an understanding of the scope/impacts/issues relating to a left-in and other access requirements to this area. I'm not the best person to be working these details through with you but I'll make sure we get you a response today.

Regards

Owen McLean
A/Manager Asset Management and Operations
Main Roads WA – South West
Ph (08) 9323 5868 Mob 0427 382 166

From: Kris Nolan <knolan@urbis.com.au>
Sent: Thursday, 5 May 2022 4:19 PM
To: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: RE: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Owen
Response here? Can I assume you are accepting of LI/LO?
KN

KRIS NOLAN
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E knolan@urbis.com.au

From: Kris Nolan
Sent: Monday, 2 May 2022 11:21 AM

To: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: RE: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hi Owen
I need to square this away with Shire of Murray asap given JDAP timeframes. As per my email below, can you please confirm MRWA is satisfied with the proposed condition?
Regards

KRIS NOLAN
DIRECTOR
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E knolan@urbis.com.au

From: Kris Nolan
Sent: Tuesday, 26 April 2022 4:38 PM
To: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; DAVIES Paul (Con)

<paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: RE: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hi Owen
Thanks for that.
After some discussions with the client, we have decided to revert to Left In Only and lean on Furnissdale for the full movement access. .
Can you advise if MRWA will be accepting of a condition requiring this intersection to be LI only as per the ACP?

We can then work this through with the Shire as part of the RAR to JDAP.

Any queries, please let me know.

Regards

KRIS NOLAN
DIRECTOR
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E knolan@urbis.com.au

From: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Sent: Tuesday, 26 April 2022 8:27 AM
To: Kris Nolan <knolan@urbis.com.au>
Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert

(DSWO) <robert.barnsley@mainroads.wa.gov.au>; NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: RE: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hi Kris,

My apologies – there was a n error in my original response. Amended response below (change in red).

Rob Barnsley (Director South West Operations) has asked that I respond on his behalf with our formal reply attached. With regard to your further queries below we confirm the following:

- We don't believe there is adequate space to facilitate the left-out movement onto Pinjarra Road, however will support a left-in movement. It is our view the site layout and proximity of other turn lanes, surrounding constraints and potential masking complications would result in safety concerns;
- Detailed concepts typically require a detailed feature survey and vertical assessment. There are cases where it's useful to progress a 2D concept first to define broad layout, width and other details before full levelling is undertaken. We can put you in touch with our Bunbury design area to confirm any technical details to assist with this process. Please confirm who they are best to liaise with and we'll get the ball rolling.

Regards

Owen McLean
A/Manager Asset Management and Operations
Main Roads WA – South West
Ph (08) 9323 5868 Mob 0427 382 166

From: Kris Nolan <knolan@urbis.com.au>
Sent: Thursday, 21 April 2022 5:35 PM
To: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Cc: FERNANDEZ Steve (On Leave) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; NAUDE Daniel (On Leave) <Daniel.Naude@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>; Matthew Filov <MFilov@urbis.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>
Subject: RE: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hi Owen

Just confirming we are seeking LI/LO only and not Right Out onto Pinjarra as you suggest in point 1 below. Can you please confirm the MRWA position in this context?
Regards

KRIS NOLAN
DIRECTOR

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E knolan@urbis.com.au

From: MCLEAN Owen (MAMO/A) <owen.mclean@mainroads.wa.gov.au>
Sent: Tuesday, 19 April 2022 7:21 PM
To: Kris Nolan <knolan@urbis.com.au>
Cc: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>; BARNSLEY Robert (DSWO) <robert.barnsley@mainroads.wa.gov.au>; NAUDE Daniel (RCPM) <Daniel.Naude@mainroads.wa.gov.au>; DAVIES Paul (Con) <paul.davies@mainroads.wa.gov.au>; WALTON Amy (NM/A) <amy.walton@mainroads.wa.gov.au>; THORNELY Maryanne (RAPM/A) <Maryanne.Thornely@mainroads.wa.gov.au>
Subject: FW: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hi Kris,

Rob Barnsley (Director South West Operations) has asked that I respond on his behalf with our formal reply attached. With regard to your further queries below we confirm the following:

- We don't believe there is adequate space to facilitate the right-out movement onto

Pinjarra Road, however will support a left-in movement. It is our view the site layout and proximity of other turn lanes, surrounding constraints and potential masking complications would result in safety concerns;

- Detailed concepts typically require a detailed feature survey and vertical assessment. There are cases where it's useful to progress a 2D concept first to define broad layout, width and other details before full levelling is undertaken. We can put you in touch with our Bunbury design area to confirm any technical details to assist with this process. Please confirm who they are best to liaise with and we'll get the ball rolling.

Regards

Owen McLean
A/Manager Asset Management and Operations
Main Roads WA – South West
Ph (08) 9323 5868 Mob 0427 382 166

From: Kris Nolan <knolan@urbis.com.au>
Sent: Friday, 8 April 2022 2:52 PM
To: FERNANDEZ Steve (PAO/A) <steve.fernandez@mainroads.wa.gov.au>
Cc: OSTOIC Jerko (DRAP) <jerko.ostoic@mainroads.wa.gov.au>; THORNELY Maryanne (On Leave) <Maryanne.Thornely@mainroads.wa.gov.au>; Sheldon Day <sheldon@yolkpropertygroup.com.au>; Jennie Hopfmueller <jennie@portereng.com.au>; Matthew Filov <MFilov@urbis.com.au>
Subject: Lot 137 Pinjarra Road, Furnissdale (Service Station)

Hi Steve
Thanks for your time earlier in relation to the MRWA correspondence (attached) relating to our current service station proposal in Furnissdale in the Shire of Murray.

As discussed, we can proceed to 15% design for the LI/LO crossover and it's relationship with the left turn pocket but there is no point in my client spending time and money completing the more detailed engineering design if MRWA has a fundamental issue with the spacing between our LI/LO access point and the left turn pocket.

To this end, before we proceed with more design work, can MRWA please confirm their position on this spacing query in the context of LI/LO and not LI only.

Also – assuming we can proceed to 15%, will MRWA require a vertical assessment and a detailed feature survey? The site and surrounds are very flat and just need to know if a broader feature survey may be required.

Look fwd to hearing from you.

Regards

KRIS NOLAN

DIRECTOR
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GREAT CITIES ARE SAFE CITIES

Urbis is committed to ensuring the health and wellbeing of our team, clients and visitors.

To support this, everyone attending our offices must confirm they are fully vaccinated against COVID-19 and check in via Sine Pro.

Urbis Website

LEVEL 14, 1 WILLIAM STREET
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Urbis recognises the traditional owners of the land on which we work.
Learn more about our **Reconciliation Action Plan.**

Government of Western Australia
Department of Water and Environmental Regulation

Your ref:
Our ref: PA46747 RF9822
Enquiries: Mark Hingston

Shire of Murray
PO Box 21
Pinjarra WA, 6208

Attention: Chief Executive Officer

Development Application – Lot 137 Pinjarra Road, Furnissdale (Service Station)

Thank you for providing the development application for a service station at Lot 137 Pinjarra Road, Furnissdale for the Department of Water and Environmental Regulation (the Department) to consider.

The Department has identified that the proposed service station has the potential for impacts on environment and water resource values and/or management. While the Department does not object to the proposal, key issues and recommendations are provided below and these matters should be addressed.

Issue: Stormwater management
Recommendation: **Stormwater Management Plan**
Consistent with the Department's Water quality protection note (WQPN) No. 49 – '*Service stations'* (September 2013) the proponent should manage stormwater in accordance with the *'Decision process for stormwater management in WA (DoW 2016)'* and the *'Stormwater Management Manual for Western Australia (DoW 2004–2007)'.*

Furthermore, the Department recommends the proponent prepare a detailed Stormwater Management Plan (SMP) as part of the development approval process. The SMP should include, but not be limited to,

- cross-sections for all relevant stormwater basins including, invert levels, top water levels (TWL) for all rainfall events, distance to maximum groundwater level from basin invert and use of amended soils.
- required storage for each rainfall event (Stormwater runoff should be fully contained onsite for small and minor storm events).
- permitted outflow of stormwater runoff from the site
- confirmation that stormwater runoff storage areas are designed to drain within the Department's recommended 96 hours.
- the first 15 mm of stormwater runoff designed to undergo water quality treatment via bio-retention.

Kwinana Peel Region
107 Breakwater Parade Mandurah Ocean Marina Mandurah Western Australia 6210
PO Box 332 Mandurah Western Australia 6210
Telephone: 08 9550 4222 Facsimile: 08 9581 4560
www.dwer.wa.gov.au

Issue: Spill Containment
Recommendation: Spill management & contingency plans

- In accordance with WQPN No.10 - *'Contaminant spills – emergency response (February 2006)'*, an effective Emergency Response Plan (ERP) should be prepared as part of the development approval process.

Issue: Underground Tanks
Advice: Design of underground fuel tanks

The Department provides the following advice in regards to the underground fuel tanks. In accordance with WQPN No. 62 – '*Tanks for underground chemical storage'*,

- All tanks and pipe work should be constructed of corrosion-resistant materials that conform to Australian Standards such as reinforced plastic or metal construction with corrosion-resistant coating and cathodic protection.
- All new or upgraded tanks and their pipe work (excluding any gas venting and tank fill lines that are normally dry) should have double-walled construction, with an interstitial leak-monitoring space. This is particularly important when located close to sensitive water resources or where the tank may come into contact with the watertable.
- All underground tank systems should have provision for leak monitoring.

Issue: Native Vegetation
Advice

Under section 51C of the *Environmental Protection Act 1986* (EP Act), clearing of native vegetation is an offence unless:

- it is undertaken under the authority of a clearing permit
- it is done after the person has received notice under Section 51DA(5) that a clearing permit is not required
- the clearing is subject to an exemption

Exemptions for clearing that are a requirement of written law, or authorised under certain statutory processes, are contained in Schedule 6 of the EP Act. Exemptions for low impact routine land management practices outside of environmentally sensitive areas (ESAs) are contained in the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (the Clearing Regulations).

Based on the information provided, should development approval be issued, the proposal is likely to be exempt from the requirement for a clearing permit under Regulation 5, Item 1 of the Clearing Regulations.

Note that this exemption does not apply prior to development approval being issued.

This exemption is described in the Departments 'A Guide to the Exemptions and Regulations for Clearing Native Vegetation'. It is the applicant's responsibility to determine compliance with these exemptions and therefore whether a clearing permit is required. If there is uncertainty, then the precautionary principle should be applied, and it is recommended applicants apply for a clearing permit.

If further clarification is required, please contact DWER's Native Vegetation Regulation section by email (admin.nvp@dwer.wa.gov.au) or by telephone (6364 7098

Issue: Groundwater Protection
Recommendation: Sewerage Sensitive Area
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 surface and groundwater resources.

Issue: Wastewater Systems
Recommendation: Decommissioning
Any septic sewer systems including all tanks and pipes and associated drainage systems (soak wells or leach drains) on the property are to be decommissioned in accordance with the *Health (Treatment of Sewerage and Disposal of Effluent and Liquid Waste) Regulations 1974*.

Issue: Acid Sulphate Soils
Advice
Acid sulfate soils (ASS) risk mapping indicates that the site is located within an area identified as representing a moderate to high risk of ASS occurring within 3 metres of the natural soil surface. Please refer to Department of Water and Environmental Regulation's (DWER) acid sulfate soil guidelines for information to assist with the management of ground disturbing works. https://www.der.wa.gov.au/your-environment/acid-sulfate-soils/69-acidsulfatesoils-guidelines

Guidelines for the Identification and investigation of acid sulfate soils and acidic landscapes, (DER, June 2015) can be found on the Department's website at https://www.der.wa.gov.au/images/documents/your-environment/acid-sulfate-soils/fact sheets/Identification and investigation of acid sulfate soils and acidic landscapes.pdf.

In the event there are modifications to the proposal that may have implications on aspects of environment and/or water management, the Department should be notified to enable the implications to be assessed.

Should you require any further information on the comments please contact Mark Hingston on 9550 4209.

Yours sincerely

Jane Sturgess
Acting Program Manager – Planning Advice
Kwinana Peel Region

12 / 01 / 2022

GOVERNMENT OF WESTERN AUSTRALIA

Department of **Biodiversity, Conservation and Attractions**

PARKS AND WILDLIFE SERVICE

Your ref: P304/2021
Our ref: PRS 48142
Enquiries: Lyndon Mutter
Phone: 9442 0342
Email: lyndon.mutter@dbca.wa.gov.au

Mr Greg Delahunty
Manager Planning Services
Shire of Murray
PO Box 21
PINJARRA WA 6001

JDAP Application for Service Station – Lot 137 Pinjarra Rd

Dear Sir

In reference to your correspondence dated 23 December 2020, the Parks and Wildlife Service of the Department of Biodiversity, Conservation and Attractions (the department) provide the following comments.

It is noted that the proposal will involve some clearing of native vegetation and potential loss of habitat for threatened Black Cockatoos.

Clearing of native vegetation in Western Australia is prohibited, unless the clearing is authorised by a clearing permit obtained from Department of Water and Environmental Regulation (DWER), or is of a kind that is exempt in accordance with Schedule 6 of the *Environmental Protection Act 1986* or *Environmental Protection (Clearing of Native Vegetation) Regulations 2004).* Any proposed clearing of native vegetation associated with the proposal should be discussed with DWER.

Carnaby's Black Cockatoo, Baudin's Black Cockatoo, and the Forest Red-tailed Black Cockatoo are listed as 'Endangered' and 'Vulnerable' respectively under the *Environmental Protection and Biodiversity Conservation Act 1999* (*EPBC Act 1999)*. These species are also listed as 'Specially Protected' under the Western Australian *Biodiversity Conservation Act 2016*. The proposal should be discussed with the Federal Department of Agriculture, Water and the Environment to determine if there is a requirement to refer the proposal under the EPBC Act.

Thank you for the opportunity to provide comment. Should you have any queries regarding the above comments, please contact Lyndon Mutter on 9442 0342.

Yours sincerely

Benson Todd
REGIONAL MANAGER

31 January 2022

Swan Region
Cnr Australia II Drive and Hackett Drive, Crawley WA 6009
Locked Bag 104, Bentley Delivery Centre, Western Australia 6983
Phone: (08) 9442 0300 Email: [lyndon.mutter@dbca.wa.gov.au

Government of **Western Australia**
Department of **Health**

Your Ref: P304/2021
Our Ref: F-AA-01672 D-AA-22/3580
Contact: Franziska Marian 9222 2000

Mr Dean Unsworth
Chief Executive Officer
Shire of Murray
PO Box 21
PINJARRA WA 6849

Attention: Susan Cowling

Via email: po5@murray.wa.gov.au.

Dear Mr Unsworth

PROPOSED JDAP APPLICATION FOR SERVICE STATION - LOT 137 (630) PINJARRA ROAD, FURNISSDALE

Thank you for your letter of 23 December 2021 requesting comments from the Department of Health (DOH) on the above proposal.

The DOH provides the following comment:

1. Water Supply and Wastewater Disposal
The development is required to connect to scheme water and reticulated sewerage and be in accordance with *the Government Sewerage Policy 2019.*

2. Public Health Impacts
The DOH concern is with the location of the service station due to proximity to sensitive land-uses, particularly the adjoining neighbouring private residence.
The proponent is to acknowledge and incorporate appropriate separation distances in accordance with the EPA Environmental Assessment Guideline (EAG) 3 *'Guidance for the Assessment of Environmental Factors No. 3 – Separation Distances between Industrial and Sensitive Land Uses'*. Available for download from: http://epa.wa.gov.au/sites/default/files/Policies_and_Guidance/GS3-Separation-distances-270605.pdf. For the type of service station proposed (24-hour, freeway service) the EPA document recommends at least 100m, from boundary to boundary, between the development and the sensitive land-use. However, the DOH suggests that the distance be measured from the nearest bowser to the boundary of the residence. The DOH recommends that if this distance cannot be achieved, some barrier (vegetation or structure) between the service station and residence is incorporated into the design.

189 Royal Street East Perth Western Australia 6004
Telephone (08) 9222 2000 TTY 133 677
PO Box 8172 Perth Business Centre Western Australia 6849
ABN 28 684 750 332
www.health.wa.gov.au

3. Food Act Requirements

All food related areas (kitchen, preparation areas, etc.) to comply with the provisions of the Food Act 2008 and related code, regulations and guidelines. Details available for download from: https://ww2.health.wa.gov.au/Articles/S_T/Starting-a-food-business-in-WA

Should you have any queries or require further information please contact Franziska Marian on 9222 2000 or eh.eSubmissions@health.wa.gov.au

Yours sincerely

Dr Michael Lindsay
EXECUTIVE DIRECTOR
ENVIRONMENTAL HEALTH DIRECTORATE

10 January 2022

Government of Western Australia
Department of Mines, Industry Regulation and Safety

Your ref P304/2021
Our ref A1604/201801
Enquiries Andrew Johnston
08 9222 3329
andrew.johnston@dmirs.wa.gov.au

Chief Executive Officer
Shire of Murray
Sent By Email: mailbag@murray.wa.gov.au
Enter Locality State Postcode

Dear Sir / Madam

RE: P304/2021 - JDAP Application for Service Station - Lot 137 (630) Pinjarra Road, Furnissdale

Thank you for your email dated 23 December 2021 providing the opportunity to comment on the above proposal.

The Department of Mines, Industry Regulation and Safety (DMIRS), Land Use Planning Branch, has determined that this proposal raises no significant issues with respect to mineral and petroleum resources, geothermal energy, and basic raw materials.

We have also referred your correspondence to DMIRS, Dangerous Goods Branch, as the proposal relates to a petrol / service station and they may have relevant comments.

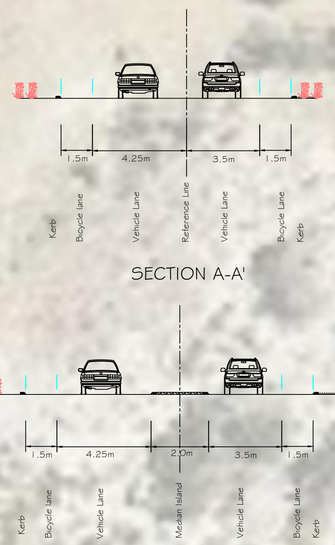
Yours sincerely

Andrew Johnston

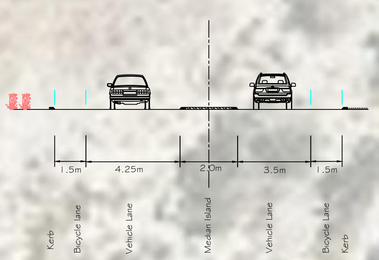
_____

Andrew Johnston
Senior Geologist
Mineral and Energy Resources Directorate
06 January 2022

Mineral House 100 Plain Street East Perth Western Australia 6004
Postal address: Locked Bag 100 East Perth WA 6892
Telephone +61 8 9222 3333 Facsimile +61 8 9222 3862
www.dmirs.wa.gov.au
ABN 69 410 335 356



SECTION A-A'



SECTION B-B'

SHIRE OF MURRAY
PROPOSED KERBLINE

A

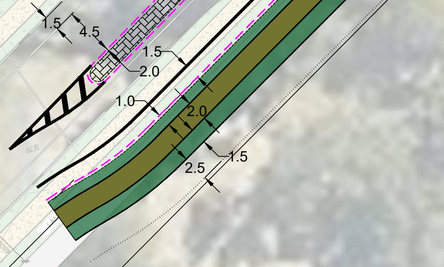
A'

B

B'

PINJARRA ROAD

FURNISSDALE ROAD



PROPOSED UNITED SERVICE STATION
FURNISSDALE W.A.
Collard Planning

LOT 137 PINJARRA ROAD FURNISSDALE – SERVICE STATION AND CONVENIENCE STORE

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer	
Local Government Area:	Shire of Murray	
Applicant:	Urbis	
Owner:	Yolk Property Group	
Value of Development:	$3.1 million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)	
Responsible Authority:	Western Australian Planning Commission	
Authorising Officer:	Assistant Director General, Land Use Planning	
LG Reference:	P304/2021	
DAP File No:	616-256-1 DAP/22/02159	
Application Received Date:	17 June 2022	
Report Due Date:	12 August 2022	
Application Statutory Process Timeframe:	90 Days	
Attachment(s):	1. Location Plan - Peel Region Scheme 2. Proposed Development 3. Activity Centre LPP 4. Main Roads Furnissdale/Pinjarra Road Intersection Upgrade plan 5. Applicant Pinjarra Roads Deceleration Land Plan	
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:

1. **Refuse** DAP Application reference DAP/22/02159 and accompanying plans pursuant to clause 35 of the Peel Region Scheme, for the following reasons:

Refusal Reasons

1. The proposed vehicular access at Pinjarra Road with left-in and left-out manoeuvrability is inconsistent with:

(a) The *Barragup Furnissdale Activity Centre Local Planning Policy*, which only permits vehicular access from Pinjarra Road via a left turn in with an associated 120 metre-long left-turn deceleration lane and does not propose this point of access be the primary entry/exit for the subject land;

(b) Main Roads Western Australia does not support the proposed left-in left-out access and the applicant has not demonstrated, through the provision of a detailed concept plan, that a left-in access from Pinjarra Road can be provided in accordance with Main Roads Western Australia specifications, including:

i. the provision of a suitable separation distance between the proposed left-in access and a future required left-turn auxiliary lane at the intersection of Pinjarra and Furnissdale Roads;
ii. confirmation that the adjoining landowner to the east supports the left-turn lane into the proposed development, as this fronts their property and will require the closure of an existing vehicle access point and the potential relocation of another vehicle access point;
iii. if additional road widening is required to relocate the existing footpath and utility services within the road reserve for Pinjarra Road, and the provision of drainage infrastructure associated with the left-turn lane; and
iv. whether the affected landowner agrees to the acquisition of such land areas.

(c) Pinjarra Road has declared Control of Access under the *Main Roads Act 1930* and new access or modifications to existing access can only be approved if supported by the Commissioner of Main Roads. Roads with Control of Access have a general restriction on new access. Main Roads Western Australia do not support the proposed left-in left-out access via Pinjarra Road.

(d) The proposed access is inconsistent with Western Australian Planning Commission *Development Control Policy 5.1: Regional Roads (Vehicular Access)* which states in part 3.3.2 that there is a presumption against the creation of new driveways on regional roads where access is available from side or rear streets.

(e) The proposed access is inconsistent with Western Australian Planning Commission *Development Control Policy 5.1: Regional Roads (Vehicular Access)* which states that where access is permitted, conditions may be imposed prescribing the location and width of the driveway to ensure adequate visibility and provide for the safe and convenient movement of vehicles, both entering and leaving the traffic stream. In determining such design requirements, the Western Australian Planning Commission has regard to Main Roads Western Australia design standards.

2. The application is inconsistent with proper and orderly planning in that it has not adequately demonstrated that the proposed access arrangements, in respect to Furnissdale Road and a future access road running parallel to Pinjarra Road, are consistent with and/or will not adversely affect or prejudice the planned movement network.

Details: outline of development application

Region Scheme	Peel Region Scheme
Region Scheme - Zone/Reserve	Urban/Primary Regional Roads
Local Planning Scheme	Shire of Murray Local Planning Scheme No.4
Local Planning Scheme - Zone/Reserve	Commercial/Service Commercial
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	Service Station
Lot Size:	4.28 hectares
Existing Land Use:	Vacant Land
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:

The application seeks development approval under Clause 21 of the Peel Region Scheme (PRS) for works over Lot 137 (No.630) Pinjarra Road, Furnissdale relating to the development of a service station (**Attachment 1** - Location Plan).

The proposed development consists of:

- a 300m² fuel sale and convenience retail building;
- eight fuel bowsers for small private vehicles with a covering canopy of 345.1m²;
- four fuel bowsers for trucks with a covering canopy of 134.5m²;
- an 8m high pylon sign;
- a total of 22 parking bays;
- a servicing bay;
- internal trafficable surfaces;
- external trafficable access points to Pinjarra Road and Furnissdale Road; and
- landscaping (**Attachment 2** - Development Plan).

The service station proposes to gain access via a new left-in/left-out intersection with Pinjarra Road which is a Primary Regional Roads reserve under the Peel Region Scheme (PRS).

The application is supported by a traffic impact assessment, a bushfire management plan and a bushfire risk management plan.

Proposed Land Use	Service Station
Proposed Net Lettable Area	300m^2 for convenience store
Proposed No. Storeys	1
Proposed No. Dwellings	N/A

Background:

The land has an area of 4.283 hectares and is located approximately 5.8 kilometres from the Mandurah City centre and approximately 65 kilometres from the Perth CBD.

The land is zoned Urban in the PRS and an area approximately 10 metres wide abutting Pinjarra Road is reserved as Primary Regional Roads. Under the Shire of Murray Local Planning Scheme No.4 (LPS4), an area 1.1ha in the north-west corner of the site is zoned Commercial and the balance of the site is zoned Service Commercial.

Requirement for Development Approval

Subject to development approval not being required under Clauses 19 and 20, Clause 18 of the Peel Region Scheme requires the prior approval of the Western Australian Planning Commission prior to the commencement of development for:

a) development on reserved land; or
b) development of a kind or class specified in a resolution made by the Western Australian Planning Commission under Clause 21.

On 23 December 2011, the Western Australian Planning Commission (WAPC) published an instrument of delegation to local governments in the Western Australian Government Gazette.

In this respect, the instrument of delegation gives a local government the authority to determine an application (under the Peel Region Scheme) to develop land within or abutting the Primary Regional Roads reservation, where that application has been referred to Main Roads Western Australia (MRWA) and the decision is consistent with the advice of MRWA. Where there is disagreement between MRWA and the local government, Schedule 3, clause 6 of the instrument of delegation requires the application be referred to the WAPC for determination.

The WAPC is the responsible authority in this instance because the Shire supports dual access to Pinjarra Road in the proposed location, which conflicts with the recommendation of MRWA.

The application also requires development approval under the Shire of Murray LPS4 and will be the subject of a dual determination.

2020 Development Application

In January 2020 a similar application was submitted to the Metro Outer JDAP (DAP/20/01742). This proposal had 5 less parking bays than the current application.

In July 2020 the Metro Outer JDAP was due to consider the proposal however the application was withdrawn.

Legislation and Policy:

Legislation

- *Planning and Development Act 2005.*
- *Peel Region Scheme.*
- *Planning and Development (Development Assessment Panels) Regulations 2011.*

State Government Policies

State Planning Policy 3.7 - Planning in Bushfire Prone Areas.
Development Control 5.1: Regional Roads (Vehicular Access).
Government Sewerage Policy.
Transport Assessment Guidelines.

Local Planning Policies

Shire of Murray Barragup Furnissdale Activity Centre Local Planning Policy (not WAPC endorsed but with MRWA agreement)

On 18 December 2014, the Shire adopted the Barragup Furnissdale Activity Centre Local Planning Policy (Activity Centre LPP). The Activity Centre LPP plans for, inter alia, the provision of safe, functional and coordinated vehicular and pedestrian access, (**Attachment 3** - Activity Centre LPP). Of particular relevance to the application, the Activity Centre LPP requires:

1. traffic signals at the intersection of Pinjarra Road with Furnissdale Road and Watson Drive, including the channelisation of traffic lanes and associated localised road widening;
2. the provision of one left turn-in only vehicular access point from Pinjarra Road into the subject land with an associated 120 metre-long left-turn deceleration lane;
3. east-west access through the centre be provided for by integrated shared driveways protected by easements in gross or public roads, including the extension of Douglas Place eastwards to Watson Drive as depicted in **Attachment 3**;
4. the widening of Furnissdale Road to a 26 metre wide two lane boulevard road, with 5 metre-wide verges, 5 metre-wide traffic lanes and incorporating a cycle lane and a 6 metre-wide central median;
5. dual use paths, inter alia, along both sides of Pinjarra and Furnissdale Roads; and
6. pedestrian paths at least 2 metres-wide along the front of buildings and providing convenient pedestrian connections to adjacent buildings.

The Activity Centre LPP constitutes the ultimate road reserve capacity required to be implemented to achieve safe and effective vehicular manoeuvrability over time to ensure all lots retain access to the road network.

Consultation:

Main Roads Western Australia

The Shire referred the application and the associated Transport Impact Assessment (TIA) to MRWA for comment, as required by the current instrument of delegation. MRWA advised that the proposed intersection is inconsistent with and a departure from the design supported by MRWA as part of the Activity Centre Local Planning Policy and is not supported for the following reasons:

- The proposed intersection design does not take into consideration the function or the safety of the State Road.
- This section of Pinjarra Road has an 80km speed limit and permits RAV4 (27.5m vehicles). The proposed service station is being developed to service heavy vehicles as well as domestic and as such will require a deceleration turn pocket into the left in only access road. (**Attachment 4** - Main Roads Design)
- Access from Pinjarra Road must be left in only, the proposed left-in/left-out movement cannot be accommodated, while still maintaining safety and future functionality of the Primary Regional Road.
- The development plans do not take into consideration the future road planning for this location requiring the signalised upgrade to the intersection of Furnissdale/Pinjarra Roads. The turn pocket land requirement for the signalised intersection dictates the location at which the proposed left in access, to the subject site, can safely be positioned. The left in access location on the Shire's concept may compromise future planned road upgrades in the locality.

MRWA recommends that the Pinjarra Road access be modified to a left-in only intersection to align with Main Roads WA access/Pinjarra Road concept plan. The required modifications also include the requirement to relocate the left-in access from Pinjarra Road further east to avoid land required to upgrade the Furnissdale/Pinjarra Road intersection.

Planning Assessment:

The application is a dual approval and the Shire is responsible for the assessment under the LPS4. It is noted that the proposed use is a discretionary (AA) use under the LPS4 in the Commercial zone. The assessment of the land use and development standards is to be undertaken by the Shire as part of their responsible authority report under the LPS4. The assessment under the PRS is limited to the proposed access arrangements with the Primary Regional Road.

Pinjarra Road Widening

The road reserve for Pinjarra Road is currently 40 metres-wide. However, the Primary Regional Roads reservation extends approximately 10 metres into the lots on either side of the existing road reserve, facilitating an ultimate road reserve width of 60 metres. Accordingly, the subject land is affected by a 10 metre-wide road widening requirement.

Future Pinjarra Road Traffic

The traffic impact assessment prepared in support of the application (dated December 2021) assumes traffic volumes on Pinjarra Road will grow at the rate of 3 per cent per annum anticipating 30,200 to 33,000 vehicles per day for 2041.

The land reserved for Primary Regional Roads abutting Pinjarra Road in the Peel Region Scheme is required to accommodate road widening necessary to support the traffic volumes forecast for 2031 and 2049.

Pinjarra Road Access

The development plan proposes access via a left-in/left-out intersection on Pinjarra Road and a full movement T intersection onto Furnissdale Road that abuts the western boundary of the site. Furnissdale Road creates a full movement intersection priority controlled intersection with Pinjarra Road.

MRWA has prepared a plan illustrating long term road design for this section of Pinjarra Road which includes the upgrade of the Furnissdale/Pinjarra Road intersection to a full movement signalised intersection. MRWA have raised concerns that the proposed left-in/left-out intersection with Pinjarra Road compromises the safety of the proposed upgrade of the Furnissdale/Pinjarra Road intersection and the associated slip and turning lanes. MRWA have identified that the proposed left-out is located too close to the Furnissdale/Pinjarra Road intersection as required by Austroads. MRWA note that this conflict creates an unsafe traffic environment.

The position taken by MRWA is consistent with the Pinjarra Road access for three of the four existing service stations on Pinjarra Road between Mandurah and the Pinjarra town centre within the 80km/hr speed limit area. The third, being the oldest service station is located in a mid-block location and therefore cannot gain access via an existing intersection or side street.

Main Roads position is supported by WAPC *Development Control Policy 5.1: Regional Roads (Vehicular Access)* (DC 5.1). The objectives of DC5.1 include improving traffic flow and safety on all regional roads by minimising the number of junctions or driveways and to ensure the vehicle access to regional roads and the type of development is controlled and conform with sound town planning principles.

Clauses 3.3.1 and 3.3.2 of DC 5.1 seek to minimise the creation of new driveways on regional roads such as Pinjarra Road with a general presumption on traffic and safety grounds against the creation of new driveways. Where alternative access is or could be made available from side or rear streets, no access shall be permitted to the regional road unless special circumstances apply. In this instance, the western boundary of the site abuts Furnissdale Road that provides the primary access to the proposed services station and the wider commercial and urban development in the locality. The location of the proposed left-in/left-out would impact the reduce the length of the left turn lane required as part of the upgrade to the Furnissdale/Pinjarra Road intersection to below the length required for Pinjarra Road which is sign posted at 80km/hr. This compromises the design safety and functionality of the intersection which is inconsistent with the objectives of DC5.1.

The Shire has identified a preference for additional access to/from Pinjarra Road to address the potential for congestion at the Furnissdale/Pinjarra Road intersection. The Shire's position is based on consideration of the internal road network and traffic permeability. The Shire's analysis did not extend to regional considerations including the functionality, safety and design requirements of the Region Road which relate to the matters raised by MRWA. The current level of development within the Furnissdale Activity Centre and the current levels of traffic do not necessitate additional access points.

MRWA has advised that it may be possible to support a left-in access from Pinjarra Road subject to the design being the specifications of MRWA. The Furnissdale/Pinjarra Road intersection, once upgraded will require a left hand turning lane with a minimum length of 120 metres. The proposed left-in access provides sufficient separation from the Furnissdale/Pinjarra Road intersection. MRWA has advised that the proposed left-in would also require a 120 metre long deceleration turning lane. This turning lane cannot be accommodated entirely within the frontage of the subject site with approximately 50 metre of the turning land in front of the neighbouring lot to the east. MRWA have advised that the Pinjarra Road reserve is required to be widened to accommodate a turning lane, drainage services etc. This would require land from the neighbouring lot (Lot 132 Pinjarra Road), which is not party to this application and is not under the control of the applicant.

The applicant has prepared a plan to demonstrate that the required road works can be accommodated within the existing road reserve (**Attachment 5**). This design and the relocation of services has not been validated/supported by MRWA and it may not be possible for the left-in to be constructed to MRWA specifications. Therefore, the proposed access/egress via Pinjarra road is not supported.

The resolution under Clause 21 of the PRS identifies development on zoned land that requires planning approval under the region scheme. This includes the development of land abutting a Primary Regional Road Reservation where access to the regional road reservation is proposed. If the subject development application did not propose the Pinjarra Road left-in/left-out access, which is not supported by MRWA, development approval under the PRS would not be required.

Conclusion:

It has not been demonstrated that the proposed left-in/left-out access with Pinjarra Road can be designed to the specifications of MRWA to ensure the functionality and safety of the Furnissdale/Pinjarra Road intersection. The proposed left-in/left-out intersection with Pinjarra Road is not supported by MRWA and is inconsistent with WAPC policy. Alternative access via side local roads is available and should be utilised by the development. Therefore, it is recommended that the application be refused under the PRS.

Alternative Recommendation

Notwithstanding the above, the Outer Metropolitan Joint Development Assessment Panel may consider it appropriate to support conditional approval for the proposed development that removes the proposed left-out and supports a left-in access from the Pinjarra Road Primary Regional Road Reservation. However, it should be noted that it may not be possible for the left-in access including the associated turning lane, drainage, services and footpath to be designed and constructed to the specifications of MRWA within land controlled by the applicant. The below alterative recommendation is provided:

It is recommended that the Outer Metropolitan Joint Development Assessment Panel resolves to:

Approve DAP Application reference DAP/22/002159 and accompanying plans date stamped **17 June 2021** by the Department of Planning, Lands and Heritage (22533-02, rev D; 22533-01, rev F; 22533-04, rev B; 22533-03, rev A; 22533-05, rev B and

22533-06, rev A) in accordance the provisions of Clause 21 of the Peel Region Scheme subject to the following conditions:

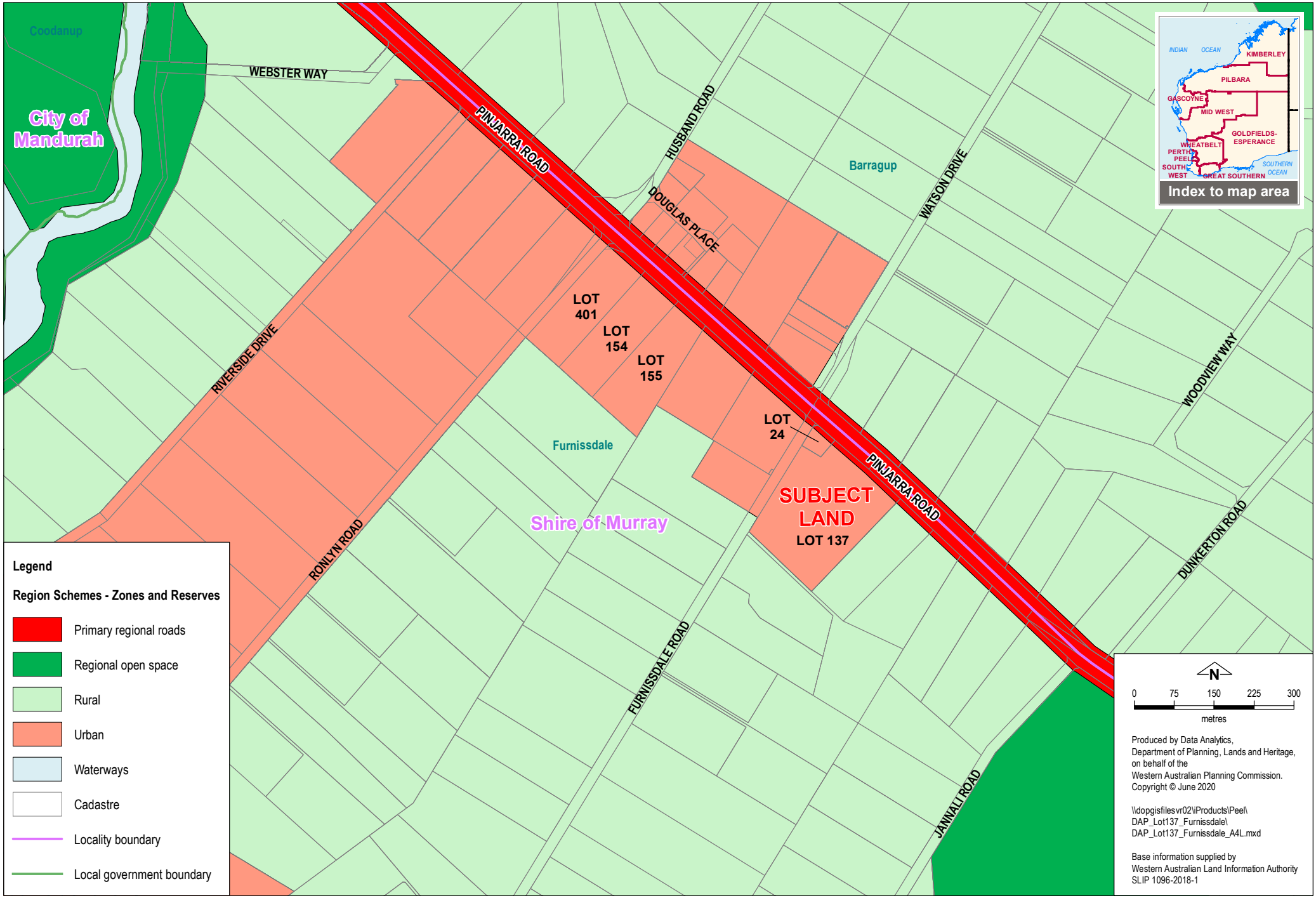
1. This decision constitutes planning approval only and is valid for a period of 2 years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.

2. The development plans being modified by deleting the proposed left-out access on to Pinjarra Road to the specifications of Main Roads Western Australia.

3. The left-in access from Pinjarra Road being located and designed, including drainage, turning/decoration lane, relocation of services as required and footpath to the specifications of Main Roads Western Australia and satisfaction of the Western Australian Planning Commission.

4. The land reserved as Primary Regional Road being transferred free of cost to the Commissioner for Main Roads Western Australia for road purposes and without any payment of compensation.

ATTACHMENT 1



DAP/22/02159

Attachment 2

UNITED SERVICE STATION
FURNISSDALE, WA
ISSUE FOR DEVELOPMENT APPLICATION
ALL NEW BUILD

DRAWING LIST:

SK15:	COVER PAGE & DRAWING LIST
SK13:	PROPOSED SITE PLAN
SK14:	OVERALL LOT PLAN
SK10:	PROPOSED FLOOR PLAN
SK09:	PROPOSED LANDSCAPING PLAN
SK11:	PROPOSED ELEVATIONS P1
SK12:	PROPOSED ELEVATIONS P2

A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date
project: PROPOSED UNITED SERVICE STATION		drawn: MS	description: COVER PAGE & DRAWING LIST	
location: FURNISSDALE, WA		checked: NP		
Hodge Collard Preston ARCHITECTS — Third Floor, 38 Richardson Street, West Perth, WA 6005; PO Box 743, West Perth, WA 6872; Ph: (08) 9322 5144; Fax: (08) 9322 5740; Email: admin@hcparch.com		scale: NTS	date: 03.12.2021	
			project no: 68.21	dwg no: SK15
				rev: A

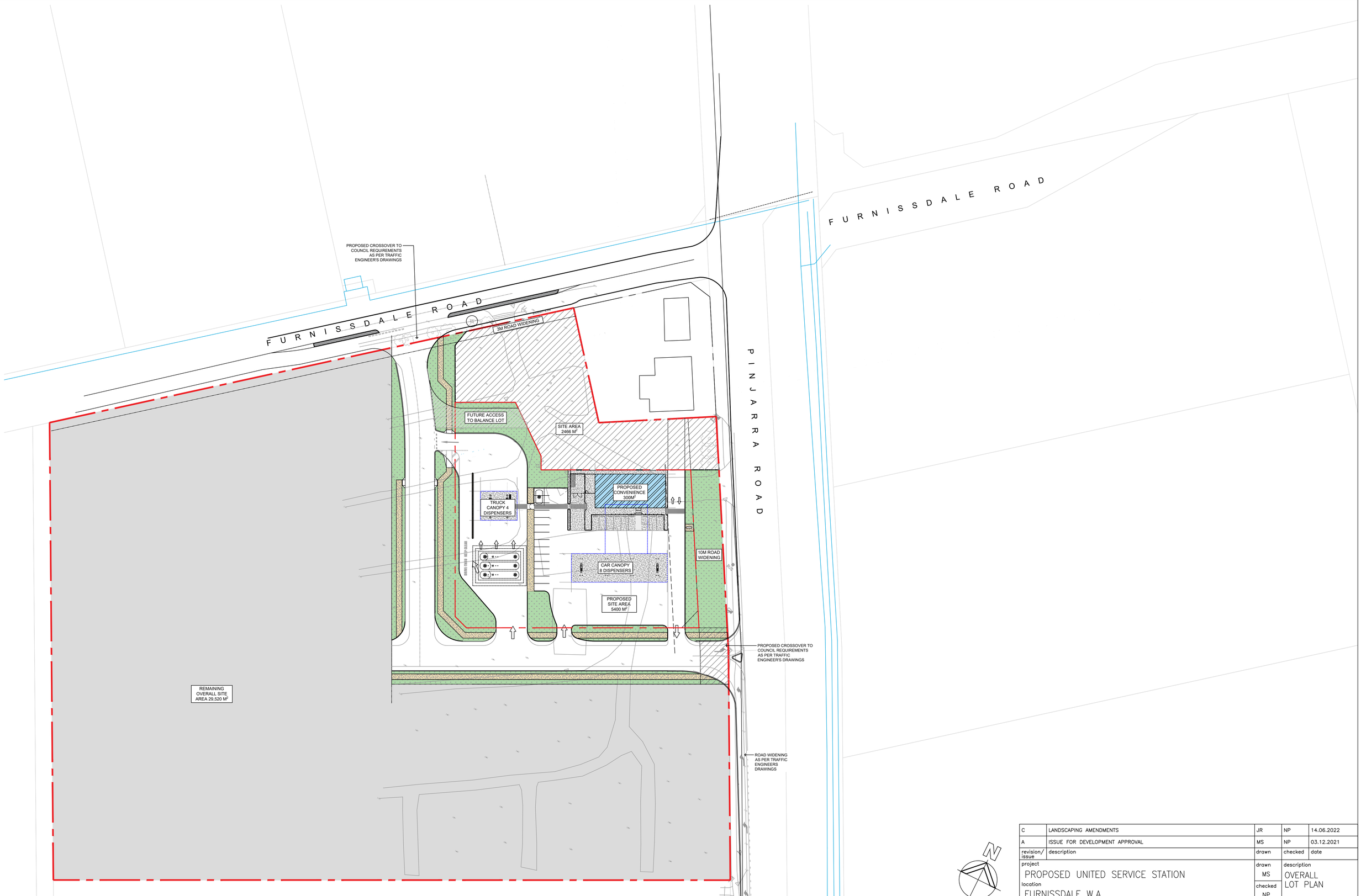
BOUNDARY 38.95M
3M ROAD WIDENING
BDRY 6.98M
BOUNDARY 20.21M
VERGE TREES TO BE REMOVED
BOUNDARY 119.36M
BOUNDARY 75.97M
BOUNDARY 21.41M
BOUNDARY 41.68M
EXISTING FOOT PATH
PROPOSED SITE AREA 2466 M²
FUTURE ACCESS TO BALANCE LOT
BOUNDARY 21.14M
BOUNDARY 18.95M
PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS
BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY
BOUNDARY 53.06M
BOUNDARY 10.01M
PROPOSED CONVENIENCE 300m²
BIN STORE
PLANT AREA
U/GROUND LPG TANK
LINE OF CANOPY OVER SHOWN DASHED
FILL POINTS
TRUCK CANOPY 4 DISPENSERS
SERVICE BAY
BIKE RACKS
PEDESTRIAN CROSSING
FUTURE ACCESS ROAD
PROPOSED 8m HIGH PYLON SIGN
10M ROAD WIDENING
BOUNDARY 56.11M
REFER CIVIL DRAWINGS FOR UNDER CANOPY DRAINAGE
LINE OF CANOPY LINK OVER SHOWN DASHED
REFER CIVIL DWGS FOR UNDER CANOPY DRAINAGE
BLACK OXIDE FINISH AND WHEEL STOPS TO ALL SHOP FRONT PARKING BAYS & PAVING
CAR CANOPY 8 DISPENSERS
LINE OF CANOPY OVER SHOWN DASHED
9000 SETBACK
LANDSCAPING
DRIVE-THRU KEEP CLEAR
U/GROUND FUEL TANKS
PAVING TYPE, CUTS AND DRAINAGE TO CIVIL ENG'S DWGS
FORECOURT PAVING
PROPOSED SITE AREA 5400 M²
BLACK OXIDE FINISH TO CONCRETE UNDER CANOPY
PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS
PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS
PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS
PROPOSED CROSSOVER TO COUNCIL REQUIREMENTS
BOUNDARY 82.49M
BOUNDARY 10.01M
BOUNDARY 119.53M
LANDSCAPING
PINJARRA ROAD
BUS

SITE PLAN
SCALE 1:250 @ A1

C	LANDSCAPING AMENDMENTS	JR	NP	14.06.2022
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE W.A.
drawn: MS
checked: NP
description: PROPOSED SITE PLAN
scale: 1:250 @A1
date: 30.11.2021
project no: 68.21
dwg no: SK13
rev: A

Hodge Collard Preston ARCHITECTS
Third Floor, 38 Richardson Street, West Perth, WA 6005
PO Box 743, West Perth, WA 6872
Ph: (08) 9322 5144
Fax: (08) 9322 5740
Email: admin@hcparch.com



TRAFFIC PLAN
SCALE 1:500 @ A1

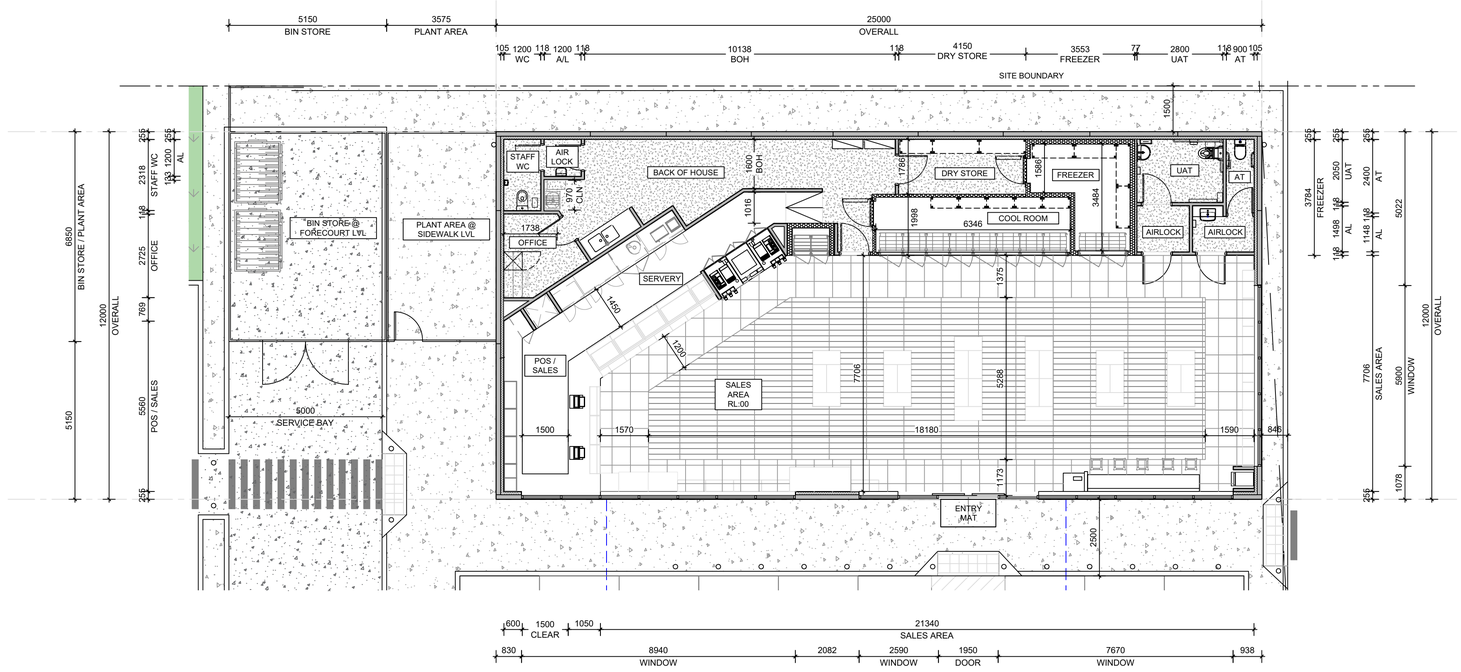
C	LANDSCAPING AMENDMENTS	JR	NP	14.06.2022
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project
PROPOSED UNITED SERVICE STATION
location
FURNISSDALE W.A.

drawn: MS
checked: NP
description: OVERALL LOT PLAN

Hodge Collard Preston ARCHITECTS
Third Floor, 38 Richardson Street, West Perth, WA 6005
PO Box 743, West Perth, WA 6872
Ph: (08) 9322 5144
Fax: (08) 9322 5740
Email: admin@hcparch.com

scale: 1:600 @A1
date: 30.11.2021
project no: 68.21
dwg no: SK14
rev: A



CONTROL BUILDING FLOOR PLAN

SCALE 1:100 @ A1

C	LANDSCAPING AMENDMENTS	JR	NP	14.06.2022
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE, W.A.

drawn: MS
checked: NP
description: PROPOSED FLOOR PLAN
scale: 1:100 @ A1
date: 15.10.2021
project no: 68.21
dwg no: SK10
rev: A

Hodge Collard Preston ARCHITECTS
Third Floor, 38 Richardson Street, West Perth, WA 6005
PO Box 743, West Perth, WA 6872
Ph: (08) 9322 5144
Fax: (08) 9322 5740
Email: admin@hcparch.com

FURNISSDALE ROAD

BOUNDARY 38.95M

3M ROAD WIDENING

RDRY 6.38M

BOUNDARY 20.21M

BOUNDARY 41.68M

BOUNDARY 21.41M

FUTURE ACCESS TO BALANCE LOT

PROPOSED SITE AREA 2466 M²

BOUNDARY 21.14M

BOUNDARY 41.68M

BOUNDARY 18.95M

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

BOUNDARY 53.06M

1490

BOUNDARY 10.01M

PINJARRA ROAD

EXISTING FOOT PATH

FILL POINTS

U/GROUND LPG TANK

BIN STORE

PLANT AREA

PROPOSED CONVENIENCE 300m²

515U

2573

TRUCK CANOPY 4 DISPENSERS

10350

BOUNDARY 75.97M

PROPOSED 8m HIGH PYLON SIGN

BOUNDARY 56.11M

10M ROAD WIDENING

BUS

BOUNDARY 119.36M

1500 8900 150 4150 150 4500 500 2500 13000

5400 6500 1000 5000 1900 7800 2400 2400 13000 2070

ACROD BAY, SHARED SPACE & KERB RAMP TO AS1428 & AS2890 REQS

10080

12000 15000 7000

DRIVE-THRU KEEP CLEAR

U/GROUND FUEL TANKS

CAR CANOPY 8 DISPENSERS

10150

34000

PROPOSED SITE AREA 5400 M²

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

PROPOSED ENTRY ONLY CROSSOVER TO COUNCIL REQUIREMENTS

PROPOSED EXIT ONLY CROSSOVER TO COUNCIL REQUIREMENTS

11000 5000 6000

RDRY 5.68M

BOUNDARY 82.49M

BOUNDARY 10.01M

2500 3500 7400 2500 50 2500

BOUNDARY 119.53M

LANDSCAPE LEGEND

PROPOSED SITE AREA: 5400M²
PROPOSED SITE LANDSCAPING: 961M²
LANDSCAPING % OF PROPOSED SITE: 17.8%

SHOPFRONT PAVING (CONCRETE)

BLACK OIDE (HAND-STIPPLED) CONCRETE COMPRISING -
NUTECH - PR 210 BLACK PAVECOAT (UNDERCOAT DILUTED, FULL-STRENGTH TOP COAT) COLOURED WITH NUTECH ANTI-SLIP ADDITIVE AS PER MANUFACTURERS INSTRUCTIONS

FORECOURT PAVING

ACACIA APHYLLA (LEAFLESS ROCK WATTLE)
MIN. POT SIZE: NA

MATURE GROWTH HEIGHT ~2M
PLANTS TO SPREAD ~2M

EUTAXIA OBOVATA

MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~0.5M
PLANTS TO SPREAD ~1M

HAKEA CERATOPHYLLA (HORNED LEAF HAKEA)
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~2M
PLANTS TO SPREAD ~2M

HAKEA ORTHORRHYNCHA (BIRDS BEAK HAKEA)
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~2.5M
PLANTS TO SPREAD ~1.5M

MELALEUCA PULCHELLA (CLAW HONEY MYRTLE)
MIN. POT SIZE: 150mm

75MM MULCH COVER
MATURE GROWTH HEIGHT ~2M
PLANT SPREAD ~1.2M

AGONIS FLEXUOSA (WESTERN AUSTRALIAN PEPPERMINT)

75MM MULCH COVER
MATURE GROWTH HEIGHT ~5M
PLANT SPREAD ~4M

MELALEUCA QUINQUENERVIA (BROAD-LEAVED PAPERBARK)

75MM MULCH COVER
MATURE GROWTH HEIGHT ~15M
PLANT SPREAD ~10M

GREVILLEA LEUCOPTERIS (WHITE-PLUMED GREVILLEA)

75MM MULCH COVER
MATURE GROWTH HEIGHT ~3M
PLANT SPREAD ~2M

LANDSCAPE NOTE:

IRRIGATION SYSTEM PROPOSED ON SITE, DRIPPER SYSTEM TO BE INSTALL ON GARDEN BED AS PER LANDSCAPING ARCHITECT'S DETAIL.

revision/ issue	description	drawn	checked	date
C	LANDSCAPING AMENDMENTS	JR	NP	14.06.2022
B	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE, W.A.
drawn: MS
checked: NP
description: PROPOSED LANDSCAPING PLAN
scale: 1:250 @ A1
date: 08.10.2021
project no: 68.21
dwg no: SK09
rev: B

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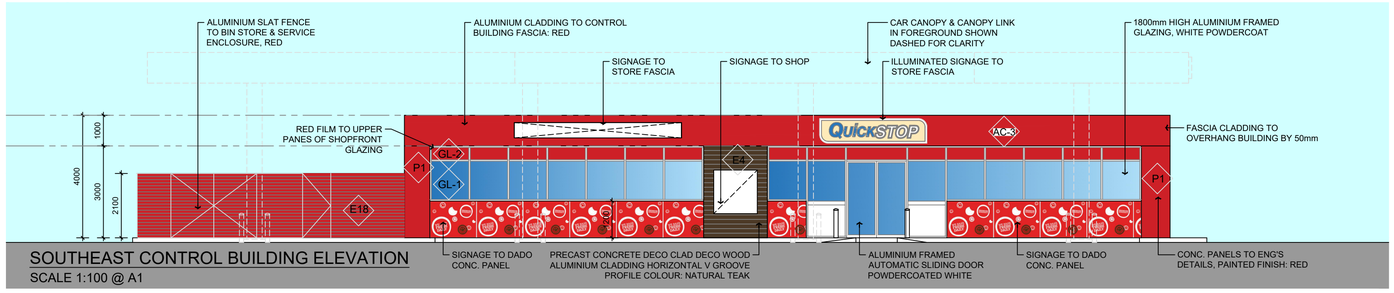
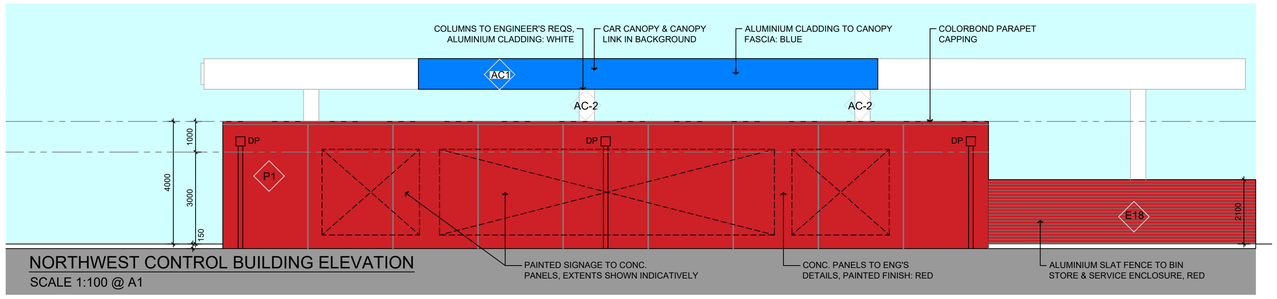
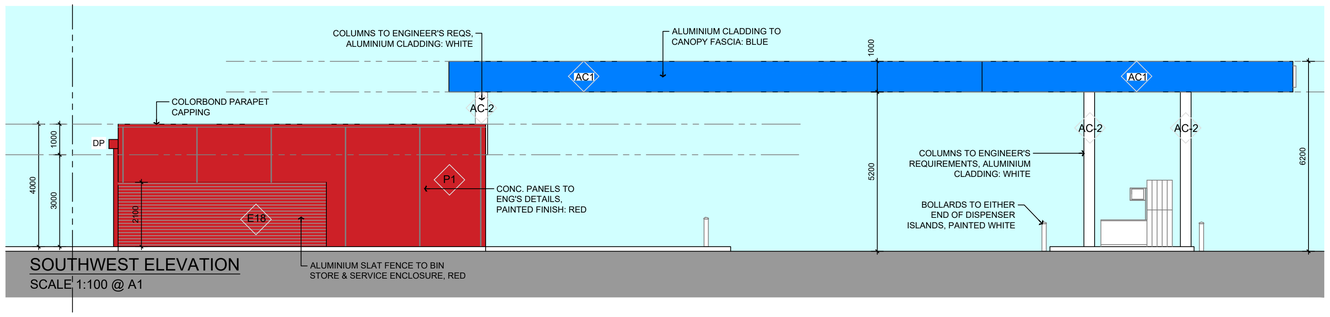


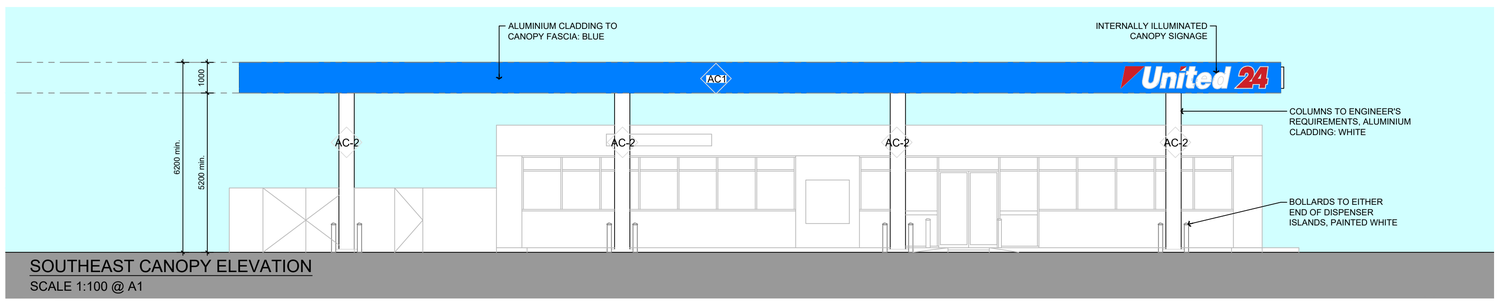
SOUTHEAST CONTROL BUILDING ELEVATION
SCALE 1:100 @ A1



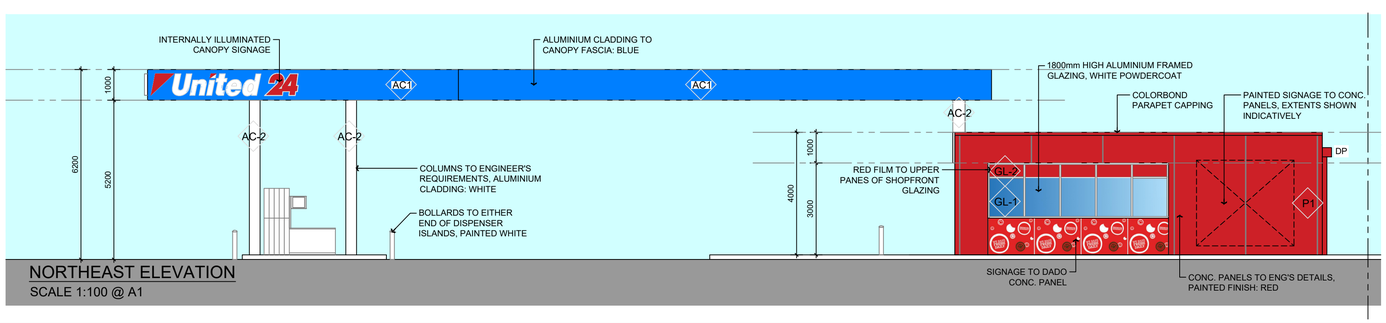
NORTHWEST CONTROL BUILDING ELEVATION
SCALE 1:100 @ A1



SOUTHWEST ELEVATION
SCALE 1:100 @ A1



SOUTHEAST CANOPY ELEVATION
SCALE 1:100 @ A1



NORTHEAST ELEVATION
SCALE 1:100 @ A1

COLOUR LEGEND

AC-1	AC - 1 ALUMINIUM CANOPY FASCIA CLADDING - BLUE
AC-2	AC - 2 ALUMINIUM CANOPY COLUMN CLADDING - WHITE
AC-3	AC - 2 ALUMINIUM STORE FASCIA CLADDING - RED
E18	E18 - ALUMINIUM SLATS - RED
E4	P4 - PRECAST CONCRETE DECO CLAD DECO WOOD ALUMINIUM CLADDING HORIZONTAL V GROOVE PROFILE COLOUR: NATURAL TEAK
P1	P1 - EXTERNAL WALLS PAINT FINISH - RED
GL-1	GL-1 CLEAR GLAZING TO CODE, NCC & RELEVANT STANDARDS
GL-2	GL-2 CLEAR GLAZING TO CODE WITH RED VINYL

A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE W.A.
drawn: MS
checked: NP
description: PROPOSED ELEVATIONS
scale: 1:100 @ A1
date: 05.11.2021
project no: 68.21
dwg no: SK11
rev: A

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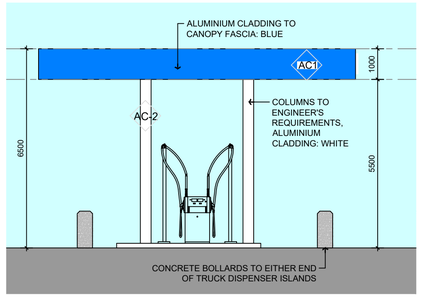
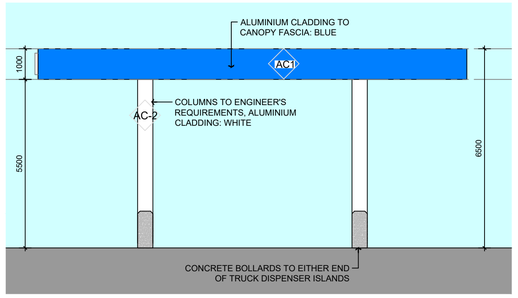
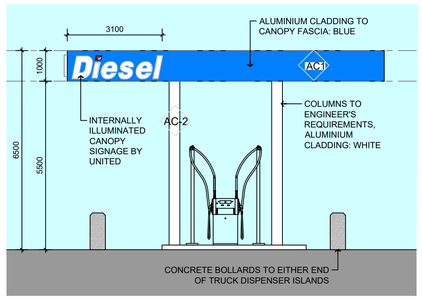


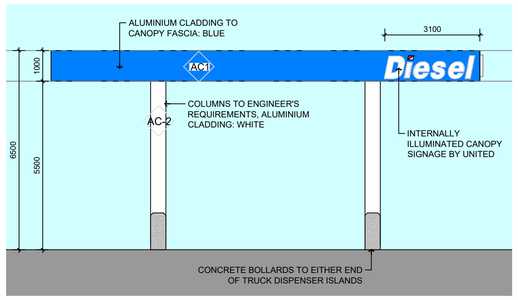
SOUTHWEST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1



NORTHWEST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1

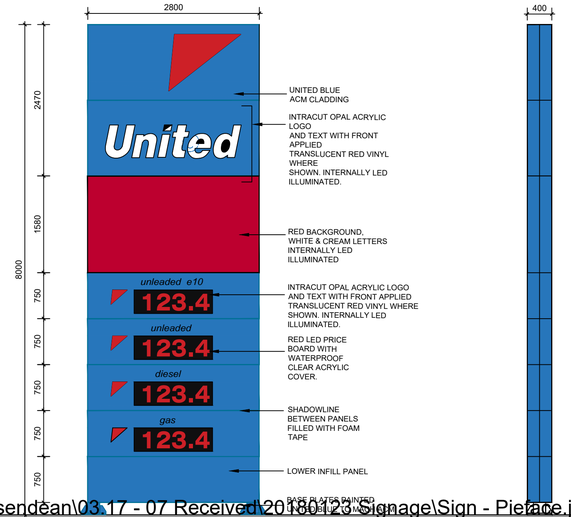


NORTHEAST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1



SOUTHEAST TRUCK CANOPY ELEVATION
SCALE 1:100 @ A1

PYLON SIGN PLAN
SCALE 1:50 @ A1



PYLON SIGN ELEVATION
SCALE 1:50 @ A1

PYLON SIGN ELEVATION
SCALE 1:50 @ A1

oad Bassendean\03.17 - 07 Received\20180123 Signage\Sign - Pierce.jpg

COLOUR LEGEND

AC-1	AC - 1 ALUMINIUM CANOPY FASCIA CLADDING - BLUE
AC-2	AC - 2 ALUMINIUM CANOPY COLUMN CLADDING - WHITE
AC-3	AC - 2 ALUMINIUM STORE FASCIA CLADDING - RED
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GL-1	GL-1 CLEAR GLAZING TO CODE, NCC & RELEVANT STANDARDS
GL-2	GL-2 CLEAR GLAZING TO CODE WITH RED VINYL

A	ISSUE FOR DEVELOPMENT APPROVAL	MS	NP	03.12.2021
revision/ issue	description	drawn	checked	date

project: PROPOSED UNITED SERVICE STATION
location: FURNISSDALE, W.A.
drawn: MS
checked: NP
description: PROPOSED ELEVATIONS
scale: 1:100 @ A1
date: 05.11.2021
project no: 68.21
dwg no: SK12
rev: A

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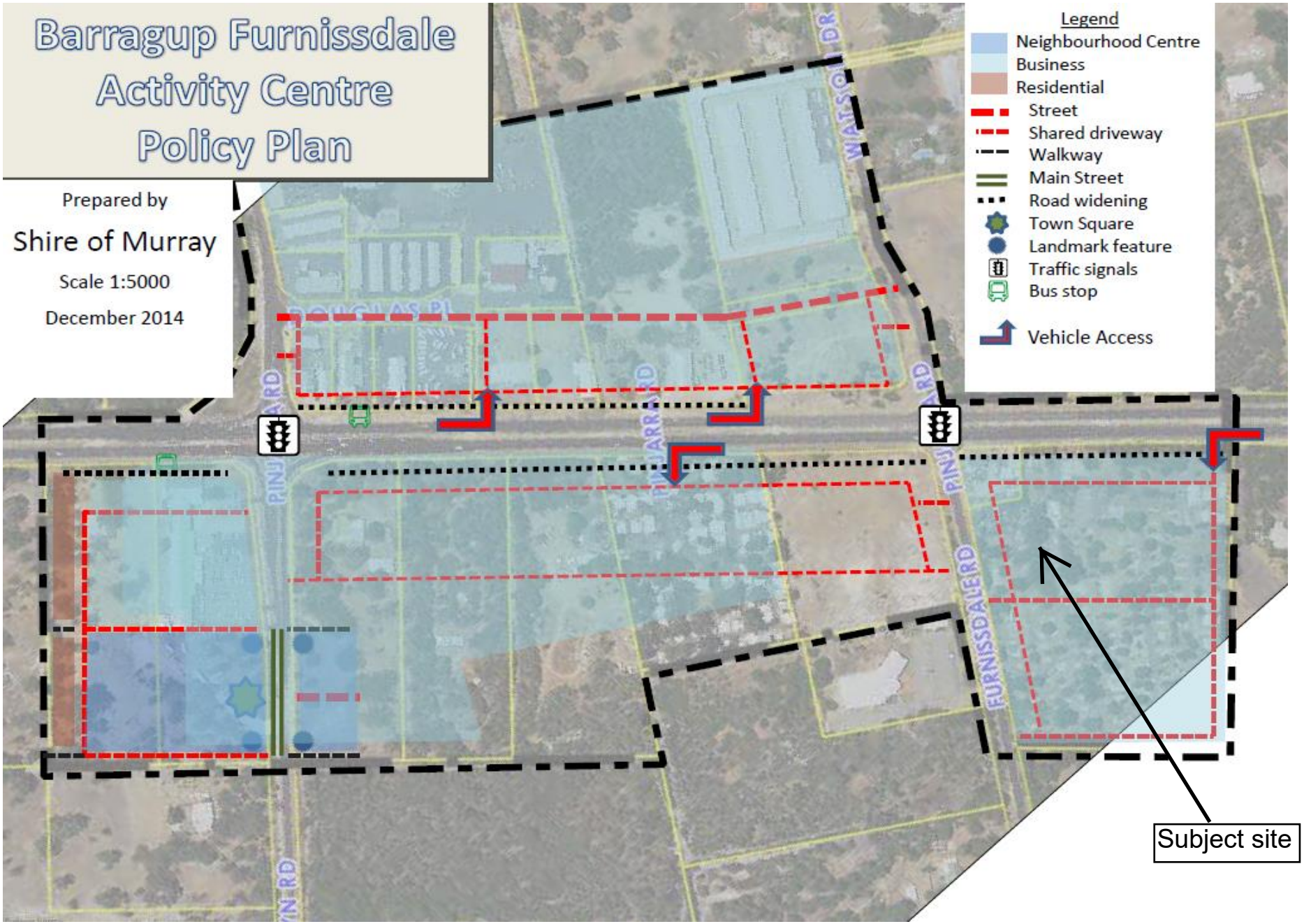
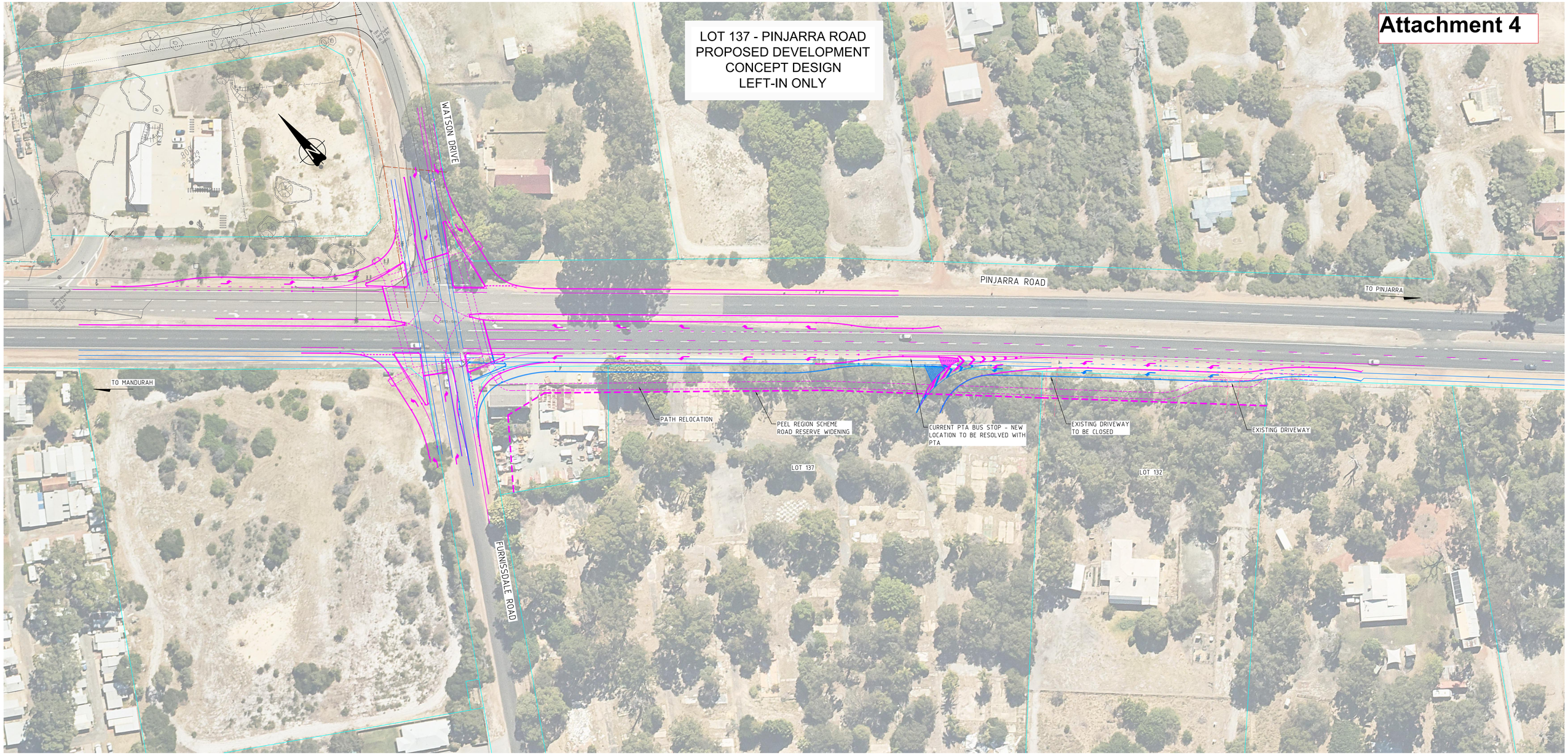
ATTACHMENT 3





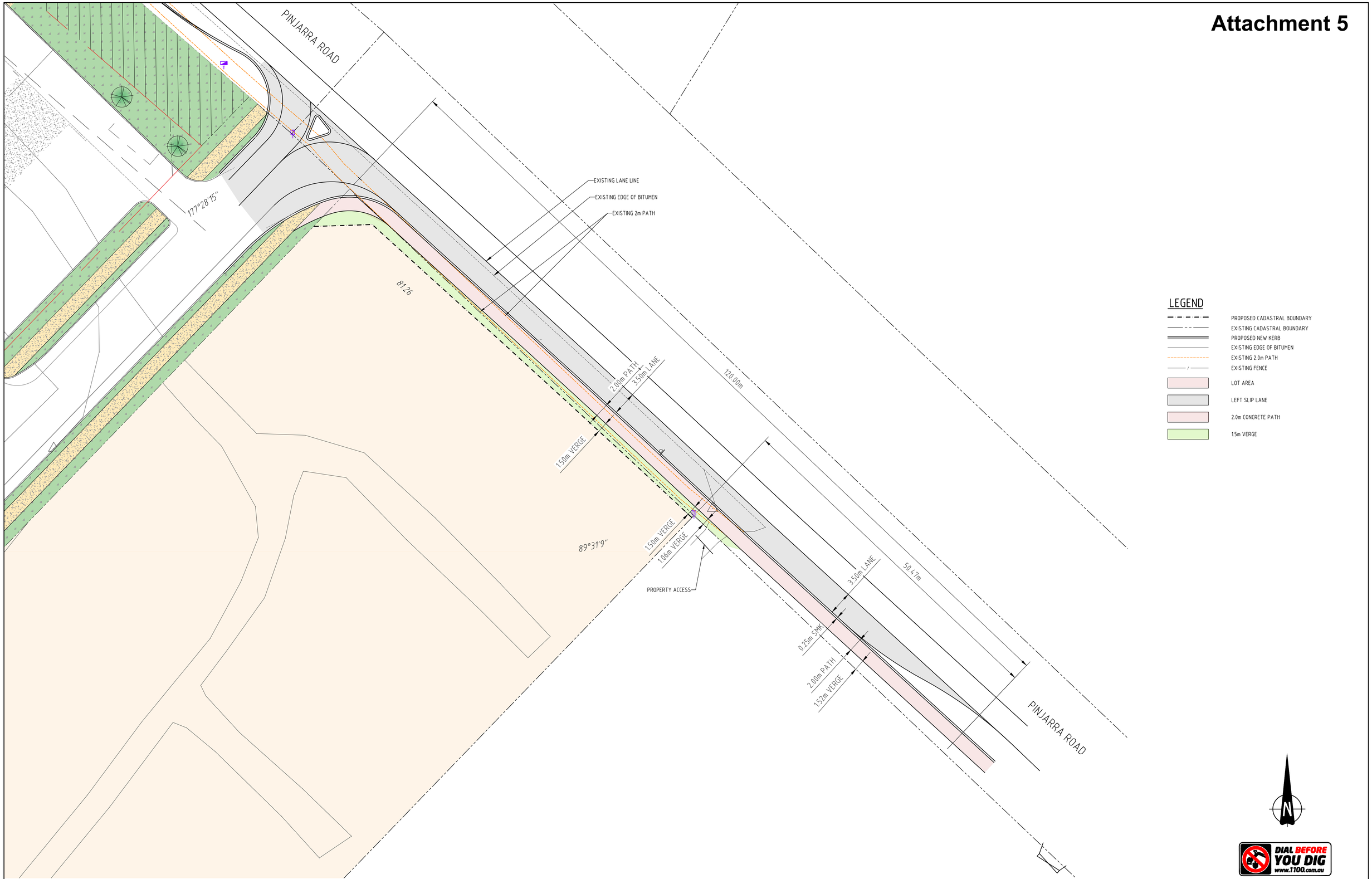
1:500 0 5m 10 15 20 25 30 35 40 45 50 55 60 65 70 75

UPDATED: MAY 2022

PRINTED ON: 16/05/2022 02:19:05 PM

I:\Bunbury Projects\M023 Pinjarra Road\06.00_06.60_slk_furnissdale_rd_int_pcd94\Concept\Drawings\Sketches\des-MRWA-2022-May-Interim+Ultimate-2-lane-v2.dwg

Attachment 5



PROJECT:

PROPOSED SERVICE STATION
CNR FURNISSDALE & PINJARRA RD

No.	DATE	REVISION	BY
A	2-8-2022	ISSUED FOR APPROVAL	MJV

Porter Consulting Engineers

Level 2 Kishorn Court
58 Kishorn Road
Mt Pleasant 6153 WA

PO Box 1036
Canning Bridge 6153 WA

Tel (08) 9315 9955
Email office@porterseng.com.au
www.porterseng.com.au

TUSMO Pty Ltd ACN 070 997 948 as trustee for the Consulting Engineering Unit Trust trading as Porter Consulting Engineers ABN 78 636 396 385

CLIENT: **YOLK PROPERTY GROUP**

DRAWING: **PINJARRA ROAD DECELERATION LANE**

STATUS: **FOR APPROVAL**

SCALE	1:500
DATE	AUG 2022
DESIGN	JH
DRAWN	MJV
CHECK	
APP'D	

DRAWING No. **21-6-80/807**

REV No. **A**

ORIGINAL DRAWING SIZE **A1**

FILE NAME S:\ACTIVE PROJECTS\21-06-080\ACAD\20680-807.dwg

102, 104 AND 106 COCKMAN ROAD, GREENWOOD
CHILD CARE PREMISES

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer JDAP	
Local Government Area:	City of Joondalup	
Applicant:	Urbanista Town Planning	
Owner:	SPG Capital Fund 3 Pty Ltd	
Value of Development:	$2.2 million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)	
Responsible Authority:	City of Joondalup	
Authorising Officer:	Chris Leigh Director Planning and Community Development	
LG Reference:	DA22/0384	
DAP File No:	DAP/22/02239	
Application Received Date:	25 May 2022	
Report Due Date:	22 August 2022	
Application Statutory Process Timeframe:	90 days with an additional 10 days agreed.	
Attachment(s):	1. Development plans and elevations 2. Building perspectives 3. Landscaping plan 4. Location Plan 5. Design reviewed by Joondalup Design Review Panel 6. Applicant response to submissions 7. Transport impact statement 8. Environmental acoustic assessment 9. Applicant's design statement and explanatory report 10. Waste management plan 11. Environmentally sustainable design checklist	
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:

1. **Refuse** DAP Application reference DAP/22/02239 and accompanying plans (dated June 2022) 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 Joondalup *Local Planning Scheme No. 3*, for the following reasons:

Reasons

1. The proposed Child Care Premises does not meet the objectives of the Residential zone of the City of Joondalup Local Planning Scheme No. 3 or Clause 67(m) of the Deemed Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* as the scale of the development is incompatible with and not complementary to residential development.

2. In accordance with clause 67(g) of the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015, the proposed development does not meet the objectives of the City's Child Care Premises Local Planning Policy and will have an adverse impact on the amenity of the surrounding areas as a result of the location and scale (number of children proposed) of the development.

Details:

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Urban
Local Planning Scheme	City of Joondalup Local Planning Scheme No. 3
Local Planning Scheme - Zone/Reserve	Residential R20
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	Child Care Premises – Discretionary "D" use
Lot Size:	Lot 522: 751.023m^2 Lot 523: 751.023m^2 Lot 524: 733.024m^2
Existing Land Use:	Residential (three single houses)
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	No
Swan River Trust Area	No

Proposal:

Proposed Land Use	Child Care Premises
Proposed Net Lettable Area	N/A

Proposed No. Storeys	One
Proposed No. Dwellings	N/A

The proposed development consists of the following:

- The construction of a new single-storey Child Care Premises comprising a pitched roof design, face brick work (recycled brick) and painted CFC cladding;
- Garrison style fencing around the perimeter of the site along Cockman Road and Ollis Street;
- A maximum of 92 children and 15 staff at any one time;
- A singular outdoor play space on the western side of the building oriented to Cockman Road;
- One way vehicular access from Ollis Street, with a one way exit onto Cockman Road;
- Access to 27 car parking bays located on the northern end of the site. The parking bays consist of eight tandem staff bays, standard staff and visitor bays and one accessible bay with a shared space;
- Operating hours between 7.00am and 6.00pm Monday to Friday and 8.00am to 1.00pm on Saturdays; and
- One sign located on the building's western elevation (facing Cockman Road).

The development plans, building perspectives and landscaping plan are provided in Attachments 1, 2 and 3 respectively.

Background:

The applicant is proposing a Child Care Premises on Lot 522 (102), Lot 523 (104) and Lot 524 (106) Cockman Road, Greenwood (the site).

The site is zoned 'Residential' under the City's *Local Planning Scheme No. 3* (LPS3) and is coded R20. The land use 'Child Care Premises' is a discretionary ('D') use within the 'Residential' zone under LPS3.

The site is bound by Cockman Road to the west, Ollis Street to the north and residential dwellings to the south and the east (Attachment 4 refers). There are currently three single storey dwellings occupying the subject site which will be removed to allow for construction of the Child Care Premises. The prevailing streetscape in the immediate area is characterised predominantly by single storey residential properties, however there are consulting rooms (chiropractor and dental) located opposite the development at Lot 525 (108) Ollis Street. Greenwood Kingsley Plaza (120 Cockman Road) is located within 200 metres of the site to the north.

The proposal was reviewed by the Joondalup Design Review Panel (JDRP) following lodgement of the application. The design reviewed by the JDRP is contained within Attachment 5 and the feedback provided by the panel is included in the consultation section of the report below.

Legislation and Policy:

Legislation

- *Planning and Development Act 2005.*
- *Metropolitan Region Scheme* (MRS).

- *Planning and Development (Local Planning Schemes) Regulations 2015* (Regulations).
- *Planning and Development (Development Assessment Panels) Regulations 2011.*
- *City of Joondalup Local Planning Scheme No. 3* (LPS3).

State Government Policies

- State Planning Policy 7.0: Design of the Built Environment (SPP7).
- State Planning Policy 7.3: Residential Design Codes Volume 1 (R-Codes).

Structure Plans/Activity Centre Plans

- Nil.

Local Policies

- Child Care Premises Local Planning Policy (LPP).
- Advertisements Local Planning Policy.
- Planning Consultation Local Planning Policy.
- Joondalup Design Review Panel Local Planning Policy.

Consultation:

Public Consultation

The proposal was advertised for a period of 14 days, commencing on 20 July 2022 and concluding on 4 August 2022. Consultation was undertaken in accordance with the Regulations and the City's Planning Consultation Local Planning Policy in the following manner:

- letters sent directly to 27 surrounding landowners and occupiers;
- two signs erected on-site (one per street frontage); and
- development plans and information provided by the applicant were made available for public viewing on the City's website and at the City's Administration Building.

The City received a total of 24 submissions, of which 17 responses objected to the development, with seven in support of the proposal. The comments raised in the submissions and the City's response are included in the table below.

The applicant's response to the issues raised during public consultation is provided as an attachment (Attachment 6).

Issue Raised	**Officer comments**
Submissions objecting to the development	

<u>Land Use and Location</u> This scale of the development is better suited to a commercial or light industrial area like Canham Way.	Noted. The suitability of the proposed location is addressed in the planning assessment below.
There are four properties on Ollis Street. One is already a commercial property (dental clinic). If a daycare centre is built on Ollis Street, that would be 50 percent of the residential street being used for commercial purposes.	Noted.
The centre is also not close to any primary school with the Greenwood primary school at Merivale Way over one kilometre away.	Noted.
Approval of this proposal would precede further approval of similar development in residential areas. The City has identified some 369 sites in the residential zone which would comply with the LPP. There is no shortage of sites that would justify the proposal being in this location.	A Child Care Premises remains a 'discretionary' land use within the Residential zone and therefore proposals are still able to be considered in locations that do not meet the locational criteria of the LPP.

<u>Noise</u> Noise generated by 92 children being dropped off and picked up each day as well as 15 staff, noise from daily centre activities, building utility noise and various garbage trucks and re-supply vehicles will impact surrounding residences. The acoustic report doesn't properly model the tonal impulse noise from groups of children at play or the additional service vehicles. It doesn't account for annoyance and loudness factors.	Noted. The proposal, should it be approved, will be required to comply with the *Environmental Protection (Noise) Regulations 1997.*
Noise from the play areas, while being within the acceptable limit, will still be too high for a predominantly residential area especially on a Saturday morning. Potentially some further noise cancelling features other than the colorbond fences could be put in place to reduce this further.	Noted. The potential for noise from the play areas to impact the amenity of neighbouring properties is addressed in the planning assessment below.
<u>Building Appearance</u> The size of the building will be out of character with surrounding development and will impact on the surrounding buildings in this highly residential area. Locating the large car park on the Ollis Street side of the development will be a visual eyesore, even if it is 'fenced off.' This car park and fence will not align with the residential character of the area.	While the development was reviewed by the JDRP who were supportive of the proposed size and design, the City considers the size and scale of the development inconsistent with the surrounding 'Residential R20' zone and therefore does not support it. Council's recently adopted local planning policy seeks to reduce the impact of Child Care Premises in the 'Residential' zone through limiting the overall size of the facility. The building appearance is discussed further in the planning assessment below. The local planning policy seeks car parking to be located in a position that is clearly visible from the street. This approach reduces the likelihood for visitors to instead use the verge for car parking. Landscaping will soften the interface between the car park and the street and minimise the visual impact of the car parking as viewed from the street.
<u>Traffic and safety</u> Unclear if the location, with Cockman Road being a local distributor road is	Noted. The local planning policy requires vehicular access to be taken from a Local

compliant with the local planning policy given access is provided from the local access road (Ollis Street).	Distributor. In this instance access is taken from the local access road, and the applicant is seeking discretion in this regard. This is addressed in the planning assessment below.
The number of children to be located on the site is almost double what the local planning policy permits, which will greatly impact the amount of traffic in the area at peak hour.	Noted. This has been discussed in further detail in the planning assessment below.
Accounting for the 140 dwellings under construction at East Green there would be an additional 708 trips on Cockman Road (including 480 associated with the proposal) presenting a 9% increase in traffic volume.	Noted. The existing traffic volume and the impact of the development on Cockman Road is discussed in further detail in the planning assessment section of this report.
With the recent addition of the BP service station, there needs to be better traffic control on the intersection of Cockman Road and Hepburn Avenue. A set of traffic lights should be considered.	The installation of traffic lights is managed by Main Roads WA and is outside the scope of consideration for this application.
Concern that additional traffic will create a 'black spot' intersection.	A 'black spot' is defined as an intersection or short road section with a history of at least three casualty crashes over a five year period. The Transport Impact Statement (TIS) provided with the application (Attachment 7 refers) considered recent crash data along Cockman Road, indicating there were a total of three minor incidents over the past five years to December 2020 with none of these involving casualties. The TIS has considered impact of the development on the existing road network, including driver reaction time and sight distances between the exit only on Cockman Road and the Cockman Road/Ollis Street intersection and concluded that the arrangement can operate safely.
The chiropractor and dentist on the corner of Ollis Street make a minor impact to the traffic on the road. If a daycare is built, we will face a backlog of traffic every morning and evening which neither Ollis Street or Cockman Road are able to sustain. Undoubtedly, desperate parents in a hurry will then be inclined to avoid the bottle neck	In contrast to schools where there is a set drop off time, traffic for a Child Care Premises is typically staggered during peak drop off and pick up times. The TIS predicts a maximum of 70 trips during 'peak hour' which would equate to approximately three vehicles entering the site over a five minute period which is not

issue getting into the car park and will then use the residents' verges to park instead. Due to increased traffic and Ollis Street being the entry to the daycare centre there would be significant increase of traffic on surrounding local streets being used as "cut throughs".	considered to have a significant impact on the localised traffic in terms of queuing. This is addressed further in the planning assessment below. The applicant's TIS demonstrates that the proposal will not have a significant impact on local traffic conditions and that the existing road network can adequately cater for the additional traffic generated by the development.
<u>Car parking</u> There are already parking issues on Ollis Street due to the dentist and Chiropractor. The entry to the Dentist and Chiropractor carpark is right across from the proposed carpark entry. More than half of the parking lots will probably be taken up by employees of the facility and the remaining parking lots will be not enough for 90 kids' parents. Even though many of them may only need a few minutes to drop their kids (compared with teenagers), parents of small kids are expected to spend more time to take care of the kids at the facility rather than just drop them off and leave.	Noted. This has been discussed in further detail in the planning assessment section of this report. The staff/parent parking ratios proposed by this development comply with the requirements of the LPP.
<u>Verge tree</u> What precautions will the applicant put in place during construction works to ensure the large white gum on the corner or Cockman Rd and Ollis St. isn't damaged?	Should the application be supported it is recommended that a condition of approval be included to require an arborist report including measures to protect the existing verge tree during construction.
<u>Lighting</u> Ollis Street is currently only serviced by one street light. There are no footpaths on Ollis Street which would serve as the vehicular access to the development. More street lighting is needed for public safety, particularly children walking to school.	The City considers that an upgrade of the existing street lighting is not required based on the proposed operating hours between 7am and 6pm falling outside of night time hours.
<u>Construction</u> Will the footpath on Cockman Road be required to close?	Should the application be supported, it is recommended that a condition be included which requires approval of a construction management plan, which would manage

	any potential closure of the footpath during construction. Should there be a need for the footpath to be closed for a period of time, the management plan will outline the alternative pedestrian route for that duration.
Will vibration monitoring be undertaken during construction? Will defect house inspections be carried out?	Potential impacts resulting from vibration during construction are a civil matter between a builder/developer and affected property owners. Vibration monitoring is not a requirement imposed by the City as a condition of construction, however some builders will routinely carry this out. Defect house inspections can be undertaken at the discretion of property owners but is not enforced through the City's approval processes.
<u>Dividing fences</u> Can a cross section showing the wall detail to the houses on the east be provided? Will the existing Hardie fencing on the boundary of the site be retained?	The applicant has advised in the absence of a cross section having been provided, that the proposed levels are approximately 0.5 metres below the ground level at the rear of the site. Retaining will be provided to address this level difference between properties, and colorbond fencing between 1.8 metres and 2.0 metres in height is proposed above this retaining.
<u>Loss of housing</u> Please consider you will be taking 3 homes away from the Greenwood Community, where there isn't enough housing in Perth as it is.	A Child Care Premises is a 'discretionary' land use within the Residential zone and therefore proposals are still able to be considered in locations that do not meet the locational criteria of the LPP. In addressing the issue of housing availability, the City has recently commenced a review of its Local Housing Strategy to consider demand and diversity for housing.
<u>Demand</u> There is not a pressing need for more daycare. A one minute search of daycares in the Greenwood area on the Care for Kids website shows that there are currently 10 daycares in the area, of which five have vacancies. The need for and shortage of daycare placements is for the babies and toddlers age group, as this is more	The existence of other similar centres in the vicinity or ones that may arise in the future, perceived demand and whether the developer is local/interstate are not valid planning matters that should be taken into account as part of decision-making.

expensive to staff., resulting in a surplus of older placements. Is the developer/owner local or is it an interstate business?	
<u>Consultation</u> Nearby residents were unaware of the proposal. How many letters were sent to neighbouring homes?	Letters were sent directly to 27 surrounding landowners and occupiers. The extent of consultation is discussed above in the public consultation section of this report.
<u>Property values</u> The development will have a negative impact on property values.	The perceived impact on property values is not a valid planning consideration.
<u>Miscellaneous</u> Will the development affect the drainage in the area?	Should the application be supported it is recommended that a condition of approval requiring stormwater to be contained on-site, including within the car parking area be included to manage drainage.
Comments in support / neutral to the proposal	
I and many other members of the local community support this childcare, and more childcares getting approved. There are massive waitlists in the NIDO down the road. If you have a look at the local Greenwood/Kingsley community page, you can see that for every nimby there is a young parent who is screaming out for more places.	Noted.
I work in the local area. It is pretty clear there is a dire need for more childcare. Everyone talks about the NIDO being full with massive wait lists. If you look at the plans on this application, you can see the owner has tried to orientate the children's play area away from the other neighbours. You can also see that it is 92 places, but across 3 existing properties. So the actual density, given it is single storey, is actually quite low impact. I like that the building is being designed with similar red brick to the existing area. I also heard the local after school care operator will be the operator of this	Noted.

centre. If that's the case, it keeps it local and there is clearly a need for it if they are going to be the operator.	
Having made multiple enquiries at childcare centres in Greenwood, the wait lists seem to be never ending. I have been on the wait list at a centre in Greenwood for over a year. A close contact of mine has confirmed that a centre on Coolibah Drive has over 160 families on the wait list and no movement until the new year. Working families need more options. In this current economic climate, we need to work to lighten the burden of living expenses. We need more childcare options.	Noted.
The location is perfect. It's on the way to work for me from Woodvale as I drive through the suburbs to miss the freeway. The location is an extension of the existing commercial buildings starting from BP and ending at the dentist on the corner, so I don't think there is an issue with a childcare being next to that.	Noted. The location of the proposal has been addressed in the planning assessment below.
I work at the BP down the road and have friends with young kids. They can't get their kids into any nice childcare centres around the area unless they go outside the suburb. Waitlists are crazy and prices keep going up. Having more options in the area, especially on the eastern side of Greenwood would really help with these factors. Young people need more options. Cockman Road is a good option as its a thru-road for many people on the way to work. Its great how this centre seems to be one level unlike the NIDO centres around the suburbs.	Noted.
Fantastic initiative to support the growing suburb and undersupply of modern centres for the families in Greenwood.	Noted.

Referrals/consultation with Government/Service Agencies

No external referrals are required as the subject site is not affected by any regional reserves or planning controls and is bordered by a Local Distributor Road and Local Access Road. The subject site is also not within a Bushfire Prone Area, and the existing dwellings on site having no identified heritage value.

Design Review Panel Advice

The proposal was referred to the JDRP on 15 June 2022 following formal lodgement of the development application. A summary of the JDRP feedback from this meeting and the applicant's response is outlined below.

JDRP review	**Summary of applicant's response**
Principle 1 – Context and character *Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.* JDRP comments**:** The panel acknowledges that the proposal doesn't comply with Policy in two key areas – residential lots are on eastern and southern adjoining boundaries and the proposal exceeds max no. of children by 42 children (50 max). However the location is considered appropriate by the panel because it is: • readily accessible on Cockman Rd, which is a local distributor and on a corner location. • close to the Neighbourhood Centre, existing commercial medical use opposite to the north and a bus stop. The design successfully takes cues from the surrounding residential typology in terms of its form and materials. JDRP recommendation 1: Signage is not shown on the plans. If it is proposed, then the location and extent of signage needs consideration so that its sits well in its context.	Signage location has been included in the revised plans, located on the gable of the reception facing Cookman Road. The signage location will improve entrance legibility whilst not being obtrusive as a result of the stepped building design providing an increased street setback at the location of the signage.
Principle 2 – Landscape quality	A 1.5m wide landscape strip has been incorporated into majority of the street

JDRP review	Summary of applicant's response
Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context. JDRP comments: The retention of the mature verge tree is a positive for the proposal. Some trees proposed are also proposed in the carpark and the proposal to upgrade verge is supported. • more detail on the landscaping needed, with additional strips adjacent to the streets and paths that could be included. • rather than having a turfed verge, the applicant could consider planting the verge with native vegetation. JDRP recommendation 2: • The addition of landscape screening along the eastern fence line of the carpark would create an attractive vista from the street. • Landscaped setbacks are a characteristic of a suburban context so a landscape strip along of at least 1.5m min landscape along the lot boundaries on both street fronts should be included. • Consideration should be given to increasing the 1.5m setback along the eastern boundary to allow for tall plants or a hedge for view by occupants of the CCC (viewed from the internal passage) and for residents to the east (a soft landscaped interface with existing residential lots). • The fence design at street boundaries and around the outdoor play should be visually permeable and of a high quality design to complement the building/landscape design. • More detail of play area layout including shading (whether trees or shade) would result in better site planning and indicate how much	setback area, inclusive of the truncation nearby the street tree. Works proposed within the verge are over 10m from the street tree and a 1.5m landscaping setback from the truncation has been accommodated. We consider this reasonable precaution to minimise impact to the street tree. Should the City wish to undertake an arborist review to determine whether further precautions are necessary to protect its asset, we would be willing to accommodate all reasonable recommendations of the arborist report.

JDRP review	Summary of applicant's response
space would be needed. The introduction of shade sails could have an aesthetic impact on the building so this should be considered at the design stage. • The location of the parking bays abutting the truncation could impact the mature verge tree's root system. These bays should be relocated and replaced with soft landscaping to ensure the tree remains healthy. • An arborist report is recommended for the mature verge tree to inform the design outcomes and ensure longevity of the tree.	
<u>Principle 3 – Built form and scale</u> *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.* JDRP comments: • The single storey scale is modest and in keeping with the surrounding context. • The built form is appropriate for both its setting and use. JDRP recommendation 3: - N/A	N/A
<u>Principle 4 – Functionality and build quality</u> *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.* JDRP comments: • There is direct access from activity rooms via verandas to the outdoor play area, which is optimum. • Kitchen is internalised and remote from the entry and servicing requirements.	Location of services has not been determined at this stage of the development design, however the intention is to locate these services as to not be visually obtrusive. We raise no objection to a condition of approval addressing servicing location to ensure a satisfactory outcome.

JDRP review	Summary of applicant's response
JDRP recommendation 4: • Servicing and waste management details are required - where are the screened a/c units, meters, fire services, bin collection? • Consider relocating the kitchen closer to the servicing requirements.	
<u>Principle 5 – Sustainability</u> *Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.* JDRP comments: The solar panels are supported. JDRP recommendation 5: Consideration should be given to further sustainability initiatives, waterwise plantings, encouraging walking/cycling, etc.	N/A
<u>Principle 6 - Amenity</u> *Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.* JDRP comments: The site planning is supported as it will mitigate noise impact with the outdoor play area and activity rooms located further away from the adjoining residential lots by the L-shaped building form. JDRP recommendation 6: Consider including seating near the entry to the centre for waiting and general community use.	Bench seating and pram parking added to the western wide of the reception.
<u>Principle 7 - Legibility</u> *Good design results in buildings and places that are legible, with clear connections and easily identifiable*	N/A.

JDRP review	Summary of applicant's response
elements to help people find their way around. JDRP comments: Active uses are on the frontage and the entry is legible from the northern approach and carpark. However the pedestrian access from the north is through the carpark and the cranked path from the west is illegible. JDRP recommendation 7: Consider a more direct path and safe path from both street fronts to the safety zone.	
<u>Principle 8 – Safety</u> *Good design optimises safety and security, minimising the risk of personal harm and easily identifiable elements to help people find their way around.* JDRP comments: The L-shaped internal passageway and tight 90 deg corners at the southern and eastern perimeter of the building have unclear sight lines. JDRP recommendation 8: • Consider a chamfer or curve at the corners of the internal passageway for clearer sightlines. • Consider a second access/egress point on Ollis Street to avoid reversing in the carpark.	The access arrangements have been reviewed in light of the City's feedback. Following further discussion with the City's Engineering Services the access has been amended to a one-way arrangement, with an entry on Ollis Street and exit on Cockman Road.
<u>Principle 9 – Community</u> *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 interactions.* JDRP comments: The childcare centre fulfills a community need. JDRP recommendation 9:	Two bike racks and pram parking have been added outside the building entry.

JDRP review	Summary of applicant's response
The use of bike racks could be increased and pram parking could be included. A waiting area shelter could be added outside the front door which could cover the bikes and prams given the busyness of those spaces and to facilitate social interactions.	
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.* JDRP comments: The saw tooth roof has been integrated into the residential typology design aesthetic well to allow additional light into activity rooms, however the design is quite uniform in its materiality. JDRP recommendation 10: Include some more playful elements such as decorative brick detailing or coloured window shades and consider an additional contrast painted render colour to differentiate the building as a child care centre.	N/A.

While the JDRP were supportive of the size of the development, particularly in relation to design principle 3 (built form and scale), the panel's comments centred around the compatibility of the building by way of its single storey height fitting within the surrounding residential context. The building has been designed to accommodate 92 children, which has resulted in a building the City considers to be larger than a typical residential dwelling as contemplated by the LPP in this location. This results in a development being out of context with the surrounding residential area.

Other Advice

As part of the assessment process, the application was referred internally to the City's Building Services, Waste Services, Health Services, Engineering and Landscaping departments.

The comments from these departments have been incorporated into the planning assessment below.

Planning Assessment:

The proposal Child Care Premises has been assessed against the relevant legislative requirements of the City's LPS3, State and Local Planning Policies 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.

Land Use and Location

The site is zoned 'Residential' under the City's LPS3 with a residential density code of R20. The land use 'Child Care Premises' is a discretionary ("D") use in the 'Residential' zone under LPS3.

The relevant objectives of the 'Residential' zone under LPS3 are to:

- *Facilitate and encourage high quality design, built form and streetscapes throughout residential areas.*
- *Provide for a range of non-residential uses, which are compatible with and complementary to residential development.*

The local planning policy sets out further locational requirements to guide decision makers to determine whether a Child Care Premises is compatible with and complementary to surrounding development. The locational requirements of the local planning policy are intended to ensure the size and scale of child care development in the Residential zone is appropriate to ensure adverse impacts on residential amenity are mitigated. The intent of these provisions are as follows:

- to locate larger scale premises in alternative locations whilst facilitating small-scale Child Care Premises in appropriate places within the Residential zone;
- requiring Child Care Premises in residential zones to adjoin a non-residential land use on at least one side to provide at least one boundary adjacent to which potential noise generating activities such as outdoor play areas and car parking can be located;
- limit the number of children for Child Care Premises in residential zones resulting in buildings that are of a scale compatible with and complementary to surrounding residential buildings; and
- limit size coverage within the Residential zone to 50% to ensure adequate space for outdoor areas, parking and landscaping.

The City's assessment of the proposal against the locational requirements of the local planning policy is as follows:

Provision	**Requirement**	**Proposal**	**Assessment**
Child Care Premises LPP (Clause 5.1)	Child Care Premises are most appropriately located within the 'Mixed Use', 'Commercial', 'Service Commercial' or 'Private Community Purposes' zone.	Located within a 'Residential' zone	The proposal does not meet the locational requirements and is inconsistent with the scale of Child Care Premises expected within the residential zone, and is therefore not supported.
	Can be considered in a 'Residential' zone where it: - Directly adjoins non-residential uses such as shopping centres,	Directly adjoins four residential properties	

	medical centres or consulting rooms, schools, parks or community purpose buildings on at least one boundary;		
	- Accommodates a maximum of 50 children; and	Accommodates 92 children	
	Has a maximum 50% site coverage.	32% site coverage	

As indicated above, the proposal does not satisfy two of the three locational criteria for Child Care Premises in the Residential zone in relation to:

- The development does not directly adjoin a non-residential use on any of its boundaries; and,
- The proposed number of 92 children exceeds the permitted maximum amount of 50 children.

Some submissions received expressed concerns with the proposal being located within the 'Residential' zone, and in particular the additional noise that will be generated. Community feedback received during consultation also suggested that the development would be better suited within the nearby 'Commercial' zoned area on Canham Way to the north.

While the development does not directly adjoin any boundaries of non-residential development as required by the local planning policy, the applicant has outlined that the proposed site is suitable given it is located opposite non-residential uses (a chiropractor and dentist) on Ollis Street and within 100 metres of a 'Mixed Use' zone to the north which directly connects with 'Commercial' and 'Light Industry' zones.

With consideration to the potential impact that noise generated from the facility might have on the surrounding residents the applicant provided an *Environmental Acoustic Assessment* (EAA) that demonstrates the development can comply with the *Environmental Protection (Noise) Regulations 1997*. The EAA achieves compliance through site layout design and increasing sections of the dividing fencing to two metres in height. The EAA demonstrates that the resulting noise from the development complies with all applicable noise levels, which includes noise modelling from the outdoor play area, cars moving/starting/door slamming and air conditioning.

The City acknowledges the development complies with the *Noise Regulations*, however, considers the cumulative impact of the number of children accommodated and the scale of the building in its context will have an adverse impact on the surrounding residential area. This is contrary to the objectives of the Residential zone provided in LPS3 and the LPP and on this basis the City does not support the proposal. Further discussion on building appearance and traffic generation is provided below.

Building Appearance

Provision	Requirement	Proposal	Assessment
Child Care Premises LPP (Clause 5.5.3)	Child Care Premises in the 'Residential' zone must be of residential appearance, in keeping with the surrounding environment, and not detract from the amenity of adjoining properties.	Single storey pitched roof design, with recycled brick and CFC cladded walls.	Pitched roof to match predominant roof style, with recycled brick and cladded walls consistent with a residential appearance.

Submissions were received during consultation raising concerns that development of a Child Care Premises across three lots would be of a size and scale incompatible with the surrounding residential area.

The proposal was considered by the JDRP with their feedback highlighting that the design includes strong characteristics of the existing residential context in relation to materiality, street setbacks and its single storey scale. While the panel considered the development to be of a form and scale appropriate to the residential context of the surrounding properties, feedback was also provided that the design's materiality was overly uniform.

The proposal reviewed by the panel (Attachment 5 refers) was subsequently modified with a series of skillion style pitches facing the eastern boundary being replaced with the proposed single roof pitch design, however the colours and materials remain generally unchanged. While the JDRP are generally supportive of the design of the building for a residential area, the City considers the size of the building (as a direct result of the number of children to be accommodated) is out of context with the surrounding residential dwellings. Given this, City does not support the appearance of the building on the basis it is incompatible with the established residential streetscape.

Traffic and Safety

Provision	Requirement	Proposal	Assessment
Child Care Premises LPP (Clause 5.2)	Vehicle access to be taken from a local distributor road	Vehicle access is from Ollis Street, being a local access road	The location of the vehicle access to the site from Ollis Street being a local access road, with egress onto Cockman Road is supported.
	Be located in such a manner that they would not: - conflict with traffic control devices; - not encourage unsafe vehicle	Will not conflict with traffic control devices or encourage unsafe vehicle movements, however turning	

	movements; and - not encourage use of nearby access roads for turning movements; -	onto Ollis Street is required.	
	Not be located in, or on the corner of a cul-de-sac road	Not located in, or on corner of a cul-de-sac road	

A number of submitters expressed concern that Cockman Road is a busy road with the development resulting in increased traffic movements that could compromise safety. The local planning policy requires vehicular access to be taken from a local distributor road which in this case would be Cockman Road.

A TIS was provided as part of the application (Attachment 7) demonstrating that the development will not have a significant impact on the existing road network. The City's technical officers reviewed the TIS and proposed access arrangement, which initially included access and egress both being provided from Cockman Road. In response to traffic data showing that Cockman Road is reaching its desirable maximum traffic volume, the proposal was modified to include a two way access arrangement, with entry-only from Ollis Street, and exit-only onto Cockman Road. The modification halves the number of vehicle movements occurring directly between the site and Cockman Road, and addresses concerns regarding the volume and speed of traffic currently experienced along Cockman Road.

The TIS demonstrates that the development will not increase traffic by more than 10% of the current road capacity. In May 2019, the City undertook a traffic count along Cockman Road which showed there was an average traffic volume of over 8,000 vehicles per day. The proposal will generate an additional 370 trips per day, with 63 trips during the AM peak period and 70 trips in the PM period. The Western Australian Planning Commission Transport Impact Assessment Guidelines state any increase in capacity less than 10% is capable of being accommodated within the road network without significantly affecting the overall traffic performance.

While vehicle entry to the site is provided from the local access road (Ollis Street) in lieu of Cockman Road, the dual access proposed serves a dual purpose of lessening the impact of queuing on Cockman Road and reducing the number of trips impacting the local access road (Ollis Street). Therefore it is considered that the proposed site layout has achieved the optimal vehicle access arrangement for the site, and is therefore supported by the City.

Car Parking

Provision	Requirement	Proposal	Assessment
Child Care Premises LPP (Clause 5.3)	1 bay per employee (15 bays) 12 per 89-92 children – 12 bays	15 bays 12 bays	The amount of parking proposed is compliant with the LPP.

	27 bays total	27 bays	

A number of submitters expressed concern that overflow parking would fall to neighbouring verges and streets, referencing existing verge parking issues associated with the dentist and chiropractor located opposite to the subject site on Ollis Street.

The local planning policy requires a total of 27 car parking bays to be provided on site, and that the car parking location must be clearly visible from the street to minimise the potential for verge parking.

The proposal provides 27 car parking bays on the northern corner of the site, including eight staff bays in a tandem arrangement and an accessible bay with an associated shared space. The proposed car park is in a location that is unobstructed from view from the adjoining streets, however should the application be approved it is recommended that a condition of approval is included to ensure that the verge is landscaped in a way that discourages verge parking.

The City has reviewed the parking arrangement and supports the layout and the number of bays proposed meets the amount required under the local planning policy.

Landscaping

Provision	**Requirement**	**Proposal**	**Assessment**
Child Care Premises LPP (Clause 5.6)	Landscape strip of 1.5 metres to all street boundaries.	Cockman Road: 1.5 metres Ollis Street: 1.4 metres Corner truncation: 1.3 metres	The proposed landscaping widths adjoining street verges achieve the intent of the local planning policy and are supported.

Submissions received during consultation raised concerns with the car parking area being a visual eyesore on the streetscape and adjoining residential area.

The development includes landscaping around the perimeter of the site associated with the proposed car park and outdoor play area, adjoining the Cockman Road and Ollis Street verges. The local planning policy requires a minimum landscaping strip of 1.5 metres width adjoining all street verges. The proposal includes reduced landscaping widths along Ollis Street and the corner truncation adjoining the car park. The landscaping plan submitted with the application (provided at Attachment 3) includes a mix of shrubs and shade trees within each of these strips. The widths proposed would also be sufficient to accommodate hedge species better suited at providing some additional screening of cars from the surrounding streets Should the application be supported, it is recommended that a condition for an updated landscaping plan be submitted for the City's review.

The JDRP in reviewing the proposed landscaping commented that retention of the mature verge adjoining the corner truncation, was a feature of the site. In response to the panel's feedback the car parking bays located closest to the lot's corner truncation has been shifted a further 1.3 metres away from the existing verge tree in order to

mitigate against any impact the development may have on the tree's root system. This results in the nearest car bays being between 1.3 metres and 3.2 metres from the lot's corner truncation, which on average provides a greater extent of landscaping facing the adjoining streets than required.

Should the application be approved it is recommended that a condition of approval be included to require an arborist report including measures to protect the existing verge tree during construction.

Waste

The applicant provided a Waste Management Plan (WMP) as part of the application (refer to Attachment 9). Waste collection is proposed to be undertaken on-site via private collection between 7am and 5pm. The proposed one way flow through the car park will allow waste trucks to utilise the car park for collection without requiring any turning manoeuvres within the site. Should the application be approved it is recommended that a condition of approval requiring a revised WMP be included to ensure that waste collection is not conducted during peak times and that any visitor bays needed for collection are kept free during those times.

Servicing

Provision	Requirement	Proposal	Assessment
Child Care Premises LPP (Clause 5.5.4)	Bin storage areas must be screened from view by a wall of brick construction (or other approved material) not less than 1.8 metres in height.	The bin store is proposed to be screened by a colorbond gate located on the eastern side of the building.	The bin store is appropriately screened from the street/s.
	Bin storage must be accessible to waste vehicles and not adversely affect car parking or vehicular/pedestrian access.	Bin storage is accessible for waste collection.	Further detail is needed to confirm how waste pickup may impact or be impacted by parking in adjacent visitor bays.
	Plant and equipment must be screened from view from the street and located on the roof, basement or at the rear of the building.	Details of plant and equipment have not been indicated.	Detail has not been provided regarding the placement of plant and equipment, however the EAA has been carried out on the basis these would be included on the eastern side of the building.

The proposal has made provision for services including air conditioning units on the eastern side of the building, factoring in the future placement of these utilities into the EAA, however has not provided exact details of where these will be installed. Given that service and plant equipment may potentially impact residential amenity by way of aesthetics and noise, it is recommended that should the application by supported a condition of approval requiring details of the plant and equipment prior to commencement of development be included.

Conclusion:

The proposed development is not considered to adequately address all the relevant provisions under the City's *Local Planning Scheme No. 3,* the Child Care Premises Local Planning Policy and the Clause 67 of the *Planning and Development (Local Planning Schemes) Regulations 2015.*

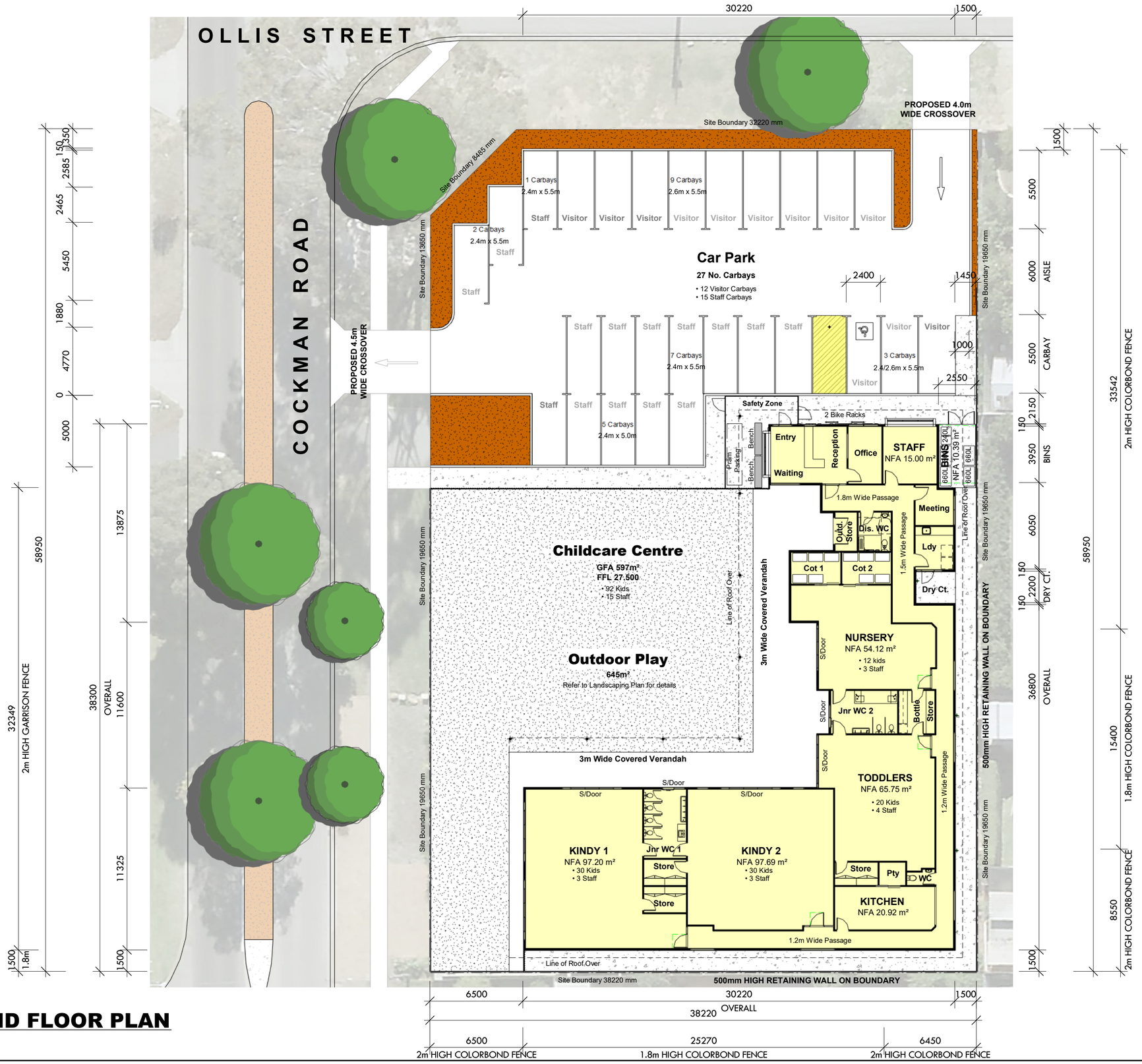
The locational requirements of the local planning policy allow for smaller scale Child Care Premises within a residential setting where the site coverage is consistent with the applicable zoning and the facility is not proposed to exceed 50 children. In this instance, the proposal seeks approval for 92 children which requires a larger building size, that in the context of the surrounding low density residential development, is of a scale above what is reasonably contemplated by the local planning policy in the 'Residential' zone. While the applicant has provided an Environmental Acoustics Assessment and Traffic Impact Statement in support of the application, the City considers the development is not compatible with the surrounding residential area as a result of its built form and scale and therefore will have an adverse impact. This is contrary to the objectives of the Residential zone under LPS3 and the City's local planning policy and therefore the development should not be supported.

Alternatives

In accordance with clause 17(4) of the Regulations, the JDAP may determine an application by either approving the application (with or without conditions) or refusing the application.

Should the JDAP resolve to approve the application, this determination needs to be made based on valid planning considerations as outlined under clause 67 of the *Planning and Development (Local Planning Schemes) Regulations 2015* and as set out in the *Development Assessment Panel Practice Notes: Making Good Planning Decisions*.

If the applicant is aggrieved by the decision or any aspect of the decision, the applicant has a right of review in accordance with the *State Administrative Tribunal Act 2004* and the *Planning and Development Act 2005.*



SITE CRITERIA

1. Site Area

a. Site Area	**2,235m²**

3. Floor Area (GFA)

a. Child Care Centre (Total 96. No. Kids)	597m²
b. Outdoor Store + Bins	10m²
Total	**607m²**

2. Landscaping

a. Outdoor Play	493m²
b. Alfreso	152m²
c. Paving	96m²
d. Strip Landscaping	184m²
Total	**925m²**

4. Carparking

i. Cars Required

a. Parent Bays @ 12 Bays per 89-96 Kids	12.0 Bays
b. Staff Bays @ 1/Staff	15.0 Bays
Total Required	**27.0 Bays**

ii. Cars Provided

Total Provided	**27 Bays**

Landscaping
A. Hard Landscaping
Defined as paved walkways either open or covered.
B. Soft Landscaping
Defined as vegetative landscaping.

Gross Floor Area : GFA
A. All Floor Areas on this plan are shown as GROSS FLOOR AREA.
Unless otherwise noted as Nett Floor Area
B. Definition of Gross Floor Area is defined as:
i/ GROSS FLOOR AREA OF TENANCY:
Gross Floor Area of an individual Tenancy is defined as the area contained between the centre line of common tenancy walls and the outside edge of external walls.
ii/ GROSS FLOOR AREA OF A BUILDING:
Gross Floor Area of a Building is defined as the total area contained between the outside edge of external walls

Nett Floor Area : NFA
A. Nett Floor Area of a Tenancy on this plan is defined as the area between external or tenancy dividing walls.
B. This area is inclusive of toilets if the toilets are exclusive to the Tenancy.

SITE & GROUND FLOOR PLAN

SCALE: 1 : 200

meyer shircore architects

CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

2 4 6 8 10 20

DATE: JUN 2022
REVISION: 16
SHEET: 3
SCALE: As indicated

PROJECT NUMBER **8829**

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ROOF PLAN

SCALE: 1 : 200

CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

0 1 2 3 4 5 10

DATE: JUN 2022

REVISION: 12

SHEET: 4

SCALE: 1 : 200

PROJECT NUMBER

8829

meyer shircore architects

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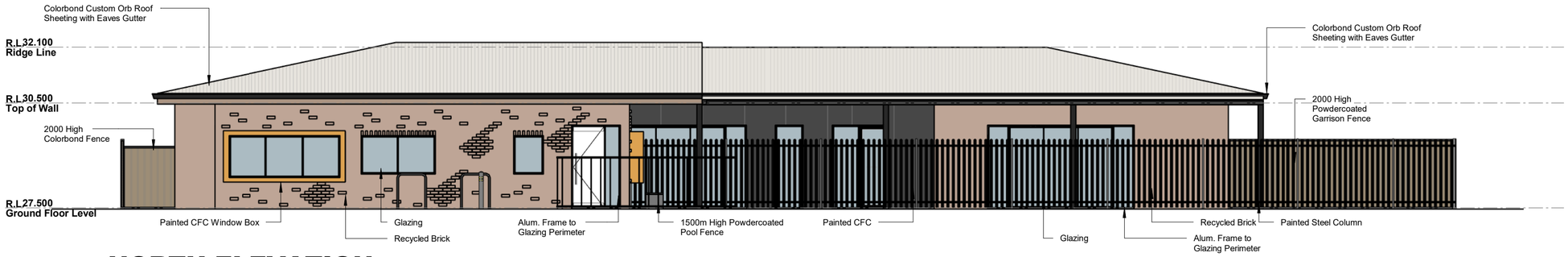
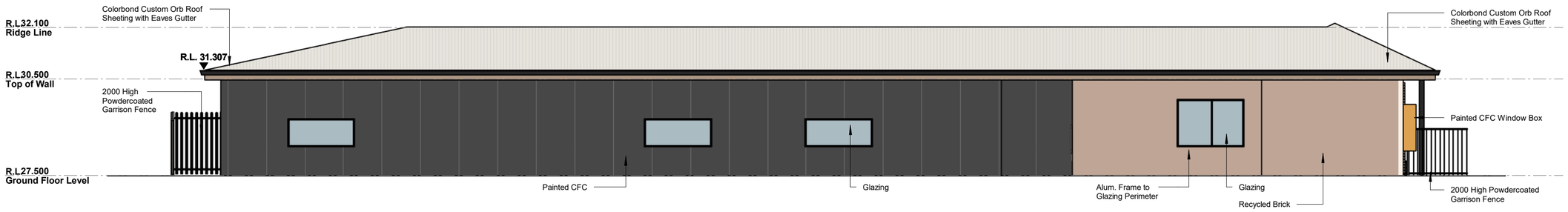


NORTH ELEVATION

SCALE: 1 : 100



EAST ELEVATION

SCALE: 1 : 100

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CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

DATE: JUN 2022

REVISION: 16

SHEET: 5

SCALE: 1 : 100

PROJECT NUMBER

8829

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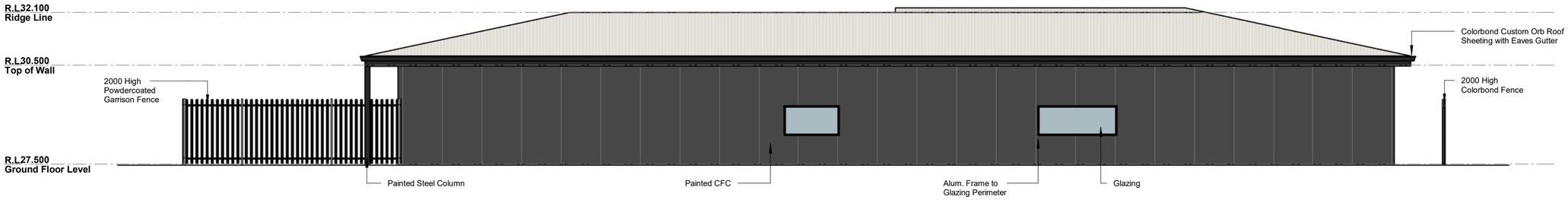
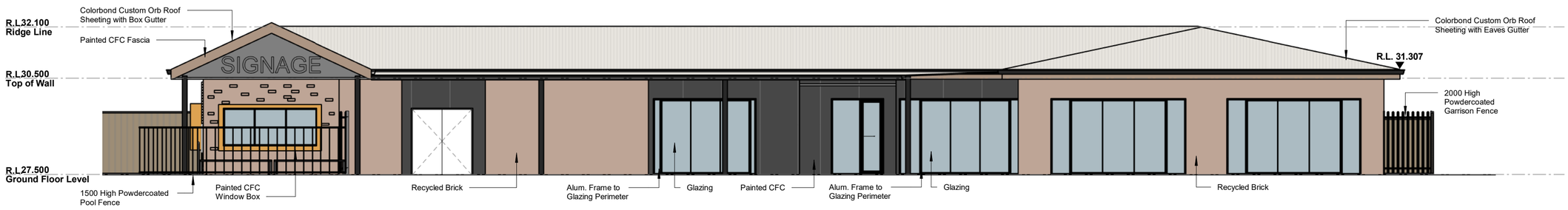


SOUTH ELEVATION

SCALE: 1 : 100



WEST ELEVATION

SCALE: 1 : 100

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CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

0 1 2 3 4 5 10

DATE: JUN 2022

REVISION: 16

SHEET: 6

SCALE: 1 : 100

PROJECT NUMBER

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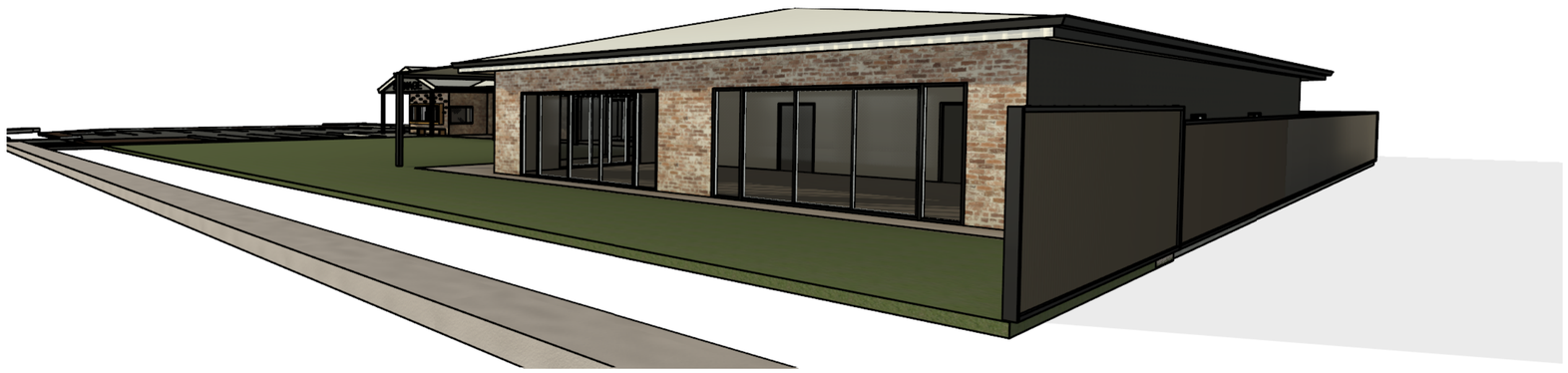
NORTH WEST VIEW
SCALE:

VIEW OF ENTRY
SCALE:



VIEW FROM COCKMAN INTERSECTION
SCALE:

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CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

DATE: JUN 2022

REVISION: 16

SHEET: 7

SCALE:

PROJECT NUMBER **8829**

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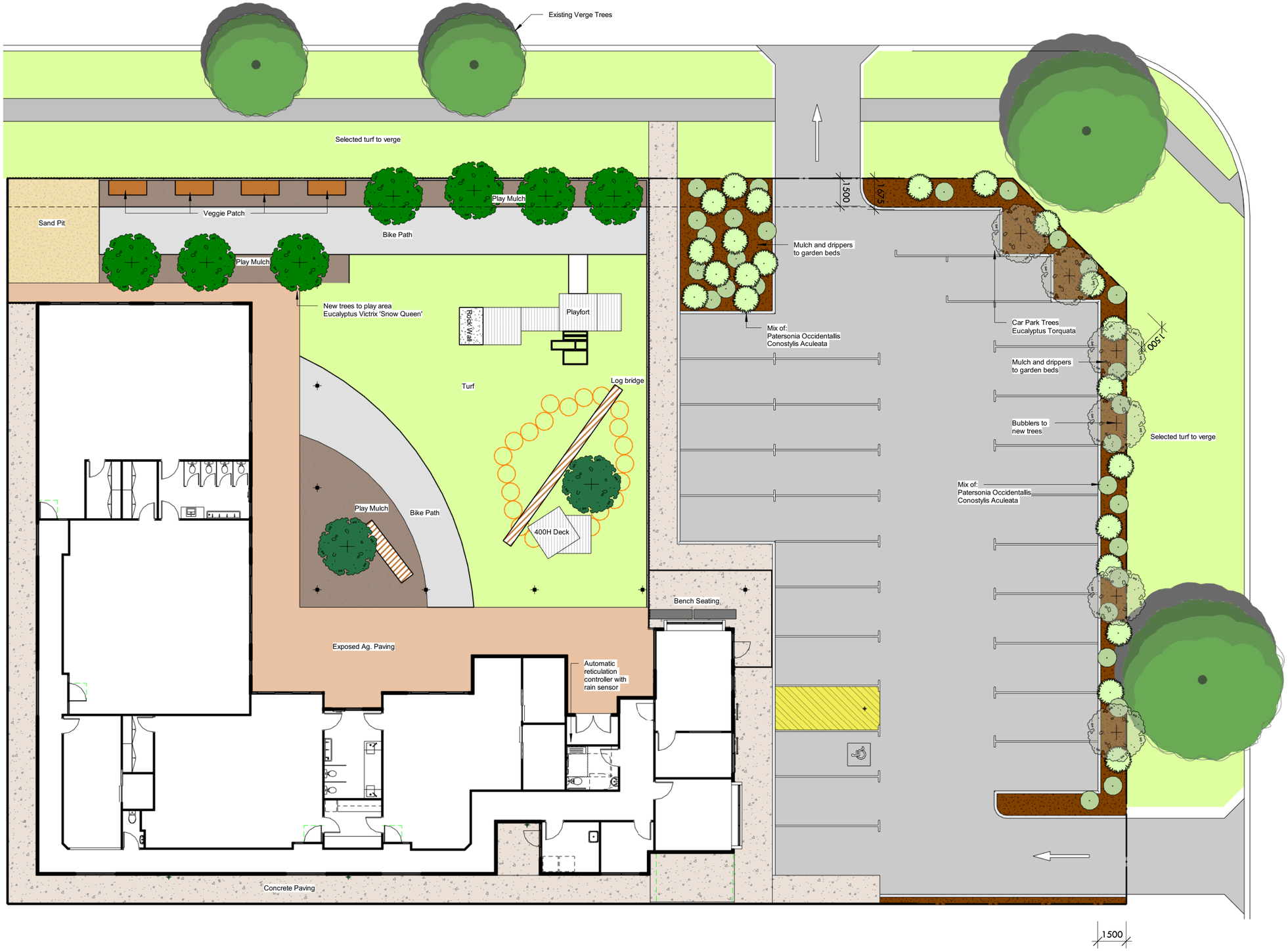

CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

0 1 2 3 4 5 10

DATE: JUN 2022

REVISION: 16

SHEET: 8

SCALE: 1 : 150

PROJECT NUMBER

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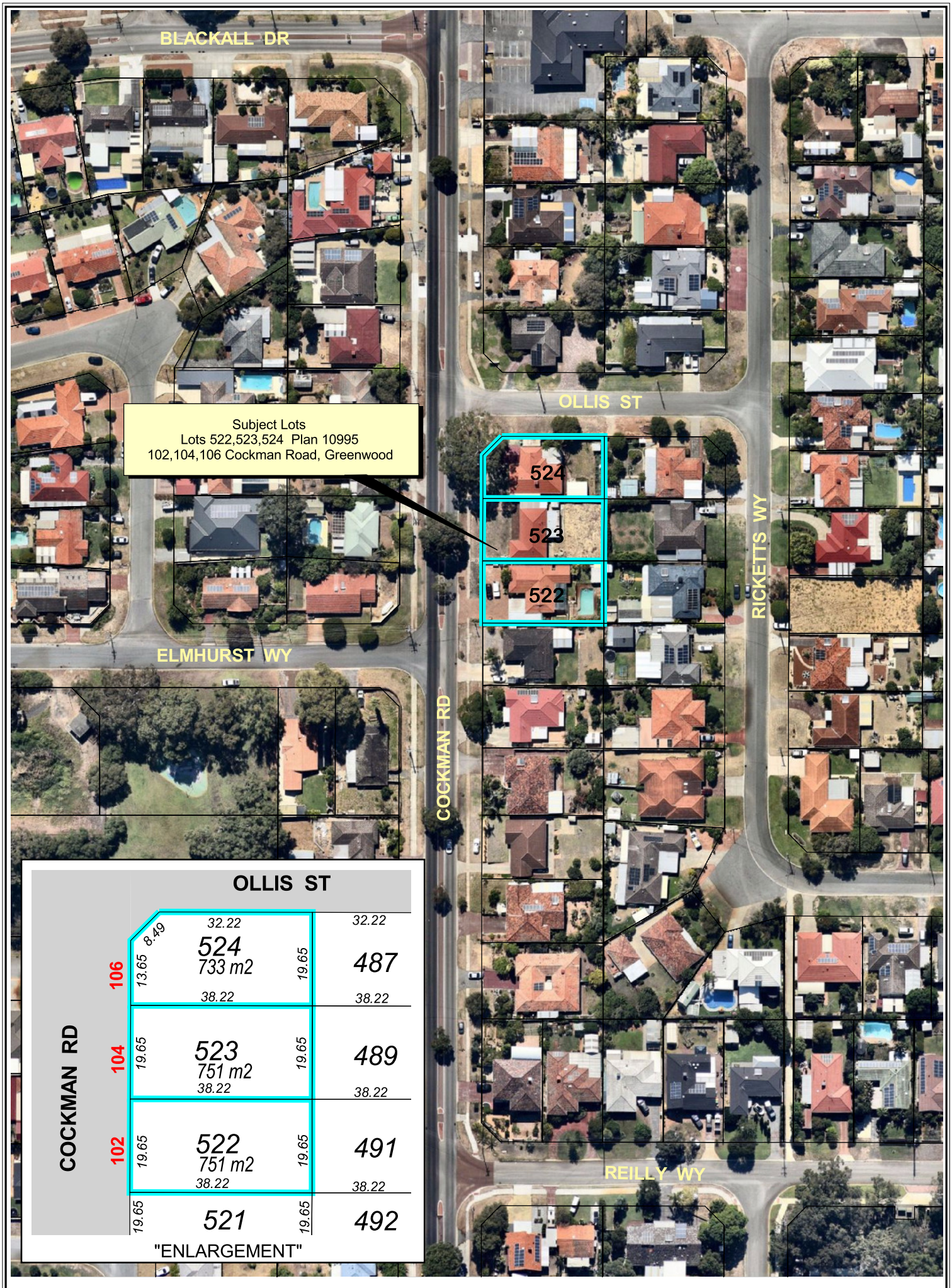
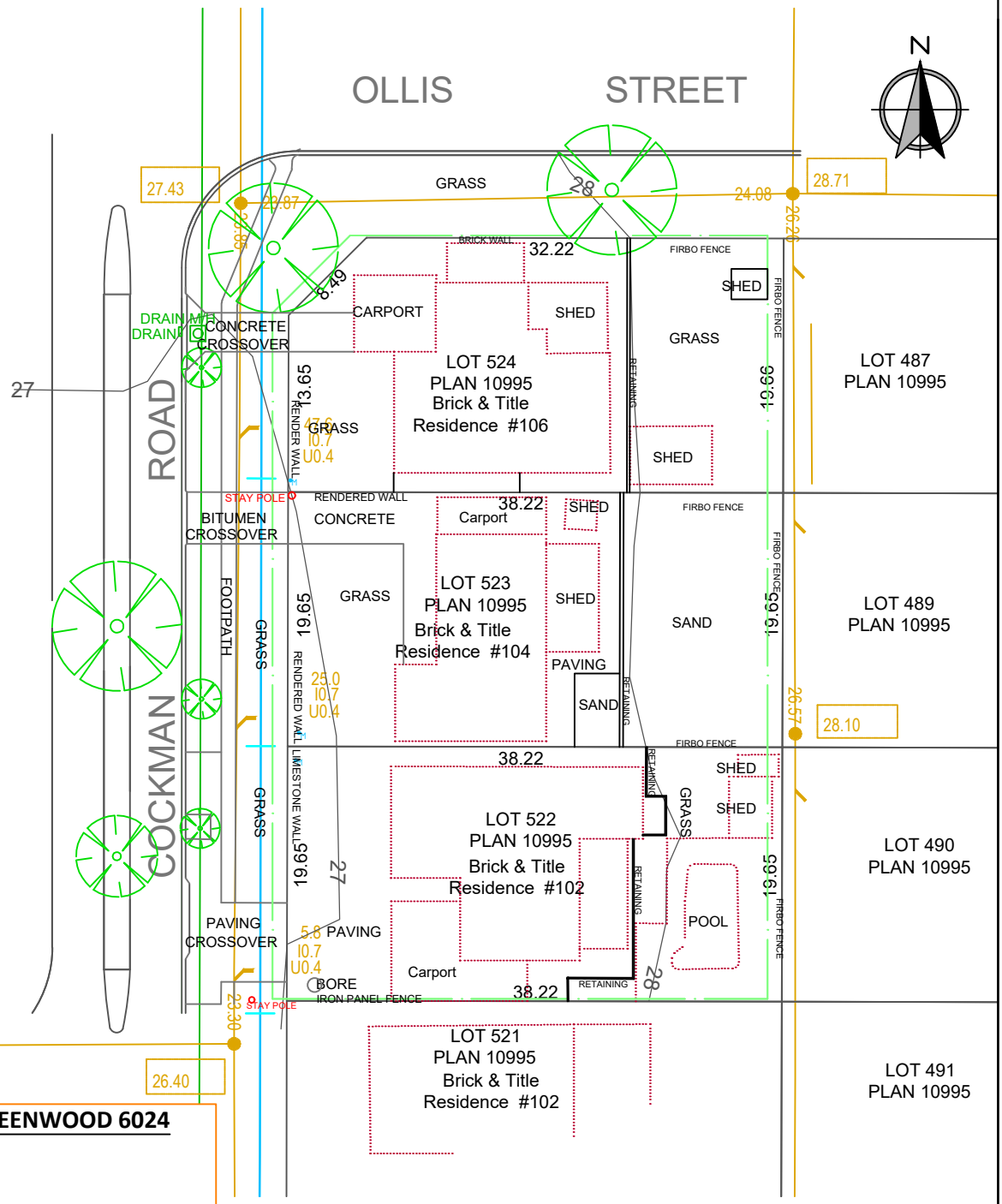


lots522-524_102-106_cockman-15062022

Feature Survey



SERVICE LEGEND

SURVEY
- DATUM
- PF PEG FOUND
- PG PEG GONE

SEWERAGE
- SEW SEWER MANHOLE
- IO INSPECTION OPENING
- IS INSPECTION SHAFT

WATER
- M WATER METER
- H HYDRANT
- F FLUSH POINT
- V STOP VALVE

ELECTRICAL
- D POWER DOME/PILLAR
- P POWER POLE
- L LAMP POST
- C CONSUMER POLE
- A STAY WIRE ANCHOR

STORMWATER
- STORMWATER MANHOLE
- GRATE
- SIDE ENRTY PIT

GAS
- G GAS METER
- S SERVICE VALVE

TELECOM
- COMMUNICATION PIT

SEWER CONNECTION POSITION
APPROXIMATE ONLY
SEW INV. 7.93
UP. 0.0
DEPTH. 2.60m

The location of Services is indicative only. Strategic does not warrant or hold out that its plan is accurate and accepts no responsibility for any inaccuracy shown. Further on site investigation is required to validate the exact location of Services prior to commencing works.

102 Cockman Road, GREENWOOD 6024
Lot 522 On Plan 10995
CT - 1390-163
Lot Area 751m²

104 Cockman Road, GREENWOOD 6024
Lot 523 On Plan 10995
CT - 1390-164
Lot Area 751m²

106 Cockman Road, GREENWOOD 6024
Lot 524 On Plan 10995
CT - 1390-165
Lot Area 733m²

Client: Strategic Property Group
City of Joondalup Scheme No. 3
Residential R20

Bushfire Prone Area: No
Contaminated Site Database: No
inHerit: No

Datum: AHD (Approx.)
Plan: D.G
Date:01/02/22
Scale: 1:500 at A4

STRATEGIC SURVEYING
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PERTH WA 6000
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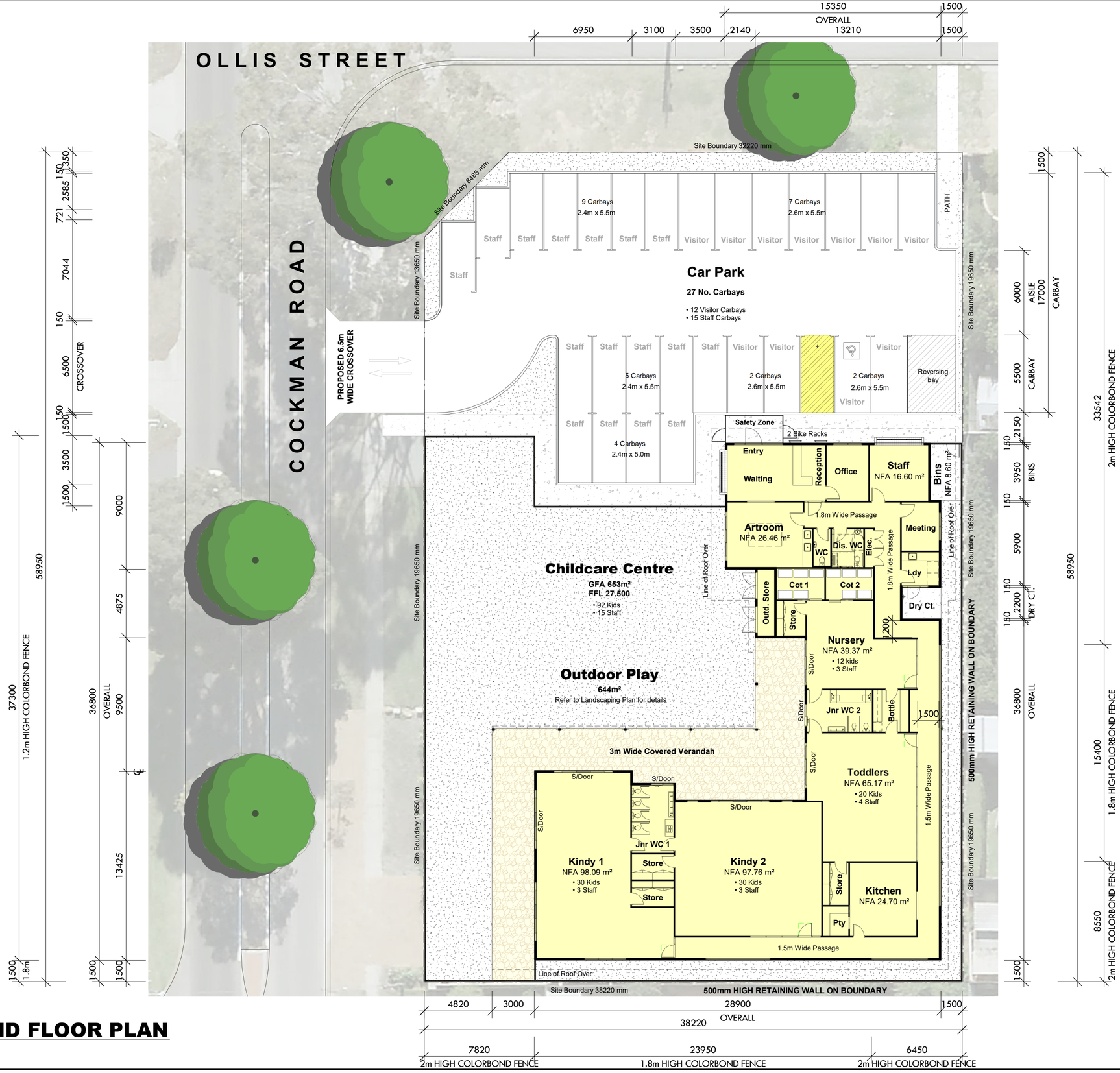
Please note:
- This plan is intended for the Department of Planning, Lands & Heritage only.
- Compiled plan. Strategic Surveying takes no responsibility for changes after the date on the original field survey. This survey shows site features that were visible & accessible at the time of the survey.
- Location of utilities may vary from schematic presentation / check with the appropriate authority before adoption of position.
- This survey does not guarantee the location of boundaries or fences.
- Check the Certificate of Title for easements / Covenants etc.
- If applicable, any proposed lots and dimensions may be subject to change; including but not limited to encumbers & easements.



SITE CRITERIA

1. Site Area

a. Site Area	**2,235m²**

3. Floor Area (GFA)

a. Child Care Centre (Total 104. No. Kids)	643m²
b. Outdoor Store + Bins	7m²
Total	**653m²**

2. Landscaping

a. Outdoor Play	493m²
b. Alfreso	152m²
c. Paving	96m²
d. Strip Landscaping	184m²
Total	**925m²**

4. Carparking

i. Cars Required

a. Parent Bays @ 12 Bays per 89-96 Kids	12.0 Bays
b. Staff Bays @ 1/Staff	15.0 Bays
Total Required	**27.0 Bays**

ii. Cars Provided

Total Provided	**27 Bays**

Landscaping
A. Hard Landscaping
Defined as paved walkways either open or covered.
B. Soft Landscaping
Defined as vegetative landscaping.

Gross Floor Area : GFA
A. All Floor Areas on this plan are shown as GROSS FLOOR AREA.
Unless otherwise noted as Nett Floor Area
B. Definition of Gross Floor Area is defined as:
i/ GROSS FLOOR AREA OF TENANCY:
Gross Floor Area of an individual Tenancy is defined as the area contained between the centre line of common tenancy walls and the outside edge of external walls.
ii/ GROSS FLOOR AREA OF A BUILDING:
Gross Floor Area of a Building is defined as the total area contained between the outside edge of external walls

Nett Floor Area : NFA
A. Nett Floor Area of a Tenancy on this plan is defined as the area between external or tenancy dividing walls.
B. This area is inclusive of toilets if the toilets are exclusive to the Tenancy.

SITE & GROUND FLOOR PLAN

SCALE: 1 : 200

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CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

2 4 6 8 10 20

DATE: APR 2022
REVISION: 12
SHEET: 3
SCALE: As indicated

PROJECT NUMBER **8829**

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ROOF PLAN
SCALE: 1 : 200

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CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

0 1 2 3 4 5 10

DATE: APR 2022

REVISION: 12

SHEET: 4

SCALE: 1 : 200

PROJECT NUMBER
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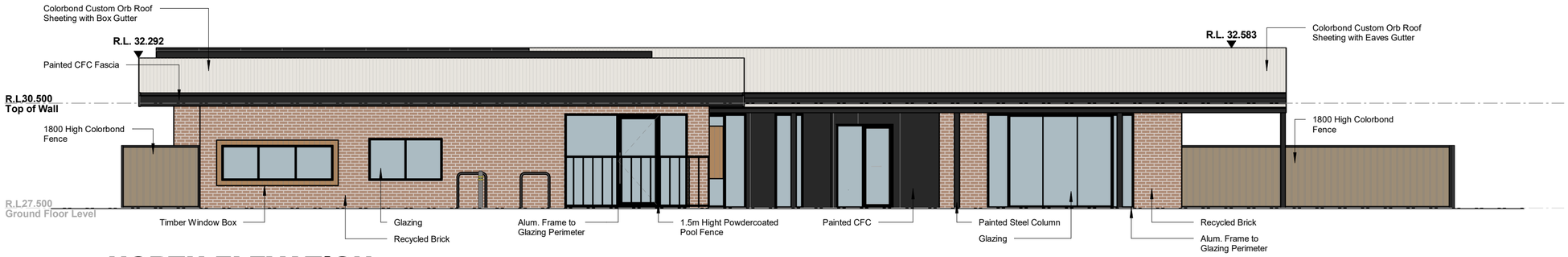
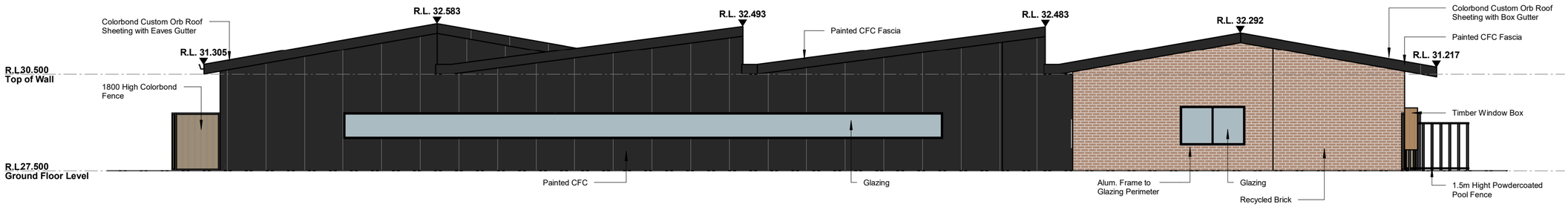


NORTH ELEVATION

SCALE: 1 : 100



EAST ELEVATION

SCALE: 1 : 100

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CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

DATE: APR 2022

REVISION: 12

SHEET: 5

SCALE: 1 : 100

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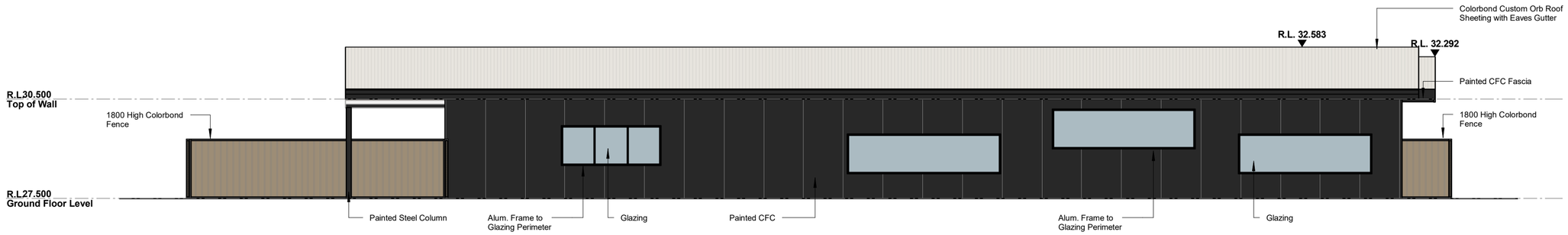
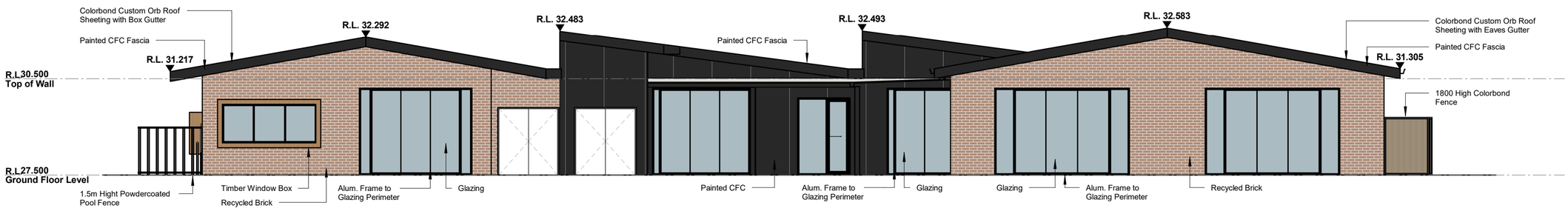


SOUTH ELEVATION

SCALE: 1 : 100



WEST ELEVATION

SCALE: 1 : 100

meyer shircore architects

CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

0 1 2 3 4 5 10

DATE: APR 2022

REVISION: 12

SHEET: 6

SCALE: 1 : 100

PROJECT NUMBER **8829**

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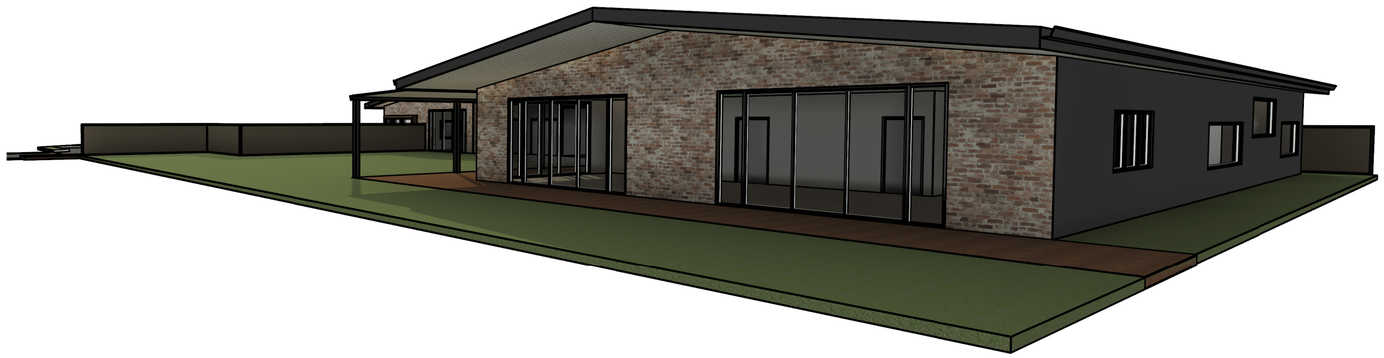
NORTH WEST VIEW
SCALE:

VIEW OF ENTRY
SCALE:



VIEW FROM COCKMAN INTERSECTION
SCALE:

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CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

DATE: APR 2022

REVISION: 12

SHEET: 7

SCALE:

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Issue Raised	Applicant response
Submissions objecting to the development	
<u>Land Use and Location</u>	
Unclear if the location, with Cockman Road being a local distributor road is compliant with the LPP given access is provided from the local access road (Ollis Street).	The proposal originally restricted access to the site via Cockman Road, however this was revised to the current layout following feedback from the City's Engineering Services. The revised access arrangement is considered a superior outcome with reduced impact to traffic flows on Cockman Road and improved safety.
This scale of the development is better suited to a commercial or light industrial area like Canham Way.	The development is low scale relative to the site area and has been designed to provide a sympathetic built form outcome which references the nearby residential development. A residential environment is considered far more hospitable and appropriate for children's care than an industrial or commercial environment.
There are four properties on Ollis Street. One is already a commercial property (dental clinic). If a daycare centre is built on Ollis St, that would be 50 percent of the residential street being used for commercial purposes.	Similar to the existing commercial development on Ollis Street, the proposal presents a residential scale and character which compliments the residential nature of the area. The proposal will contribute considerable landscaping and canopy cover within the street setback areas which will provide direct benefits to the local streetscape.
Approval of this proposal would precede further approval of similar development in residential areas.	Approval of this proposal would not set an undesirable precedent. The development's unique context, site planning, low intensity and scale in addition to measures implemented to mitigate impacts result in a positive outcome for the site which will provide a valuable service to the local community.
The centre is also not close to any primary school with the Greenwood primary school at Merivale Way over one kilometre away.	There is no requirement or demonstrated need to locate child care premises within close proximity to existing primary schools.
The City has identified some 369 sites in the residential zone which would comply with the LPP. There is no shortage of sites that would justify the proposal being in this location.	The subject site meets the criteria to provide a viable child care premises, in addition to meeting the objectives and majority of the LPP requirements. The LPP does not consider all factors relevant to developing a viable child care premises, so the claim of 369 suitable sites is misleading.

	The City's Design Review Panel considered the location to be appropriate with the design successfully taking cues from the surrounding residential typology.
<u>Building Aesthetics</u> The size of the building will be out of character with surrounding development and will impact on the surrounding buildings in this highly residential area. Locating the large car park on the Ollis Street side of the development will be a visual eyesore, even if it is 'fenced off.' This car park and fence will not align with the residential character of the area.	The building has been designed specifically to fit in with existing development in the area, taking inspiration form the scale, design, materials and colours from the existing streetscape. The City's Design Review Panel considered the built form appropriate for both its setting and use. The carpark location has been thoroughly considered and was determined as the best location on site to achieve a balance between minimising visual impact to the streetscape and minimising impact to adjacent residential properties. All street trees will be retained, and a 1.5m landscaping buffer will be provided between the verge to the car parking area which will allow for the planting of small trees and shrubs which will limit view of the at grade parking area and assist in softening the visual impact of the hardstand area. Overall hardstand has been minimised to the extent possible through use of one-way traffic flow with single width crossovers and not providing surplus car parking spaces.
<u>Traffic</u> Accounting for the 140 dwellings under construction at East Green there would be an additional 708 trips on Cockman Road (including 480 associated with the proposal) presenting a 9% increase in traffic volume. With the recent addition of the BP service station, there needs to be better traffic control on the intersection of Cockman Road and Hepburn Avenue. A set of traffic lights should be considered. Concern that additional traffic will create a 'black spot' intersection.	It is not the responsibility of this development to address traffic generated by a nearby development. The traffic generated by the proposed child care centre is within acceptable limits as outlined in the traffic impact statement. The proposed development does not create the need for intersection upgrades. This claim is not substantiated, the proposed development meets all safety requirements and substantially reduces

	the number of entry points along Cockman Road.
Moving the entrance to tiny Ollis Street does not alleviate the potential for queuing, car stacking and possible car accidents as people wait to enter the site.	Relocating the entrance from Cockman Road to Ollis Road will reduce queuing and improve safety on Cockman Road.
The chiropractor and dentist on the corner of Ollis Street make a minor impact to the traffic on the road. If a daycare is built, we will face a backlog of traffic every morning and evening which neither Ollis Street or Cockman Road are able to sustain. Undoubtedly, desperate parents in a hurry will then be inclined to avoid the bottle neck issue getting into the car park and will then use the residents' verges to park instead.	Sufficient on-site parking has been provided to cater to the child care premises. There is no evidence to suggest that parents will opt to park in the verge instead of the parking provided on site, which would be closer to the premise entrance.
Due to increased traffic and Ollis Street being the entry to the daycare centre there would be significant increase of traffic on surrounding local streets being used as "cut throughs".	The most direct route to the site will be via Cockman Road irrespective of whether the entry is located on Cockman Road or Ollis Street. It is unclear how relocation of the entrance from Cockman Road to Ollis Street (30m east) would correlate to a significant increase of traffic to surrounding local streets.
<u>Parking</u> There are already parking issues on Ollis Street due to the dentist and Chiropractor. The entry to the Dentist and Chiropractor carpark is right across from the proposed carpark entry.	It is not the responsibility of this development to address parking issues arising from a nearby business.
More than half of the parking lots will probably be taken up by employees of the facility and the remaining parking lots will be not enough for 90 kids' parents. Even though many of them may only need a few minutes to drop their kids (compared with teenagers), parents of small kids are expected to spend more time to take care of the kids at the facility rather than just drop them off and leave.	Parking has been provided in full compliance with the City's parking requirements, which accounts for and includes a parking bay for every employee on site.
<u>Number of children</u> The number of children to be located on the site is almost double what the	The policy limit of 50 children does not appear to be backed by any evidence,

local planning policy permits, which will greatly impact the amount of traffic in the area at peak hour.	research, or logical reasoning. The limit appears to be nothing more than a round number utilised as a blunt tool to limit impact. Assessment of impact based on children's numbers alone is an ineffective method of assessment, which is beneficial only to proposals which cannot otherwise demonstrate how their impacts will be limited. For example, a child care premises with 40 children on a site 750m² would be compliant, whilst a child care premises with 60 children on a 1,500m² site would be non-compliant. This is despite the 1,500m² site presenting a substantially lower use intensity which would rationally translate to a lower impact. In this instance the development has been spread across three lots specifically to create a low intensity (31 children per lot), single storey child care premises which is respectful to existing development in the area. The larger site also allows for a configuration whereby all outdoor activities are oriented away from adjacent dwellings and shielded from impact by the premises.
<u>Lighting</u> Ollis Street is currently only serviced by one street light. There are no footpaths on Ollis Street which would serve as the vehicular access to the development. More street lighting is needed for public safety, particularly children walking to school.	Lack of public street lighting and footpaths are not a relevant matter in determining this proposal. The site will be provided with lighting and pedestrian access connecting to the public footpath on Cockman Street to ensure a safe and accessible environment.
<u>Construction</u> Will the footpath on Cockman Road be required to close? Will vibration monitoring be undertaken during construction? Will defect house inspections be carried out?	These matters are not relevant considerations in determining this application. The development is single storey and does not include any significant site works, so there is no reason for enforcement of any measures beyond that typically associated with small scale residential development.
<u>Noise</u>	

Noise generated by 92 children being dropped off and picked up each day as well as 15 staff, noise from daily centre activities, building utility noise and various garbage trucks and re-supply vehicles will impact surrounding residences. The acoustic report doesn't properly model the tonal impulse noise from groups of children at play or the additional service vehicles. It doesn't account for annoyance and loudness factors. Noise from the play areas, while being within the acceptable limit, will still be too high for a predominantly residential area especially on a Saturday morning. Potentially some further noise cancelling features other than the colorbond fences could be put in place to reduce this further.	The acoustic report addresses all required noise considerations, and the development has been assessed to fully comply with noise targets as a result of appropriate site planning and some noise attenuation measures. The assessment does account for tonal emissions by applying penalties in the assessment. This claim is unsubstantiated. It should be noted that the site is not oriented towards a local access road or within a cul-de-sac where noise levels are typically much lower. The immediate context is a site directly adjacent to local distributor road with relatively high traffic and associated noise emissions. The shape and location of the proposed premises will arguably improve noise mitigation for adjacent properties from these existing factors.
<u>Verge tree</u> What precautions will the applicant put in place during construction works to ensure the large white gum on the corner or Cockman Rd and Ollis St. isn't damaged?	In the event of approval, the City will require street trees to be protected in accordance with AS4970 for the duration of construction.
<u>Dividing fences</u> Can a cross section showing the wall detail to the houses on the east be provided? Will the existing Hardie fencing on the boundary of the site be retained?	The child care premises is proposed at a level of 27.5 which is approximately 0.5m below the ground level at the rear of the site. Retaining will be provided to address the difference in level between properties, and Colorbond fencing is proposed above this retaining as indicated on the site and ground floor plan.
<u>Loss of housing</u> Please consider you will be taking 3 homes away from the Greenwood Community, where there isn't enough housing in Perth as it is.	The loss of three dwellings is not of any significance in the context of housing availability within Perth. The Local Planning Scheme contemplates Child Care Premises as an appropriate and acceptable land use on residential zoned land.
<u>Demand</u>	

There is not a pressing need for more daycare. A one minute search of daycares in the Greenwood area on the Care for Kids website shows that there are currently 10 daycares in the area, of which five have vacancies. The need for and shortage of daycare placements is for the babies and toddlers age group, as this is more expensive to staff., resulting in a surplus of older placements. Is the developer/owner local or is it an interstate business?	There is considered to be a need for additional child care services in this area. If there were no demand it would not be commercially viable to proceed with this development. Developer/owner/operator location is not a relevant matter in determining this application.
<u>Consultation</u> Nearby residents were unaware of the proposal. How many letters were sent to neighbouring homes?	This is a matter for the City to respond to.
<u>Property values</u> The development will have a negative impact on property values.	This is not a relevant matter in consideration of this proposal, nor is this claim substantiated. Being located nearby a child care premises is a positive attribute for families with children.
<u>Miscellaneous</u> Will the development affect the drainage in the area?	The development will contain all stormwater on site and therefore not affect drainage in the area.
Comments in support / neutral to the proposal	
I and many other members of the local community support this childcare, and more childcares getting approved. There are massive waitlists in the NIDO down the road. If you have a look at the local Greenwood/Kingsley community page, you can see that for every nimby there is a young parent who is screaming out for more places.	Noted.
I work in the local area. It is pretty clear there is a dire need for more childcare. Everyone talks about the NIDO being full with massive wait lists. If you look at the plans on this application, you can see the owner has tried to orientate the children's play area away from the other neighbours. You can also see that it is 92 places,	Noted.

but across 3 existing properties. So the actual density, given it is single storey, is actually quite low impact. I like that the building is being designed with similar red brick to the existing area. I also heard the local after school care operator will be the operator of this centre. If that's the case, it keeps it local and there is clearly a need for it if they are going to be the operator.	
Having made multiple enquiries at childcare centres in Greenwood, the wait lists seem to be never ending. I have been on the wait list at a centre in Greenwood for over a year. A close contact of mine has confirmed that a centre on Coolibah Drive has over 160 families on the wait list and no movement until the new year. Working families need more options. In this current economic climate, we need to work to lighten the burden of living expenses. We need more childcare options.	Noted.
The location is perfect. It's on the way to work for me from Woodvale as I drive through the suburbs to miss the freeway. The location is an extension of the existing commercial buildings starting from BP and ending at the dentist on the corner, so I don't think there is an issue with a childcare being next to that.	Noted.
I work at the BP down the road and have friends with young kids. They can't get their kids into any nice childcare centres around the area unless they go outside the suburb. Waitlists are crazy and prices keep going up. Having more options in the area, especially on the eastern side of Greenwood would really help with these factors. Young people need more options. Cockman Road is a good option as its a thru-road for many people on the way to work. Its great how this centre seems to be one level unlike the NIDO centres around the suburbs.	Noted.

Fantastic initiative to support the growing suburb and undersupply of modern centres for the families in Greenwood.	Noted.

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15 July 2022

Trent Fleskens
Managing Director,
Strategic Property Group,
308 Fitzgerald Street,
PERTH WA 6000

Dear Trent,

RE: TRANSPORT IMPACT STATEMENT FOR PROPOSED CHILD CARE CENTRE
NO'S. 102, 104 & 106 COCKMAN RD, GREENWOOD

As requested, we have now reviewed the traffic and parking situation regarding the proposed Child Care Centre development at No.'s 102, 104 & 106 Cockman Road, Greenwood, which is located at the intersection of Cockman Road and Ollis Street, as shown in the Locality Plan in the attached Figure 1.

1. EXISTING SITUATION AND PROPOSED DEVELOPMENT SITE

- It can be seen in the Locality Plan (in Figure 1) that Cockman Road extends from Erindale Road at Warwick Road in the south, to Hepburn Avenue in the north, as a significant distributor road serving the surrounding residential area that extends from Wanneroo Road in the east to Allenswood Road in the west, with access also to the Canham Way light industrial area just south of Hepburn Avenue.

- The existing roads and intersections in the vicinity of the proposed development are shown in the aerial photograph in the attached Figure 2, while the existing situation within and immediately adjacent to the site is shown in more detail in the attached Figure 3.

- It can be seen in Figure 2 that Cockman Road is a 2-lane divided road, linking to Hepburn Avenue (with an unsignalised intersection) approximately 330 metres north of the proposed development site, while Ollis Street is a 2-lane undivided road providing access to the local residential area. The Canham Way light industrial area is also shown.

- Cockman Road is identified as a Distributor B road under the Main Roads WA Functional Road Hierarchy, while Ollis Street is identified as an Access Road, with both roads operating under the default urban area speed limit of 50 kilometres per hour.

- It can be seen in Figure 3 that the proposed development site is currently occupied by 3 residential dwellings, with access for each property via separate crossovers to Cockman Road. It can also be seen that existing footpaths are provided along both sides of Cockman Road immediately adjacent to the proposed development, but there are no footpaths along Ollis Street.

- Surveyed traffic counts obtained from the Main Roads WA Trafficmap website show that Cockman Road south of Hepburn Avenue carried approximately 6,870 vehicles per day (in August 2020).

- Historical crash data was also obtained from Main Roads WA, indicating only 3 minor incidents on Cockman Road in the vicinity of the site over the past 5 years to December 2020. One incident occurred 50 metres south of the development site, where a vehicle hit a pole when trying to avoid an animal. The other two incidents occurred north of Ollis Street, where a vehicle on Cockman Road collided with a vehicle reversing from a driveway and a truck was sideswiped as it tried to overtake a bus.

- The nearest available Bus Service is Route 447, which travels from Whitfords Station to/from Warwick Station, with the closest bus stops located approximately 60 metres north of the proposed development site in Cockman Road, as also shown in Figure 2.

2. PROPOSED DEVELOPMENT

- The proposed development plan is shown in the attached Figure 4, as prepared by Meyer Shircore architects. The proposal includes demolition of the existing residential dwellings and the construction of a purpose-built Child Care Centre (for up to 92 children), with a gross floor area of 607 square metres plus an outdoor play area of 645 square metres.

- The attached Figure 5 then shows the proposed development plan superimposed on the aerial photograph from Figure 3, identifying the proposed development in the context of the adjacent road network.

- It can be seen in Figures 4 and 5 that the plan proposes a total of 27 parking spaces for staff and visitors, including 1 accessible (disabled) space within the development site, and with a 1-way entry driveway off Ollis Street plus a 1-way exit driveway onto Cockman Road. Pedestrian access to the Child Care Centre is also proposed directly off Cockman Road (adjacent to the car park exit), linking to the existing footpath along Cockman Road.

- Rubbish collection for the Centre will occur within the car park, with the truck stopping in the parking aisle and bins to be wheeled out from the proposed Bin Store via the adjacent 1.0 metre path.

3. PARKING REQUIREMENTS

- Car parking requirements are specified in City of Joondalup's *'Child Care Premises Local Planning Policy'* (as adopted in February 2022), with a requirement to provide 1 space per employee plus 12 spaces for 89-96 children accommodated. With a specified 15 staff for the maximum 92 children, the proposed Child Care Centre therefore requires a total of 27 car parking spaces, as currently provided on the development plan.

- It is important to note that the Local Planning Policy also specifies a requirement for 1 bicycle parking space per 8 employees, therefore resulting in a requirement for 2 bicycle spaces for the proposed Child Care Centre, as also provided on the proposed plan.

4. TRIP GENERATION AND TRAFFIC IMPACT

- On the basis of previous surveys and available data, it is estimated that the proposed Child Care Centre will generate a total of 4 vehicle trips per child per day, with peak hour flows of 0.69 trips per child during the morning peak hour and 0.76 trips per child during the afternoon peak hour. The Child Care Centre is therefore estimated to generate a total of 370 vehicle trips per day, with 63 vehicle trips and 70 vehicle trips, respectively, during the AM and PM peak hours.

- With a trip generation of less than 100 vehicle trips during both the AM and PM peak hours, the proposed development is therefore expected to have minimal impact on the existing road network. It is also likely that a significant proportion of the total traffic generation will be 'passing trips' that are

already on the road network, travelling from the surrounding residential areas to/from Greenwood Primary School, the Canham Way light industrial area, or the broader road network, thereby further reducing the overall traffic impact.

5. PROPOSED CAR PARK LAYOUT AND RECOMMENDED ACCESS

The attached Figure 6 shows the car park layout and recommended access arrangement for the proposed development, while Figures 7 and 8 provide swept path diagrams to confirm the suitability of the proposed layout, as follows:

- It can be seen in Figure 6 that the proposed car park provides a total of 27 parking spaces, as required, with 15 Staff spaces plus 12 Visitor (pick-up/drop-off) spaces, including 1 Accessible (disabled) space with an adjacent shared area as required under AS 2890.6, located immediately adjacent to the front of the Centre.

- Visitor parking space dimensions are all 2.6 metres x 5.5 metres with a 6.0 metre aisle, which is suitable for User Class 3 (short-term parking) under AS 2890.1. Staff parking spaces are 2.4 metres x 5.5 metres, as required for User Class 1 (with a combined length of 10.5 metres for tandem bays).

- The proposed 1-way entry driveway off Ollis Street is located as far east as possible, resulting in a separation of 40 metres from the Cockman Road intersection.

- The proposed 1-way exit driveway onto Cockman Road is located with an 8.0 metre separation from the corner lot truncation at Ollis Street, placing the driveway approximately midway between the large tree at the corner of Ollis Street and the large tree within the Cockman Road median, in order to maximise sight distances for vehicles on Cockman Road. The driveway location also provides a separation of 25 metres from vehicles turning into Cockman Road from Ollis Street.

- It is also important to note that the 3 existing crossovers will be removed, with verge and footpaths to be reinstated.

- Figure 7 shows the swept paths for a 7.1 metre rubbish truck accessing the proposed car park, for rubbish collection from within the parking aisle, noting that bins will be wheeled out to the truck via the 1.0 metre wide path at the eastern end of the car park in front of the Bin Store.

- Figure 8 then shows the swept paths for a B85 Car accessing the Staff parking space at the western end of the car park (located on the boundary truncation). It can be seen in Figure 8 that the vehicle will reverse into this parking space and then drive out in forward-gear (as will a vehicle accessing the adjacent space, which is also located on the boundary truncation).

I trust that the above review of traffic and parking requirements, together with the recommended car park layout and access arrangement are sufficient to confirm the operation and safety of the proposed Development Application. However, please do not hesitate to contact me if you require anything further.

Yours sincerely,

Darren Levey

SOURCE: NEARMAP PTY LTD

0 100 200
METRES
SCALE 1 : 7,500

N

Proposed Development

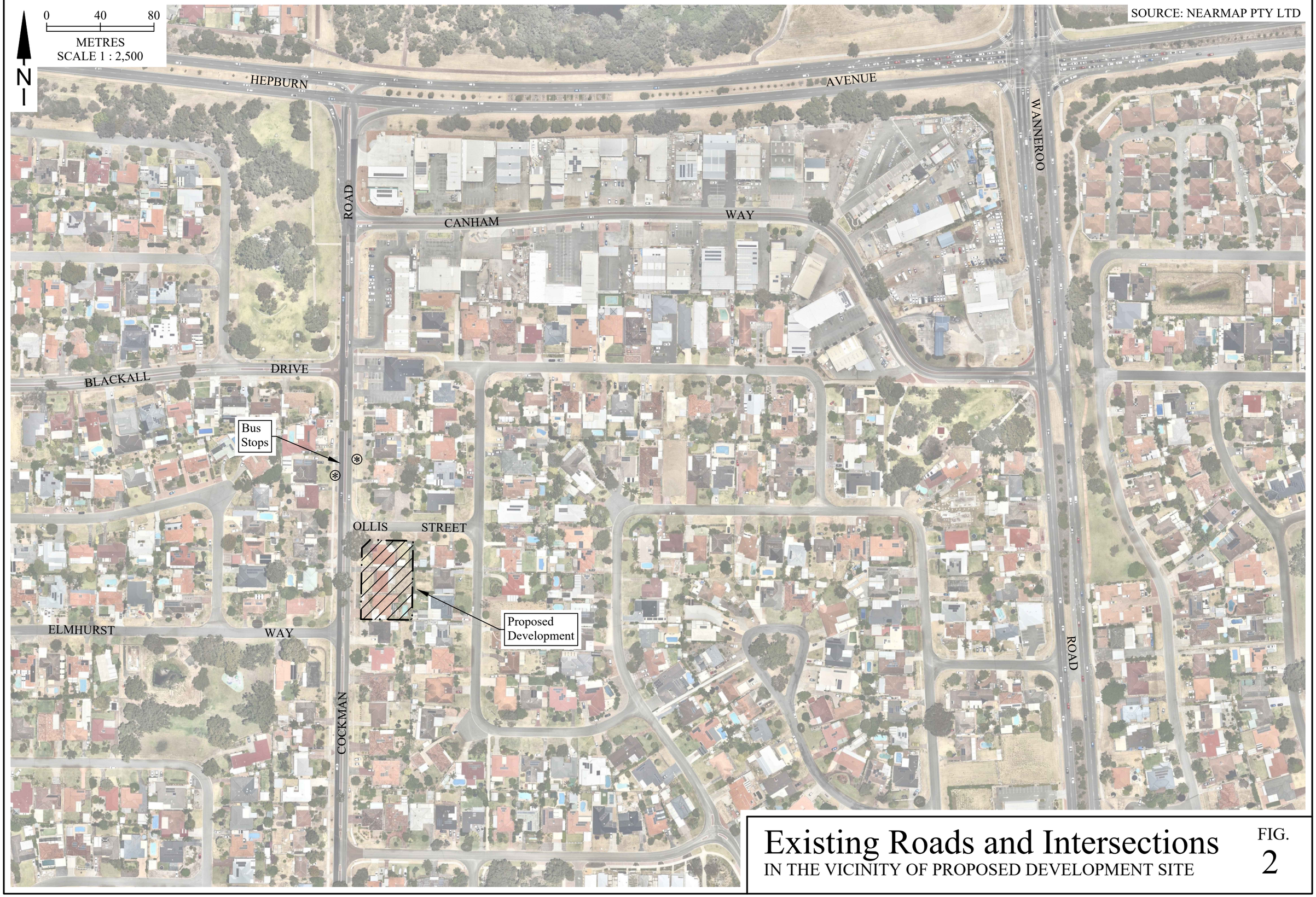
Ollis St

Hepburn Ave
Clinton St
Blackthorn Rd
Dillenia Way
Adenandra Way
Bouvardia Way
Filbert Park
Blackall Dr
Hester Way
Elmhurst Way
Crowea St
Allenswood Rd
Annato St
Damson Way
Sherington Rd
Kendal Way
Beaumont Way
Hazelbury St
Tabard St
Garfield Way
Merivale Way
Chandos Way
Cockman Rd
Ricketts Way
Canham Way
Wanneroo Rd
Sarre Park
Aylesford Dr
Napier Rd
Wrotham Pl
Marangaroo Park
Matfield St
Lenham Way
Lenham Park
Giralt Rd
Bredhurst Rd
Westgate Way
Capstone Way
Brookland Cres
Parin Rd
Warner Pl
Smallman Cres
Dargin Pl
Mulligan Dr
Ewell Ct
Jeffers Way
Mattison Way
Cockman Park
Blackall Reserve
Sandalwood Dr
Marlock Dr
Leadale Way
Leschenaultia St
Calectasia St
Calectasia Reserve
Greenwood Primary School
Penistone Park
Penistone St
Norbury Way
Rodgers St
George Sears Park
York Rd
Kent Rd
Cabrini Park
Hythe Rd
Swanley Park
Swanley St
Wingham St
Mereworth Park
Mereworth Way
Dartford Cres
Addingt
Warwick Rd
Hillwood Ave
Ballantine
Drakeswood Rd
Greenwood

Locality Plan and Proposed Development Site

CNR COCKMAN ROAD AND OLLIS STREET, GREENWOOD

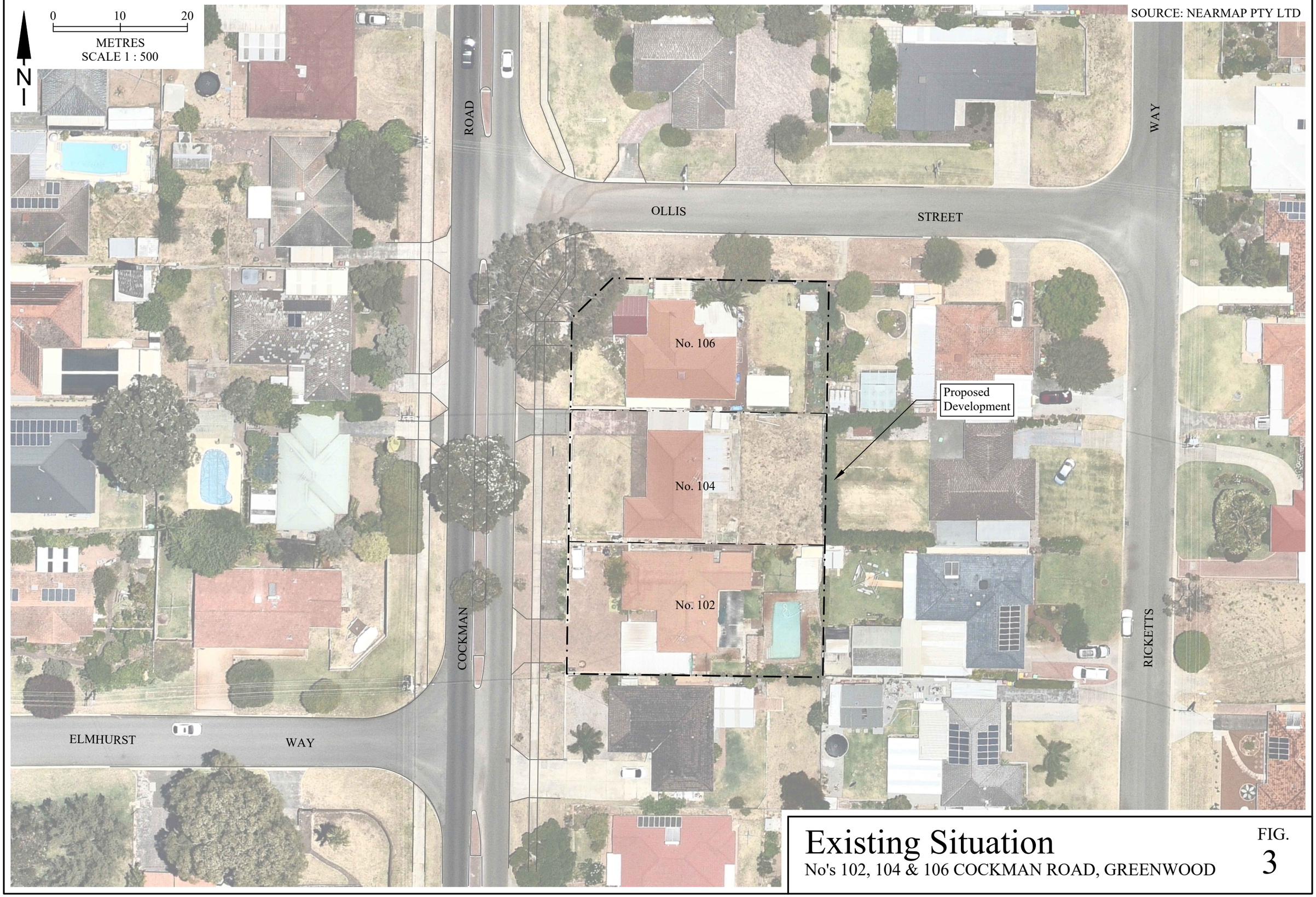
FIG. 1



Existing Roads and Intersections

IN THE VICINITY OF PROPOSED DEVELOPMENT SITE

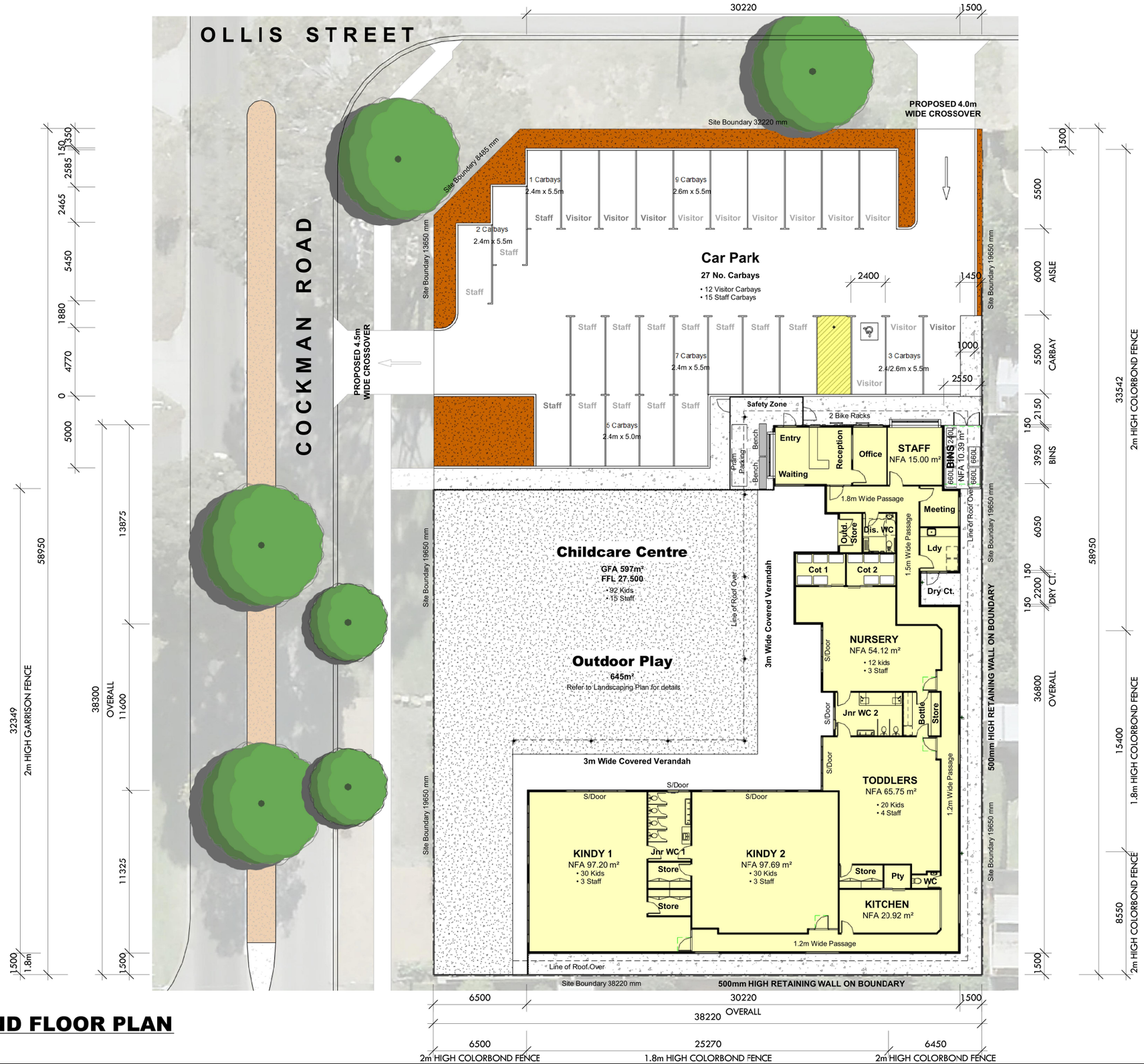
FIG. 2



Existing Situation

No's 102, 104 & 106 COCKMAN ROAD, GREENWOOD

FIG. 3



SITE CRITERIA

1. Site Area

a. Site Area	**2,235m²**

3. Floor Area (GFA)

a. Child Care Centre (Total 96. No. Kids)	597m²
b. Outdoor Store + Bins	10m²
Total	**607m²**

2. Landscaping

a. Outdoor Play	493m²
b. Alfreso	152m²
c. Paving	96m²
d. Strip Landscaping	184m²
Total	**925m²**

4. Carparking

i. Cars Required

a. Parent Bays @ 12 Bays per 89-96 Kids	12.0 Bays
b. Staff Bays @ 1/Staff	15.0 Bays
Total Required	**27.0 Bays**

ii. Cars Provided

Total Provided	**27 Bays**

Landscaping
A. Hard Landscaping
Defined as paved walkways either open or covered.
B. Soft Landscaping
Defined as vegetative landscaping.

Gross Floor Area : GFA
A. All Floor Areas on this plan are shown as GROSS FLOOR AREA.
Unless otherwise noted as Nett Floor Area
B. Definition of Gross Floor Area is defined as:
i/ GROSS FLOOR AREA OF TENANCY:
Gross Floor Area of an individual Tenancy is defined as the area contained between the centre line of common tenancy walls and the outside edge of external walls.
ii/ GROSS FLOOR AREA OF A BUILDING:
Gross Floor Area of a Building is defined as the total area contained between the outside edge of external walls

Nett Floor Area : NFA
A. Nett Floor Area of a Tenancy on this plan is defined as the area between external or tenancy dividing walls.
B. This area is inclusive of toilets if the toilets are exclusive to the Tenancy.

SITE & GROUND FLOOR PLAN

SCALE: 1 : 200

FIG. 4

meyer shircore architects

CHILDCARE CENTRE, GREENWOOD

LOCATION : 102 - 106 COCKMAN ROAD, GREENWOOD

FOR : STRATEGIC PROPERTY GROUP

2 4 6 8 10 20

DATE: JUN 2022
REVISION: 16
SHEET: 3
SCALE: As indicated

PROJECT NUMBER **8829**

Suite 2, Ground Floor 437 Roberts Road, Subiaco WA 6008
PO Box 1294 Subiaco WA 6904
t: 08 9381 8511 e: msa@meyershircore.com.au

SOURCE: ULOTH & ASSOCIATES

0 10 20
METRES
SCALE 1 : 500

N

OLLIS STREET

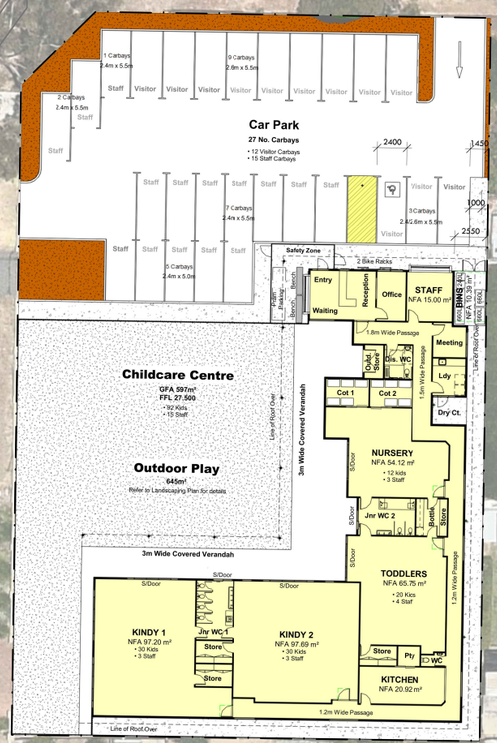
ROAD

WAY

COCKMAN

RICKETTS

ELMHURST WAY



Proposed Development Plan

GREENWOOD CHILD CARE CENTRE

FIG. 5

SOURCE: ULOTH & ASSOCIATES

0 4 8
METRES
SCALE 1 : 200

N

OLLIS STREET

ROAD

COCKMAN ROAD

4.0m

8.0m

4.5m

1 Carbays
2.4m x 5.5m

9 Carbays
2.6m x 5.5m

2 Carbays
2.4m x 5.5m

Staff

Visitor

Car Park

27 No. Carbays

- 12 Visitor Carbays
- 15 Staff Carbays

2400

1450

1000

2550

7 Carbays
2.4m x 5.5m

3 Carbays
2.4/2.6m x 5.5m

5 Carbays
2.4m x 5.0m

Safety Zone

2 Bike Racks

Pram Parking

Bench

Entry

Waiting

Reception

Office

STAFF
NFA 10.39 m²

BINS
240L
660L
660L
660L

1.8m Wide Passage

Meeting

Outd. Store

Dis. WC

Ldy

1.5m Wide Passage

Line of Roof Over

Covered Verandah

Cot 1

Cot 2

Dry Ct.

Childcare Centre

GFA 597m²
FFL 27.500

- 92 Kids
- 15 Staff

Recommended Parking and Access Arrangement

FOR PROPOSED GREENWOOD CHILD CARE CENTRE

FIG. 6

SOURCE: ULOTH & ASSOCIATES

0 4 8
METRES
SCALE 1 : 200

N

OLLIS STREET

ROAD

COCKMAN ROAD

4.0m

Rubbish Truck 2

1 Carbays
2.4m x 5.5m
Staff

9 Carbays
2.6m x 5.5m
Visitor

2 Carbays
2.4m x 5.5m
Staff

8.0m

Car Park
27 No. Carbays
• 12 Visitor Carbays
• 15 Staff Carbays

2400

1450

Rubbish Truck 2
4.5m

7 Carbays
2.4m x 5.5m
Staff

3 Carbays
2.4/2.6m x 5.5m
Visitor

1000

2550

5 Carbays
2.4m x 5.0m
Staff

Safety Zone

2 Bike Racks

Pram Parking

Bench

Entry

Waiting

Reception

Office

STAFF
NFA 15.00 m²

BINS
240L
660L
NFA 10.39 m²
660L
660L

1.8m Wide Passage

Meeting

Outd. Store

Dis. WC

Ldy

1.5m Wide Passage

Line of Roof Over

Cot 1

Cot 2

Dry Ct.

Childcare Centre
GFA 597m²
FFL 27.500
• 92 Kids
• 15 Staff

Line of Roof Over

Covered Verandah

Swept Paths for Rubbish Truck (7.1m)

ACCESSING PROPOSED GREENWOOD CHILD CARE CENTRE

FIG. 7

SOURCE: ULOTH & ASSOCIATES

0 4 8
METRES
SCALE 1 : 200

N

OLLIS STREET

ROAD

COCKMAN ROAD

4.0m

1 Carbays
2.4m x 5.5m
Staff

9 Carbays
2.6m x 5.5m
Visitor

2 Carbays
2.4m x 5.5m
Staff

8.0m

4.5m

Car Park
27 No. Carbays
- 12 Visitor Carbays
- 15 Staff Carbays

B85 Vehicle
2400
1450

7 Carbays
2.4m x 5.5m
Staff

3 Carbays
2.4/2.6m x 5.5m
Visitor

1000

2550

5 Carbays
2.4m x 5.0m
Staff

Safety Zone
2 Bike Racks
Bench
Pram Parking
Bench
Entry
Waiting
Reception
Office
STAFF
NFA 15.00 m²
BINS
240L
660L
NFA 10.39 m²
660L
660L
1.8m Wide Passage
Meeting
Outd. Store
Dis. WC
Ldy
1.5m Wide Passage
Line of Roof Over
Cot 1
Cot 2
Dry Ct.

Childcare Centre
GFA 597m²
FFL 27.500
- 92 Kids
- 15 Staff

Line of Roof Over
Covered Verandah

Swept Paths for B85 Car (4.9m)

ACCESSING STAFF PARKING SPACE AT WESTERN END OF CAR PARK

FIG.
8

PROPOSED CHILD CARE CENTRE
102 – 106 COCKMAN ROAD
GREENWOOD

ENVIRONMENTAL ACOUSTIC ASSESSMENT

MAY 2022

OUR REFERENCE: 29468-1-21514

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:
HERRING STORER ACOUSTICS
P.O. Box 219, Como, W.A. 6952
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hsa@hsacoustics.com.au

DOCUMENT CONTROL PAGE

ENVIRONMENTAL ACOUSTIC ASSESSMENT

PROPOSED CHILD CARE CENTRE
COCKMAN ROAD, GREENWOOD

Job No: 21514

Document Reference: 29468-1-21514

FOR

STRATEGIC PROPERTY GROUP

DOCUMENT INFORMATION			
Author:	Tim Reynolds	**Checked By:**	George Watts
Date of Issue:	03 May 2022		

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1	1	Strategic Property Group Attn: Trent Fleskens Email: Michael@tbbplanning.com.au		✓

CONTENTS

APPENDICIES

1. INTRODUCTION

Herring Storer Acoustics were commissioned to undertake an acoustic assessment of noise emissions associated with the proposed day care centre to be located at 102 – 106 Cockman Road, Greenwood.

The report considers noise received at the neighbouring premises from the proposed development for compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997.* This report considers noise emissions from:

- Children playing within the outside play areas of the centre; and
- Mechanical services.

We note that from information received from DWER, the bitumised area would be considered as a road, thus noise relating to motor vehicles is exempt from the *Environmental Protection (Noise) Regulations 1997*. We note that these noise sources are rarely critical in the determination of compliance. However, as requested by council and for completeness, they have been included in the assessment, for information purposes only.

For information, a plan of the proposed development is attached in Appendix A.

2. SUMMARY

Noise received at the neighbouring premises from children playing in the outdoor areas would comply with the requirements of the *Environmental Protection (Noise) Regulations 1997*, for the day period.

Additionally, noise from the mechanical services has also been assessed to comply with the relevant criteria. However, it is recommended that the mechanical services design be reviewed for compliance with the Regulatory requirements.

It is noted that noise associated with cars movements and cars starting are exempt from complying with the Regulations. However, noise emissions from car doors are not strictly exempt from the Regulations. Noise received at the neighbouring residences from these noise sources would comply at all times.

Thus, noise emissions from the proposed development, would be deemed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* for the proposed hours of operation, with the inclusion of the mitigation as outlined above, with the boundary fencing being as shown on Figure 5.2 in Section 6 – Modelling.

Note: Noise modelling and hence, compliance, has been based on boundary fencing being 2.0 metres high.

3. CRITERIA

The allowable noise level at the surrounding locales is prescribed by the *Environmental Protection (Noise) Regulations 1997*. Regulations 7 & 8 stipulate maximum allowable external noise levels. For highly sensitive area of a noise sensitive premises this is determined by the calculation of an influencing factor, which is then added to the base levels shown below in Table 3.1. The influencing factor is calculated for the usage of land within two circles, having radii of 100m and 450m from the premises of concern. For other areas within a noise sensitive premises, the assigned noise levels are fixed throughout the day, as 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
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80

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.

Under the Regulations, a highly sensitive area means that area (if any) of noise sensitive premises comprising –

(a) A building, or a part of a building, on the premises that is used for a noise sensitive purpose; and

(b) Any other part of the premises within 15 m of that building or that part of the building.

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 neighbouring residences of concern to the proposed development, are located around the development.

An aerial of the area and neighbouring residences are shown below as Figure 3.1.

FIGURE 3.1 – NEIGHBOURING LOTS

At the neighbouring residences, as shown above, with Hepburn Avenue being a major road in the outer circle and Cockman Road being a secondary road in the inner circle; and the commercial premises to the north, the influencing factor has been determined to be +5 dB. Thus, the assigned noise levels would be as listed in Table 3.3.

TABLE 3.3 - 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)	50	60	70
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	45	55	70
	1900 - 2200 hours all days (Evening)	45	55	60
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	40	50	60

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. PROPOSAL

From information supplied, we understand that the child care centre normal hours of operations would be between 6300 and 1830 hours, Monday to Friday (closed on public holidays). It is understood that the proposed childcare centre will cater for a maximum of 92 children: with the following breakdown:

Nursery	12 places
Toddlers	20 places
Kindy 1	30 places
Kindy 2	30 places

It is noted that the proposed child care centre would open at 7 am (ie during the day period). Thus, the outdoor play area would need to comply with the assigned L_{A10} day period noise level.

For reference, plans are attached in Appendix A.

5. MODELLING

To assess the noise received at the neighbouring premises from the proposed development, noise modelling was undertaken using the noise modelling program SoundPlan.

Calculations were carried out using the DWER's weather conditions, which relate to worst case noise propagation, as stated in the Department of Environment Regulation *"Draft Guidance on Environmental Noise for Prescribed Premises"*. These conditions include winds blowing from sources to the receiver(s).

Calculations were based on the sound power levels used in the calculations are listed in Table 5.1.

TABLE 5.1 – SOUND POWER LEVELS

Item	Sound Power Level, dB(A)
Children Playing	83 (per 10 children)
Car Moving in Car Park	79
Car Starting	85
Door Closing	87
Air conditioning condensing Unit	
Full Load (Day Period)	4 @ 73
Night Period (Level 2 Night Mode)	4 @ 60

Notes:

1 Given the number and breakdown of children, to be conservative, even though the child care centres capacity is for 92 children, given the 12 nursery children, noise modelling of outdoor play noise was based on 80 children playing within the outdoor play areas at the one time, utilising 8 groups of 10 children, sound power levels distributed as plane sources.

2 With regards to the air conditioning, we understand that the air conditioning has not been designed at this stage of the development. However, it is recommended that the condensing units be located on the eastern side of the development, with 2 units outside the meeting room / laundry and the other 2 units located near the southern corner of the building.

3 The noise level for the air conditioning has been based on the sound power levels used for previous assessment of child care centres. Although we understand that not all the air conditioning condensing units would be run before 7am, to provide flexibility all air conditioning units are to be installed with night period low noise modes. However, to be conservative, it has been assumed that all condensing units were operating before 7am.

4 Modelling was based on the boundary fencing, as shown in Figure 5.1.

5 It is understood that the child care centre would not open until 7:00 am. However, some staff will need to arrive before 7am to set up and open the centre. Noise emissions from staff closing doors can be managed and would be less than for parents dropping of children. However, to be conservative, for this assessment the sound power level listed in Table 5.1 has still been used.

6 Noise modelling was undertaken to a number of different receiver locations for each of the neighbouring residences. However, to simplify the assessment, only the noise level in the worst case location, as shown on Figure 3.1, have been listed.

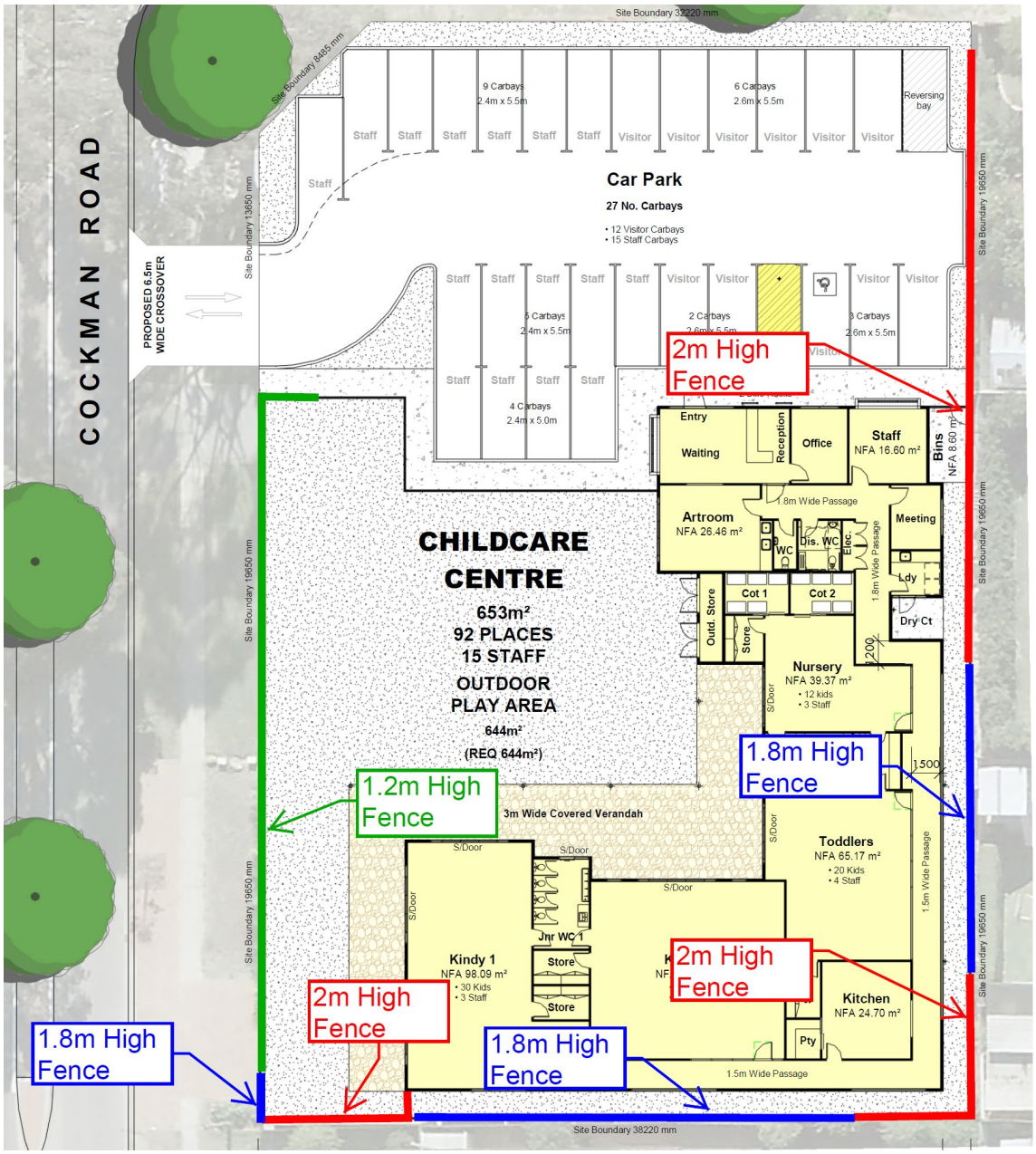


FIGURE 5.1 - FENCING

Although we believe that the sound power level listed in Table 5.1 best represents the noise emissions from the outdoor play area, we have undertaken additional noise modelling to reflect the sound power level provided in the AAAC guideline, as listed in the following table.

Table 1 – Effective Sound Power Levels ($L_{Aeq,\ 15min}$) for Groups of 10 Children Playing

Number and Age of Children	Sound Power Levels [dB] at Octave Band Centre Frequencies [Hz]								
	dB(A)	63	125	250	500	1k	2k	4k	8k
10 Children - 0 to 2 years	78	54	60	66	72	74	71	67	64
10 Children - 2 to 3 years	85	61	67	73	79	81	78	74	70
10 Children - 3 to 5 years	87	64	70	75	81	83	80	76	72

Notes:

1 If applicable, an adjustment to the above sound power levels of -6 dB could be applied in each age group for children involved in passive play.

The additional, noise modelling was undertaken for the following groups of children:

0 – 24 months	20 of at 78 dB(A);
2 – 3 years	10 of at 85 dB(A); and
3+ years	60 of at 87 dB(A).

We note that as stated in the above note to the AAAC sound power level, an adjustment of -6 dB(A) would be applicable to each group of children involved in passive play. Thus, some children would be engaged in passive play. However, no adjustment has been made for passive play and the results using the AAAC sound power level, we believe would be an unrealistic worst case scenario, that we believe would not occur.

6. ASSESSMENT

The resultant noise levels at the neighbouring residence from children playing outdoors and mechanical services are tabulated in Tables 6.1 and 6.2, respectively.

From previous measurements, noise emissions from children playing does not contain any annoying characteristics. Noise emissions from the mechanical services could be tonal and a +5 dB(A) penalty would be applicable, as shown in Table 6.1. Noise emissions from both outdoor play and the mechanical services needs to comply with the assigned L_{A10} noise levels.

TABLE 6.1 - ACOUSTIC MODELLING RESULTS FOR L_{A10} CRITERIA
OUTDOOR PLAY AREAS

Neighbouring Premises	Calculated Noise Level (dB(A))	
	Children Playing	
	HSA SOUND POWER LEVEL	AAAC SOUND POWER LEVELS
North	47	48
East	35	34
South	46	50
West	47	50

TABLE 6.2 - ACOUSTIC MODELLING RESULTS L_{A10} CRITERIA
AIR CONDITIONING

Neighbouring Premises	Calculated Noise Level (dB(A))	
	Day Period	Night Period
North	25 (30)	22 (27)
East	44 (49)	31 (36)
South	42 (47)	29 (34)
West	14 (19)	1 (6)

( ) Includes +5 dB(A) penalty for tonality

With regards to noise associated with cars within the parking area, resultant noise levels are tabulated in Tables 6.3 and 6.4. It is noted that noise emissions from a moving car being an L_{A1} noise level, with noise emissions from cars starting and doors closing being an L_{Amax} noise level.

Based on the definitions of tonality, noise emissions from car movements and car starts, being an L_{A1} and L_{AMax} respectively, being present for less than 10% of the time, would not be considered tonal. Thus, no penalties would be applicable, and the assessment would be as listed in Table 6.3 (Car Moving) and Table 6.4 (Car Starting). However, noise emissions from car doors closing could be impulsive, hence the +10dB penalty has been included in the assessment.

TABLE 6.3 - ACOUSTIC MODELLING RESULTS L_{A1} CRITERIA
CAR MOVING

Neighbouring Premises	Calculated Noise Level (dB(A))
North	43
East	42
South	29
West	40

TABLE 6.4 - ACOUSTIC MODELLING RESULTS L_{Amax} CRITERIA
CAR STARTING / DOOR CLOSING

Neighbouring Premises	Calculated Noise Level (dB(A))	
	Car Starting	Door Closing
North	48	49 [59]
East	45	49 [59]
South	33	35 [45]
West	45	46 [56]

[ ] Includes +10 dB(A) penalty for impulsiveness.

Tables 6.5 to 6.10 summarise the applicable Assigned Noise Levels, and assessable noise level emissions for each identified noise.

TABLE 6.5 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
OUTDOOR PLAY (DAY PERIOD) FOR AAAC SOUND POWER LEVELS

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
North	48	50	Complies
East	34	50	Complies
South	50	50	Complies
West	50	50	Complies

TABLE 6.6 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
AIR CONDITIONING (DAY PERIOD)

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
North	30	50	Complies
East	49	50	Complies
South	47	50	Complies
West	19	50	Complies

TABLE 6.7 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
AIR CONDITIONING (NIGHT PERIOD)

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
North	27	40	Complies
East	36	40	Complies
South	34	40	Complies
West	6	40	Complies

TABLE 6.8 – ASSESSMENT OF L_{A1} NIGHT PERIOD NOISE LEVEL EMISSIONS
CAR MOVEMENTS

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
North	43	50	Complies
East	42	50	Complies
South	29	50	Complies
West	40	50	Complies

TABLE 6.9 – ASSESSMENT OF L_{Amax} NIGHTY PERIOD NOISE LEVEL EMISSIONS
CAR STARTING

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
North	48	60	Complies
East	45	60	Complies
South	33	60	Complies
West	45	60	Complies

TABLE 6.10 – ASSESSMENT OF L_{Amax} NIGHT PERIOD NOISE LEVEL EMISSIONS
CAR DOOR

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
North	59	60	Complies
East	59	60	Complies
South	45	60	Complies
West	56	60	Complies

7. CONCLUSION

Noise received the neighbouring residences from the outdoor play area would comply with day period assigned noise level.

The air conditioning condensing units have also been assessed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* at all times. However, it is recommended that the mechanical services design be reviewed for compliance with the Regulatory requirements.

It is noted that noise associated with cars movements and cars starting are exempt from complying with the Regulations. However, noise emissions from car doors are not strictly exempt from the Regulations. Noise received at the neighbouring residences from these noise sources would, comply at all times.

Thus, noise emissions from the proposed development, would be deemed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* for the proposed hours of operation, with the inclusion of the mitigation as outlined above, with the boundary fencing being as shown on Figure 5.2 in Section 6 – Modelling.

Note: For child care centres, colourbond fencing is acceptable.

URBANISTA

TOWN PLANNING

PROPOSED
CHILD CARE PREMISES

102, 104, & 106 COCKMAN ROAD, GREENWOOD

This report has been prepared by Urbanista Town Planning on behalf of the landowners for the proposed development at 102, 104, & 106 Cockman Road, Greenwood.

REV	AUTHOR	DATE	REVIEWED	DATE
A – DA lodgement	SD	10/05/22	SD	12/05/22
B – RFI 30/06/22	SD	20/07/22		

CONTENTS

1 INTRODUCTION

Urbanista Town Planning have been engaged to prepare and submit a Joint Development Assessment Panel (JDAP) application for a Child Care Premises at the corner of Cockman Road and Ollis Street. The application is being submitted as an 'opt-in' JDAP application.

This report provides a detailed assessment of the proposal in accordance with the relevant state and local planning frameworks to comprehensively demonstrate the merit of the proposal, and its supportability in development approval.

The proposal provides appropriate development density and scale for the subject site, in line with the future desired built form outlined in the local planning framework and will cater to the future housing needs of the area. The high-quality design with an emphasis on the character and context of the locality has been rigorously assessed and improved prior to lodgement.

We look forward to working with the City and JDAP to achieve development approval.

Perspective streetscape render

1.1 SUPPORTING DOCUMENTATION

To inform and support the design of the proposed development, additional supporting documents have been prepared and included in this submission, summarised below.

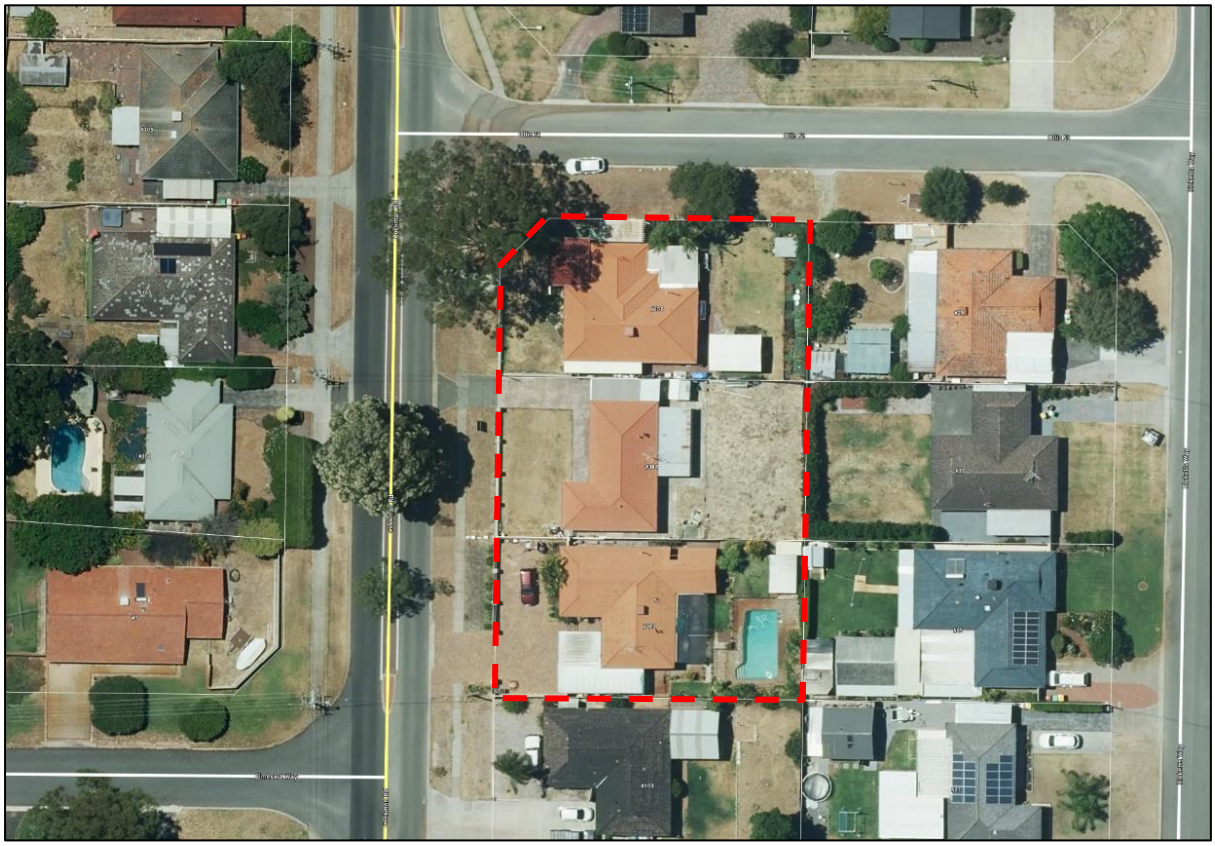
DOCUMENT	PREPARED BY	DATE
Acoustic Report	Herring Storer Acoustics	03/05/2022
Development plans	Meyer Shircore	12/05/2022
Environmentally Sustainable Design Checklist	Meyer Shircore	10/05/2022
Transport Impact Statement	Uloth and Associates	09/05/2022
Waste Management Plan	Instant Waste	12/05/2022

2 DEVELOPMENT CONTEXT

2.1 DEVELOPMENT SITE

The proposed development will occupy three lots at the intersection of Cockman Road and Ollis Street. The site currently contains three single houses and has a total site area of 2,235m² with a frontage of 58.95m to Cockman Street and 38.22m to Ollis Street. The site has a slight slope approx. 1m from east (high) to west (low).

The adjacent verge area includes several street trees of varying maturity, with drainage and sewerage infrastructure running through the Cockman Road verge area. Cockman Road also includes a median strip with two trees opposite the site. Surrounding properties are all occupied by single-storey single houses, with exception to 108 Cockman Road (opposite the site on Ollis Street) currently occupied by a dentist and chiropractor.



Aerial image of site and surrounding lots (MetroMap January 2022)

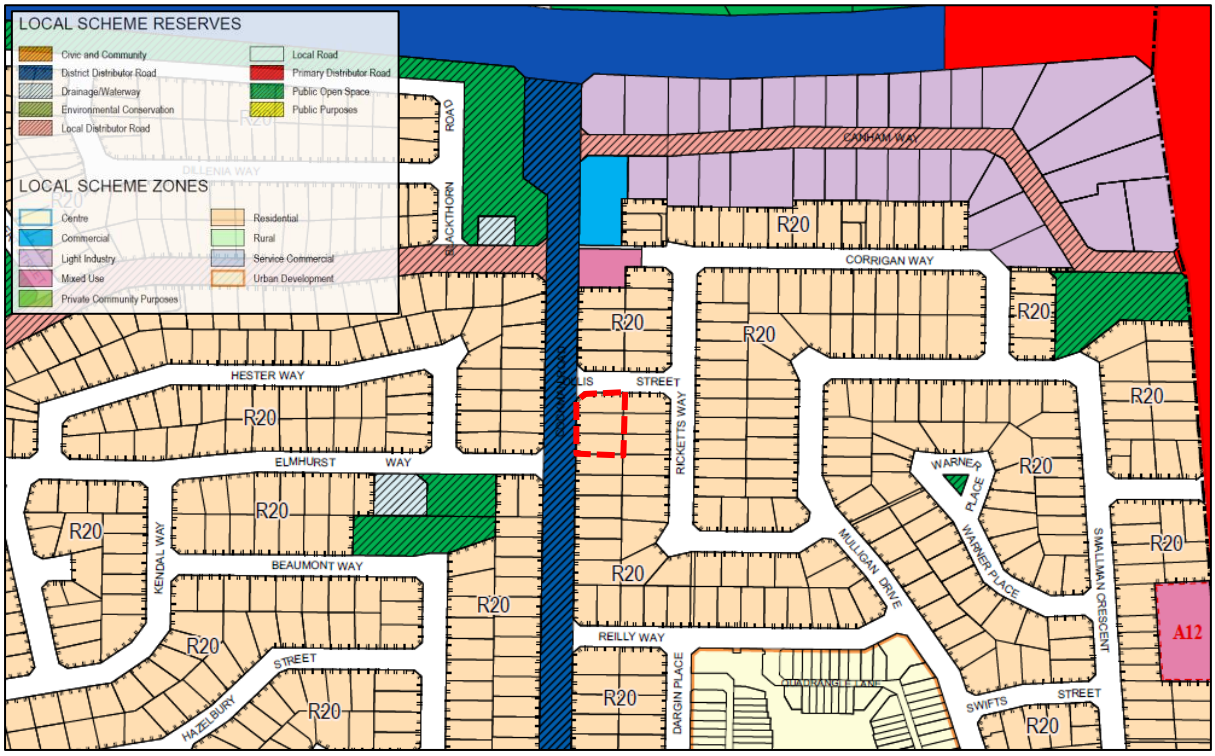
2.2 AMENITIES AND INFRASTRUCTURE

Cockman Road is district distributor road and includes a bus route connecting the site with Warwick and Whitfords Stations. The route is not high frequency however does focus services during peak times, and includes bus stops approximately 50m from the site.

Beaumont Park is located under 70m from the site to the south-west, and 200m north of the site a group of commercial and light industrial premises.

2.3 PLANNING CONTEXT

The development site is located within a Residential (R20) Zone under the City of Joondalup Local Planning Scheme No. 3 ('**LPS 3**').



Extract of the LPS 3 Map

All properties surrounding the site are residentially zoned, however, as noted above the site located opposite the development on Ollis Street is currently utilised by a dentist and chiropractor. To the south, east and west is predominantly residential development, whilst the corridor to the north includes a mix of residential, commercial, and industrial land uses.

3 THE PROPOSAL

The development application proposes construction of a single-storey child care premises comprising a nursery, toddlers' area, and two kindergartens, all fronting out towards a large outdoor play area. Car parking is proposed in the northern corner of the site, near the intersection of Cockman Road and Ollis Street, whilst the outdoor area is located towards Cockman Road, away from the adjacent residential properties.

The child care premises has been designed to provide a consistent built form and character with existing residential dwellings in the area, whilst strategically positioning play areas and facilities to minimise potential impacts from operation. A summary of the proposed operation is provided below.

Hours of operation	
Monday to Friday	7.00am – 6.00pm*
Saturday	8.00am – 1.00pm*
Sunday and public holidays	Closed
*Staff on site 30 minutes prior to and after stated hours	

Staff
Max on site: 15
Parking: 15 bays

Children
Max on site: 92
Parking: 12 bays

4 PLANNING FRAMEWORK

The statutory planning framework applicable to the development is outlined in the table below.

Key statutory planning framework documents	
1.	City of Joondalup Local Planning Scheme No. 3 ('**LPS 3**')
2.	State Planning Policy 7.0 – Design of the Built Environment ('**SPP 7**')
3.	Child Care Premises Local Planning Policy ('**CCPLPP**')
4.	Design Review Panel Local Planning Policy ('**DRPLPP**')
5.	Environmentally Sustainable Design Policy ('**ESDP**')
6.	Planning and Development (Local Planning Schemes) Regulations 2015 ('**Deemed Provisions**')

An assessment of the development against each of these documents is provided within the Planning Assessment and Justification section of the report.

5 PLANNING ASSESSMENT AND JUSTIFICATION

An assessment of the proposed development's performance against the relevant provisions of the planning framework is detailed in this section of the report.

5.1 CITY OF JOONDALUP LOCAL PLANNING SCHEME NO. 3

The development site is located within a Residential Zone under the City of Joondalup Local Planning Scheme No. 3 ('**LPS 3**'). The objectives of the residential zone are as follows:

- *To provide for a range of housing and a choice of residential densities to meet the needs of the community.*
- *To facilitate and encourage high quality design, built form and streetscapes throughout residential areas.*
- *To provide for a range of non-residential uses, which are compatible with and complementary to residential development.*

Whilst the proposal does not address the first objective, LPS 3 contemplates non-residential land uses within the Residential Zone, and therefore it must be accepted that not all development within the zone will contribute to residential density. In this respect only the second and third objectives are relevant to the proposal.

The built form of the child care centre presents a residential character and scale. Not only aligning with the built form permitted under the R-Codes, but also confirming to the specific characteristics of the local built form environment in respect of building scale, height, roof form, materials, colours, and features, complementing the existing streetscape character.

Child care premises as a land use is entirely compatible and complementary to residential development, in addition to being highly desirable to have close to and within residential areas for convenience. Impacts from traffic and noise can be mitigated through development design and operational management, both of which have been thoroughly considered in this instance.

Accordingly, all relevant objectives of the Residential Zone are addressed by the development. LPS 3 does not include any specific development requirements applicable to the development, with majority of the development requirements addressed in the City's Child Care Premises Local Planning Policy.

5.2 State Planning Policies

5.2.1 State Planning Policy 7.0 – Design of the Built Environment

This policy addresses design quality and built form outcomes in Western Australia. It seeks to deliver the broad economic, environmental, social, and cultural benefits that derive from good design outcomes and supports consistent and robust design review and assessment processes across the State. This is achieved through ten design principles which establish a definition of 'good design' that can inform the design, review, and decision-making processes for built environment proposals. An assessment of the proposed development against these principles is provided below.

SPP 7.0 SCHEDULE 1 – DESIGN PRINCIPLES

1. ***Context and character*** *– Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*

   The site is located in an area with 1980's houses with some recent residential builds and the Greenwood/ Kingsley Shopping plaza located up the road. Within the residential and commercial area there is a predominant use of face brick (masonry) throughout, expressed pitched roofs, masonry retaining walls and mature vegetation to the boundary and verge. The commercial areas have large flat facades with minimal articulation, parapet walls with concealed roofs, awnings to entry areas, minimal vegetation and a vast contrast to the residential development within the area.

   The predominant neighbouring use is residential so we felt it was important to interface with this while still reflecting the commercial development opposite. We saw this site, as with most childcare sites, a transition zone between the commercial and residential areas. The streetscape is varying with different elevations but a similar language of height, materials and roof form. The proposed development looks to reflect the neighbouring character and draw on some of the commercial elements such as the masonry format.

2. ***Landscape quality*** *– Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*

   There is some vegetation on the subject site however it is proposed for the landscaping to be revisited and form an integral part of the new works with the outdoor play space to be extensively landscaped and designed as a play space for children. It is proposed that the wide verges are also extensively landscaped to form a visual extension of the ground floor play scape area.

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 proposed built form is single-storey, consistent with residential development in the area and is an appropriate outcome within a residential area. Heights and setbacks adhere to the R-Codes and sit within the accepted scale for residential development, ensuring sympathy for the surrounding uses.

4. ***Functionality and built 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.*

   This will be a purpose-built child care premises that can accommodate a number of operators, ensuring the operational requirements have been built into the initial design approach. The design includes an integrated veranda providing shaded outdoor area with play spaces located away from the residential boundaries to mitigate any perceived loss of amenity. Materials will be durable and fit for purpose with proposed materials being face brick, aluminium, glass and Colorbond steel.

5. ***Sustainability*** *– Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.*

   Where possible with overhanging eaves/ slab edge providing shading. There is the opportunity for solar arrays to be installed on the north facing portions of the pitched roof and operable windows will be provided for natural ventilation.

SPP 7.0 SCHEDULE 1 – DESIGN PRINCIPLES

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 proposed development includes materials and finishes which are consistent with the local character. There were several initial site layouts that balanced site constraints, operational outcomes and preservation of amenity. Ultimately the layout we have chosen to settle on prioritises residential amenity while still balancing this with operational outcomes for the end user.
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 entry addresses both Ollis Street and Cockman Road. Room function within the centre is clearly defined and easy to navigate.
8.	***Safety** – Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*
	CPTED principles have been applied in the design of the development. Passive surveillance is achieved through open style entrance and fencing.
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.*
	Child care premises offer an important community service, providing early education and care for young children in a safe and educational environment. The location of this development, will provide this service near a commercial centre, thereby diversifying the range of uses in the locality.
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.*
	We have explored a vernacular concept - simple and practical, much like the houses of the 1980's and the transitional nature of the site and use. The use of face brick, a resilient masonry element giving perception of strength is prevalent within the area and a tell-tale of the classic double brick WA home. We looked at utilising a face brick couple with sections of fibre cement cladding and an emphasis on the roof lines/ form. The layout of the building is functional and driven by the operational requirement of the development responding to the needs of the end user.

5.3 Local Planning Policies

The City of Joondalup has several local planning policies applicable to the proposed development, the relevance of these policies and assessment is outlined below.

5.3.1 Child Care Premises Local Planning Policy

The Child Care Premises local planning policy is the primary document for providing guidance to the City on the suitability of applications for Child Care Premises. The policy includes two objectives:

- *To provide development standards for the location, siting and design of child care premises.*
- *To ensure that child care premises do not have an adverse impact on the amenity of surrounding areas, particularly residential areas.*

As a means of establishing whether the above objectives have been achieved, a range of requirements are provided under clause 5 of the policy. An assessment against these requirements has been undertaken and is provided below.

5.1 – LOCATION

The appropriate location of child care premises is crucial in avoiding adverse impacts on surrounding properties, particularly in terms of additional traffic, car parking and noise.

a. *Child care premises are most appropriately located within the 'Mixed Use', 'Commercial', 'Service Commercial' or 'Private Community Purposes' zone.*

Discretion – the premises is located within a residential zone, however it is located only 100m from a mixed use zone to the north which directly connects with both commercial and light industrial zones. It is also noted that the site is opposite a commercial premises also located within the residential zone (dentist and chiropractor at 108 Cockman Road). Notwithstanding this clause, (b) below provides criteria for consideration of child care premises within residential zones, clearly acknowledging that there can be acceptable circumstances when a child care premises can operate from within a Residential Zone.

b. *In order to minimise potential adverse impacts a child care premises may have on the amenity of residential properties, particularly as a result of noise, increased traffic, and building scale, a child care premises will only be considered in the 'Residential' zone where it:*

   i. *directly adjoins non-residential uses such as shopping centres, medical centres or consulting rooms, schools, parks or community purpose buildings on at least one boundary.*

   ii. *accommodates a maximum of 50 children.*

   iii. *has a maximum building site coverage of 50%.*

Discretion – The development results in no adverse impacts, noise impact to residential properties will be minimal as all active areas are oriented towards the street, away from adjacent residential properties. The impact on traffic in the context of a local distributor road will be minimal, building scale is entirely complimentary to development in the locality, and considerably less than that permitted under the R-Codes.

i. Adjoining a non-residential use on one boundary holds no relevance to whether the child care premises will impact the other adjacent residential properties, the purpose of this criteria is unclear. Notwithstanding, the site is opposite another commercial premises.

ii. The site is proposed to accommodate greater than 50 children, however the overall traffic and noise impacts are still satisfactorily managed. It is unclear why the City considers 50 children specifically to be the upper limit of acceptance, irrespective of site size, design, or management.

iii. The building (including outdoor areas enclosed on more than two sides) only proposed a site coverage of 32%, significantly less than permitted, and notably less than typical residential developments in the local area, allowing for a significant landscaping contribution.

c. *Where a proposed child care premises adjoins a residential property, the applicant is required to demonstrate how the proposal will not have an undue impact on residential amenity in terms of noise, location of car parking, increased traffic and building scale.*

Discretion – The design of the premises directs all impacts away from adjacent residential properties, both a setback and internal corridor buffer. All activities are directed towards Cockman Road, a local distributor road connecting with a regional road 300m from the site. The car parking location is opposite an existing commercial premises on Ollis Street, and access is from a single crossover to Cockman Road. In this respect the premises primarily interacts with s busy traffic corridor rather than residential dwellings. Impact to adjacent dwellings will be minimal. The building scale is entirely consistent with existing development in the immediate locality.

Additional information in respect of noise and traffic impacts is provided in the Acoustic Report and Transport Impact Statement included in this submission.

5.2 – ROAD HIERARCHY

Child care premises can be reasonably high traffic-generators. Therefore, in order to minimise their impact on the street network, child care premises are required to:

i. be located on Local Distributor Roads

Compliant – Cockman Road is a local distributor road.

ii. be located in such a manner that they would:

- *not conflict with traffic control devices;*
- *not encourage unsafe vehicle movements; and*
- *not encourage the use of nearby Access Roads for turning movements.*

Compliant – all access is via a single crossover to a local distributor road, a considerable distance from any traffic control devices.

iii. not be located in, or on the corner of, a cul-de-sac road.

Compliant – Cockman Road and Ollis Street are not cul-de-sac roads.

5.3 – PARKING AND ACCESS

1 Car parking bays are to be provided in accordance with the following table:

Use Class	Number of on-site parking bays
Child Care Premises	1 per employee plus 5 per ≤ 25 children 6 per 26–30 children 7 per 31–56 children 8 per 57–64 children 9 per 65–72 children 10 per 73–80 children 11 per 81–88 children 12 per 89–96 children 13 per 97–104 children 14 per 105 + children

Compliant – a total of 27 car bays are provided on site; 15 bays for the maximum 15 staff, and 12 bays for the maximum 92 children.

2(a) Car park location

(i) All car parking is to be provided on-site; verge parking is not permitted.

(ii) Car parks must be clearly visible from the street to encourage parking on-site instead of on the road verge.

Compliant – car parking is entirely accommodated on site, visible from the street, and conveniently located nearby the premises entrance.

2(b) Car park design

Car parks shall be designed in accordance with Australian Standards AS 2890.1 and/or AS 2890.2 as amended from time to time.

Compliant – the car parking area has been designed in accordance with the AS 2890 set. The tandem parking bays are proposed at 5.0m depth as opposed to the typical 5.4m, this based on a B85 Design Vehicle which has a length of 4.91m (therefore 9.82m for 2). The current 10.5m tandem bays therefore allow for 680mm clearance in front of and between 2 vehicles.

It is also noted that a 'Small Car' bay is permitted to be 5m x 2.3m, so the 10.4m tandem bays also allow for 1 larger (B99) vehicle (in a 5.4m bay) together with 1 'Small Car' (in a 5m bay).

2(c) Vehicle access

(i) Vehicle access shall be taken from Local Distributor Roads.

(ii) 'Two-way' vehicle access is required in accordance with Figure 1.

(iii) Vehicles are required to enter and exit the site in forward gear.

5.3 – PARKING AND ACCESS

Compliant – vehicle access is only taken from Cockman Road, in accordance with figure 1 (type 2), and allows for forward gear entry/exit for all bays.

2(d) *Pedestrian access*

A footpath must be provided from the car park and the street to the building entrance.

Compliant – a footpath connects the carpark, street, and building entrance.

3 *Bicycle parking is to be provided in accordance with the following table and relevant Australian standards.*

Use Class	Employee / Visitor Bicycle Parking
Child Care Premises	1 per 8 employees

Compliant – two bike racks have been provided for staff.

5.4 – BUILDING HEIGHT

The maximum building height as measured from the natural ground level is to be in accordance with the following table:

Maximum Building Height		
Top of external wall	Top of external wall (concealed roof)	Top of pitched roof
6 metres	7 metres	9 metres

Compliant – building height is effectively half of that permitted under this policy and under the R-Codes for residential development in this location.

5.5 – BUILDING DESIGN

1 *Building setbacks*

Building setbacks in the 'Residential' zone are to be in accordance with Part 5 of the R-Codes, with the exception of the following:

R-Code	Minimum Primary Street Setback Distance	Minimum Secondary Street Setback Distance
R5	12 metres	6 metres
R20 and R25	6 metres	1.5 metres
R30 and above	4 metres	1.5 metres

Discretion – the primary and secondary street setbacks will fully comply and allow for considerable landscaping contribution to the streetscape, which will enhance street character and benefit local community. A simple, streamlined approach has been taken for both side and rear boundaries, providing a 1.5m setback the full length of single-storey building.

Setback	Required	Proposed
Primary street setback	6.0m	7.8m
Secondary street setback	1.5m	20.6m
Side (south) setback	1.5m (wall height <3.5m)	1.5m
Rear (east) setback	1.5m – 1.8m (wall height <3.5m – 4.0m)	1.5m

A setback of 1.5m is generally accepted for all development of single-storey height, however in this instance due to the skillion roof design the wall height along the rear boundary varies, resulting in some areas with a height greater than 3.5m and therefore a greater setback requirement than 1.5m.

The skillion roof is proposed in order to allow high level north facing windows which will allow for natural light into the building, improving solar passive design, and reducing the need for artificial heating/cooling and lighting. The skillion roof structure provides some variation to the roof design as viewed from the rear adjacent properties, creating some interest and ameliorating potential visual bulk impacts. Notwithstanding, the building is of single-storey height in a location permitting two-storey development, so in this context the design is unlikely to result in any significant visual bulk impacts.

5.5 – BUILDING DESIGN

2 *Noise attenuation*

a. *The layout and design of child care premises must consider noise attenuation measures to reduce the noise impact on adjacent properties. Noise-generating activities such as outdoor play areas, vehicle accessways, car parking areas and any plant and equipment shall be located away from noise-sensitive land uses (such as residences).*

b. *The design and construction of child care premises must also consider measures to reduce the impacts of noise from external sources, to achieve acceptable indoor noise within the child care premises. These measures shall include consideration of the size and placement of windows and doors, the use of double-glazing, fencing, landscaping and the location of vehicle accessways, car parking areas and any plant and equipment.*

c. *An acoustic report prepared by a suitably qualified person shall be submitted with the application for development approval. A noise management plan is also required where identified by the acoustic report.*

Compliant – These requirements are addressed in the acoustic report prepared by Herring Storer, included in this submission.

3 *Building appearance*

Child care premises in the 'Residential' zone must be of residential appearance, in keeping with the surrounding environment, and not detract from the amenity of adjoining properties.

Compliant – the appearance of the child care premises is residential in both in character and scale, particularly responding to the scale and features of the existing dwellings in the immediate vicinity of the site.

4 *Servicing*

Services must be screened from view and located away from residential properties. Servicing is to be in accordance with the following requirements:

Provision	Development Requirement
(a) Bin storage areas	(i) Bin storage areas must be screened from view by a wall not less than 1.8 metres in height, constructed of brick, masonry or other approved material. (ii) Bin storage areas must be accessible to waste collection vehicles and not adversely affect car parking and vehicular or pedestrian access.
(b) Plant and equipment	(i) Plant and equipment must be screened from view from the street through building design and located on the roof, basement or at the rear of the building.

Compliant – the bin store area is located behind the building line of the secondary street and will be screened by a 1.8m high Colorbond fence. The waste collection will not adversely affect parking or access and is outlined in the Waste Management Plan included in this submission.

All servicing equipment will be incorporated into the building design and not visually obtrusive from the street.

5.6 – LANDSCAPING

(a) *% landscaping*

(i) *A minimum of 8% of the area of a lot shall be landscaped.*

(ii) *The landscaped area shall include a minimum strip of 1.5 metres wide adjacent to all street boundaries.*

Compliant – The proposed landscape plan indicates greater than 8% (180m²) landscaping in the external play area alone, and provides landscaping within the 1.5m adjacent to the street to the extent reasonably possible accounting for access requirements.

(b) *Size*

5.6 – LANDSCAPING

The landscaped area shall have a minimum width of 1.0 metre and distributed in areas of not less than 4.0 square metres.

Compliant – All landscaped areas achieve a minimum 1.0m dimension and 4.0m² area.

(c) *Shade trees*

(i) Shade trees shall be provided and maintained in uncovered car parks at the rate of one tree for every four car parking bays.

(ii) One small shade tree shall be provided for each lot in addition to those required for uncovered car parks.

Compliant -The parking area is provided with seven shade trees, sufficient to cater to 28 car bays, and nine trees located elsewhere on site, providing a total of 16 trees.

(d) *Verge area*

The verge areas of all child care premises are required to be suitably landscaped, reticulated and maintained to discourage patrons from parking on the verge. The verge is not permitted to be paved or sealed as this would encourage its use for parking.

Compliant – All redundant hardstand associated with parking and access to the site is being removed as part of this proposal. The verge is for the most part already landscaped, and is not proposed to be modified.

5.7 – HOURS OF OPERATION

a. The days and hours of operation for child care premises within the 'Residential' zone or abutting or opposite the 'Residential' zone are to be in accordance with the following:

Days	Operating hours
(a) Monday to Friday	(i) 7.00 am to 6.00 pm*
(b) Saturday	(i) 8.00 am to 1.00 pm*
(c) Sunday	(i) Not permitted

**Staff are permitted on site 30 minutes prior to and after the stipulated hours of operation.*

Compliant – The proposed hours of operation align with the above stipulated hours.

As outlined above the proposal presents a high level of compliance with the guidance of the policy, and therefore demonstrates close alignment with the intended objectives. Minor discretion is sought in respect of location, and it is requested that the proposal be considered on its merits in this instance, as the specific site circumstances provide for an appropriate location to accommodate the use.

5.3.2 Design Review Panel Local Planning Policy

The proposal will require referral to the City's Design Review Panel ('**DRP**') under clause 5.2 of the City's policy. The proposal has been designed with regard to SPP 7 as outlined in this report, we look forward to further refining the design on advice from the DRP.

5.3.3 Environmentally Sustainable Design Policy

This is a Council adopted policy to encourage the integration of environmentally sustainable design principles into the siting, design, and construction. The policy encourages incorporation of 11 design principles when designing development and requires an Environmentally Sustainable Design checklist to be completed and submitted with development applications. A completed checklist has been included in submission of this application.

5.4 Planning and Development (Local Planning Schemes) Regulations 2015

In considering an application for development approval the decision maker is to have due regard to the matters outlined in clause 67(2) of the deemed provisions to the extent that, in the opinion of the decision maker, those matters are relevant to the development the subject of the application. These matters are outlined below alongside comment on whether the matter is relevant, and if so, how it has been addressed by the development.

DEEMED PROVISIONS CLAUSE 67(2) – MATTERS TO BE CONSIDERED BY THE DECISION MAKER	
(a)	*the aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area;*
	Satisfied – the objectives and requirements of the LPS 3 have been addressed in section 5.1 above.
(b)	*the requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the Planning and Development (Local Planning Schemes) Regulations 2015 or any other proposed planning instrument that the local government is seriously considering adopting or approving;*
	Satisfied – there are no proposed planning instruments currently under consideration affecting the proposed development.
(c)	*any approved State planning policy;*
	Satisfied – all relevant State planning policies have been addressed in section 5.2 above.
(d)	*any environmental protection policy approved under the Environmental Protection Act 1986 section 31(d);*
	Satisfied – no environmental protection policies apply to the proposed development.
(e)	*any policy of the Commission;*
	Satisfied – all relevant Commission policies have been addressed under section 5.2 above.
(f)	*any policy of the State;*
	Satisfied – all relevant State policies have been addressed in section 5.2 above.
(fa)	*any local planning strategy for this Scheme endorsed by the Commission;*
	Satisfied – the proposed development is consistent with the objectives of the City of Joondalup Local Planning Strategy through compliance with LPS 3.
(g)	*any local planning policy for the Scheme area;*
	Satisfied – all relevant local planning policies have been addressed in section 5.3 above.
(h)	*any structure plan or local development plan that relates to the development;*
	Satisfied – there are no structure or local development plans appliable to the site.
(i)	*any report of the review of the local planning scheme that has been published under the Planning and Development (Local Planning Schemes) Regulations 2015;*
	Satisfied – there are no current reports of the review of LPS 3.
(j)	*in the case of land reserved under this Scheme, the objectives for the reserve and the additional and permitted uses identified in this Scheme for the reserve;*
	Satisfied – the site is not reserved under LPS 3.
(k)	*the built heritage conservation of any place that is of cultural significance;*
	Satisfied – the site does not contain any registered places of Indigenous, State, or local heritage significance.
(l)	*the effect of the proposal on the cultural heritage significance of the area in which the development is located;*
	Satisfied – the site does not adjoin any registered places of Indigenous, State, or local heritage significance.

DEEMED PROVISIONS CLAUSE 67(2) – MATTERS TO BE CONSIDERED BY THE DECISION MAKER

(m) the compatibility of the development with its setting, including —
(i) the compatibility of the development with the desired future character of its setting; and
(ii) the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;

Satisfied – the development is representative of the desired future built form for the area, aligning with the guidance provided in the CCPLPP, and will be further refined following review from the City's DRP.

(n) the amenity of the locality including the following —
(i) environmental impacts of the development;
(ii) the character of the locality;
(iii) social impacts of the development;

Satisfied – the proposal will significantly enhance the natural environment, proposing a considerable landscaped play area adjacent Cockman Road, and removing no significant existing vegetation. The building design is reflective in scale and character of existing residential dwellings in the area, and the service offered is of considerable social benefit to the locality.

(o) the likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource;

Satisfied – no adverse impact has been identified in relation to the proposed development on the natural environment. Minimal site works are proposed, and the development does not include a basement level.

(p) whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;

Satisfied – significant landscaping and deep soil areas are provided as part of the proposed development. The site pre-development does not include any trees of significance worthy of retention, all mature street trees are unaffected by the proposal.

(q) the suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bush fire, soil erosion, land degradation or any other risk;

Satisfied – the site is not within a bush fire risk area or 1 in 100 year flood area. No other specific site constraints related to this clause have been identified.

(r) the suitability of the land for the development taking into account the possible risk to human health or safety;

Satisfied – the development site is not contaminated, nor have any health or safety risks been identified.

(s) the adequacy of —
(i) the proposed means of access to and egress from the site; and
(ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;

Satisfied – sufficient spaces has been accommodated on site for parking of vehicles and forward gear entry and exit whilst maintaining hardstand to a minimum.

(t) the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;

Satisfied – the traffic impacts have been thoroughly considered in the Transport Impact Statement included in this submission. No indue impacts are anticipated as a result of the proposed development.

(u) the availability and adequacy for the development of the following —
(i) public transport services;
(ii) public utility services;
(iii) storage, management and collection of waste;
(iv) access for pedestrians and cyclists (including end of trip storage, toilet and shower facilities);
(v) access by older people and people with disability;

Satisfied – the site is well serviced by public transport (bus route located on Cockman Road) and will be provided with all typical public utility services. The development has been designed to meet waste

DEEMED PROVISIONS CLAUSE 67(2) – MATTERS TO BE CONSIDERED BY THE DECISION MAKER	
	management requirements and includes bike storage and a shower facility. The entire development is provided with clear pedestrian paths and is without steps, creating a highly accessible environment.
(v)	*the potential loss of any community service or benefit resulting from the development other than potential loss that may result from economic competition between new and existing businesses;*
	Satisfied – no negative impact to community service or community benefit has been identified. The development arguably provides an extremely important community service which creates opportunities for additional economic benefits both internally and externally.
(w)	*the history of the site where the development is to be located;*
	Satisfied – development in the local area has been traditionally residential suburban development. The design of the proposed development is respectful to this context. No site history relevant to the proposed development has been identified.
(x)	*the impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals;*
	Satisfied – the development has been aligned to face the street, creating a high level of interaction with the public domain, whilst preserving and enhancing privacy for adjoining residential properties.
(y)	*any submissions received on the application;*
	Pending consultation.
(za)	*the comments or submissions received from any authority consulted under clause 66;*
	Satisfied – no external authority referrals required.
(zb)	*any other planning consideration the local government considers appropriate.*
	Satisfied – no other planning considerations have been identified.

6 CONCLUSION

The layout of the proposal has been extensively considered to ensure the proposed use presents minimal impacts on the residential area which it is located, whilst also carefully considering the building design to ensure it complements and fits within the existing residential streetscape character. The development achieves a high level of compliance with the local planning framework and will represent an important contribution to the local area.

The child care premises will provide a convenient and invaluable service for many of the local residents, whilst also creating local employment opportunities. We look forward to working with the City to refine the proposal and further improve on a development prior to consideration by the Development Assessment Panel.

7 APPENDIX 1 – REQUEST FOR INFORMATION 30/06/2022

In response to the City's request for information received 30 June 2022 and the comments of the Design Review Panel the following revised documents have been prepared:

DOCUMENT	PREPARED BY	DATE
Development plans	Meyer Shircore	14/07/2022
Planning Report	Urbanista Town Planning	20/07/2022
Transport Impact Statement	Uloth and Associates	15/07/2022
Waste Management Plan	Instant Waste	13/07/2022

The request for information included three key sections;

- Waste comments (addressed in Appendix III of the revised Waste Management Plan)
- Engineering comments (addressed below)
- Planning comments (addressed below)

Engineering comments	Applicant Response
1. Traffic counts: • The TIS states a traffic Count obtained from MRWA (Cockman Rd South of Hepburn Ave) of 6870 vehicles per day. This is not the weekly average count rather it's only one weekday's count during the data collection period. • The MRWA also shows 7518 vehicles per day in one of the days during the period, which is higher than the 6870 stated in the TIS. The City's Traffic Count in 2019 shows Traffic volume over 8000 vehicles per day and 85% speed of 57kmph and 59kmph for North and Southbound traffic, respectively. • The difference between MRWA (Aug 2020) and the City's (May 2019) could be due to MRWA's traffic data collected in Covid 19 lockdown period in Aug 2020. • Either way it is evident that the Traffic Volume in Cockman Rd is reaching or has reached the desirable maximum traffic volume for District Distributor B without including the additional trips generated by the proposed development. • Therefore, frontage access for commercial properties should be limited where possible according to MRWA Road hierarchy criteria.	To reduce impact on Cockman Road the access arrangements for the site have been revised, eliminating entry assess from Cockman Road. Site entry is now via Ollis Street, with exit only to Cockman Road.

2. Proposed development: • The City has not assessed any waste management processes as part of the assessment as to whether the car park or facilities are appropriate. • As stated above, on-street waste collection for commercial development is not permitted. On-site waste collection methodology and provision for other service vehicles needs to be explained in detail in terms of vehicle access to site without conflicting/impacting the traffic on road, turning template, service hours etc for further assessment.	Waste collection will be entirely on-site, with the Traffic Impact Assessment updated to demonstrate the waste truck swept paths through the site, allowing for collection within the parking aisle. This arrangement avoids any conflict with road users during collection.
3. Parking requirements: • The parking arrangement appears to be satisfactory, however, if all bays are full, the **applicant should demonstrate** that the reversing bay functions appropriately. This should be shown using a turning template and any minor adjustments made if required. • Bike racks- The location of one of the bike racks appears to impede the access door. Suggest that this is reviewed and relocated as required.	The revised one-way arrangement avoids the need for a reversing bay on site and the bicycle racks have been relocated further from the safety zone door to avoid conflict.
4. Trip generation: • The trip generation calculation provided in the TIS, excludes trips generated by the Staff. Minor adjustment required but would make no difference to the assessment.	Noted.
5. Proposed carpark layout and recommended access: • The proposed crossover to Cockman Rd is a highly activated crossover that poses potential issues where located in proximity to side roads. • While 6m offset is typically required for residential properties, this site is not residential and poses additional risks due to the higher activation especially in peak periods. • For example, commercial driveways and crossovers (excluding splays) must be located no closer than 25m to the corner truncation. Refer to City's Crossover guidelines. • The proposed crossover is considered to be too close to the intersection to provide safe entry and egress given the higher activation of the site. • The best or safer location for the crossover is considered to be in Ollis St, or alternatively further south in Cockman Rd. • The first staff bay on the western end of the car park appears to be a little awkward and may impede entering vehicles. Recommend review and modification where possible.	The traffic consultant has liaised further with the City's Engineering Services to establish the optimum access arrangement for the site in terms of functionality, minimising impact to Cockman Road, and safety for all users. The revised access arrangement with entry from Ollis Street and Cockman Road halves the number of vehicle movements directly between the site and Cockman Road and reduces queuing. The revised layout and reduced crossover width also increase separation between the Cockman Road crossover and the Ollis/Cockman intersection. Swept paths for the western most car bay has been included in the revised Traffic Impact Assessment and will no longer impede entering vehicles with access removed from Cockman Road.

6. Fencing and Sightlines: • The developer to confirm fencing and clear 1.5m sightlines on either side of vehicle access points.	Additional fencing detail has been provided on the development plans. No fencing is proposed within 6m of the Cockman Road access point, and a boundary fence is located adjacent the Ollis Street access point. The boundary fence does not impact on safety of the Ollis Street access point as the fence does not obstruct sight lines between vehicles entering the site and users within the verge or on site.
Key Recommendations ➢ To relocate the crossover away from the Cockman Rd and Ollis St intersection, especially considering the high vehicle volume ~ 8000vpd and 85% speed exceeding the road speed limit. The preferred location for improved safety is considered to be Ollis Street with a significant set back from Cockburn Rd to reduce any impact of vehicle stacking towards Cockman Rd. ➢ Some other comments (detailed above) while relevant are considered minor in nature and could be addressed with minor adjustment to the TIS/plans.	All recommendations have been incorporated into the revised access and parking design.

Planning comments	Applicant Response
1. Signage is not shown on the plans. If it is proposed, then the location and extent of signage needs consideration so that its sits well in its context.	Signage location has been included in the revised plans, located on the gable of the reception facing Cookman Road. The signage location will improve entrance legibility whilst not being obtrusive as a result of the stepped building design providing an increased street setback at the location of the signage.
2. Landscaping strips of at least 1.5m should be incorporated along the street boundaries and corner truncation. As highlighted by the DRP an arborist report is requested for the existing verge tree to inform design of the car park and what would/wouldn't be considered acceptable.	A 1.5m wide landscape strip has been incorporated into majority of the street setback area, inclusive of the truncation nearby the street tree. Works proposed within the verge are over 10m from the street tree and a 1.5m landscaping setback from the truncation has been accommodated. We consider this reasonable precaution to minimise impact to the street tree. Should the City wish to undertake an arborist review to determine whether further precautions are necessary to protect its asset, we would be willing to accommodate all reasonable recommendations of the arborist report.
3. Further information is needed regarding the location of services/utilities.	Location of services has not been determined at this stage of the development design, however the intention is to locate these services as to not be visually obtrusive. We raise no objection to a condition of approval addressing servicing location to ensure a satisfactory outcome.
4. Further detail regarding the proposed perimeter fencing is needed.	The plans have been updated to indicate 2m high powder coated garrison fencing to outdoor play area, and 1.5m high powder coated pool fencing to the safety zone adjacent the reception. This would be in addition to Colorbond fencing proposed to lot boundaries as recommended in the acoustic report.
5. Further to recommendation 8 from the DRP and comments from Engineering Planning the access arrangements into the site should be reviewed with a relocation or second access/egress point on Ollis St being a preferred outcome if determined to be a safer alternative.	The access arrangements have been reviewed in light of the City's feedback. Following further discussion with the City's Engineering Services the access has been amended to a one-way arrangement, with an entry on Ollis Street and exit on Cockman Road.

Prepared by Instant Waste Management
102 to 106 Cockman Rd – City of Joondalup WA - Waste Management Plan Rev: B – July 2022

Waste Management Plan

Child Care Centre

Corner of Cockman Road & Ollis Street

Within the City Joondalup

Issued by:

Jake Hickey

State Resource Development Manager

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Introduction

1. Introduction

1.1. Executive Summary, findings, assumptions & recommendations

This Waste Management planning of a commercial Child Care Centre requires many considerations. First of which was the diversion of waste from landfill, as per council bylaws & state government waste strategy targets. Followed by building amenities & their ease of use of the system by guests, occupants, the facility team members, caretakers and visiting guests & contractors.

Private rear lift trucks will enter and exit the site via a one way internal road and service bins.

Based on the new design / yield schedule, the ~10m2 bin storeroom (3950mm x 2550mm) has enough size to allow for the buildings' bin configuration, with allowance for 2x660L Landfill (Red) 2x660L Commingled (Yellow) and future proofing of FOGO in 240L should it be mandated by local government, (FOGO green lidded bins are not currently a requirement of commercial properties within Joondalup under planning approval, although recommended in the comments provided by the Waste Department as part of the planning review in June).

Signage (in text and pictures) for better diversion rates and reduced contamination of waste streams are recommended within all waste generating areas. As well as space for the temporary placement of bulk verge waste, or maintenance refurbishment waste that is to be removed by private appointed waste contractor.

All other typical recommendations regarding bin store designs and drainage considerations are detailed in the Appendixes & drawings attached. We plan to use either 240L or 660L bins. Due to the implications of higher levels of odour management (Nappies) the future considerations of mechanical ventilation systems is needed… the bin store has been sited to the Eastern boundary of the site to avoid the loss of play space for the children & increase the local social amenities for any passers-by, if the bin store or ventilation was positioned on the front elevation street. This point was also raised in council consultation but the location of the bin store is placed for the convenience of waste generation and only accessible externally from the building to reduce odour, meaning its placement would always be on the boundary.

1.2. Purpose

This Waste Management Plan outlines the correct approach for the management of waste during the initial design, application for local government building approval & the end user / tenant waste generator's processes once the building is complete.

All construction waste, liquid, post design approval and the commissioning phases of the building excluded from this planning document.

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1.3. Scope of Plan

This plan details the waste management strategy for the buildings' end users, and includes:

- Environmental protection from contamination by waste, debris or discharges;
- Management of solid environmental contaminants, waste reduction strategies, waste stream segregation (if required) and recycling.
- Allocates adequate space for bin storage & waste management for general & recycled waste.

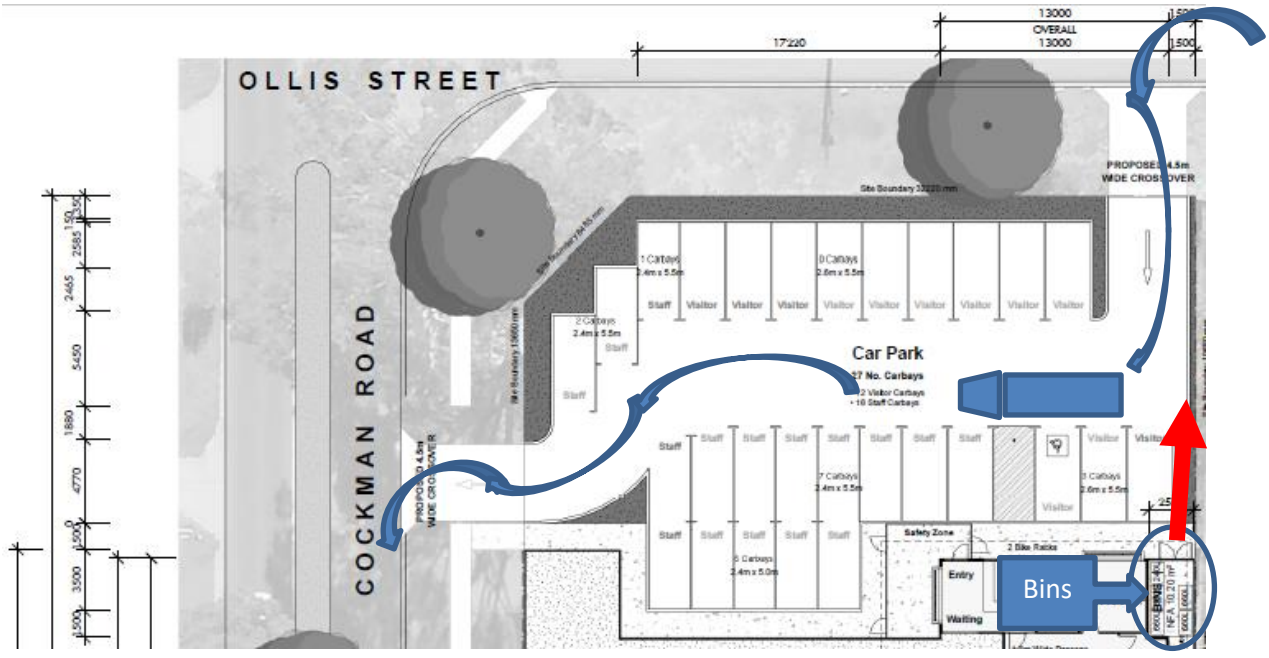
1.4. Precedence

Where ambiguity is detected between the procedures and requirements in this plan and the design documentation, then the procedures nominated in this Waste Management Plan will take precedence.

1.5. Interface with other Project Plans and Procedures

This plan forms part of an integrated set of environmental documents and should only be read in conjunction with all other project documentation provided by the Developer at Development Approval stage. Of note is the traffic impact statement or management plan.

Not to scale except of re-design of car park with one way system in July 2022 below.



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1.6. Project Description

A detailed project scope and description was provided Urbanista and Meyer Shirecore Architects. The Gross Floor Area of the building structure is ~608m2 but the actual waste generating areas within are only ~336m2. However, all waste generation calculations have used the GFA of >608m2. 608m2 /100m2 x 350L per week is 2,128L (or 3.2x660L bins weekly) =2x660L collected twice weekly

Waste Generation figures at 350L per 100m2 per week for both commingled and general waste, were provided by the City of Melbourne (as City of Perth doesn't have figures for childcare generation rates) following consideration of the m3 of the active area's floor foot print via drawings & emails provided April / May and again in July 2022.

- Yield schedule of ~608m2 Gross Floor Area shows no more than 2x 660L of General Waste and 2x 660L of commingled recycling would need to be collected per truck lift twice per week.
- Serviced by the site caretaker as required & presented for private contractor collection within the boundary line by a vehicle that enters and exits in a forward gear. (As show in the Traffic Impact Statement provided by Uloth).

General Waste (Red lid 2x 660L wheelie bins serviced twice weekly)
Figures taken from the City of Melbourne & consideration towards WALGA waste generation rates

Recycled Waste (Yellow lid 2x 660L wheelie bins serviced weekly)
Figures taken from the City of Melbourne & consideration towards WALGA waste generation rates

Landscape (Lime Green waste N/A)
Private landscape contractors if needed. Utes servicing the site will go to private recycling facilities.

Bulk Hard Waste (moved by private contractor to tip or recycling facility)
Private contractor under cleaning contract or agreement.

FOGO (Green lid)
Future proofing of this element has been allowed within the space of the bin store with provision of an extra 2x240L above the needs of the general waste calculations. With expectation that general landfill waste would be reduced by these volumes in collection if a private or public organics bin is collected.

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1.7. Document Control

Amendments to this Waste Management Plan are approved by Instant Waste Management & Planning Development and distributed to all holders of controlled copies by Urbanista Planning.

Controlled Copy No.	Date	Name of Recipient	Organisation
WMP Instant Waste Rev: B	13th July 2022	Bianca Sandri	Urbanista Planning

Uncontrolled copies of this plan may be distributed to the Main Contractor, the project team & maintenance personnel.

These copies are not subject to automatic amendment and the receiver should verify currency of the document.

Revisions to this Plan will be made as required to reflect the current system requirements.

Current Revision Record:

Document Reference	Date	Revision	Description	Pages	Reviewed By	Approved By
WMP – Instant Waste Rev A	12th May 2022	Rev: A	Issued for DA	1 - 14	Bianca Sandri	Bianca Sandri
WMP – Instant Waste Rev B	13th July 2022	Rev: B	Incorporation of waste dept comments as issued June 2022 to Urbanista	1 - 15	Bianca Sandri	Bianca Sandri

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Waste Management

2. Waste management plan

2.1. Introduction

Waste can affect different aspects of the environment and may cause contamination, impacts on visual amenity and health effects. Waste materials that may be produced on the Project site include:

- Litter including food and drink packaging;
- General Waste from tenants
- Recyclable waste from tenants
- Maintenance works waste
- Office equipment paper, cardboards, etc.; and
- Wastewater – generated by flood events

It is important that all litter and waste generated by maintenance activities is constrained within the project area, using designated bins and waste management procedures. At no time should surrounding premises or environments be impacted by waste from maintenance.

2.2. Recycling

The guiding principle of waste management is to minimise the impact of waste on the environment and the public wherever practicable. The hierarchy of waste management applied is:

a) Avoid – making the waste in the first place – alternative designs & lean procurement systems.
b) Reduce – via prevention or elimination of waste products;
c) Reuse – find a secondary use for the waste product; and
d) Recycle – alternative use for waste product which may include reprocessing of product.
e) Recovery – divert materials away from landfill that can be processed into feedstock for the waste to energy sector.
f) Landfill – control the destination of waste to its' relevant class of landfill site.

Waste products shall be eliminated, prevented and reduced wherever practicable. This shall be achieved through rationalising the number of products onsite, finding alternative products which assist in volume reduction and are recyclable. Other methods to help minimise the generation of waste include:

- Storing maintenance materials safety to avoid damage and loss.
- Regular orders in an "as needed" basis rather than large stock levels of consumables.
- Keeping materials in their packaging for as long as possible to protect them from damage.
- Reuse of materials until no longer fit for purpose.
- Reuse of materials for alternative purposes,
- Residuals product can be transported offsite for further processing and recycling by the licensed waste contactor, waste to energy or licenced landfill.

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Waste Management

2.3. Aspects requiring management

Maintenance processes & large active occupied buildings have the potential to produce a large amount of solid waste; Therefore, it is important to properly design & manage the waste flow. Potential aspects of waste management include:

- Generation of solid wastes, such as plastics, paper and aluminium cans, by tenant may impact the surrounding environment if they are not contained and properly managed;
- Waste not properly contained may attract unwanted feral animals & odours;
- Bin storage designs, their maintenance, access & locations.
    - Volume of waste & recyclables
    - Access to bin storage & transferal to collection point;
    - Frequency of collection
    - Safety of waste operatives & members of the public
    - Truck access to roads & site. (turning curves & bin sizes)
    - Amenity (plant machine noise and waste odours controlled by ventilation)
    - Local Government requirements
    - General waste, generated in the building is transferred to the bin store via the Care Taker under strata agreement.
    - Recycled commingled waste & general waste is deposited in the bins by the tenants in clearly marked bins.

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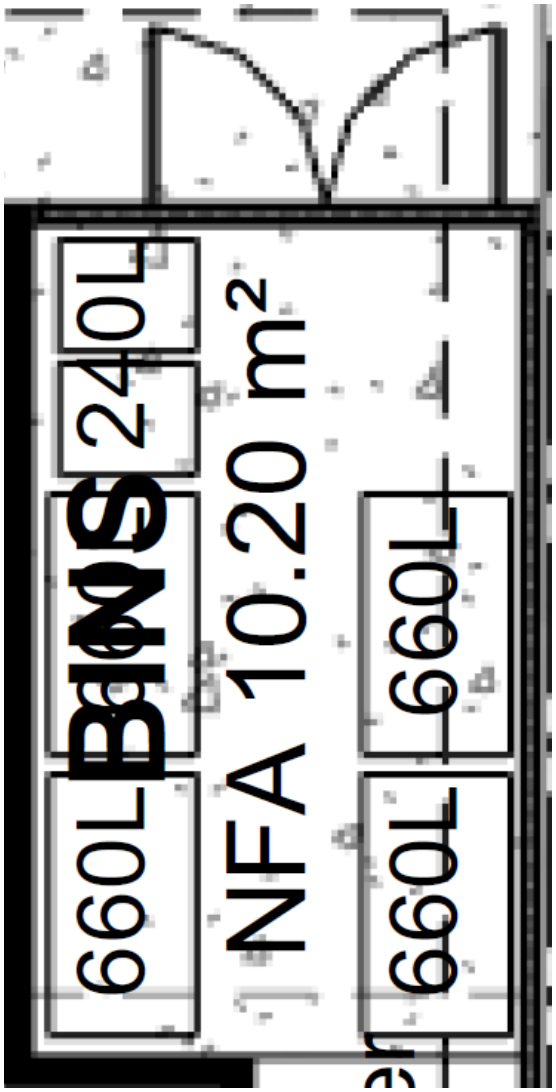
Ground Floor Garbage Room for general waste commingled recycling bins & future proofed FOGO.



See Traffic Impact Statement for turning curves and recommendations if internal service is needed in car park. Reversing bay can be used with small rear lift truck from private contractor.

Table for Waste Streams likely to be generated

Waste Stream	Waste generation	No. of weekly collections	Available Footprint in bin ~10m2 store
General Waste	2,128L per week	<2x 660L twice weekly or as required with options for 5x240L twice weekly	Yes within bin store
Commingled Recycling	2,128L per week	<2 x 660L twice weekly or as required with options for ~3x360L twice weekly	Yes within bin store
Landscape	TBC	By private contractor	N/A
Bulk	TBC	By private contractor	~ transported to landfill or recycling facility
FOGO	Future proofed	Private contractor	Yes within bin store

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2.4. Objectives, Targets & KPI's

Objective	Target	Key Performance Indicator
Solid waste to be disposed of as per regulatory requirements.	All waste to be disposed of by a licensed waste contractor. (Private).	Onsite waste disposal facilities kept clean & odour free. Bin cleaning regime by site caretaker or private contractor.
Client aim to maximise landfill diversion	Recycle commingled waste bins used	Commingled bins not contaminated
No waste to affect nearby premises or tenants	Limited complaints relating to waste	No. of complaints relating to waste

2.5. Building Management Actions

Parameter	Action	Timing	Responsibility
Induction	During inductions all maintenance personnel shall be made aware of individual responsibilities in regards to waste management, including the understanding that all personal rubbish and maintenance rubbish generated is to be properly disposed of in designated disposal facilities	Establishment of a permit to work or similar maintenance systems.	All contractors & sub contractors, Building Supervisor
Waste Management Plan	Maintenance subcontractors will be required to comply with the Waste Management Plan for their Scope of Work. Detailing the type of waste generated, waste avoidance / reduction / reuse / recycling strategies if required.	Establishment of landscape contract	Maintenance & landscaping contractors. Building Supervisor
Waste Disposal	Secure appropriate waste disposal facilities (wheelie bins) shall be provided in strategic locations onsite. Waste bins shall be located such that they do not affect the community and not too close to surrounding premises. Separation of waste for recycling will be enforced and monitored at Car Park recycling points.	Occupancy	Building Supervisor
Waste Disposal: Storage & transfer of waste to a collection point	Waste disposal facilities shall be regularly collected or emptied by a licensed waste collector in accordance with Local Council Health Laws.	Occupancy	Building Supervisor
Storage Area design	Where possible a secure storage area allocated for the collection & recycling of waste will be established.	Design	Designer & or Architect
See next page for more parameters			

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Parameter	Action	Timing	Responsibility
Waste Contractors	Licensed contractors shall be engaged to remove waste.	Handover from construction project team to maintenance team	Project Team & Maintenance team
Putrescibles Waste (Organic only bins)	All putrescibles waste to be placed in a lidded bin and removed separately if it becomes a condition of local government.	Occupancy	Building Supervisor
Recycling / Waste Reduction	Recycling initiatives will be investigated and implemented on site if required.	Occupancy	Building Supervisor
Site Maintenance office or Building Supervisors' stores	The site supervisors' office shall implement office waste minimisation techniques: • Reuse methods where possible. • Using electronic documents to reduce use of paper • Purchasing products in bulk to reduce packaging	Establishment	Building Supervisor
Hazardous Waste	Hazardous waste will be managed and disposed of as per the Material Safety Data Sheet requirements and Environmental Protection (Controlled Waste)	End of Defect works (Construction), Maintenance teams & Building Supervisor	Sub Contractors & Building Supervisor
Servicing & cleaning of Carousel & bin store	Where practicable bin storage plant will be serviced by licenced contactors to reduce the risk of waste onsite and potential for chemicals spills.	Maintenance	Building Supervisor

2.6. Monitoring the Actions of Building users

Type of Monitoring / Reporting	Timing	Responsibility	Record
Measure the diversion from landfill of recycled waste streams	Monthly	Building Supervisor	Internal record keeping
Measure the amount of General waste	Monthly	Building Supervisor	Internal record keeping
On site segregated waste (if required). Appropriate, secure waste placement	Daily	Building Supervisor	Internal record keeping

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Appendix I

Internal waste management:

Separation of waste at point of generation: Recommend that two separate bins to be incorporated into the design of all the changing areas, which should be sufficient to store waste & recyclables generated in each day. Paper and Cardboard packaging can also be considered if volumes warrant it in place of one of the 240L FOGO bins provided for future proofing waste streams.

Bin store & recycling collection point design considerations:

Size: The size of the area set aside for the management of waste is sufficient to accommodate the number of bins required (based on the compaction ratio and the collection regime provided).
Even if the bin store needed to store all the waste in 660L bins beyond collection date. (~30% extra)

Ventilation and odour: The design of the bin store will provide for adequate natural ventilation through ventilated doors which will be permanent, unobstructed natural ventilation openings direct to the external air, not less than one-twentieth i.e. 5% of the floor area. Due to the nature of this site mechanical ventilation should be considered in design to prevent the space becoming too odorous.

Lighting: Artificial light controlled by switches will be located both outside and inside the room.

Noise: Waste and recyclables will be collected from the waste collection point on the ground level which is not adjacent to ground floor entrance, between 7am – 5pm. Consideration should be given to commingled, As this stream can be noisy if glass is involved. Collection by driver via access path 1.5m wide past visitors bay into carpark means bins can be compacted away from the neighbours on the boundary line if needed to reduce noise and odours at point of compaction in rear lift truck.

Signage: Clear and easy to read “NO STANDING” signs and “DANGER” warning signs for children will be fixed to the external face of each waste and recycling room where appropriate and signage designating the storage of RECYCLABLES will be fixed to the internal wall(s).

Aesthetics: The bin store has been designed within the development and as such will be consistent with the overall aesthetics. The waste collection point is located away from the front or main entrances to the building and avoids setting bins out along the external walls of the building or detracting for safety elements of small children being dropped off at the centre during all hours.

Protection from Fire, theft and vandalism: The bin store is located on the ground level and access will be restricted to only the Site Supervisor and the approved building user & maintenance staff.

Vermin: On the ground floor self-closing double or leaf & a half doors to eliminate access to vermin will be installed. Washing bins and waste storage area: The bin store will have bin-washing facilities including an adequate supply of hot and cold water mixed through a centralised mixing valve with hose cock and have non permeable floor with drainage installed. The site supervisor will be responsible for washing bins (or contracting the provider to wash bins) and for maintenance of the bin store. The walls, floors and ceilings of the waste room(s), recycling room(s) and service compartment(s) will be non permeable & finished with a light colour. Floor drainage will be required.

Distance from service area & truck access: Reasonably level ground, with flat trafficable (bin width) access paths from the bin store to the presentation point are required. The collection point needs enough free standing space for all bins behind the truck and should be as close by to the building as possible to shield empty bins from heavy winds during collection and return to bin store by driver or presentation by caretaker, staff.

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Appendix II

Bin Vehicle Specifications Provided for reference only, as site will be serviced by rear lift truck

See attachment provided by traffic consultant for sweep paths and truck specifications of active fleet trucks.

Bin Specifications

Capacity	120L	240L	660L	1100L
Depth	0.620m	0.715m	0.765m	1.070m
Width	0.540m	0.580m	1.360m	1.360m
Height	0.920m	1.075m	1.235m	1.485m

Further bin type sizes and truck turning curves can be provided on request.

A full Traffic Management plan is to be provided by others.

Sumary of truck movement:

Rear lift will arrive and enter the site via one way system on Ollis Street, park within the car park, collect the bins via the access path to the bin store on the Eastern Boundary of the site and compact them into the rear lift truck away from the turning point to enter the car park, the entrance to the child care centre and the ajoining neibouring boundary line. Then exit onto Cockman Road with the flow of traffic in a forward gear. (NO verge presentaiton of bins).

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Appendix III

Relevant documents:

- Drawing development during April, May & June showing one way system for trucks to enter and exit in a forward gear.
- Traffic Impact Statement provided by Uloth in May 2022 with updated appendix in July 2022 showing above one way system with rear lift turning sweep paths.
- Drawings of Bin Storage area & truck collection on Ollis St shown dated 12th July 2022.
- Specification of internal under counter or open plan litter bins & bin transfer areas to be developed by the design team at later stage for operational waste needs.
- Typical truck data flyers & bin sizes available on website & provided by waste contractor showing typical bin sizes used by commercial sites for removal of waste.
- Waste generations figures used from the City of Melbourne as no Perth metropolitan council or WALGA figures are available for childcare centres.
- Waste generation figures emailed to design team for consideration in May 2022.
- June 2022 comments addressed from council in this revised WMP issued to WMP in July 2022. Shown below.

Waste comments from City of Joondalup	Applicant Response (WMP consultant)
1. The bin store size doesn't seem big enough, a diagram showing the bin store size, length and width with the bin configuration in it needs to be added to the Waste Management Plan.	Added dimensions are 10m2 (3950mm x 2550mm) with scale drawing showing 4x660L and 2x240L bins within a revised larger layout provided to WMP in July 2022 and submitted as part of re-design package.
2. The location of the bin store is very close to the neighbours.	Unavoidable. Mechanical ventilation recommended in WMP. Also, the emptying of the bins can be conducted via compaction truck away from the boundary line to avoid external odours and noise when trucks are on site. Limits standard collection regime to align with residential noise restrictions 7am – 5pm.
3. The collection of bins seems to be from Ollis St. Vergeside collection is not permitted for commercial properties. Collection must be from within the property boundary.	One way system incorporated into design with sweep path provided by traffic consultants. Entry and exit in a forward gear with the flow of traffic. NO verge collection
4. This sentence in Appendix 2 doesn't make sense. *"It is the intension* that *the rear lift truck drive up to the site on gazetted road Ollis Street & collect the waste from the waste bin hard standing area or bin store within the building boundary away from the entrance to the car park to avoid risk to children entering the site or multiple smaller bins becoming trip or crushing hazards in windy conditions when*	Removed from Appendix 2. As collection is now conducted within boundary line from bin store and bins returned by private contractor / strata management to bin store after emptying.

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presented kerb side to back of truck then returned."	
5. A drive path showing where the truck will enter the property, drive, and stop for waste collection needs to be added.	Shown in excerpt of new car park design showing one way system. More detail on sweep paths provided by Traffic consultant.
6. The expected truck size, collection times need to be added.	Medium rigid rear lift truck from private contractor, 8m3 truck size provided to Traffic consultant for use in traffic sweep paths. Information shown in traffic management plan as professional indemnity limits its issue within waste management plan.
7. There is no mention of bin store tap, wash down facilities or drainage.	Was always mentioned in Appendix I, in the second to last paragraph: Under Vermin.
8. Considering food will be made for around 70 plus kids each day there should be some organic food waste collection for the cooking waste and leftover scraps.	Future proofing of the commercial development for FOGO has been undertaken with provision for two FOGO 240L bins (which are not mandated under local government planning). These could be used for FOGO or Paper and Carboard recycling dependant on actual waste volumes, contamination rates and commercial considerations; with the avoidance of landfill meaning that any use of these extra allocated bins, in turn means a reduction in the general landfill bins required.

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Environmentally Sustainable Design – Checklist

Under the City's planning policy, *Environmentally Sustainable Design in the City of Joondalup*, the City encourages the integration of environmentally sustainable design principles into the construction of all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

Environmentally sustainable design is an approach that considers each building project from a 'whole-of-life' perspective, from the initial planning to eventual decommissioning. There are five fundamental principles of environmentally sustainable design, including: siting and structure design efficiency; energy efficiency; water efficiency; materials efficiency; and indoor air quality enhancement.

For detailed information on each of the items below, please refer to the *Your Home Technical Manual* at: **www.yourhome.gov.au**, and *Energy Smart Homes* at: **www.clean.energy.wa.gov.au**.

This checklist must be submitted with the planning application for all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

The City will seek to prioritise the assessment of your planning application and the associated building application if you can demonstrate that the development has been designed and assessed against a national recognised rating tool.

Please tick the boxes below that are applicable to your development.

Siting and structure design efficiency

Environmentally sustainable design seeks to affect siting and structure design efficiency through site selection, and passive solar design.

Does your development retain:

- ☐ existing vegetation; and/or
- ☑ natural landforms and topography

Does your development include:

- ☐ northerly orientation of daytime living/working areas with large windows, and minimal windows to the east and west
- ☑ passive shading of glass
- ☐ sufficient thermal mass in building materials for storing heat
- ☑ insulation and draught sealing
- ☑ floor plan zoning based on water and heating needs and the supply of hot water; and/or
- ☑ advanced glazing solutions

Energy efficiency

Environmentally sustainable design aims to reduce energy use through energy efficiency measures that can include the use of renewable energy and low energy technologies.

Do you intend to incorporate into your development:

- ○ renewable energy technologies (e.g. photo-voltaic cells, wind generator system, etc); and/or
- ☑ low energy technologies (e.g. energy efficient lighting, energy efficient heating and cooling, etc); and/or
- ☑ natural and/or fan forced ventilation

Water efficiency

Environmentally sustainable design aims to reduce water use through effective water conservation measures and water recycling. This can include stormwater management, water reuse, rainwater tanks, and water efficient technologies.

Does your development include:

- ○ water reuse system(s) (e.g. greywater reuse system); and/or
- ○ rainwater tank(s)

Do you intend to incorporate into your development:

- ☑ water efficient technologies (e.g. dual-flush toilets, water efficient showerheads, etc)

Materials efficiency

Environmentally sustainable design aims to use materials efficiently in the construction of a building. Consideration is given to the lifecycle of materials and the processes adopted to extract, process and transport them to the site. Wherever possible, materials should be locally sourced and reused on-site.

Does your development make use of:

- ○ recycled materials (e.g. recycled timber, recycled metal, etc)
- ○ rapidly renewable materials (e.g. bamboo, cork, linoleum, etc); and/or
- ○ recyclable materials (e.g. timber, glass, cork, etc)
- ○ natural/living materials such as roof gardens and “green” or planted walls

Indoor air quality enhancement

Environmentally sustainable design aims to enhance the quality of air in buildings, by reducing volatile organic compounds (VOCs) and other air impurities such as microbial contaminants.

Do you intend to incorporate into your development:

- ☑ low-VOC products (e.g. paints, adhesives, carpet, etc)

‘Green’ Rating

Has your proposed development been designed and assessed against a nationally recognised “green” rating tool?

- ○ Yes
- ☑ No

If yes, please indicate which tool was used and what rating your building will achieve:

_____

_____

_____

If yes, please attach appropriate documentation to demonstrate this assessment.

If you have not incorporated or do not intend to incorporate any of the principles of environmentally sustainable design into your development, can you tell us why:

Is there anything else you wish to tell us about how you will be incorporating the principles of environmentally sustainable design into your development:

When you have checked off your checklist, sign below to verify you have included all the information necessary to determine your application.

Thank you for completing this checklist to ensure your application is processed as quickly as possible.

Applicant's Full Name:_____ **Contact Number:** _____

Applicant's Signature: _____ **Date Submitted:** _____

Accepting Officer's Signature:_____

Checklist Issued: March 2011