



Metro Outer Joint Development Assessment Panel Agenda

Meeting Date and Time: Wednesday, 1 February 2023; 9:30am
Meeting Number: MOJDAP/226
Meeting Venue: Electronic Means

To connect to the meeting via your computer -
<https://us06web.zoom.us/j/87184019290>

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+61 8 6119 3900

Insert Meeting ID followed by the hash (#) key when prompted - 871 8401 9290

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 Gabriela Poezyn (A/Deputy Presiding Member)
Mr Jason Hick (Third Specialist Member)
Cr Phoebe Corke (Local Government Member, City of Cockburn)
Cr Tom Widenbar (Local Government Member, City of Cockburn)

Officers in attendance

Mr Lorenzo Santoriello (City of Cockburn)
Mr David King (City of Cockburn)

Minute Secretary

Mr Stephen Haimés (DAP Secretariat)

Applicants and Submitters

Mr Oliver Basson (Planning Solutions)
Ms Melanie Cox (Planning Solutions)

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

Ms Karen Hyde (Deputy Presiding Member)
Cr Chontelle Stone (Local Government Member, City of Cockburn)

3. Members on Leave of Absence

Nil.

4. Noting of Minutes

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

5. Declarations of Due Consideration

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



6. Disclosure of Interests

Nil.

7. Deputations and Presentations

- 7.1 Mr Oliver Basson (Planning Solutions) presenting in support of the recommendation for the application at Item 8.1. The presentation will address of the proposed child care premises development and the officer recommendation for approval.

The City of Cockburn and City of Kalamunda may be provided with the opportunity to respond to questions of the panel, as invited by the Presiding Member.

8. Form 1 – Responsible Authority Reports – DAP Applications

8.1 Lot 23 Russell Road, Hammond Park

Development Description: Child Care Premises
Applicant: Planning Solutions
Owner: Prosperous Development Pty Ltd
Responsible Authority: City of Cockburn
DAP File No: DAP/22/02351

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
DAP/22/02220 DR162/2022	City of Kwinana	Lot 9507 Berthold Street, Orelia	Proposed Child Care Centre	28/09/2022
DAP/22/02159 DR163/2022	Shire of Murray	No. 630 (Lot 137) Pinjarra Road, Furnissdale	Proposed Petrol Filling Station	28/09/2022
DAP/21/02036 DR236/2022	City of Swan	Lot 97 (31) & 817 (47) Lakes Road, Hazelmere	Proposed Construction of a Logistics Depot with Ancilliary Office Area	23/12/2022

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



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	Oliver Basson
Company (if applicable)	Planning Solutions
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 February 2023
DAP Application Number	DAP/22/02351
Property Location	Lot 23 Russell Road, Hammond Park
Agenda Item Number	8.1

Presentation Details

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



Presentation Content*

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

Brief sentence summary for inclusion on the Agenda	<i>The presentation will address:</i> Speaking in support of the proposed child care premises development and the officer recommendation for approval.
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In accordance with Clause 3.5.2 of the [DAP Standing Orders](#), your presentation request must also be accompanied with a written document detailing the content of your presentation.

Please attach detailed content of presentation or provide below:

Refer enclosed.

Presentation Summary

To:	Metro Outer Joint Development Assessment Panel	From:	Oliver Basson Planning Solutions
Attention:	Mr Eugene Koltasz (Presiding Member)	Job No:	8132
Copy to:	DAP Secretariat	Date:	27 January 2023
Subject:	DAP Meeting Number: MOJDAP/226 Item 8.1 – Proposed Child Care Premises Lot 23 Russell Road, Hammond Park.		

Planning Solutions acts on behalf of Brallgra Pty Ltd AFT G. Allan Family Trust, in support of the proposed child care premises development at Lot 23 Russell Road, Hammond Park (**subject site**).

We are pleased to receive the officer recommendation for **approval** and wish to express our support for the officer recommendation. We thank the City's officers for their collaboration throughout the assessment of the application. We have reviewed the conditions and advice notes and consider them to be satisfactory.

OVERVIEW AND MERITS OF THE PROPOSAL

The proposal involves the development of a single-storey, 119 place child care premises, with associated car parking, landscaping and access on the site.

The scale and form of the proposed child care premises respects the context and character of the predominantly single storey residential locality, and has been designed to a high standard to integrate into the adjoining residential built form. The proposed development has substantially benefitted from the expert input of traffic, acoustic, bushfire, waste and landscaping consultants, further demonstrating the suitability of the proposal for the site.

The proposal is consistent with the relevant provisions of the applicable planning framework, including the City's local planning scheme and policies. The proposed child care premises development will provide a valuable and essential service to the local community, supporting the ongoing growth and development of the Hammond Park locality.

SUMMARY

In summary, the proposed development is supported by the City's officers, is consistent with the relevant planning framework, has been attractively and functionally designed, and will provide important child care services to the locality.

We respectfully request the application for development approval be considered on its merits and the Metro Outer JDAP approve the recommendation provided in the RAR.

Thank you for your time and consideration. I would be pleased to answer any questions from the JDAP members at the meeting on 1 February 2023.

Yours sincerely,



OLIVER BASSON
SENIOR PLANNER

Lot 23 Russell Road, Hammond Park – Child Care Premises

Form 1 – Responsible Authority Report (Regulation 12)

DAP Name:	Metropolitan Outer JDAP	
Local Government Area:	City of Cockburn	
Applicant:	Planning Solutions	
Owner:	Prosperous Developments Pty Ltd	
Value of Development:	\$2.1 million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)	
Responsible Authority:	City of Cockburn	
Authorising Officer:	David King	
LG Reference:	DAP22/007	
DAP File No:	DAP/22/02351	
Application Received Date:	21 October 2022	
Report Due Date:	20 January 2023	
Application Statutory Process Timeframe:	90 Days + 7 days	
Attachment(s):	1. Development Plans 2. Location Plan 3. Schedule of Submissions, advertising radius and applicant comments 4. DPLH response 5. Traffic Impact Statement 6. Acoustic Report 7. Current Waste Management Plan 8. Bushfire Management Plan and Bushfire Emergency Evacuation 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 Metropolitan Outer JDAP resolves to:

- Accept** that the DAP Application reference DAP/22/02351 is appropriate for consideration as a “Child Care Premises” land use and compatible with the objectives of the zoning table in accordance with City of Cockburn Town Planning Scheme No. 3.

2. **Approve** DAP Application reference DAP/22/02351 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 of the City of Cockburn Town Planning Scheme No. 3, subject to the following conditions:

Conditions

1. Pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme.
2. This decision constitutes planning approval only and is valid for a period of four (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.
3. The development must be carried out in accordance with the details of this application herein, and any approved plans.
4. Hours of operation are restricted to 6:30am to 6:30pm Monday to Friday and not at all on weekends or public holidays.
5. A maximum of twenty (20) staff and 119 children are permitted on site at any one time.
6. The outdoor play areas are not to be utilised prior to 7am.
7. All stormwater must be contained and disposed of on-site, to the satisfaction of the City of Cockburn.
8. No building or construction activities shall be carried out before 7:00am or after 7:00pm, Monday to Saturday, and not at all on Sundays or public holidays.
9. **Prior to the issue of a building permit**, a detailed landscaping plan shall be submitted to and approved by the City.
10. Landscaping shall be installed and reticulated in accordance with the approved landscape plan prior to the occupation of the development. Landscaped areas are to be maintained thereafter in perpetuity and in good order to the satisfaction of the City.
11. **Prior to the issue of a building permit**, a schedule of the materials, finishes and colours are to be submitted to and approved by the City. The schedule shall include details of the type of materials proposed to be used including their colour and texture. The development shall thereafter be maintained in accordance with the approved materials schedule.
12. **Prior to the issue of a building permit**, a Construction Management Plan (CMP) shall be submitted to and approved by the City. The CMP shall be implemented to the satisfaction of the City.
13. **Prior to the issue of a Building Permit**, the owner/applicant shall:

- submit to the City for approval a preliminary proposal for an art work designed by a professional artist at a cost of 1% of the total project cost (to a maximum of \$250,000), to be located within the subject site as an integral part of the development;
- submit to the City for approval an 'Application for Art Work Design';
- enter into a contract with a professional artist/s to design and install (if appropriate) the art work approved by the City.

The art work shall then be installed prior to occupation of the building/development and maintained thereafter to the satisfaction of the City.

14. **Prior to the issue of a building permit**, the existing bin store shall be increased in size to 23m².
15. **Prior to the issue of a building permit**, a revised Waste Management Plan shall be provided to and approved by the City. The approved plan shall be implemented for the duration of the development.
16. **Prior to the occupation of the building hereby approved**, the 32 parking bays, driveways and points of ingress and egress shall be sealed, kerbed, drained, line marked and made available for use in accordance with the approved plans.
17. The hardstand is to be constructed and maintained to City's Paving and Drainage Specification for trafficable areas for the duration of the development. A compaction certificate is to be provided to the City prior to the issue of an occupancy permit.
18. The premises must clearly display the street numbers.
19. As per the approved plans, the two (2) bicycle racks shall be installed prior to the occupation of the development and maintained thereafter to the satisfaction of the City.
20. All outdoor lighting shall be installed and maintained in accordance with Australian Standard AS 4282-1997 "Control of the Obtrusive Effects of Outdoor Lighting".
21. **Prior to the issue of a building permit**, a revised Acoustic Report shall be submitted to the City for approval.
22. The approved Acoustic Report required by Condition 21 (above), shall be implemented at all times to the satisfaction of the City.
23. Prior to the issue of a building permit application, written confirmation from the builder shall be provided advising that the recommendations contained in the approved Acoustic Report are detailed within the building permit plans.
24. Prior to occupation of the development, the applicant shall provide written confirmation that the requirements of the Acoustic Report referred to in condition 22 have been incorporated into the completed development within the occupancy permit.

25. If an odour complaint is received by the City and deemed to be offensive, then any process, equipment and/or activities that are causing the odour shall be stopped until the process, equipment and/or activity has been altered to prevent odours to the satisfaction of the City.
26. **Prior to the issue of a building permit**, an Operational Management Plan shall be submitted to and approved by the City.
27. The applicant shall implement all of the recommendations contained in the Bushfire Management Plan for Lot 23 Russell Road, Hammond Park prepared by *Eco Logical Australia* dated 11 October 2022 and approved by the *Local Government* for the duration of the development.
28. **Prior to occupation of the building hereby approved**, a revised Bushfire Emergency Evacuation Plan shall be submitted to and approved by the City.

Advice Notes

- a. This is a Planning Approval only and does not remove the responsibility of the applicant/landowner to comply with all relevant building, health and engineering requirements of the City, or with any requirements of the City of Cockburn Town Planning Scheme No. 3, or with the requirements of any external agency.
- b. The development shall comply with the requirements of the Building Code of Australia.
- c. With regard to Condition 7, drainage is to be contained at a rate of 1 in 100 year storm event for a 24 hour period.
- d. With regard to Condition 9, the landscape plan shall address the location, number, size and species type of existing and proposed trees and shrubs, including calculations for the landscaping area. It shall detail additional tree wells in the northern car parking bays and landscaping of the verge.
- e. With regard to Condition 12, the Construction Management Plan shall address the following items:
 - I. Access to and from the site;
 - II. Delivery of materials and equipment to the site;
 - III. Storage of materials and equipment on the site;
 - IV. Parking arrangements for contractors and subcontractors;
 - V. Management of construction waste; and
 - VI. Other matters likely to impact on surrounding properties;
 - VII. Dust mitigation measures during the construction phase.
- f. With regard to Condition 14 and 15, the bin store area must be of an adequate size to contain all waste bins, at least 1.8m high, covered, fitted with a gate and graded to a 100mm diameter industrial floor waste with a hose cock, all connected to sewer.
- g. Crossovers are to be located and constructed to the City's specifications.

- h. All food businesses shall comply with the *Food Act 2008* and Chapter 3 of the Australia New Zealand Food Standard Code (Australia Only).
- i. An “Application to Construct or Alter a Food Premises” is required to be submitted to Health Services prior to construction. This is to be accompanied by detailed plans and specifications of the food preparation and storage area (including mechanical ventilation and hydraulics), sanitary conveniences and garbage room, demonstrating compliance with mentioned legislation.
- j. All toilets, ensuites and kitchen facilities in the development are to be provided with mechanical ventilation flued to the outside air, in accordance with the requirements of the National Construction Code (Building Code of Australia), the Sewerage (Lighting, Ventilation and Construction) Regulations 1971, Australian Standard S1668.2-1991 “The use of mechanical ventilation for acceptable indoor air quality” and the City of Cockburn Health Local Laws 2000. The City’s Health Service further recommends that laundries without external windows and doors should be ventilated to external air and condensating clothes dryers installed.
- k. The proposal shall comply with the *Child Care Services Regulations 2007* and the requirements of the Department for Child Protection and the applicant is advised approval shall be obtained from the Department for Families, Housing, Community Services and Indigenous Affairs.
- l. The dimensions of all car parking bays, aisle widths, wheel stops, columns, ramps and circulation areas complying with AS2890.1 and AS2890.6.
- m. The development shall comply with the noise pollution provisions of the *Environmental Protection Act 1986*, and more particularly with the requirements of the *Environmental Protection (Noise) Regulations 1997*.
- n. If dust is detected at adjacent premises and is deemed to be a nuisance by the City, then any process, equipment and/or activities that are causing the dust nuisance shall be stopped until the process, equipment and or activity has been altered to prevent the dust to the satisfaction of the City.
- o. With regard to condition 26, the Operational Management Plan shall address the following:
 - a. Available on-site and off-site parking provision for all users including staff and visitors and access/egress measures,
 - b. Arrangements for service or delivery vehicles,
 - c. The communication and promotion of alternative modes of travel like the provision of bike racks and EoT facilities and other applicable staff incentives like carpooling between staff.
- p. With regard to condition 28, the revised Bushfire Emergency Evacuation Plan shall include contact details of the operator.

Details: outline of development application

Region Scheme	Perth Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Urban
Local Planning Scheme	City of Cockburn Town Planning Scheme No. 3
Local Planning Scheme - Zone/Reserve	Development Zone
Structure Plan/Precinct Plan	Lot 458 Baler Court, Hammond Park – Local Structure Plan Residential R40
Use Class and permissibility:	Child Care Premises – ‘A’
Lot Size:	3,187m ²
Existing Land Use:	Vacant Site
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 proposed Child Care Premises has the following details:

- Single storey built form;
- A total site area of 3,187m² with a building area of 889m²;
 - The building footprint is ‘L’ shaped, with its entrance to Dorsal Bend and building façade continuing on the eastern boundary;
- 927m² Outdoor Play Area is provided;
 - The majority of the outdoor play area is contained to the western boundary, abutting Russell Road;
- The centre proposes 119 places and 20 staff;
- Operating hours are proposed from 6:30am – 6:30pm, Monday to Friday;
- Access is derived from a single, full movement, crossover via Dorsal Bend;
- A 17m² bin store is proposed in the south-west corner;
- 32 car parking bays are provided on site (inclusive of one disabled bay);
- Landscaping, predominantly within the outdoor play area, is proposed.

Proposed Land Use	Child Care Premises
Proposed Net Lettable Area	3,187m ²
Proposed No. Storeys	1

Attachment 1 – Development Plans

Background:

Lot 23 Russell Road, Hammond Park (the subject site) is located on the northern boundary of Hammond Park, approximately 700m from Aubin Grove Train Station and 400m from the 'Park Hive' Local Centre located on Macquarie Boulevard. The subject site is triangular in shape and is bound by Dorsal Bend, to the south, Residential properties to the east and Russell Road, an Other Regional Road, to the north and west. The site is vacant, with some scattered vegetation in the form of shrubs, and has remained so for some time. The site was previously approved for Multiple Dwelling developments in 2014 and 2018, which have since lapsed (**Attachment 2** – Location Plan).

Planning Framework

The subject site is *Urban* under the Metropolitan Region Scheme (MRS) and *Development zone* under the City of Cockburn Town Planning Scheme No. 3 (TPS 3). The site is designated as *Residential*, with a density code of R40, under the Lot 458 Baler Court, Hammond Park Local Structure Plan which was adopted by Council in 2014 and subsequently endorsed by the Western Australian Planning Commission (WAPC).

Child Care Premises' is a "A" use within the Residential Zone under TPS 3, which means that the use is not permitted unless the local government has exercised its discretion and has granted planning approval after giving special notice in accordance with clause 64(3) of the deemed provisions. The proposal was advertised in accordance with clause 64(3) of the deemed provisions, with the submissions received discussed further below.

Legislation and Policy:

Legislation

- Planning and Development Act 2005;
- Planning and Development (Development Assessment Panel) Regulations 2011;
- Planning and Development (Local Planning Schemes) Regulations 2015;
- City of Cockburn Town Planning Scheme No. 3

State Government Policies

- State Planning Policy 3.7 – Planning in Bushfire Prone Areas;
- State Planning Policy 5.4 – Road and Rail Noise;
- State Planning Policy 7.0 – Design of the Built Environment

Structure Plans/Activity Centre Plans

- Part Lot 458 Baler Road, Hammond Park – Local Structure Plan
 - Designates a Residential R40 density code

Local Policies

- Local Planning Policy 1.12 – Noise Attenuation;
- Local Planning Policy 1.14 – Waste Management;
- Local Planning Policy 1.17 – Non-Residential Uses in Residential Zones;
- Local Planning Policy 3.1 – Child Care Premises;
- Local Planning Policy 3.7 – Signs and Advertising;
- Local Planning Policy 5.13 – Percent for Art;
- Local Planning Policy 5.16 – Design Review Panel

Consultation:

Public Consultation

The proposal was advertised to the surrounding area for a period of 21 days, from 23 November to 14 December 2022. Consultation included a letter drop to residents considered to be impacted by the proposal, a sign on site and the plans/reports available for review on Comment on Cockburn.

A total of 11 submissions were received, with 4 objections, 6 supportive and 1 impartial. The key themes from submissions opposing the development are detailed briefly below (**Attachment 3** – Schedule of Submissions and advertising radius).

- Traffic;
- Safety
- Driver behaviour (Speeding);
- Property values.

With regard to traffic and safety, these issues are discussed further in the Planning Assessment section below. With regard to driver behaviour, this is enforced by the Western Australian Police and the City cannot assume the Child Care Premises will lead to an increase in speeding. Property values are not a valid planning consideration.

Referrals/consultation with Government/Service Agencies

Department of Planning, Lands and Heritage (DPLH)

In accordance with the WAPCs Instrument of Delegation DEL 2022/03 – Powers of Local Governments Metropolitan Region Scheme, the proposal was referred to the DPLH as it abuts a Category 2 Other Regional Road (Russell Road).

The DPLH have no objection to the proposal and advise the access is in accordance with Development Control Policy 5.1 – Regional Roads (Vehicular access), which seeks to minimise and control access to Regional Roads (**Attachment 4** – DPLH response).

Design Review Panel Advice

Under the City's Local Planning Policy 5.16 – Design Review Panel (DRP), the proposal does not meet the criteria to require mandatory review by the DRP as it is not;

- Three storeys or greater;
- Multiple dwellings of 20 or more dwellings;
- A mandatory JDAP application.

The proposal was not referred to the DRP by the Director of Planning as the built form is not considered to be impactful upon its surroundings.

Planning Assessment:

The proposal has been assessed against the relevant legislation, state and local planning policies and Lot 458 Baler Road, Hammond Park Local Structure Plan. The below matters are considered the key considerations with regard to determining the proposal.

Location and site design

The below provisions of Local Planning Policy 3.1 – Child Care Premises (LPP 3.1) are varied to some degree by the proposal. The provision is noted in the table and discussed further below.

Provision	Requirement	Proposal
LPP 3.1 – Location and Residential Amenity		
1 a)	Sites within close proximity to busy intersections and Primary Regional Roads and Other Regional Roads are not preferred due to issues of traffic conflict, noise and possible health implications associated with vehicle emissions.	The proposal abuts an Other Regional Road.
1 g)	Premises within a cul-de-sac or on lots with a battle-axe leg will not be supported.	The proposal is not within a cul-de-sac or battle-axe leg.

The location of Child Care Centres are intended to be carefully selected due to potential impacts associated with noise, traffic and emissions which may impact both the occupants of the centre and the surrounding neighbourhood. The issue of noise and traffic are discussed further below in their own sections. The planning framework does not specifically address the health implications or traffic pollution, rather it addresses emissions related to land use (such as Industrial uses), through *Development Control Policy 4.1 – Industrial Interface* and the Environmental Protection Authority *Guidance for the Assessment of Environmental Factors – Separation Distances between Industrial and sensitive Land Uses No. 3*.

Notwithstanding the above, the City recognises the proximity of the proposal to a regional road, which is inevitably a potential source of vehicle emissions, when compared to local roads. In this instance however, the location is considered appropriate, for the following reasons:

- Russell Road provides an existing verge area of mature trees which buffer the development;
- The proposal has been thoughtfully designed to minimise impact to surrounding residences relating to noise from the centre;
- The regional road network is vital to connecting the community via efficient traffic flow to community services such as child care

Traffic and access

Access

The subject site has a 108.8m frontage to Russell Road and a 44.9m frontage to Dorsal Bend. Access to the site is proposed from Dorsal Bend via a 6.2m crossover located adjacent to the eastern boundary of the subject site.

City officers and the DPLH are in agreeance that access via Dorsal Bend is the preferred outcome for the following reasons;

- Development Control Policy 5.1 – Regional Roads (Vehicle Access), generally prescribes against the creation of new access points on Regional Roads, particularly for individual development sites such as this;
- Access from Russell Road would require the creation of a deceleration lane which is not supported due to the sites location upon a bend in Russell Road which limits sight lines for vehicles;
- The deceleration lane would require the removal of 21 street trees within Russell Road reserve;
- Retention of the trees is beneficial for the City's street tree and urban forest program and assists the proposal in acting as a natural 'crash barrier' to protect the outdoor play area;

Traffic

The below provisions of Local Planning Policy 3.1 – Child Care Premises (LPP 3.1) are varied to some degree by the proposal. The provision is noted in the table and discussed further below.

Provision	Requirement	Proposal
LPP 3.1 – Parking and Traffic	Parking for larger vehicles (buses and service vehicles) should be considered in the design and layout of parking areas	No provision for parking of larger vehicles has been provided.
	Traffic associated with a child care premises is not to unreasonably reduce the function and safety of the local road network Vehicle access to and from the site must be available in forward gear, achieved through on-site manoeuvring.	The below section details the functionality of the local road. Vehicle access on site is achieved via forward gear with appropriate manoeuvring.

The site is located on the periphery of a predominantly residential pocket of land in the northern section of Hammond Road, with access obtained via a series of local roads. The most logical vehicle access approach for customers accessing from Russell Road (east or west) is as follows;

- Turn south from Russell Road into Ashendon Boulevard;
 - Turn east into Jurien Way;
 - Turn north into Penn Lane;
 - Turn east onto Baler Court; and
 - Turn north onto Dorsal Bend.
- See Location Plan.

The Traffic Impact Statement (TIS) provided by the applicant indicates the majority of traffic flow will follow the above indicated path of travel, and to a lesser extent enter/exit the site from an easterly direction via Jewel Gardens. With regard to trip generation rates, Child Care Premises typically have two busy periods being the morning and afternoon peak which are approximately between 8:00am - 9:00am and 4:30pm – 5:30pm. The TIS utilises findings from similarly sized Child Care Premises within the Perth Metropolitan area and estimates the AM peak to generate approximately 90 vehicles trips and the PM peak to generate 59 vehicle trips with the overall daily vehicle trips estimated at 418 trips. The trip estimations are within the *WAPC Traffic Impact Assessment Guidelines (2016)* recommendations which an increase in vehicle trips under 100 trips per hour will not impact the functionality or safety of the road network. The City's technical officers have reviewed and agreed with the findings (**Attachment 5 – Traffic Impact Statement**).

It is further noted that the subject site has good public transport and pedestrian connections. The proposal is approximately 700m from Aubin Grove Train Station which has a bus route connection to a stop on Ashendon Boulevard. The site is well located in terms of pedestrian infrastructure with an existing footpath on the south side of Dorsal Bend and two pedestrian crossings on Russell Road from Paloma Court and Jewel Gardens, providing northern access into Success.

Parking

The proposal is compliant as per the City's car parking requirements, identified in the below table.

Provision	Requirement	Proposal
TPS 3 Table 2 – Residential Use Classes – Vehicle Parking	Staff = 1 bay: 1 staff; PLUS Children = 1 bay: 10 children 119 Children require 11.9 (12) bays; 20 staff require 20 bays	The proposal requires 31.9 (32) car parking bays and has provided 32 car parking bays on site.

There is no scheme requirement for bicycle bays, however the applicant has indicated two bicycle racks being provided at the front of the premises which assist in providing additional forms of transport to the site. The City recommends an *Operational Management Plan* condition to assist in the management of several items including parking and deliveries to the site.

Noise

A Child Care Premises is a sensitive use which requires noise mitigation measures to be undertaken within the development due to its proximity to Russell Road, under State Planning Policy 5.4 – Road and Rail Noise. Additionally, a Child Care Premise is a source of noise and is required to provide mitigation measures to protect the amenity neighbouring residences, in accordance with local planning policy.

The proposal is supported by an Acoustic report prepared by Herring Storer which identifies the proposal is compliant against the relevant standards as set out by the

Environmental Protection (Noise) Regulations 1997 (EPNR), during the daytime period. The following measures are recommended by the acoustic report and subsequently, several conditions are recommended to provide for noise mitigation.

- The operating hours being conditioned to 6:30am – 6:30pm Monday – Friday;
- The outdoor play area is not to be used prior to 7:00am;
 - The 30 minute window of 6:30am – 7:00am is considered as the 'night-period' under the EPNR;
- The orientation of the building itself relatively screens the abutting dwellings so they are not impacted by the outdoor play area;
- A minimum density of 15kg/m² with a height of 2m to Russell Road;
- 6mm monolithic glass is provided to all habitable rooms (which is a higher standard of glazing).

The orientation of the building is well placed to provide screening to the eastern residents from the outdoor play area. It is noted that dwellings within close proximity to the proposal that directly abut Russell Road are fortunately subject to a Local Development Plan which required the dwellings to be constructed with 6mm glass for noise attenuation purposes.

Attachment 6 – Acoustic Report

Built Form

The City's *Local Planning Policy 1.17 – Non- Residential Uses in Residential Zones*, encourages commercial development within the Residential zone to be commensurate with its environment. In this regard, the proposal is a single storey development which front Dorsal Bend, providing passive surveillance to the street. The orientation of the building respects the existing residents by framing the outdoor play area on the western side of the lot to reduce the impact of noise. The bin store is located in the south west corner, not within direct line of sight, and the recommended landscaping plan condition is intended to provide additional tree wells in the norther car parking bays and landscape the verge to further screen the car park.

Waste

A 17m² bin store is proposed in the south-west corner of the subject site which is accessed internally via the associated carpark. A *Waste Management Plan* has been prepared with the application which proposes private collection, rather than reliance on the City's services, and advises of a twice weekly collection.

The City does not object to private collection or twice weekly collection in principle, however recommends the following conditions.

- Increase the bin store size to 23m²;
- Provide a revised Waste Management Plan.

The increased bin store size is requested as the City's *Local Planning Policy 1.14 – Waste Management*, requires the bin store to be capable of storing one (1) weeks waste. One weeks storage allows for a redundancy in the event multiple collections per week cannot be completed as has happened in the past few years due to the COVID-19 pandemic, fuel and labour shortages.

Minor modifications to the Waste Management Plan is recommended to provide a specific time when collection will occur and to clarify the potential measures which may be required to be undertaken during operating hours (relocation of staff vehicles etc).

Attachment 8 – current Waste Management Plan

Bushfire

The subject site is partially located within a bushfire prone area as designated by the Department of Fire and Emergency Services bushfire prone mapping. The source of the bushfire designation is Baler Reserve, which is approximately 80m to the east of the subject site (see Location Plan).

Under State Planning Policy 3.7 – Planning in Bushfire Prone Areas (SPP 3.7), a Bushfire Management Plan is required to identify the relevant *Bushfire Attack Level* (BAL) applicable to the built form. The BMP identifies the site as being BAL 12.5, however further recommends the premises itself is constructed to a BAL 19 standard. As the site can be developed to a standard below BAL 29, it is considered to meet the acceptable standards under SPP 3.7.

Section 5.5.1 – Vulnerable land uses of SPP 3.7, identifies Child Care Premises, amongst other uses, as a vulnerable land use as it is designed for people with a limited physical or mental capacity to assist themselves in the event of an emergency. The BEEP provided relevantly follows the measures identified in section 5.5.4 of SPP 3.7, with regard to identifying key requirements and actions in the event of an emergency, these include.

- Closure of the facility of days identified as ‘extreme’ or ‘catastrophic’ fire danger risk;
- The pre-planned evacuation of the facility via bus to Cockburn Arc;
- Shelter in place as a last resort.
 - Given the number of Children and staff, it would be unlikely that a secondary evacuation measure via walking from the site could be reasonably expected by the children.

The City has reviewed the BMP and BEEP and considers them satisfactory subject to updated specific contact details of the BEEP prior to occupancy.

Attachment 9 – Bushfire Management Plan and Emergency Evacuation Plan.

Conclusion:

The proposal is consistent with the objectives of the Residential zone, whereby it is compatible with and complementary to the existing development of the area. The proposal has detailed compliance with potential amenity concerns such as noise, traffic and parking to the extent where the amenity of residents is preserved or otherwise protected via conditions of development approval. Accordingly, the proposal is recommended for conditional approval.

Rev.	Amendment	Date
A	PRELIMINARY	08/09/22
B	DA ISSUE	28/09/22



01	COVER SHEET	B
02	LOCATION PLAN	B
03	SITE PLAN	B
04	FLOOR PLAN	B
05	ROOF PLAN	B
06	ELEVATIONS	B
07	STREET ELEVATIONS	B
08	3D VIEWS	B

HAMMOND PARK CHILDCARE CENTRE

LOT 23 RUSSELL ROAD, HAMMOND PARK, WA 6166

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HAMMOND PARK CCC

COVER SHEET

Scale		
Drawn	DC	Checked SJ
Date	28/09/22	
Job No.	2022073	
Dwg No.	3540 01	Rev: B A3 SHEET

Rev.	Amendment	Date
A	PRELIMINARY	08/09/22
B	DA ISSUE	28/09/22



LOCATION PLAN

NTS

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LOCATION PLAN

Scale	1 : 75	
Drawn	DC	Checked SJ
Date	28/09/22	
Job No.	2022073	
Dwg No.	3540 02	Rev: B A3 SHEET



FENCE TYPES

1.8m HIGH TIMBER FENCE



1.8m HIGH VERTICAL BLADE SLAT FENCING WITH CLEAR ACRYLIC BACKING



1.8m HIGH COLORBOND FENCE: MONUMENT



2m HIGH DOUBLE COLORBOND FENCE



DEVELOPMENT SUMMARY

SITE AREA:	3187 m ²
BUILDING AREA:	889 m ²
OUTDOOR AREA:	927 m ²
OUTDOOR AREA REQUIRED:	833 m ²
CAR BAYS:	32 (32 REQUIRED)
REGULAR BAYS	11
DISABLED BAY	1
STAFF BAYS	20

ROOM BREAKDOWN

ROOM NAME	PLACE	AGE GROUP	AREA REQUIRED CAL	AREA PROVIDED	STAFF RATIO	STAFF REQUIRED
ACTIVITY 1	12	0 - 1	39	40 m ²	.25	3
ACTIVITY 2	12	1 - 2	39	42 m ²	.25	3
ACTIVITY 3	20	2 - 3	65	67 m ²	.2	4
ACTIVITY 4	25	2 - 3	81.25	83 m ²	.2	5
ACTIVITY 5	20	3 - 4	65	65 m ²	.1	2
ACTIVITY 6	30	4 - 5	97.5	99 m ²	.1	3

TOTAL 119 20

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HAMMOND PARK CCC

SITE PLAN

Scale As indicated
Drawn DC Checked SJ
Date 28/09/22
Job No. 2022073
Dwg No. 3540 03 Rev: B A3 SHEET

SITE PLAN

1 : 400

Rev.	Amendment	Date
A	PRELIMINARY	08/09/22
B	DA ISSUE	28/09/22



FLOOR PLAN

1 : 200

Document Set ID: 11260817

Version: 1, Version Date: 18/10/2022

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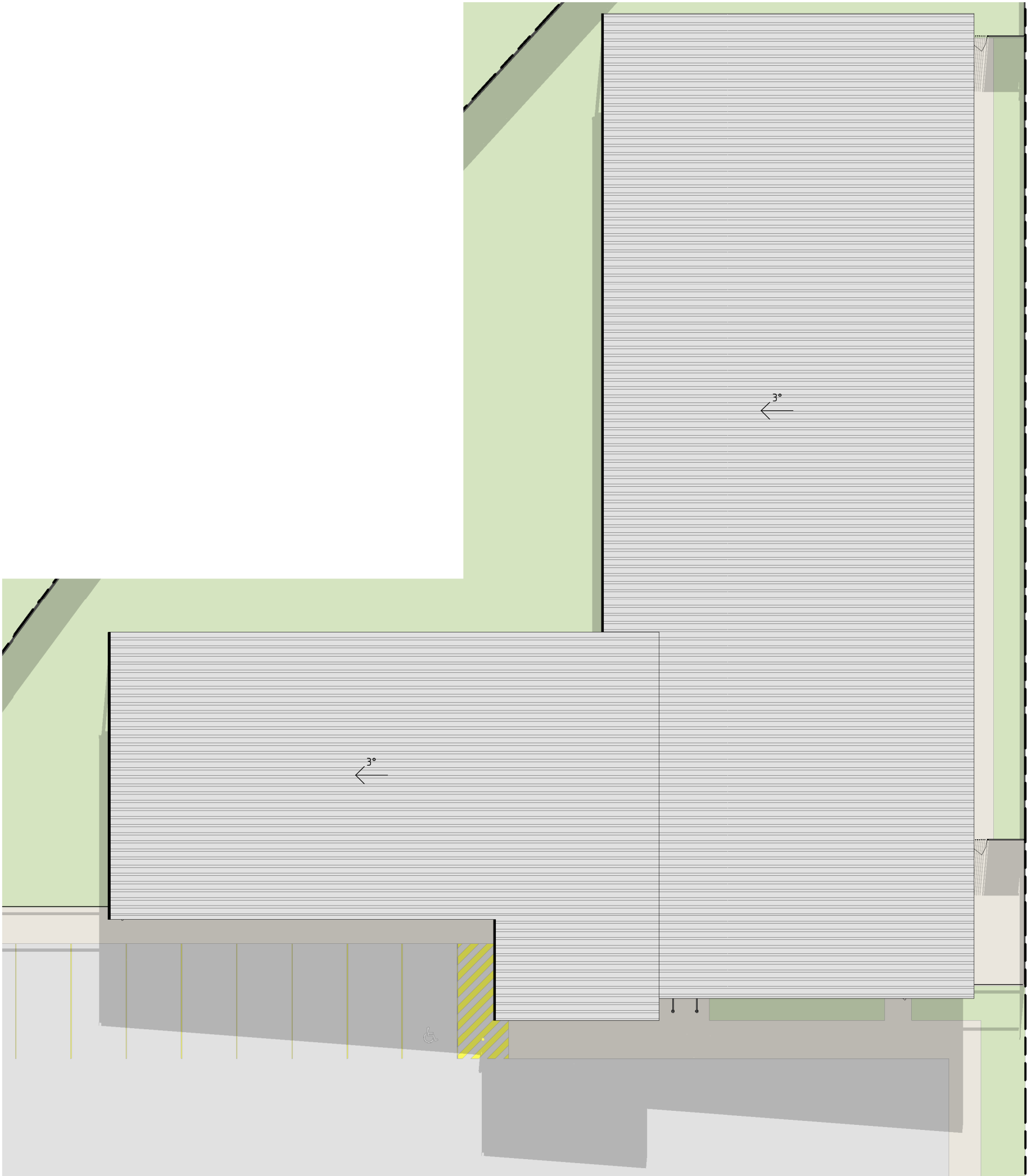
HAMMOND PARK CCC

FLOOR PLAN

Scale	1 : 200	Checked	SJ
Drawn	DC	Date	28/09/22
Date	28/09/22	Job No.	2022073
Dwg No.	3540 04	Rev.	B A3 SHEET

ROOF PLAN

1 : 200



DA ISSUE		
ISSUED FOR DEVELOPMENT APPROVAL		
Rev.	Amendment	Date
A	PRELIMINARY	08/09/22
B	DA ISSUE	28/09/22

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ROOF PLAN

Scale	1 : 200	
Drawn	DC	Checked SJ
Date	28/09/22	
Job No.	2022073	
Dwg No.	3540 05	Rev: B A3 SHEET

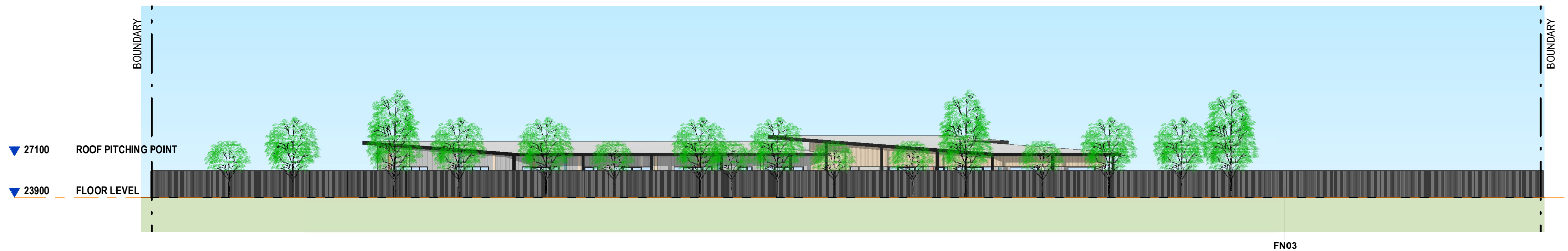


Rev.	Amendment	Date
A	PRELIMINARY	08/09/22
B	DA ISSUE	28/09/22



1 - DORSAL BEND ELEVATION

1 : 200



2 - RUSSELL ROAD ELEVATION

1 : 300

FENCE TYPES

FN01

1.8m HIGH TIMBER FENCE



FN02

1.8m HIGH VERTICAL BLADE SLAT FENCING WITH CLEAR ACRYLIC BACKING



FN03

2m HIGH DOUBLE COLORBOND FENCE



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STREET ELEVATIONS

Scale	As indicated	
Drawn	DC	Checked SJ
Date	28/09/22	
Job No.	2022073	
Dwg No.	3540 07	Rev: B A3 SHEET

DA ISSUE

ISSUED FOR DEVELOPMENT APPROVAL

Rev.	Amendment	Date
A	PRELIMINARY	08/09/22
B	DA ISSUE	28/09/22



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3D VIEWS

Scale		
Drawn	DC	Checked SJ
Date	28/09/22	
Job No.	2022073	
Dwg No.	3540 08	Rev: B A3 SHEET



City of Cockburn
G.I.S Services Department

Attachment 1 – Location Plan

SCALE = 1:4000

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NORTH

#	Submission	Comment	City comments
1	Details withheld	Objection. We don't want too many cars to pass dorsal bend everyday. It is not safe for our kids.	Objection. The City has reviewed the Traffic Impact Statement provided by the applicant and agrees with the findings that the road network will not be impacted with regard to functionality or safety.
2	Details withheld	Impartial Of concern is the traffic that will be increased along the likely main access route to and from the proposed centre, namely Jurien Way and Penn Lane. While 6.2 Traffic Flow within the Traffic Impact Statement (TIS) shows that 40% will be heading east along Dorsal Bend, traffic flows back onto Jurien Way via either Serenity Pkwy or Penn Lan via Baler Ct. The other 60% heading west will almost exclusively use Penn Lane via Baler Ct onto Jurien Way. While the TIS addresses the immediate roads from Dorsal Bend at 7.2, it does not mention that traffic from the centre will be running directly onto either Jurien Way or Barfield Road (and a lesser extent Serenity Pkwy) from them as the 'main roads' for travel to and from the centre. Already there are vehicles that drive fast and aggressively along these roads, with numerous close calls observed almost daily occurring at the corner of Penn Lane and Jurien Way, where vehicles either cut the corner short, take the corner fast and move to the oncoming lane or speed along. Increasing the traffic by another 400+ vehicles per day is likely going to increase the risk of an accident whether with another vehicle or a pedestrian, particularly with parents likely to be rushing to get their children to centre. While not opposed to the overall child care centre, traffic management in terms of speed reducing obstacles (speed humps etc) along sections of the above identified roads in particular Penn Lane, Serenity Pkwy and Baler Ct and needs to be considered.	Objection. The City has reviewed the Traffic Impact Statement provided by the applicant and agrees with the findings that the road network will not be impacted with regard to functionality or safety. The use of Barfield Road and Serenity Parkway are less likely to be utilised by traffic associated with the Child Care Centre as they do not provide a direct line of travel. With regard to speeding and safety, the posted speed limit within the nearby local road network is 50kmph however speeding is enforced by the Western Australian Police. There are currently no traffic management measures anticipated along the associated local roads, however these can be reviewed in due course.
3	Details withheld	Objection The amount of traffic driving Dorsal bend will increase significantly, this is a small neighbour hood street with lots of little kids who like to play out the front and ride their bikes on the street, this will be become very dangerous. I have no problem with the Child care centre with the entrance off Russell Rd a round about would need to be installed to facilitate traffic east and west. The CCC address is Russell Rd the entrance should be from Russell Rd.	Objection. The City has reviewed the Traffic Impact Statement provided by the applicant and agrees with the findings that the road network will not be impacted with regard to functionality or safety. The City and external authority (Department of Planning, Lands and Heritage) consider that access off Russell Road directly into the site would not be supported. With regard to the street number, the currently vacant site is Lot 23 Russell Road, Hammond Park. Where a proposal has its entrance is generally considered its address. It is likely the address will change to refer to Dorsal Bend.
4	Details withheld	Support I just had a baby and it would be amazing to walk to pick him up and drop him off. Would rather a petrol station as there's none in the area but still very much support this application.	Noted.
5	Details withheld	Support Just having had a baby, a childcare centre this close would be incredibly handy.	Noted.

6	Details withheld	Support My daughter wants to use it. Very convenient for us all	Noted.
7	Details withheld	Support There is more early learning services needed in this area as the waitlist are 18 months plus in this area. We need support for mothers to return to work or to have support in studying. As someone with zero family in Perth we rely on childcare to help us!	Noted.
8	Details withheld	Support New families in the area will benefit	Noted.
9	Details withheld	Support Convenient for childcare needs of my family.	Noted.
10	Leah Haskell 17 Mohan Loop, Hammond Park	Objection I believe there are already too many childcare centres in the area and also believe that this will affect traffic negatively within the residential area.	Objection. The City has reviewed the Traffic Impact Statement provided by the applicant and agrees with the findings that the road network will not be impacted with regard to functionality or safety. With regard to the proliferation of Child Care Centres, the proposal is an 'A' use in the Residential zone meaning it can be considered. The proposal of individual land uses are largely driven by market forces.
11	Sue Graham 5 Jurien Way, Hammond Park	Objection Traffic on Jurien Way and Penn Lane is already very busy due to the huge amounts of units and townhouses on Baler Court and Barfield Road, and with the possibility of 119 children at the childcare centre on any one day this could mean an additional 60-100 cars using these roads every day. The intersection of Jurien Way and Penn Lane quite often has near misses because people are too impatient and don't stop to look before turning the corner. And speed travelled on these residential streets is ridiculous. I live on the corner of this intersection and constantly live in fear of an accident. I believe the increased traffic flow from the proposed childcare centre will add to the probability of an accident at this intersection and more than likely devalue my property too because nobody likes backing out onto a busy street. Access via Russell Road and/or Baler Court would be a preferably option for council to consider should this proposal be approved.	Objection. The City has reviewed the Traffic Impact Statement provided by the applicant and agrees with the findings that the road network will not be impacted with regard to functionality or safety. With regard to speeding and safety, the posted speed limit within the nearby local road network is 50kmph however speeding is enforced by the Western Australian Police. With regard to property values, this is not considered a valid planning consideration. The City is unable to consider an alternate access which is not proposed. Notwithstanding, access derived from Russell Road has been considered and determined it would not be supported.



City of Cockburn
GIS Services Department

**Advertising radius (within
blue boundary)**

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NORTH

PS ref: 8132

18 January 2023

City of Cockburn
PO Box 1215, Bibra Lake DC
Western Australia 6965

Attention: David King, Senior Statutory Planner

Dear Sir,

**LOT 23 RUSSELL ROAD, HAMMOND PARK
APPLICATION FOR APPORVAL TO COMMENCE DEVELOPMENT- PROPOSED CHILD CARE PREMISES
RESPONSE TO REQUEST FOR FURTHER INFORMATION AND PUBLIC SUBMISSIONS**

Planning Solutions acts on behalf of Brallgra Pty Ltd ATF G.Allan Family Trust, the proponent of the proposed child care premises development at Lot 23 Russell Road, Hammond Park (subject site).

We refer to the correspondence received from the City of Cockburn (City) during assessment of the development application. Specifically, the following:

- City's Request for Further Information (RFI), received via email on 5 January 2023.
- Summary of submissions received during advertising of the proposed development via email on 9 January 2023.

The responses and additional commentary provided in this letter address the submissions on the proposed development, with no changes made to the proposed development plans in response to public comments.

1 RESPONSE TO CITY

The City requested additional information on 5 January 2023, generally relating to waste, health and landscaping. Responses to the City's request are provided in **Table 1** below.

Table 1 – Response to City (received via email 5 January 2023)

City's request	Applicant response
Waste	
<i>Please amend the existing storeroom to a 23m² to cater for the potential for on-street collection.</i>	The bins will now be collected on site only, twice per week by a private contractor. This negates the need for 26 potentially unsightly 240L bins to be collected from the verge. The proposed bin store is of a sufficient size to house the required number of bins for waste collection twice per week. Accordingly, the development plans have not been updated to reflect a larger bin store. However, if required, we understand the proponent is open to providing a larger bin store as part of an appropriately worded condition of development approval.

City's request	Applicant response
<i>Amend the WMP to address several items as shown in the attached.</i>	We note the comments from the City largely relate to increasing the size of the bin store. An updated Waste Management Plan (WMP) confirming on site collection only can be provided prior to building permit as an appropriately worded condition of development approval.
<i>Internal collection requires further revisions as to how collection will be managed where the vehicle requires utilising existing on site bays that may be occupied.</i>	The southern car parking bays are allocated for use by staff members, with the visitor bays located on the northern side of the car park. As shown in the swept path movements, the waste vehicle requires vacant car parking bays in the western portion of the car park to be able to reverse and exit the site in forward gear. This can practically work, as the western staff bays can be vacated during the period the waste vehicle occupies the site. The staff will be able to park in the visitor bays, which will largely be unoccupied between the hours of 10am and 2pm, generally the non-peak hours of the child care centre when drop offs and pick ups are not occurring. Further management measures can be provided as part of an operation management plan prior to occupancy, if required. Otherwise, details will form part of an updated WMP.
Health	
<i>A revised Acoustic Report is required to provide the correct road references in Appendix C which currently (incorrectly) references Morley Drive;</i>	A revised acoustic report has been provided to the City, clarifying this typographical error.
<i>Within the revised Acoustic report, please also have the consultant confirm the following:</i> <i>The location of modelling devices given the southern boundary borders on noise compliance;</i>	In the model for the "South Residence", there are multiple receivers between the façade of the residence and the boundary wall, as well as a receiver to at the east façade in the north corner. We understand the highest noise level for all these receivers has been used in the report to ensure the most thorough assessment.
<i>An Operational Management Plan is recommended to be developed to address the following;</i> <i>Detail the outdoor play area not being used prior to 7am;</i>	An operational management plan is not required to detail the outdoor play area not being used prior to 7am, given it is one of the recommendations of the acoustic report that this doesn't occur.
<i>Placement of traffic cones on selected bays overnight and returned to site 6:55am-7:00am? (this would assist in further mitigating noise concerns on the southern boundary particularly form car doors closing)</i>	Staff can be appropriately managed and briefed to ensure they do not park in car parking bays near the adjoining southern dwelling prior to 7am, if required. The proposed development will comply with the recommendations of the acoustic report.
<i>Odour may be an issue due to food scraps and nappies. Can the WMP include a timeframe for regular cleaning of the bins and bin store to ensure odour is managed?</i>	The updated WMP can include additional details relating to cleaning. We note it is a common misconception that the bins of a child care centre produce notable levels of odour. Waste is enclosed and sealed within rubbish bags, before being placed in the outdoor bins, which are generally also lined with rubbish bags. Waste is proposed to be collected twice per week, reducing the likelihood of any rubbish that would produce odours.

City's request	Applicant response
Landscaping	
Please update the existing landscaping plan to include the following; Additional shade trees within the northern car parking bays;	We understand the proponent is not opposed to providing tree wells to accommodate shade trees adjacent to the northern car parking bays. These can be included as part of an updated landscape plan, required as an appropriately worded condition of development approval.
Landscaping strip to Dorsal Bend is 600mm in lieu of the 2m required under the LPP 3.1. Please include landscaping of the verge to assist in screening of the car parking from the street.	The proponent is not opposed to providing landscaping within the Dorsal Bend verge, abutting the subject site. This can be included as part of an updated landscape plan, required as an appropriately worded condition of development approval.
It can be shown as conceptual for now with a detailed landscaping plan to be conditioned which indicates species selection.	Noted.

2 RESPONSE TO SUBMISSIONS

A summary of public consultation submissions was received from the City on 9 January 2023. A response to the submissions is provided in **Table 2** below.

Table 2 – Response to submissions (received via email 9 January 2023)

Submission	Applicant response
Submission No.1 (Objection)	
<i>We don't want too many cars to pass dorsal bend everyday. It is not safe for our kids.</i>	No specific safety issues have been identified for the proposed development as part of the Transport Impact Statement (TIS) prepared by Transcore.
Submission No.2 (Impartial)	
<i>Of concern is the traffic that will be increased along the likely main access route to and from the proposed centre, namely Jurien Way and Penn Lane. While 6.2 Traffic Flow within the Traffic Impact Statement (TIS) shows that 40% will be heading east along Dorsal Bend, traffic flows back onto Jurien Way via either Serenity Pkwy or Penn Lan via Baler Ct. The other 60% heading west will almost exclusively use Penn Lane via Baler Ct onto Jurien Way.</i> <i>While the TIS addresses the immediate roads from Dorsal Bend at 7.2, it does not mention that traffic from the centre will be running directly onto either Jurien Way or Barfield Road (and a lesser extent Serenity Pkwy) from them as the 'main roads' for travel to and from the centre.</i>	The TIS confirms the road network has the capacity to accommodate the additional vehicles generated by the proposed development. No specific safety concerns are identified within the TIS.

Submission	Applicant response
<i>Already there are vehicles that drive fast and aggressively along these roads, with numerous close calls observed almost daily occurring at the corner of Penn Lane and Jurien Way, where vehicles either cut the corner short, take the corner fast and move to the oncoming lane or speed along. Increasing the traffic by another 400+ vehicles per day is likely going to increase the risk of an accident whether with another vehicle or a pedestrian, particularly with parents likely to be rushing to get their children to centre.</i> <i>While not opposed to the overall child care centre, traffic management in terms of speed reducing obstacles (speed humps etc) along sections of the above identified roads in particular Penn Lane, Serenity Pkwy and Baler Ct and needs to be considered.</i>	The speed of vehicles is controlled by the enforced speed limits and monitored by WA Police. The TIS confirms the road network has the capacity to accommodate the additional vehicles generated by the proposed development. No specific safety concerns are identified within the TIS. It is speculative that parents or guardians would rush to get their children to the centre. The enforced speed limits control vehicle speeds. It is expected that people accessing the facility are safety minded and would not put their children or other children at risk by driving dangerously.
Submission No.3 (Objection)	
<i>The amount of traffic driving Dorsal bend will increase significantly, this is a small neighbour hood street with lots of little kids who like to play out the front and ride their bikes on the street, this will be become very dangerous. I have no problem with the Child care centre with the entrance off Russell Rd a round about would need to be installed to facilitate traffic east and west. The CCC address is Russell Rd the entrance should be from Russell Rd.</i>	The TIS confirms that assuming a maximum of 119 children being present at the centre (i.e. centre operating at full capacity), the following number of trips was estimated for the proposed centre: • AM peak hour: 90 trips generated (47 in/43 out). • PM peak hour: 59 trips generated (27 in/32 out). • Daily traffic generation: 418 trips generated (209 in/209 out). During the AM peak hour, it can be estimated that approximately 2 cars per minute would be accessing the child care centre. This is considered to be relatively low and is not expected to have adverse amenity impacts on surrounding properties. The TIS also confirms that Dorsal Bend has the capacity to accommodate the additional vehicles using the road network.
Submission No.4 (Support)	
<i>I just had a baby and it would be amazing to walk to pick him up and drop him off.</i> <i>Would rather a petrol station as there's none in the area but still very much support this application.</i>	The support for the proposal is acknowledged.
Submission No.5 (Support)	
<i>My daughter wants to use it. Very convenient for us all.</i>	The support for the proposal is acknowledged.
Submission No.6 (Support)	
<i>There is more early learning services needed in this area as the waitlist are 18 months plus in this area. We need support for mothers to return to work or to have support in studying. As someone with zero family in Perth we rely on childcare to help us!</i>	The support for the proposal is acknowledged.

Submission No.7 (Support)	
<i>New families in the area will benefit.</i>	The support for the proposal is acknowledged.
Submission No.8 (Support)	
<i>Convenient for childcare needs of my family.</i>	The support for the proposal is acknowledged.
Submission No.9 (Objection)	
<i>I believe there are already too many childcare centres in the area and also believe that this will affect traffic negatively within the residential area.</i>	There has been a clear demand identified for additional child care services within the locality. The TIS confirms the traffic generated by the development will have an insignificant impact on the road network.
Submission No.10 (Objection)	
<i>Traffic on Jurien Way and Penn Lane is already very busy due to the huge amounts of units and townhouses on Baler Court and Barfield Road, and with the possibility of 119 children at the childcare centre on any one day this could mean an additional 60-100 cars using these roads every day. The intersection of Jurien Way and Penn Lane quite often has near misses because people are too impatient and don't stop to look before turning the corner. And speed travelled on these residential streets is ridiculous.</i> <i>I live on the corner of this intersection and constantly live in fear of an accident. I believe the increased traffic flow from the proposed childcare centre will add to the probability of an accident at this intersection and more than likely devalue my property too because nobody likes backing out onto a busy street.</i> <i>Access via Russell Road and/or Baler Court would be a preferably option for council to consider should this proposal be approved.</i>	The TIS confirms the road network has the capacity to accommodate the additional vehicles generated by the proposed development, with the traffic likely to have an insignificant impact on the road network. No specific safety concerns are identified within the TIS. We understand access via Russell Road is not supported by the City.

3 CONCLUSION

The responses provided within this letter address the request for further information by the City and public submissions received during the consultation period.

We respectfully request the City proceeds to finalise its assessment and favourable recommendation of the application to the Development Assessment Panel.

Should you have any queries or require further clarification regarding the proposal, please do not hesitate to contact the writer.

Yours faithfully,



OLIVER BASSON
SENIOR PLANNER



Department of **Planning,
Lands and Heritage**

City of Cockburn
PO Box 1215
Bibra Lake DC WA 6965

Your ref: DAP22/007

Our ref: DP/10/00666

Enquiries: Simon Luscombe (Ph: 6551 9307)

17 November 2022

Attention: David King

Dear David,

Re: Lot 23 Russell Road, Hammond Park

I refer to your correspondence dated 16 November 2022 regarding the above application. In accordance with the Western Australian Planning Commission's (WAPC) Notice of Delegation dated 18 January 2022, the following comments are provided with respect to this proposal which seeks approval for a childcare centre. The centre will accommodate 119 children and 20 staff.

Land Requirements

The site abuts Russell Road which is reserved as an Other Regional Road (ORR) in the Metropolitan Region Scheme (MRS) and Category 2 per Plan Number SP 694/5. The site is not affected by the ORR reservation for Russell Road.

Access

Access will be obtained from Dorsal Bend, a lower order road. This is in accordance with the Commission's Regional Roads (Vehicular Access) Policy D.C. 5.1, which seeks to minimise the number of new crossovers onto regional roads.

Transport Impact Statement

The above report by Transcore dated September 2022 has utilised 3.5 trips per child as a daily trip rate. It is anticipated that the development will generate 90 AM peak hour trips and 59 PM peak hour trips with 418 daily trips estimated.

Recommendation

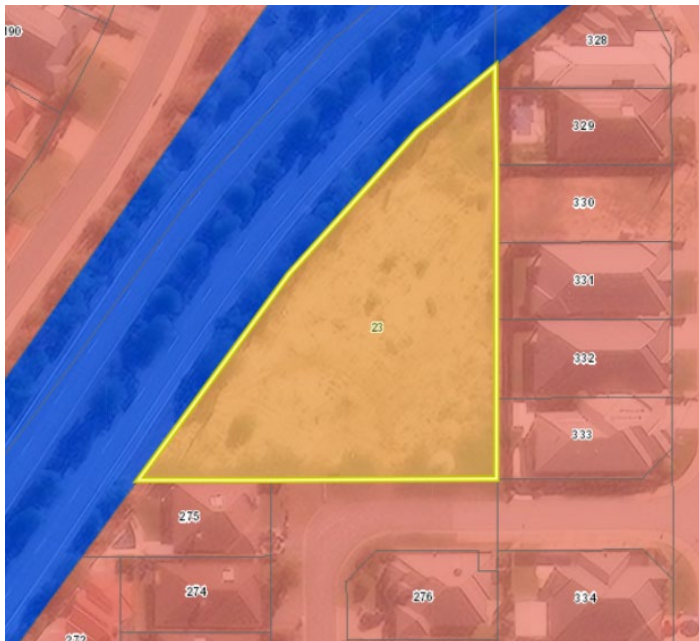
The Department has no objection to the proposal on ORR planning grounds. It is recommended that swept path drawings at Appendix B *Turn Path Plans* be checked / endorsed to the satisfaction of the local government. Drawing t22.177 shows 8.8 metre service vehicles encroaching over two lanes and kerbing on Dorsal Bend.

Thank you for your correspondence. Should you have any further queries, please contact me on 6551 9307 or via email simon.luscombe@dplh.wa.gov.au.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'S Luscombe'.

Simon Luscombe
Principal Planning Officer
Strategy and Engagement



MRS map

Proposed Childcare Centre, Lot 23 Russell Road, Hammond Park

Transport Impact Statement

PREPARED FOR:
Brallgra P/L ATF G. Allan
Family Trust

October 2022

Document history and status

Author	Revision	Approved by	Date approved	Revision type
Vladimir Baltic	r01	B Bordbar	19/08/2022	Draft
Vladimir Baltic	r01a	B Bordbar	13/09/2022	Final
Vladimir Baltic	r01b	B Bordbar	30/09/2022	1 st Revision
Vladimir Baltic	r01c	B Bordbar	26/10/2022	2 nd Revision
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Author: Vladimir Baltic

Project manager: Behnam Bordbar

Client: Brallgra P/L ATF G. Allan Family Trust

Project: Childcare Centre Hammond Park

Document revision: r01d

Project number: t22.177

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REPORT TABLES

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1 Introduction

This Transport Impact Statement has been prepared by Transcore on behalf of Brallgra P/L ATF G. Allan Family Trust with regards to the proposed childcare centre to be located at Lot 23 Russell Road in Hammond Park, City of Cockburn (subject site).

The subject site (approximately 3,187m² in size) is located on the southern side of Russell Road, approximately 600m west of the Kwinana Freeway interchange and the Aubin Grove Train Station and about 150m east of Ashendon Boulevard intersection as shown in **Figure 1**.

The site is currently vacant and located within a predominantly residential setting.

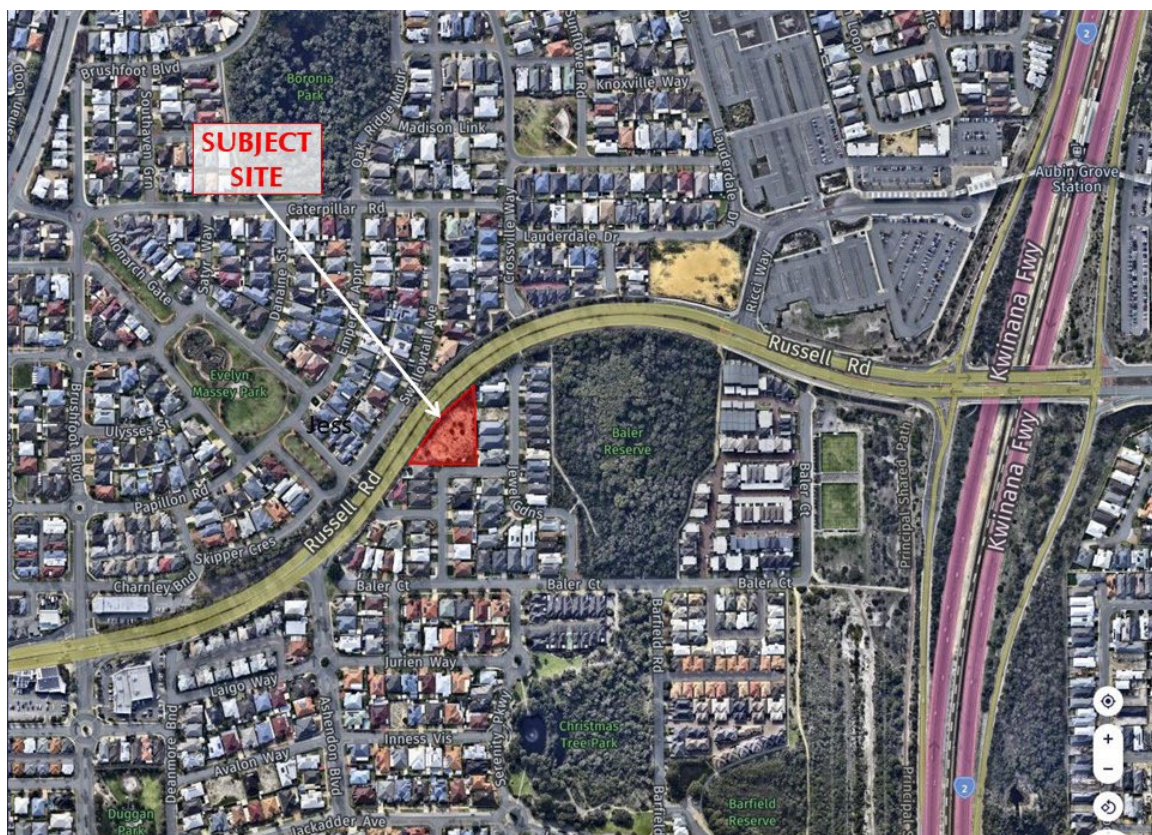


Figure 1: Location of the subject site

The Transport Impact Assessment Guidelines (WAPC, Vol 4 – Individual Developments, August 2016) states: “A Transport Impact Statement is required for those developments that would be likely to generate moderate volumes of traffic¹ and therefore would have a moderate overall impact on the surrounding land uses and

¹ Between 10 and 100 vehicular trips per hour

transport networks". Section 6.1 of Transcore's report provides details of the estimated trip generation for the proposed development.

Accordingly, as the total peak hour vehicular trips are estimated to be less than 100 trips, a Transport Impact Statement is deemed appropriate for this development.

The key issues that are addressed in this report include the traffic generation and distribution of the proposed development, parking supply and demand and access/egress movement patterns.



2 Development Proposal

The development proposal contemplates a childcare centre at Lot 23 Russell Road in Hammond Park, City of Cockburn.

The proposal for the subject site is for a single-storey childcare centre comprising the following elements:

- A single-storey childcare centre building with six activity rooms (one baby room, one kindy room and four toddler's rooms);
- Reception area;
- Staff room with kitchen, laundry, meeting and office space;
- Outdoor play spaces; and,
- On-site car parking for 32 car bays (inclusive of one ACROD bay).

The child care centre is planned to accommodate up to a maximum of 119 children and 20 staff.

A single, full-movement crossover on Dorsal Bend is proposed to service the childcare centre. The crossover is located at the easternmost end of the site midway between the adjacent bend in the road and Jewel Gardens intersection. The crossover location facilitates good sightlines in both directions.

A secured bicycle parking area with two bike rails is provided adjacent to the main entry.

The enclosed bin store area is proposed to be located at the southwest corner of the site.

The pedestrian access to the childcare centre is facilitated via the existing pedestrian path on the southern side of Dorsal Bend, between Jewel Gardens and the subject site. There is presently no path on the remainder of Dorsal Bend (i.e., section between the site and Baler Court). A pedestrian access path connecting the CCC to Dorsal Bend footpath is proposed to facilitate direct access into the CCC.

Refer to **Appendix A** for the proposed site plan.

3 Vehicle Access and Parking

3.1 Access

According to the plans prepared by Brown Falconer architects, the proposed car park would be serviced via a single, 6.0m wide, full-movement crossover on Dorsal Bend.

The crossover is proposed to be located at the easternmost end of the site providing maximum separation from the adjacent Jewel Gardens intersection to the east and bend in Dorsal Bend road to the west. The location of the proposed access on Dorsal Bend in lieu of Russell Road is also a preference of City of Cockburn due to potential safety and sightline concerns.

3.2 Parking

Based on the advice provided to Transcore the parking requirements applicable for the proposed childcare centre is 1 space per 10 children for visitors and 1 space per each employee. Accordingly, the total parking requirement equates 32 parking bays, 12 bays for visitors/parents and 20 bays for staff.

The subject childcare provides a total of 32 bays of which 20 car bays are for staff and 12 bays for visitors (including one ACROD). Accordingly, the proposal meets the parking requirements stipulated in relevant parking policies.

In addition, one turnaround bay is provided at the westernmost end of the car park facilitating safe and easy turning manoeuvres within the site.

4 Provision for Service Vehicles

According to the advice provided by the future childcare centre operator, it is envisaged that all waste collection will be carried out on-site by a private contractor, outside of the peak CCC operating hours. Refer **Appendix B** for turn path plans confirming the capacity of the scheme to support such operations.

Alternatively, should waste collection be required from the verge, rubbish bins can be wheeled out onto the Dorsal Bend verge for collection on designated days.

5 Hours of Operation

The proposed childcare centre is expected to operate during weekdays between 6:30AM and 6:30PM with heaviest traffic movements expected to occur during morning drop-off and afternoon pick-up hours, typically between 8:00-9:00AM and 4:30-5:30PM.

6 Daily Traffic Volumes and Vehicle Types

In order to assess the potential traffic impact from the proposed childcare centre, a traffic generation and distribution exercise was undertaken. The aim of this exercise is to estimate the traffic that would be generated by the proposed development and to establish the level of traffic increases on the surrounding road network.

6.1 Trip Generation

In order to establish an accurate traffic generation rate for this centre, a number of traffic count surveys undertaken by Transcore at similar centres in the Perth metropolitan area, were sourced.

Discussions with the respective centre managers revealed that the peak drop-offs and pick-ups for each of these centres occur between the hours of 7:00AM– 10:00AM and 3:00PM–6:00PM.

From the total number of children at each of the centres on the surveyed days, the following average generation rates were established for the morning and afternoon surveyed periods:

- 7:00AM– 10:00AM: 1.58 trips per child (52% in/48% out); and,
- 3:00PM–6:00PM: 1.67 trips per child (47% in/53% out).

From this information, the traffic generation rate for the combined period of 7:00AM– 10:00AM and 3:00PM–6:00PM was calculated as 3.25 trips per child. To convert this figure to a daily generation rate, this figure was increased to 3.5 trips per child to account for any trips outside of the surveyed times. It was assumed that the daily in and out split for vehicle trips was 50/50.

Furthermore, the following average peak hour generation rates were established from the surveys for the child care centres:

- Morning peak hour: 8:00AM–9:00AM: 0.75 trips per child (52% in/48% out); and,
- Afternoon peak hour: 4:30PM–5:30PM: 0.49 trips per child (43% in/57% out).

Comparison of the six-hour generation rates and the peak hour generation rates confirms that the distribution of traffic from these centres is spread over the peak periods and that full concentration of traffic does not occur in the peak hour. The AM peak hour represents 47% of the 3-hour AM peak period traffic generation and the typical school PM and road network PM peak hours represent 36% and 29% of the 3-hour PM peak period traffic generation, respectively. As such, childcare centres operate quite differently to schools as their peak period is spread out.

Accordingly, assuming a maximum of 119 children being present at the centre (i.e., centre operating at full capacity), the following number of trips was estimated for the proposed centre:

- AM peak hour: 90 trips generated (47 in/43 out);
- PM peak hour: 59 trips generated (27 in/32 out);
- Daily traffic generation: 418 trips generated (209 in/209 out).

6.2 Traffic Flow

Based on the site location and location of residential areas in the immediate locality and the permeability of the local road network, the centre's traffic distribution adopted for this analysis is as follows:

- 60% to/from the residential areas to the south/southwest of the site and along Dorsal Bend (west); and,
- 40% to/from the residential areas to the south/southeast of the site and along Dorsal Bend (east).

Figure 2 illustrates trip generation and traffic distribution over the local road network for the proposed Centre.



Figure 2. Estimated traffic movements for the proposed development – morning peak, afternoon peak and total daily trips

6.3 Impact on Surrounding Roads

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

“As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 percent may. All sections of road with an increase greater than 10 percent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 percent of capacity. Therefore, any section of road where the development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis.”

As detailed in **Section 0**, the proposed development will not increase traffic on any lanes/roads on the surrounding road network by 100vph, therefore the impact of the development traffic on the surrounding road network will not be significant and does not require further detailed traffic impact assessment.

7 Traffic Management on Frontage Streets

7.1 Context

The subject site is located on the southern side of Russell Road, approximately 600m west of the Kwinana Freeway interchange and about 150m east of Ashendon Boulevard intersection in Hammond Park.

7.2 Existing Road Network

Dorsal Bend, is a typical low-order residential street, constructed to a 6.2m wide, single-carriageway standard. It entails an L-shaped alignment with a 90-degree bend in the vicinity of the site. A pedestrian footpath is in place along the southern side of the road only, and only for the section between the subject site and the adjacent Jewel Gardens intersection.

Dorsal Bend is classified as an *Access Road* (MRWA, Functional Road Hierarchy), operating under a default build-up area speed the limit of 50km/h.

Dorsal Bend forms priority-controlled T-intersections with Jewel Gardens at the eastern end and Baler Court at the southern end.

According to Main Roads WA *Crash Map* tool which provides detailed intersection crash data, no crashes were recorded at either Dorsal Bend/Jewel Gardens or Dorsal Bend/Baler Court intersection over the 5-year period ending 31 December 2021.

8 Public Transport Access

The subject site is directly served by a number of bus services which operate along Russell Road with terminating stations at local Aubin Grove Train Station (service No. 525, 526, 527, 534, 535, 536 and 537), as shown in **Figure 3**.

These bus services also provide connectivity to a number of key local attractors including Cockburn Train Station thus securing access to greater Perth train network. The closest bus stops are located on Russell Road approximately 550m west of the site, Aubin Grove Bus Terminal (also 550m east of the site) and Jackadder Avenue, approximately 490m south of the site. All bus stops are accessible via the existing network of paths in this locality.

As such it can be concluded that the subject site has a very good and convenient public transport coverage.

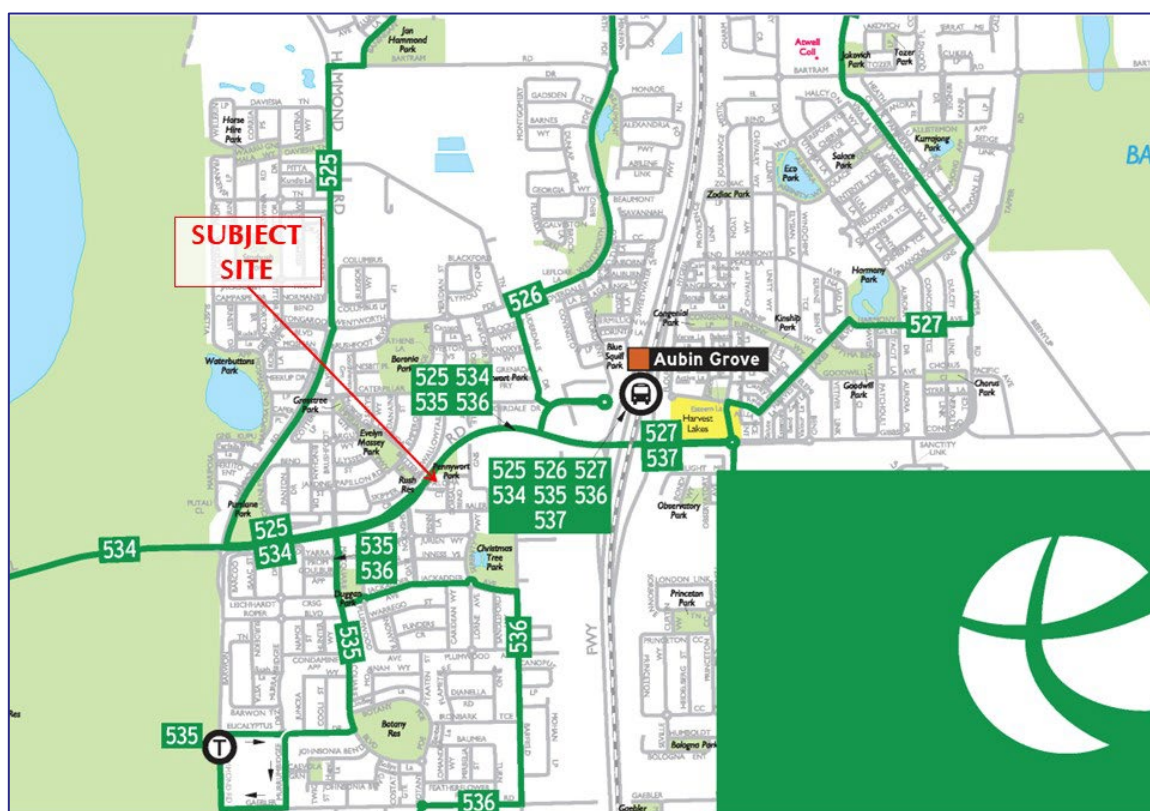


Figure 3: Public transport services (TransPerth Map)

9 Pedestrian Access

Pedestrian access to the subject site is available via the existing footpaths which are in place on Dorsal Bend which connects at the eastern end to the Jewel Gardens footpath.

As part of the development proposal, a new footpath link is proposed to connect the existing Dorsal Bend footpath with the childcare centre building main access.

10 Cyclist Access

Although the site does not formally have direct access to cycle path system (refer **Figure 4**) an extensive network of regional shared paths, on-street cycling lanes and roads classified as “good road riding environment” surrounds the site providing indirect access to the site feasible for cyclists. Refer **Figure 4** for more details.

A total of two bike racks are proposed near the entry into the childcare centre so to encourage patrons and staff to access the site by non-motorised means of transport.

Appropriate end-of-trip facilities are provided within the development to facilitate bike trips to the development.

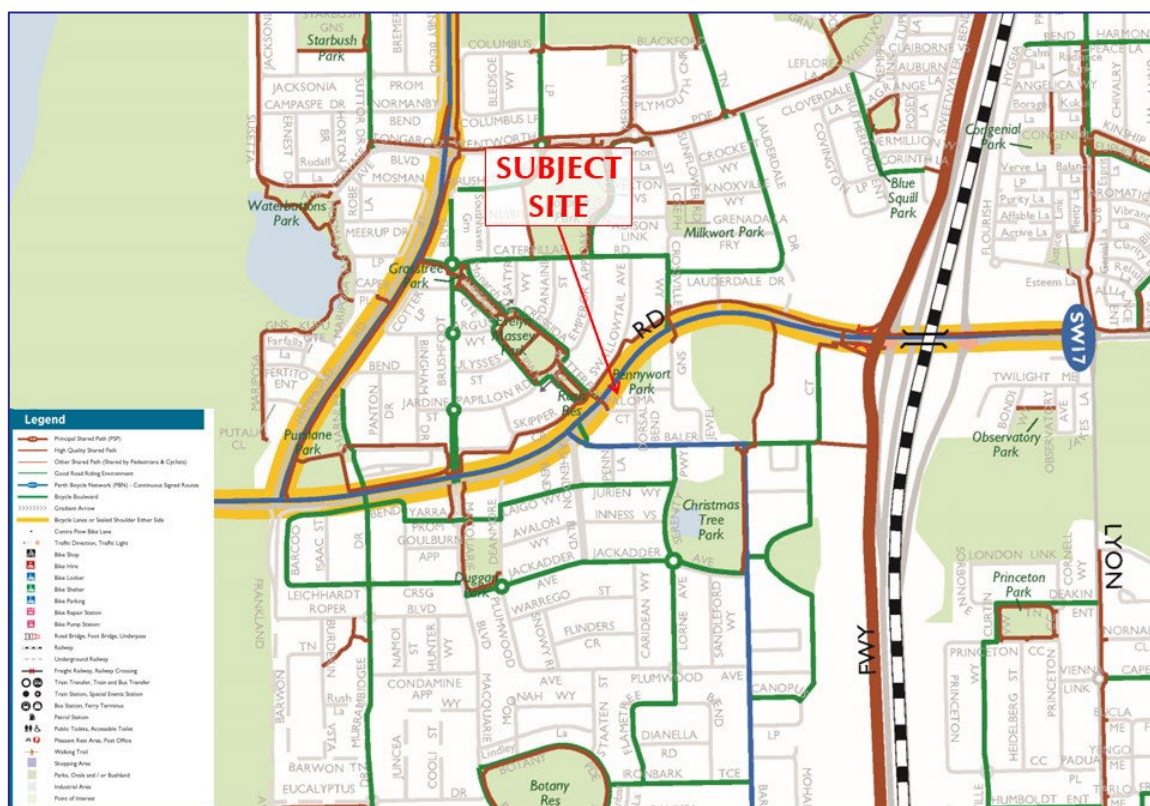


Figure 4: Extract from Perth Bicycle Network (Department of Transport)

11 Site Specific Issues

No site-specific issues have been identified for the proposed development.

12 Safety Issues

No specific safety issue has been identified for the proposed development.

13 Conclusions

This Transport Impact Statement (TIS) provides information on the proposed childcare centre to be located at Lot 23 Russell Road in Hammond Park, City of Cockburn.

The site features good connectivity via the existing road network and convenient and easy access to public transport services. The site is well served by the existing pedestrian facilities and partially by cyclist facilities, which are presently in place within the close proximity to the site.

The centre is proposed to cater for about 119 children by 20 staff.

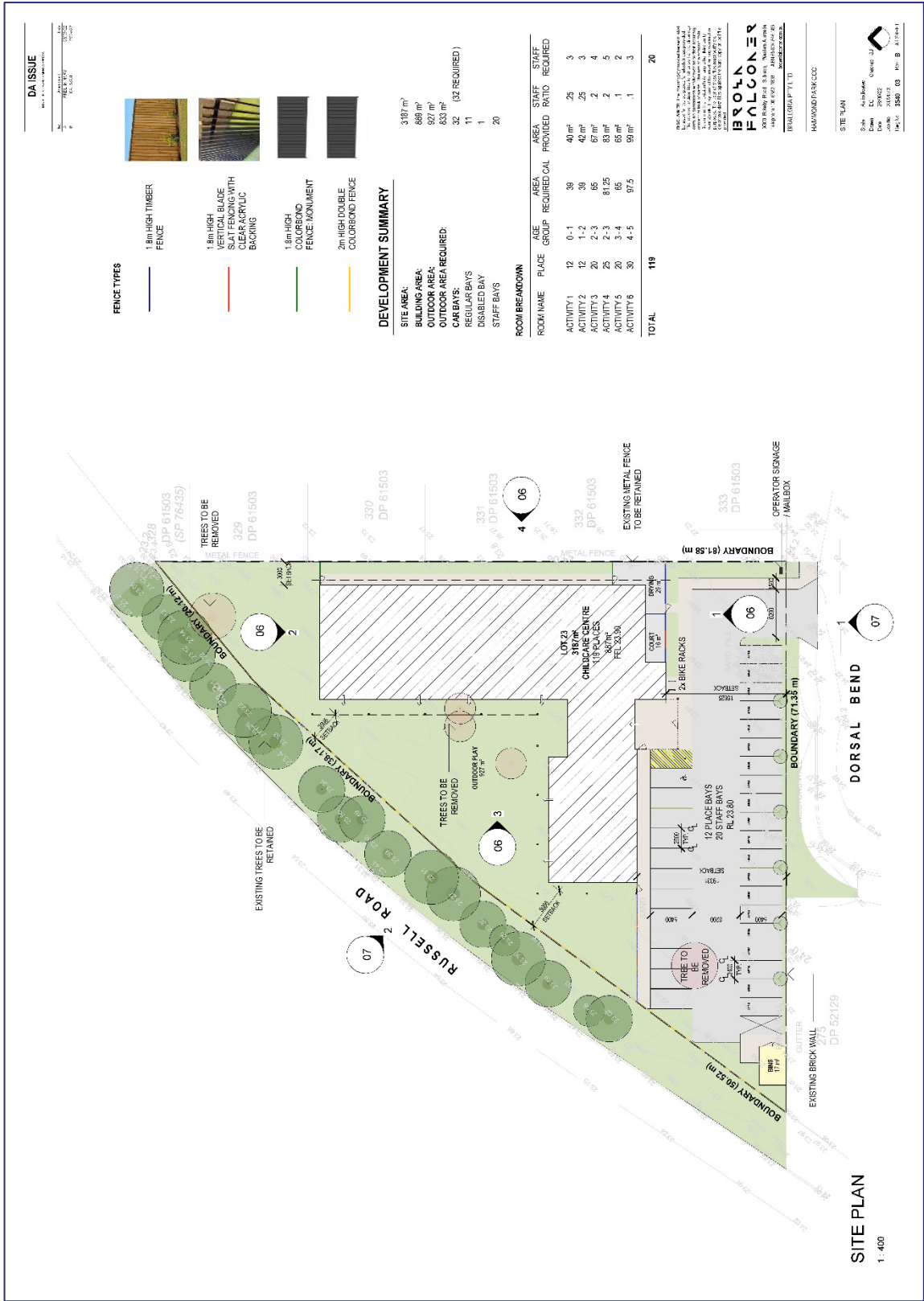
Vehicle access to and from the site will be via a single full movement crossover on Dorsal Bend which leads to a 32-bay on-site car park, inclusive of one ACROD bay. Additional turnaround bay is also provided to facilitate safe and congestion-free internal car park operations. The proposed car parking supply meets the relevant parking requirements for the proposed type of land use.

The traffic generation, distribution and impact assessment documented in **Section 6** of this report demonstrates that the traffic operations of the road network in the vicinity of the proposed childcare centre would not be adversely impacted by the additional development traffic.

Accordingly, it is concluded the traffic related issues should not form an impediment to the approval of this childcare centre.

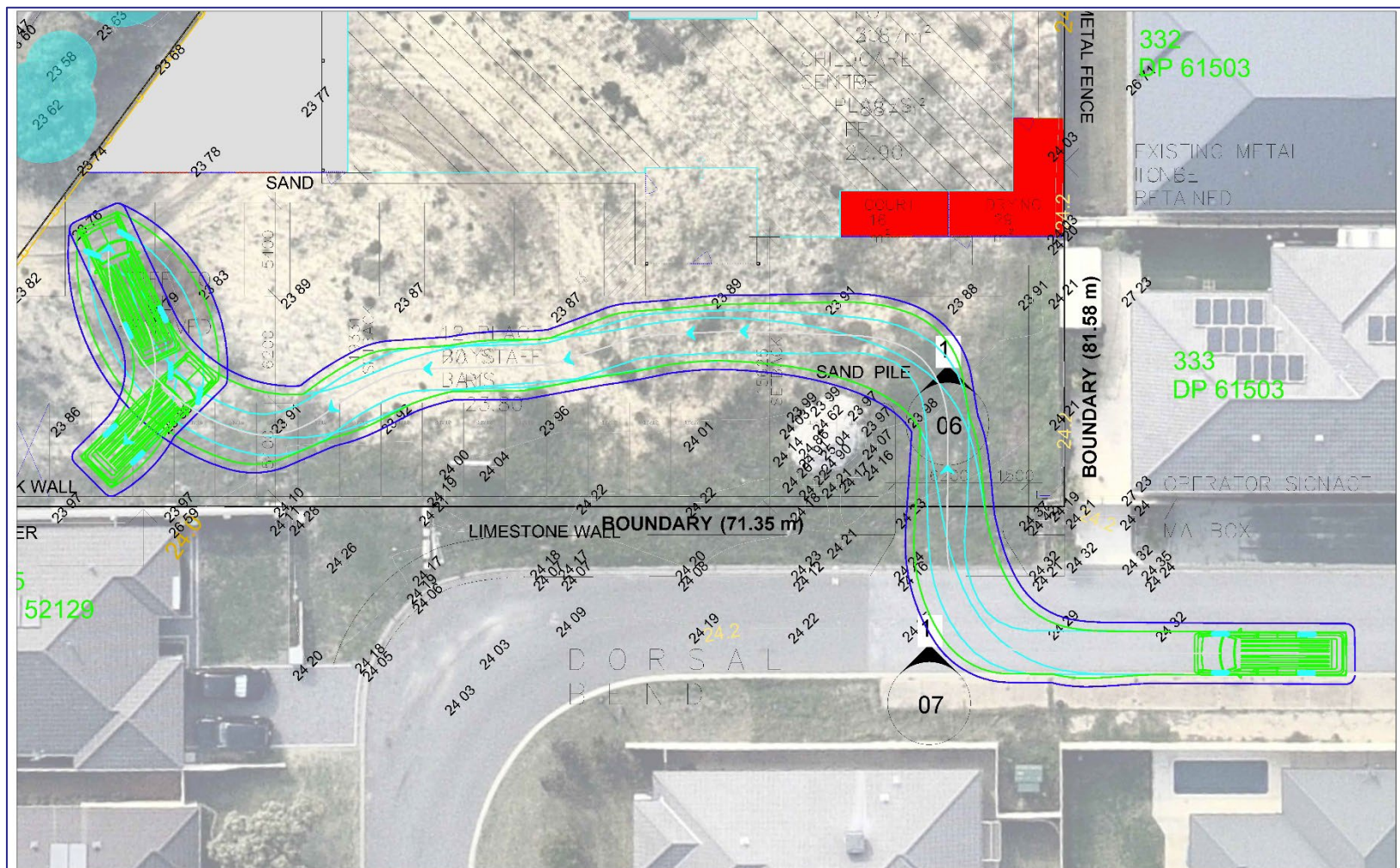
Appendix A

PROPOSED SITE PLAN



Appendix B

TURN PATH PLANS



Lot 23, Russell Road, Hammond Park
 8.8m Service Vehicle
 Service vehicle right-in entry

LEGEND
 Vehicle Body
 Wheel Path
 500mm Clearance

t22.177.sk02a

13/9/2022

Scale: 1:200 @ A3



**PROPOSED CHILD CARE CENTRE
LOT 23 RUSSELL ROAD
HAMMOND PARK**

ENVIRONMENTAL ACOUSTIC ASSESSMENT

SEPTEMBER 2022

OUR REFERENCE: 30077-4-22245

DOCUMENT CONTROL PAGE

ENVIRONMENTAL ACOUSTIC ASSESSMENT
PROPOSED CHILD CARE CENTRE
RUSSELL ROAD, HAMMOND PARK

Job No: 22245

Document Reference: 30077-4-22245

FOR

PLANNING SOLUTIONS

DOCUMENT INFORMATION				
Author:	Tim Reynolds	Checked By:	Paul Daly	
Date of Issue:	16 September 2022			
REVISION HISTORY				
Revision	Description	Date	Author	Checked
1	Clarification of fencing	20/09/22	TR	N/A
2	Updated Plans	29/09/2022	PLD	
3	Council Comments	13/12/2022	TR	
DOCUMENT DISTRIBUTION				
Copy No.	Version No.	Destination	Hard Copy	Electronic Copy
1	2	Planning Solutions Attn: Oliver Basson Email: oliver.basson@plnningsolutions.com.au		✓

This report has been prepared in accordance with the scope of services and on the basis of information and documents provided to Herring Storer Acoustics by the client. To the extent that this report relies on data and measurements taken at or under the times and conditions specified within the report and any findings, conclusions or recommendations only apply to those circumstances and no greater reliance should be assumed. The client acknowledges and agrees that the reports or presentations are provided by Herring Storer Acoustics to assist the client to conduct its own independent assessment.

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APPENDICIES

A	PLANS
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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 Lot 23 Russell Road, Hammond Park.

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 service.

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 residences from the outdoor play areas would comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* during the day period.

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, the condensing units are to be installed with “low noise” night period modes.

It is noted that noise associated with cars movements and cars starting are exempt from complying with the Regulations. However, noise emissions from a car door is not strictly exempt from the Regulations.

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 following:

- 1 Although the proposed facility would open before 7 am (ie during the night period), the outdoor play area would not be used until after 7am. Thus, noise received at the neighbouring existing residences from the outdoor play area needs to comply with the assigned day period noise level.
- 2 Boundary fencing to be as shown on the drawings attached in Appendix A.
- 3 The air conditioning unit can be located on the eastern side of the child care building. However, they are to be evenly spaced along the length of the façade. If condensing unit with a higher sound power level than state in Table 5.1 is selected, then alternative locations (ie drying Court) or additional mitigation may be required.
- 4 Additionally, the condensing units are be installed with “Low Noise” night period modes.

5 For child care centre colourbond fencing is acceptable.

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

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 neighbouring the child care centre are shown below on Figure 3.1.

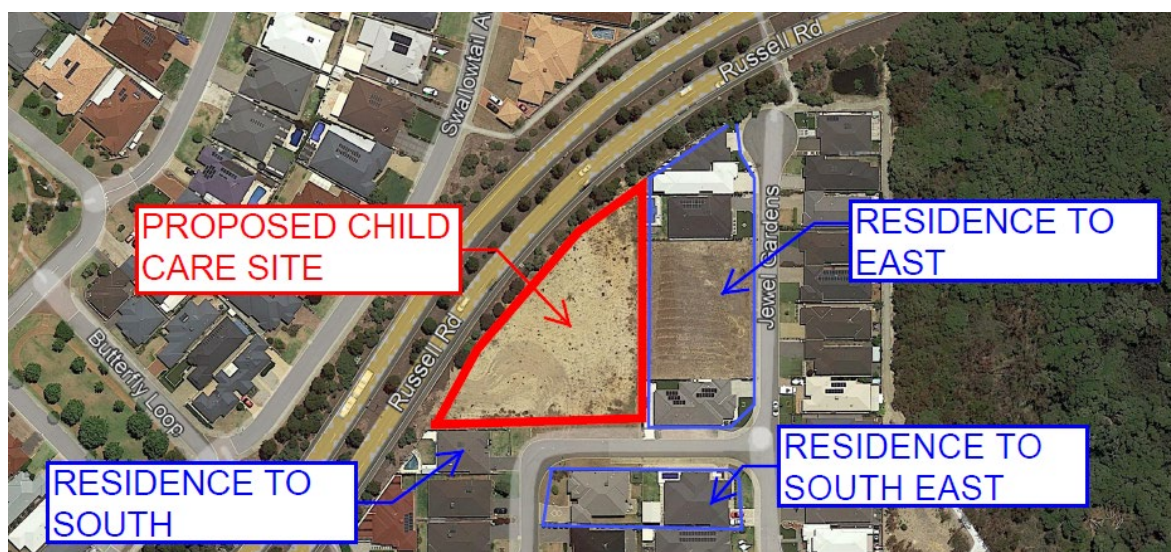


FIGURE 3.1 – NEIGHBOURING LOTS

Noting that the child care site and neighbouring residence are within 100 metres of Russell Road, which under the Regulations is a major road, the influencing factor at the neighbouring residences has been determined to be +6 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)	51	61	71
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	46	56	71
	1900 - 2200 hours all days (Evening)	46	56	61
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	41	51	61

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 0630 and 1830 hours, Monday to Friday (closed on public holidays). It is understood that the proposed childcare centre will cater for a maximum of 119 children: with the following breakdown:

Room 1 (0 - 2 years)	12 places
Room 2 (1 - 2 years)	12 places
Room 3 (2 - 3 years)	20 places
Room 4 (2 - 3 years)	25 places
Room 5 (3 - 4 years)	20 places
Room 6 (4 - 5 years)	30 Places

It is noted that although the proposed child care centre would open before 7 am (ie during the night period), the outdoor play area would not be used until after 7am.

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	7 @ 67

Notes:

- 1 Even though the noise emissions from children under the age of 2 years is relatively low compared to the other children, to be conservative, acoustic modelling of outdoor play noise was made, based on 120 children playing within the outdoor play areas at the one time, utilising 12 groups of 10 children, sound power levels distributed as plane sources.
- 2 The noise level for the air conditioning has been based on the sound power levels used for previous assessment of child care centres. From other studies, we understand that the noise associated with the condensing units would be conservative.
- 3 Based on the building design, we understand that the air conditioning condensing units would be located along the east façade of the development. Additionally, these condensing units are to be installed with "Low Noise" night period modes.

- 4 The noise modelling has been based on the fencing as shown on the drawings attached in Appendix A.
- 5 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 (ie highest noise level), have been listed.

6. ASSESSMENT

The resultant noise levels at the neighbouring residence from children playing outdoors and the mechanical services are tabulated in Table 6.1.

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	Mechanical	
		Day Period	Night Period
East	51	41 (46)	35 (40)
South East	37	29 (34)	23 (28)
South	40	8 (13)	2 (7)

() 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 6.2 and 6.3. 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 6.2 (Car Moving) and Table 6.3 (Car Starting). However, noise emissions from car doors closing could be impulsive, hence the +10dB penalty has been included in the assessment.

**TABLE 6.2 - ACOUSTIC MODELLING RESULTS L_{A1} CRITERIA
CAR MOVING**

Neighbouring Premises	Calculated Noise Level (dB(A))
East	43
South East	44
South	43

**TABLE 6.3 - ACOUSTIC MODELLING RESULTS L_{Amax} CRITERIA
CAR STARTING / DOOR CLOSING**

Neighbouring Premises	Calculated Noise Level (dB(A))	
	Car Starting	Door Closing
East	38	47 [57]
South East	37	51 [61]
South	44	51 [61]

[] Includes +10 dB(A) penalty for impulsiveness.

Tables 6.4 to 6.9 summarise the applicable Assigned Noise Levels, and assessable noise level emissions for each identified noise.

**TABLE 6.4 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
OUTDOOR PLAY (DAY PERIOD)**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
East	51	51	Complies
South East	37	51	Complies
South	40	51	Complies

**TABLE 6.5 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
MECHANICAL (DAY PERIOD)**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
East	46	51	Complies
South East	34	51	Complies
South	13	51	Complies

**TABLE 6.6 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
MECHANICAL (NIGHT PERIOD)**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
East	40	41	Complies
South East	28	41	Complies
South	7	41	Complies

**TABLE 6.7 – 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
East	43	51	Complies
South East	44	51	Complies
South	43	51	Complies

**TABLE 6.8 – ASSESSMENT OF L_{Amax} NIGHT PERIOD NOISE LEVEL EMISSIONS
CAR STARTING**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
East	38	61	Complies
South East	37	61	Complies
South	44	61	Complies

**TABLE 6.9 – 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
East	57	61	Complies
South East	61	61	Complies
South	61	61	Complies

7. CONCLUSION

Noise received at the neighbouring residences from the outdoor play area would comply with day period assigned noise level with the boundary fencing, as shown on the drawings attached in Appendix A.

The air conditioning condensing units have also been assessed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* at all times, provided they are located within the drying court / service area and are installed with Level 2 “Low Noise” night period modes.

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 with the fencing, as shown on the drawings attached in Appendix A.

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 following:

- 1 Although the proposed facility would open before 7 am (ie during the night period), the outdoor play area would not be used until after 7am. Thus, noise received at the neighbouring existing residences from the outdoor play area needs to comply with the assigned day period noise level.
- 2 Boundary fencing to be as shown on the drawings attached in Appendix A.
- 3 The air conditioning unit could be located on the eastern side of the child care building. However, they are to be evenly spaced along the length of the façade. If condensing unit with a higher sound power level than state in Table 5.1 are selected, than alternative locations (ie drying Court) or additional mitigation may be required.
- 4 Additionally, the condensing units are be installed with “Low Noise” night period modes.
- 5 For child care centre colourbond fencing is acceptable.

APPENDIX A

PLANS

Rev.	Amendment	Date
A	PRELIMINARY	08/09/22
B	DA ISSUE	28/09/22

FENCE TYPES

1.8m HIGH TIMBER FENCE



1.8m HIGH VERTICAL BLADE SLAT FENCING WITH CLEAR ACRYLIC BACKING



1.8m HIGH COLORBOND FENCE: MONUMENT



2m HIGH DOUBLE COLORBOND FENCE



DEVELOPMENT SUMMARY

SITE AREA:	3187 m ²
BUILDING AREA:	889 m ²
OUTDOOR AREA:	927 m ²
OUTDOOR AREA REQUIRED:	833 m ²
CAR BAYS:	32 (32 REQUIRED)
REGULAR BAYS	11
DISABLED BAY	1
STAFF BAYS	20

ROOM BREAKDOWN

ROOM NAME	PLACE	AGE GROUP	AREA REQUIRED CAL	AREA PROVIDED	STAFF RATIO	STAFF REQUIRED
ACTIVITY 1	12	0 - 1	39	40 m ²	.25	3
ACTIVITY 2	12	1 - 2	39	42 m ²	.25	3
ACTIVITY 3	20	2 - 3	65	67 m ²	.2	4
ACTIVITY 4	25	2 - 3	81.25	83 m ²	.2	5
ACTIVITY 5	20	3 - 4	65	65 m ²	.1	2
ACTIVITY 6	30	4 - 5	97.5	99 m ²	.1	3

TOTAL 119 20

DISCLAIMER: The drawing(s) provided herewith shall be used for the purposes for which it was provided. The electronic data files for all or part of the drawings carry no guarantees whatsoever as to their accuracy, content or lack of same. The use of electronic data files are at the recipient's (or any other third party user's) risk. They cannot be used for any contractual purposes. The user of these files must verify the electronic data files against the hard copy or .pdf file provided.

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BRALLGRA PTY LTD

HAMMOND PARK CCC

SITE PLAN

Scale	As indicated		
Drawn	DC	Checked	SJ
Date	28/09/22		
Job No.	2022073		
Dwg No.	3540 03	Rev: B	
		A3 SHEET	

SITE PLAN

1 : 400

**PROPOSED CHILD CARE CENTRE
LOT 23 RUSSELL ROAD
HAMMOND PARK**

**STATE PLANNING POLICY 5.4
NOISE MANAGEMENT PLAN**

SEPTEMBER 2022

OUR REFERENCE: 30076-3-22245

DOCUMENT CONTROL PAGE

SPP 5.4 – NOISE MANAGEMENT PLAN
CHILD CARE CENTRE – HAMMOND PARK

Job No: 22245

Document Reference: 30076-3-22245

FOR
PLANNING SOLUTIONS

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APPENDICIES

A	Child Care Plans
B	Acoustic Requirements
C	MRWA Traffic Flow Data

1. INTRODUCTION

Herring Storer Acoustics was commissioned to undertake an acoustic assessment for the proposed child care centre, located at Lot 23 Russell Road, Hammond Park, with regards to vehicles travelling along Russell Road. The acoustic assessment is to comply with the requirement of State Planning Policy 5.4 *“Road and Rail Transport Noise”* (SPP5.4). As part of this assessment, the following was carried out:

- Determine by modelling, the noise that would be received at child care centre from vehicles travelling on Russell Road.
- Assess the predicted noise levels for compliance with the appropriate criteria.
- If exceedances are predicted, comment on possible noise amelioration options for compliance with the appropriate criteria.

For information, plans for the child care centre are attached in Appendix A.

2. SUMMARY

It is noted that the child care centre is only occupied during the day period, thus under State Planning Policy 5.4 *“Road and Rail Transport Noise”* only the criteria for the day period is applicable.

The results of the acoustic assessment indicate that noise received at the development from future traffic, exceed external noise level criteria. Therefore, noise amelioration listed in Appendix B, are required.

Although under the Policy, there are no requirements with regards to the outdoor play areas, noise received within these areas does need to be considered. Thus, to provide a reasonable and practical result within the outdoor play areas, 2 metre high solid fencing is recommended for the fencing to Russell Road.

3. CRITERIA

Road traffic noise received at a sensitive premise needs to comply with the requirements of State Planning Policy 5.4 *“Road and Rail Transport Noise”*. Under this policy, for non-residential noise sensitive premises, internal noise levels should meet the design sound levels as listed in Table 1 of AS/NZ 2107:2000 *“Acoustics – Recommended design sound levels and reverberation times for building interiors”*. Under AS 2017, the internal criteria would:

Sleep Rooms	-	L _{Aeq} (Day) of 35 dB(A).
Play/Group Rooms	-	L _{Aeq} (Day) of 40 dB(A).
Staff Room	-	L _{Aeq} (Day) of 45 dB(A).
Office	-	L _{Aeq} (Day) of 40 dB(A).
Reception	-	L _{Aeq} (Day) of 45 dB(A).
Work areas (eg: Laundry)	-	L _{Aeq} (Day) of 50 dB(A).

We also note that additional to the above, under Section 6.1 of the Policy, “a reasonable degree of acoustic amenity for outdoor living areas on each residential lot.” Under the Policy, an outdoor living area is as defined in the State Planning Policy 3.1 Residential Design Codes. The definition for an outdoor living area is as per below:

Outdoor living area

The area external to a **single house, grouped or multiple dwelling** to be used in conjunction with that **dwelling** such that it is capable of active or passive use and is readily accessible from the dwelling.

However, the Policy also states that “For non-residential noise-sensitive developments, for example schools and child care centres the design of outdoor areas should take into consideration the noise targets.

Finally, it is also noted that under the Policy, “It is recognized that in some instances, it may not be reasonable and/or practicable to meet the outdoor noise targets”. Thus, for child care centres, compliance with the “Target” noise levels within the outdoor play areas is not a requirement under the Policy, however, noise received at within the outdoor area still need to be considered.

4. MEASUREMENTS

The noise measurements were conducted at 3:00pm, on 12th September 2022 to determine the L_{A10} noise level traffic for approximately 15 minutes at a distance of 15 metres from the edge of Russell Road. This time period has been identified as peak traffic period for the road to ensure of a conservative measurement. Traffic volume details for this road section are included in Appendix C.

Noise measurements were conducted with a Larson Davis 831 Sound Level Meter. The Sound Level Meter was calibrated prior to and after use with a Bruel and Kjaer 4230 Calibrator. The results of the noise level measurements are listed in Table 3.1. All equipment used is currently NATA laboratory calibrated. Calibration certificates are available on request.

TABLE 3.1: SUMMARY OF MEASURED NOISE LEVELS

Measurement Location	Measured/Calculated Noise Level, dB(A)	
	L_{A10}	$L_{Aeq, day}$ (6am to 10pm)
Lot 23, Russell Road	64.9	61.3

We note that the Child Care Centre is a day usage. Thus, the night period noise level is not required.

5. MODELLING

To determine the noise levels from traffic on Russell Road, acoustic modelling was carried out using Sound Plan, using the Calculation of Road Traffic Noise (CoRTN)¹ algorithms.

The input data for the model included:

- Topographical and cadastral data supplied by client (Shown in Appendix A).
- Traffic data as per Table 4.1 (Obtained from MRWA Traffic Map, Attached in Appendix C).
- Adjustments as listed in Table 4.2.

¹ Calculation of Road Traffic Noise UK Department of Transport 1987

TABLE 4.1 - NOISE MODELLING INPUT DATA

Parameter	Russell Road (Current)	Russell Road (Future 2041)
Traffic Volumes	19709 vpd (2020)	17400 vpd
Heavy Vehicles (%)	9.7%	9.7%
Speed (km/hr)	70km/hr	70km/hr
Road Surface	Open Graded Asphalt	Open Graded Asphalt

TABLE 4.2 – ADJUSTMENTS FOR NOISE MODELLING

Description	Value
Façade Reflection Adjustment	+2.5 dB
Conversion from L_{A10} (18 hour) to L_{Aeq} (16 hour) (Day)	-5.1 dB

The current future road traffic volumes were based on information provided by the MRWA traffic maps, with the road surface and future traffic provided by the MRWA ROM Department. Other input data for the model included:

- Traffic data from MRWA (<https://mrapps.mainroads.wa.gov.au/TrafficMap/>) Current monitored traffic are for 2020 / 2021. The current traffic flows are attached in Appendix C.
- Future Traffic flows were based on data provided by the MRWA ROM department (Job #42382).
- The current road surface information was also provided by the MRWA ROM department.

6. TRAFFIC NOISE ASSESSMENT

Using the data contained in Tables 3.1, 4.1 and 4.2 and the adjustments noted above, modelling was carried out under existing conditions for calibration. The Sound Plan model for the site has been set up for the 2041 scenario as defined in Table 4.1. The following assumptions have been made:

- 2.5 dB(A) has been added to the results for façade reflection.
- The fencing to Russell Road being 2 metres.

The noise requirements based on the above have been listed in Appendix B.

It is noted that these requirements pertain to acoustic requirements only, with regard to *State Planning Policy 5.4*, and may be superseded by other requirements (BAL, Thermal, etc).

7. CONCLUSION

In accordance with the WAPC Planning Policy 5.4, an assessment of the noise that would be received within the development of Lot 23 Russell Road, Hammond Park, from vehicles travelling on Russell Road has been undertaken.

In accordance with the Policy, the following would be the acoustic criteria applicable to this project:

Internal

Sleeping Areas	35 dB(A) $L_{Aeq}(\text{night})$
Living Areas	40 dB(A) $L_{Aeq}(\text{day})$

The results of the acoustic assessment indicate that noise received at the development from future traffic, exceed external noise level criteria. Therefore, noise amelioration listed in Appendix B, are required.

Although under the Policy, there are no requirements with regards to the outdoor play areas, noise received within these areas does need to be considered. Thus, to provide a reasonable and practical result within the outdoor play areas, 2 metre high fencing is recommended for the fencing to Russell Road.

Note: The fence to Russell Road should have a minimum density of 15 kg/m². However, as noted in the Section 4.2 of the Implementation Guidelines, a double colourbond fence, as shown below, would also be acceptable.

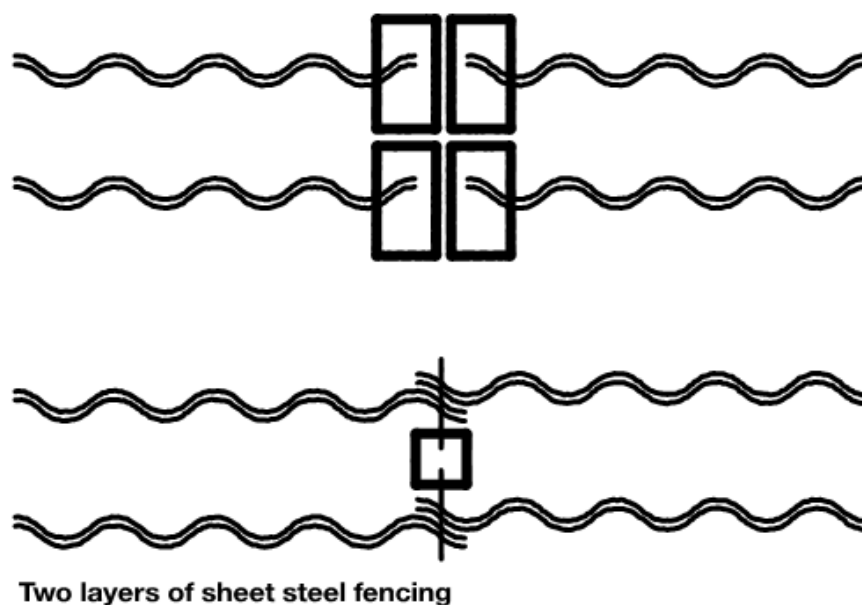


Figure 2.20 Doubling the layers of colorbond improves the fence's acoustic properties (Source: NSW Department of Planning 2008)

NOTE : The barrier is 2 layers of colorbond (not 4) with an air gap between the sheets.

APPENDIX A

PLAN



APPENDIX B

GLAZING REQUIREMENTS

Calculated Noise Levels and Required R_w and C_{tr} Ratings			Glazing Type	
Location	Level	Bedroom $R_w + C_{tr}$	Windows	Doors
Activity 2 (Western Windows)	60	23	Sliding windows with 4mm Monolithic glass	6mm Monolithic glass
Activity 2 (Northern Door)	60	23	Sliding windows with 4mm Monolithic glass	6mm Monolithic glass
Activity 1	54	23	Sliding windows with 4mm Monolithic glass	6mm Monolithic glass
Reception (Northern Window)	59	23	Sliding windows with 4mm Monolithic glass	6mm Monolithic glass
Activity 3 (Western Door)	56	23	Sliding windows with 4mm Monolithic glass	6mm Monolithic glass
Activity 4 (Western Door)	58	23	Sliding windows with 4mm Monolithic glass	6mm Monolithic glass
Activity 5 (Western Door)	59	23	Sliding windows with 4mm Monolithic glass	6mm Monolithic glass
Activity 6 (Western Window)	60	23	Sliding windows with 4mm Monolithic glass	6mm Monolithic glass
Activity 6 (Northern Windows)	59	23	Sliding windows with 4mm Monolithic glass	6mm Monolithic glass

Notes: The required R_w rating can be reduced by reducing the area of glazing.
 Sliding door with required $R_w + C_{tr}$ rating greater than 25 to have overlapping meeting stiles and close into C-section.
 Requirements pertain to only acoustic advice in regard to *State Planning Policy 5.4* and may be superceded by other requirements (BAL, Thermal, etc).

APPENDIX C

MRWA TRAFFIC FLOW DATA



Hourly Volume

Russell Rd (1030011)

2020/21
Monday to Friday

West of Kwinana Fwy (SLK 6.77)

	All Vehicles		
	EB	WB	Both
00:00	20	26	46
01:00	14	19	33
02:00	16	20	36
03:00	25	25	50
04:00	95	78	173
05:00	217	457	674
06:00	422	613	1035
07:00	679	758	1437
08:00	800	856	1656
09:00	503	488	991
10:00	510	453	963
11:00	452	469	921
12:00	482	468	950
13:00	512	493	1005
14:00	671	628	1299
15:00	895	778	1673
16:00	912	857	1769
17:00	830	871	1701
18:00	564	640	1204
19:00	356	397	753
20:00	259	276	535
21:00	183	210	393
22:00	113	151	264
23:00	66	82	148
TOTAL	9596	10113	19709

	Heavy Vehicles			%
	EB	WB	Both	
00:00	1	1	2	4.3
01:00	4	1	5	15.2
02:00	5	3	8	22.2
03:00	6	6	12	24.0
04:00	15	5	20	11.6
05:00	26	28	54	8.0
06:00	71	60	131	12.7
07:00	64	71	135	9.4
08:00	69	77	146	8.8
09:00	72	67	139	14.0
10:00	74	76	150	15.6
11:00	68	79	147	16.0
12:00	75	67	142	14.9
13:00	72	87	159	15.8
14:00	73	78	151	11.6
15:00	74	62	136	8.1
16:00	65	59	124	7.0
17:00	47	40	87	5.1
18:00	37	27	64	5.3
19:00	20	14	34	4.5
20:00	14	11	25	4.7
21:00	9	8	17	4.3
22:00	9	6	15	5.7
23:00	4	5	9	6.1
TOTAL	974	938	1912	9.7

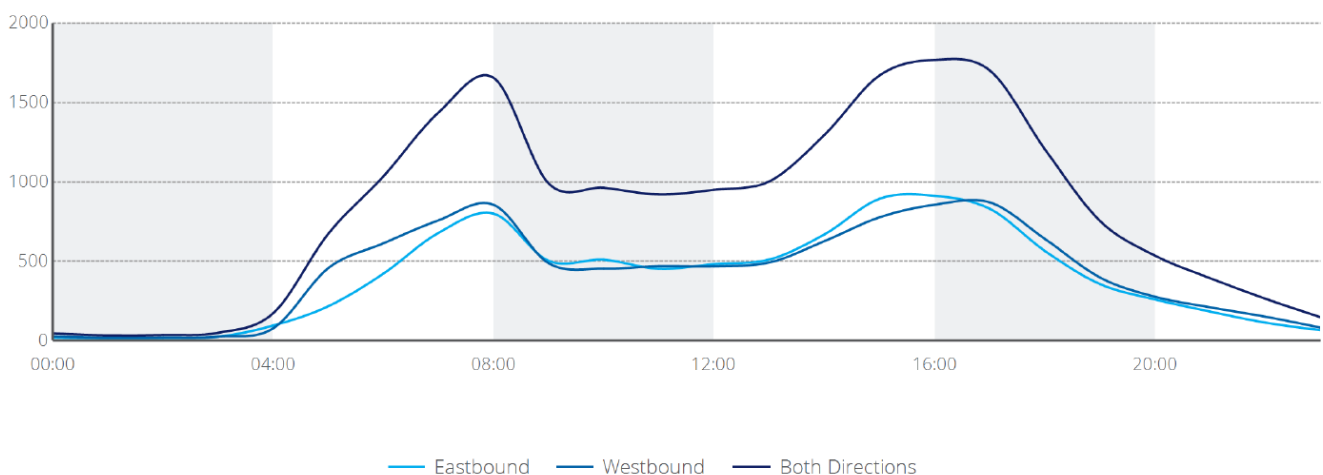


Peak Statistics

AM	TIME	08:00	07:45	07:45
	VOL	800	863	1660
PM	TIME	16:15	16:30	16:15
	VOL	944	898	1841

	08:30	11:15	10:45
	78	81	153
	14:15	13:00	13:30
	79	87	161

Volume



Urbii



Reduce. Reuse. Recycle

Lot 23 Russell Road, Hammond Park Proposed Child Care Centre Waste Management Plan



Prepared for:
Brallgra Pty Ltd

September 2022

Lot 23 Russell Road, Hammond Park

Prepared for: Brallgra Pty Ltd
Prepared by: Paul Ghantous
Date: 29 September 2022
Project number: U22.069

Version control

Version No.	Date	Prepared by	Revision description	Issued to
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U22.069.r01a	29/09/22	PG	FINAL	Planning Solutions



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1 Introduction

This Waste Management Plan has been prepared by **Urbii** on behalf of **Brallgra Pty Ltd** with regards to the proposed child care centre, located at Lot 23 Russell Road, Hammond Park.

The subject site is situated on the northern side of Dorsal Bend, as shown in Figure 1. The site is presently vacant and is surrounded by mostly residential land uses.

It is proposed to develop the site into a child care centre catering for up to 119 children and 20 staff.

The key issues that will be addressed in this WMP include calculation of the waste generation of the site, assessment of waste storage provisions and documentation of the waste collection arrangements.



Figure 1: Subject site



2 Objectives

The objectives of this WMP are adapted from WALGA:

- Ensure that the long-term waste management needs for the development are met in an efficient and sustainable manner.
- Minimise the impact of waste services and facilities on the streetscape and surrounds, in relation to both the footpath/public realm and the frontage of the development.
- Reduce the impact of waste collection services and facilities on the amenity of the locality particularly in terms of noise and odour.
- Maximise safety for both waste collection staff and the public.
- Minimise traffic and footpath obstruction.

3 Referenced documents

The documents referenced in preparing this WMP may include, but are not limited to:

- City of Melbourne *Guidelines for Waste Management Plans* 2021;
- City of Perth *Waste Guidelines for all Developments* 2019;
- WALGA *Multiple Dwelling Waste Management Plan Guidelines*;
- WALGA *Subdivision Waste Management Plan Guidelines*; and,
- Waste Authority WA *Waste Avoidance and Resource Recovery Strategy for 2030*.

4 Guiding concepts

Urbii adopts the guiding concepts of the State's Waste Strategy and encourages these concepts to be considered in all developments to the furthest extent feasible.

4.1 Waste hierarchy

The *Waste Avoidance and Resource Recovery Strategy 2030* applies the waste hierarchy (Figure 2), which is a widely accepted decision-making tool. The waste hierarchy ranks waste management options in order of their general environmental desirability. Waste avoidance is the most preferred option in the hierarchy.

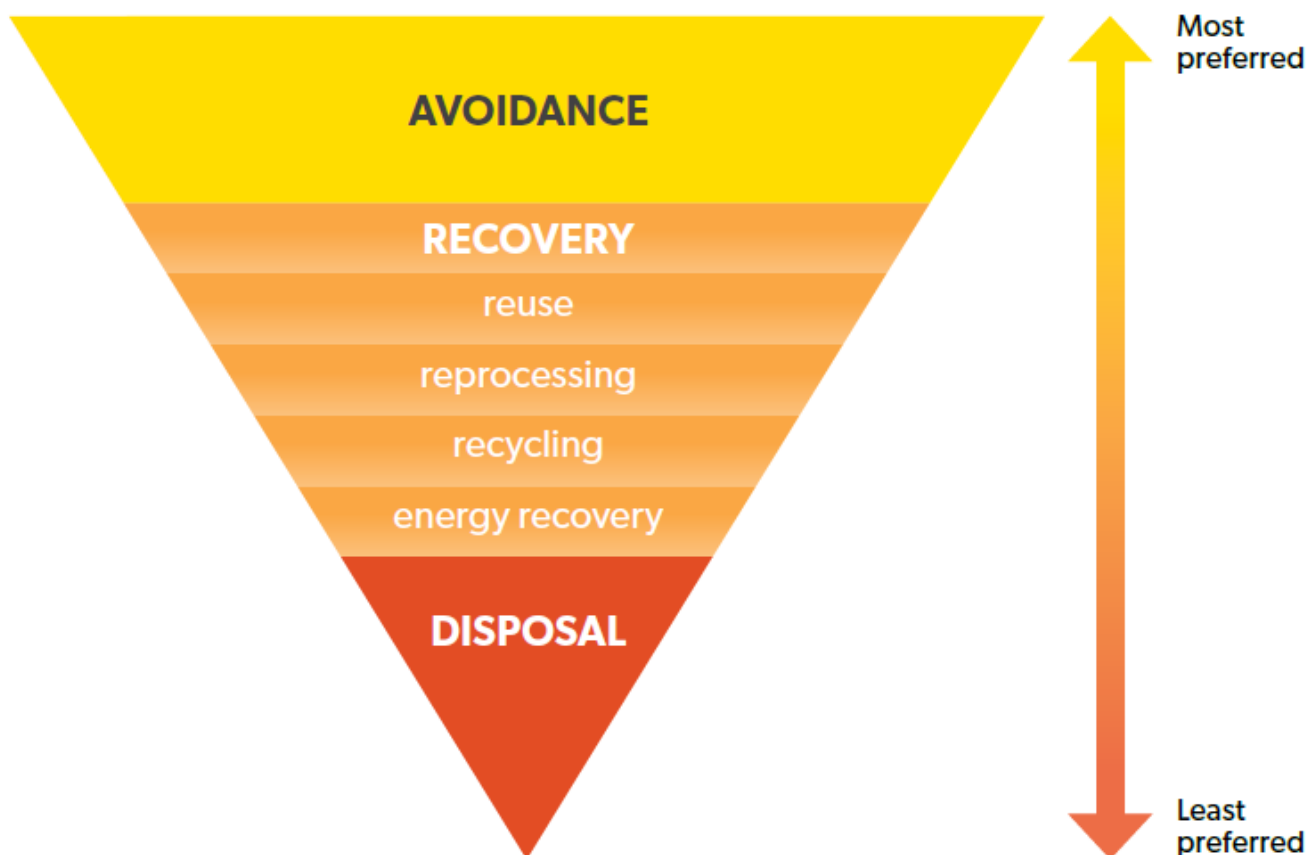


Figure 2: Waste hierarchy

Source: Waste Authority WA *Waste Avoidance and Resource Recovery Strategy for 2030*.

Resource recovery options recover value from materials, thereby offsetting the environmental impacts of extracting and processing raw materials. Energy recovery is the least preferred recovery option. Disposal is the least preferred option. Disposal generally recovers the least value from materials and delivers the least environmental benefit.

4.2 Circular economy

A circular economy (Figure 3) makes use of established sustainability concepts, including life cycle thinking and resource efficiency. A circular economy should consider the flow of both materials and energy. It moves away from the linear ‘take, make, use and dispose’ model, to one which keeps materials and energy circulating in the economy for as long as possible.

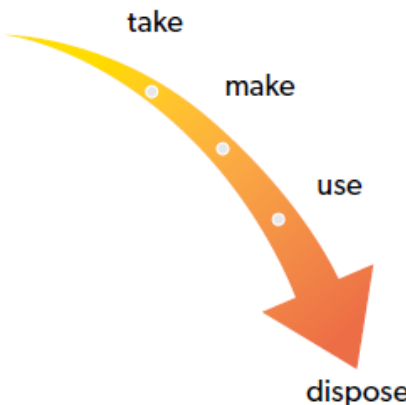
Current approach	Circular economy
	
Linear flow of materials – ‘take, make, use and dispose’ model.	Circular flow of materials – materials sorted and retained in the economy for as long as possible.
Limited use of renewable materials and energy.	Preference for renewable materials and energy.
Significant volumes of materials disposed of and lost to the economy. Loss of embodied materials, energy and water.	Materials recovered as high up the waste hierarchy as possible. Embodied materials, energy and water retained in the economy. Organic materials re-enter and regenerate the environment safely (for example, as compost).
Materials managed locally and globally.	Preference to manage materials locally to reduce the costs and impacts of transport, and to provide local employment and investment opportunities.
Economic value of materials, employment and investment not fully accounted for.	Economic value of materials, employment and investment accounted for.
Limited focus on life cycle thinking.	Products designed and manufactured to minimise environmental impact through whole of life.

Figure 3: Transitioning to a circular economy

5 Proposed development

The anticipated volume of general waste, and recyclables is based on the floor area of the development. For robust assessment, the full floor area of the building was adopted with no exclusions, which is 889m².

The proposed development plans are included for reference in Appendix A.

6 Waste generation

6.1 Waste generation rates

The waste generation rates for general waste and recyclables are sourced from the *City of Melbourne Guidelines for Waste Management Plans 2021*. Waste generation rates are detailed in Table 1.

Table 1: Residential waste generation rates

Land use	General waste generation rate	Recyclables generation rate
Child Care Centre	350L/100m ² Floor area/week	350L/100m ² Floor area/week

6.2 Waste generation calculations

The waste generation calculations are detailed in Appendix C. The estimated waste generation for the development is:

- General Waste: around 3,110L per week.
- Recyclables: around 3,110L per week.



7 Waste systems

7.1 Internal waste storage

Internal bins should be provided throughout the child care centre for separate disposal of general waste and recycling.

Internal bins will be emptied by cleaners at regular intervals throughout the week and transferred to the Bin Storage Area for disposal into the appropriate bins.

7.2 External bin storage areas

7.2.1 Bin size, quantity and colour

It is recommended to provide the following bins in a centralized bin store:

- 3 x 660L General waste (red lid bin).
- 3 x 660L Co-mingled recycling (yellow lid bin).

As an alternative option, 7 x 240L General Waste and 7 x 240L Recycling Bins can also be considered if kerbside waste collection is preferred by the site operator.

The number of bins required for the development is detailed in Appendix C.

7.2.2 Bin storage area size

As detailed in Table 2, each 660L bin has a footprint area of 1.16m². A 50mm gap is allowed between the bins to allow easy pull movement.

Storage areas should be out of sight or well screened from the street. Bin storage areas should not detract from the aesthetics of the development and should blend in with surrounding structures and landscaping.

Table 2: Larger Mobile Garbage Bin (MGB) dimensions

Bin capacity	660L	770L	1100L	1300L	1700L
Height (mm)	1250	1425	1470	1408	1470
Depth (mm)	850	1100	1245	1250	1250
With (mm)	1370	1370	1370	1770	1770
Approximate Footprint (m ²)	1.16	1.5	1.7	1.21	1.27

Source: WALGA

7.2.3 Bin storage area design

Urbii has checked the proposed bin storage location and confirmed that required clearances are provided. A bin storage plan is included in Appendix B.

The following is a list of generic advice offered for consideration at subsequent detailed design stages of the project:

- **Size:** Ensure the size of the area set aside for the management of waste is sufficient to accommodate the number of bins required.
- **Ventilation and odour:** If covered, the design of the bin store will provide for adequate natural ventilation through ventilated doors or an alternative method 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.
- **Lighting:** Artificial light controlled by switches will be located near the bin store entrance.
- **Noise:** Bins will be collected from the waste collection presentation point outside of opening hours of the development.
- **Aesthetics:** The bin store should be consistent with the overall aesthetics of the development.
- **Vermin:** Self-closing doors can be considered to eliminate access to vermin.
- **Washing bins and waste storage area:** If there is no space for bin washing outdoors then the internal bin stores 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 floor drainage installed. Staff will be responsible for washing bins (or contracting a provider to wash bins) and for maintenance of their bin stores.

7.3 Access to bins

Waste and recycling storage facilities are in positions that:

- Permit easy, direct and convenient access for the users of the facility.
- Permit easy transfer of bins to the presentation point.
- Permit easy, direct and convenient access for collection service providers.
- Are well screened and do not reduce amenity.
- Are secure and provide protection against potential vandalism.
- Reduce potential noise pollution and disturbance of residents.
- Are close to building exits.



8 Waste collection

8.1 Waste vehicle types

A private contractor will undertake waste collection, via an 8.0m rear loader waste truck or smaller.

8.2 Waste collection frequency

Waste collection will be scheduled at a frequency of two times per week.

8.3 Waste collection method and presentation points

The waste truck is proposed to enter the site in forward gear from Dorsal Bend and turn around within the car park. The truck will then reverse up to the bin store. Bins will be wheeled out of the bin store by waste collection staff to the rear of the truck and emptied. Empty bins will then be returned to the bin store. Once waste collection is complete the truck will then exit the site back to Dorsal Bend in forward gear.

8.4 Vehicle access and maneuvering

Waste collection is recommended to be facilitated internally, so trucks will enter the site in forward gear from Dorsal Bend, turn around within the car park, then exit the site in forward gear. Waste collection will need to be scheduled outside of the peak operating hours of the facility, possibly between 10am and 2pm.

The swept path analysis is presented in Appendix D, and confirms that there is satisfactory geometry for internal waste truck access and maneuvering.

There is some flexibility for waste collection to be facilitated on-street via the verge on Dorsal Bend, adjacent to the site. There is sufficient space to accommodate 14 x 240L bins to be presented on the verge to the west of the site crossover.

9 Additional waste requirements

9.1 Bulk waste

Bulk waste can be temporarily placed in a store room within the building until private arrangement for collection is made.

9.2 E-Waste

Storage space for E-waste will be accommodated within the building. E-waste will be disposed in a suitable manner, such as bulk drop-off to the tip or using public battery recycling boxes.

9.3 Garden organics

The site caretaker will manage garden organic waste. Garden waste can be placed in general waste bins if there is space or can be removed by trailer to be disposed offsite in a suitable location.

10 Waste management

Staff/cleaners will be responsible for:

- Cleaning their bin storage areas and facilities;
- Transferring waste stored internally to the consolidated bin storage area daily; and,
- Regularly cleaning their bins.

Staff should comply with the City's waste sorting requirements and only place permitted waste in each respective bin type. Waste that does not belong in any bin should be disposed of through private services or another appropriate method.

11 Conclusion

As demonstrated within this Waste Management Plan, the proposed development provides sufficient bin storage and adequate bins to service the site for general waste, recyclables and other waste.

Furthermore, the servicing of the bins by private contractor can be adequately achieved without having an adverse impact on the site and the local street network.



Appendices

Appendix A: Proposed development plans

FENCE TYPES



1.8m HIGH TIMBER FENCE



1.8m HIGH
VERTICAL BLADE
SLAT FENCING WITH
CLEAR ACRYLIC
BACKING



1.8m HIGH
COLORBOND
FENCE: MONUMENT

2m HIGH DOUBLE
COLORBOND FENCE

DEVELOPMENT SUMMARY

SITE AREA:	3187 m ²
BUILDING AREA:	889 m ²
OUTDOOR AREA:	927 m ²
OUTDOOR AREA REQUIRED:	833 m ²
CAR BAYS:	32 (32)
REGULAR BAYS	11
DISABLED BAY	1
STAFF BAYS	20

ROOM BREAKDOWN

ROOM NAME	PLACE	AGE GROUP	AREA REQUIRED CAL	AREA PROVIDED	STAFF RATIO	STAFF REQUIRED
ACTIVITY 1	12	0-1	39	40 m ²	25	3
ACTIVITY 2	12	1-2	39	42 m ²	25	3
ACTIVITY 3	20	2-3	65	67 m ²	2	4
ACTIVITY 4	25	2-3	81,25	83 m ²	2	5
ACTIVITY 5	20	3-4	65	65 m ²	1	2
ACTIVITY 6	30	4-5	97.5	99 m ²	1	3
TOTAL	119					20

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AMMOND PARK CCC

ITE PLAN

Scale	As indicated	Checked	SJ		A3 SHEET
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No.	2022073				
No.	3540	03	Rev	B	

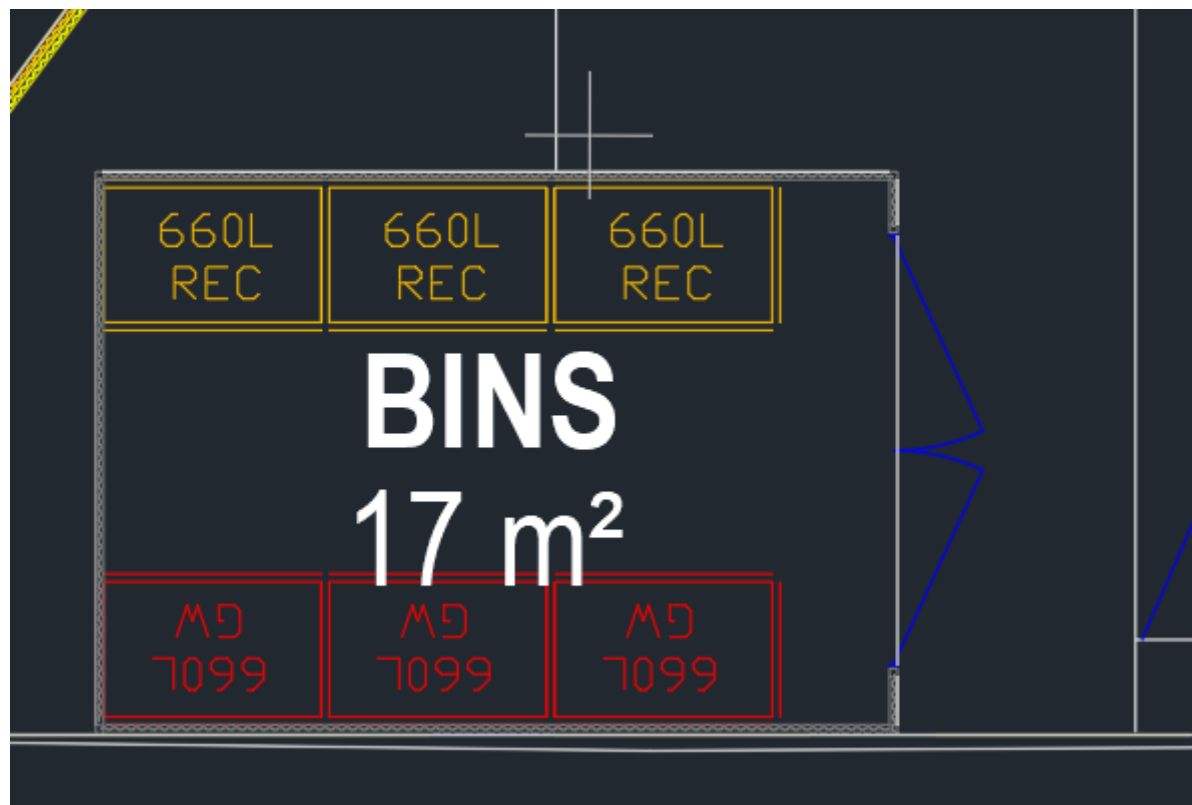


SITE PLAN

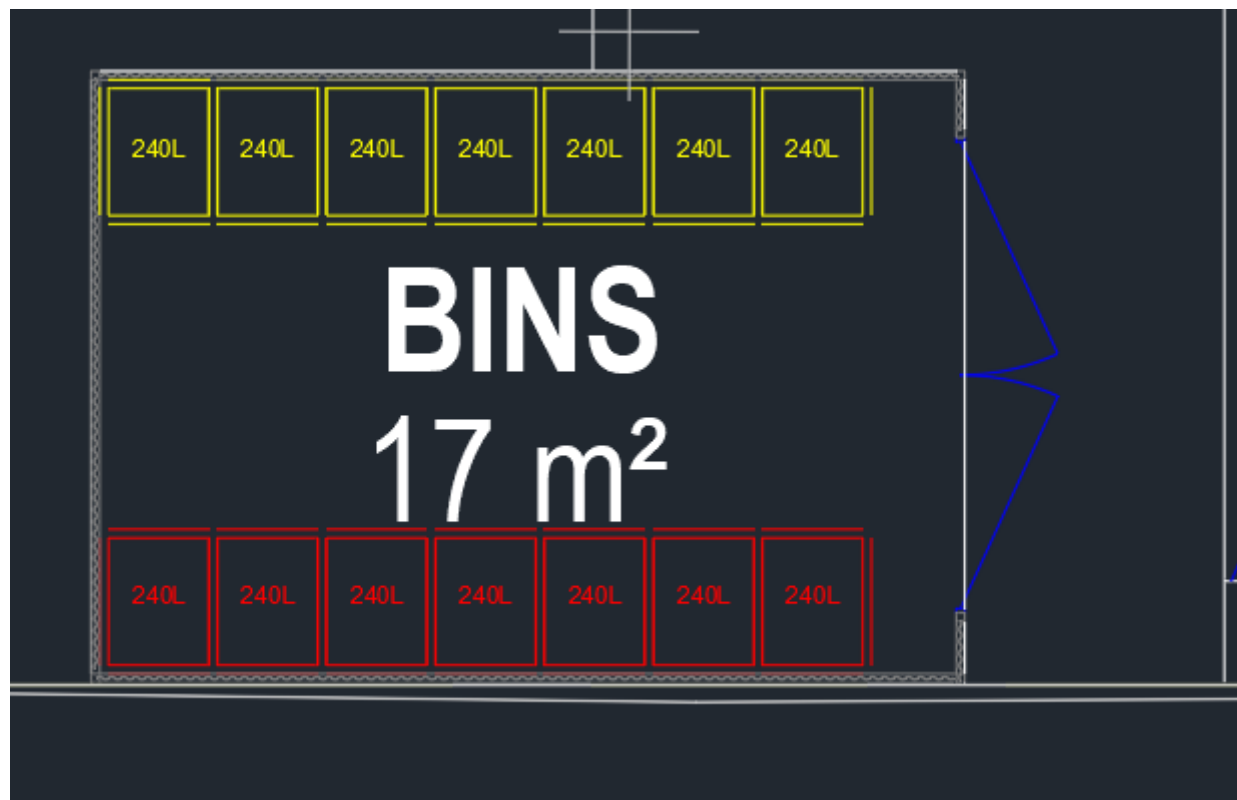
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Appendix B: Bin storage and bin presentation plans

Recommended



Alternative option



Appendix C: Waste calculations



Table 3: Weekly waste generation, bin types and collection frequency

Waste type	Daily generation (L)	Weekly waste generation (L)	Weekly collection frequency
General waste	444.5	3111.5	2
Recyclables	444.5	3111.5	2

General Waste Bins

Bin Size (L)	Number of bins	Weekly capacity
660	3	3960
Total weekly capacity (L)		3960

Recycle Waste Bins

Bin Size (L)	Number of bins	Weekly capacity
660	3	3960
Total weekly capacity (L)		3960

Appendix D: Swept path analysis

Swept path diagrams are included in this section of the report. Different coloured lines are employed to represent the various envelopes of the vehicle swept path, as described below:

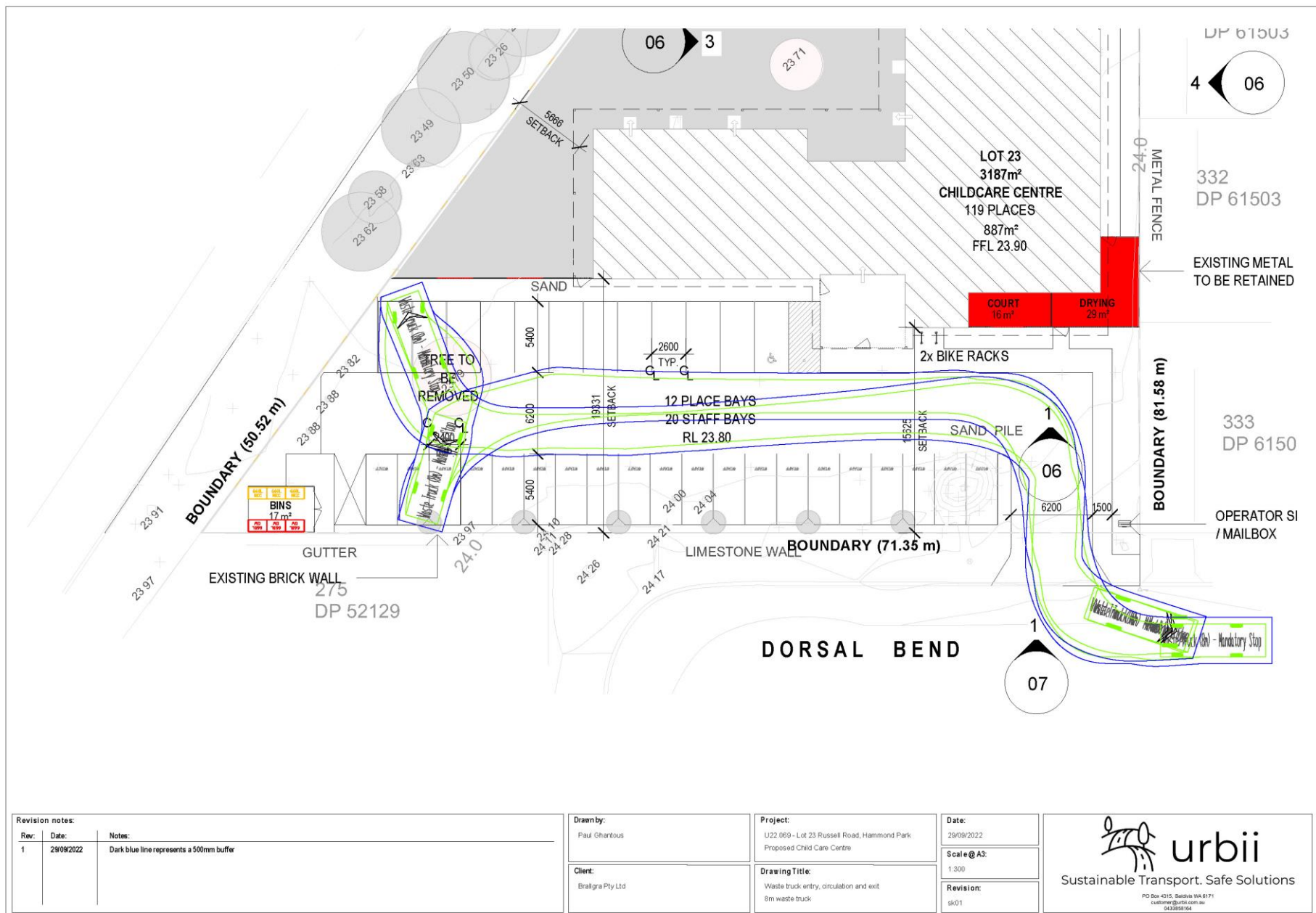
Cyan represents the wheel path of the vehicle

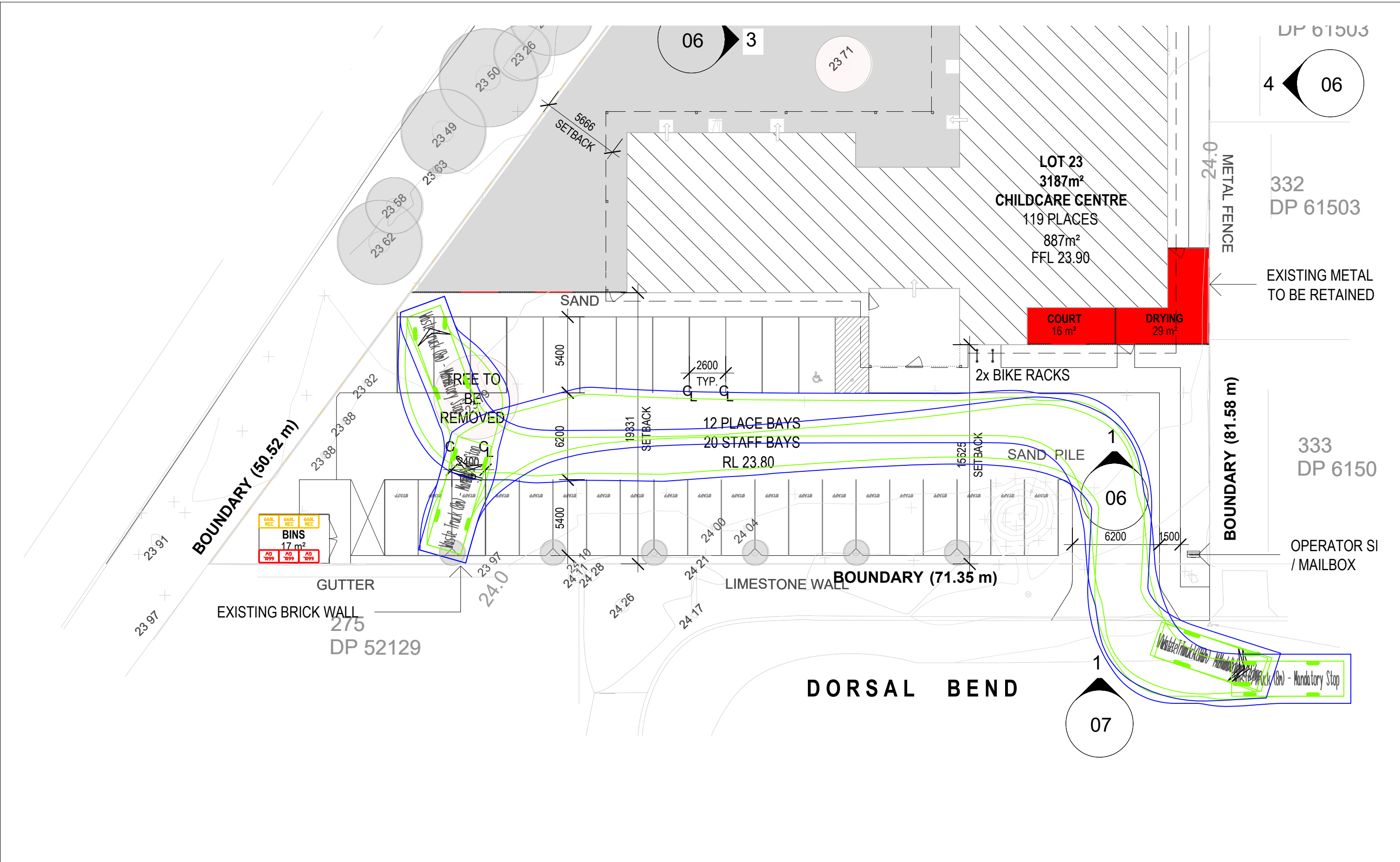
Green represents the vehicle body envelope

Blue represents a 500mm safety buffer line, offset from the vehicle swept path

The swept path diagrams are also provided separately in high-quality, A3 PDF format.







Revision notes:		
Rev:	Date:	Notes:
1	29/09/2022	Dark blue line represents a 500mm buffer

Drawn by:	Paul Ghantous
Client:	Brallgra Pty Ltd

Project:	U22.069 - Lot 23 Russell Road, Hammond Park Proposed Child Care Centre
Drawing Title:	Waste truck entry, circulation and exit 8m waste truck

Date:	29/09/2022
Scale @ A3:	1:300
Revision:	sk01

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Bushfire Management Plan:
Development Application: Lot 23 Russell Road,
Hammond Park

Brallgra Pty Ltd ATF G.Allan Family Trust

DOCUMENT TRACKING

Project Name	Bushfire Management Plan: Development Application: Lot 23 Russell Road, Hammond Park
Project Number	22PER3084
Project Manager	Stephen Moore
Prepared by	Maitland Ely
Reviewed by	Daniel Panickar (BPAD Level 3 – 37802)
Approved by	Daniel Panickar (BPAD Level 3 – 37802)
Status	Final
Version Number	v2
Last saved on	11 October 2022

This report should be cited as 'Eco Logical Australia 2022. *Bushfire Management Plan: Development Application: Lot 23 Russell Road, Hammond Park*. Prepared for Brallgra Pty Ltd ATF G. Allan Family Trust.

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Template 2.8.1

Version control	
Version	Purpose
v1	Draft – Submission to client
v2	Final

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1. Introduction

1.1 Proposal details

Eco Logical Australia (ELA) was commissioned by Brallgra Pty Ltd ATF G. Allan Family Trust to prepare a Bushfire Management Plan (BMP) to support a development application for Lot 23 Russell Road, Hammond Park (hereafter referred to as the subject site, Figure 1). The proposed development will result in an intensification of land use and involves the development of childcare centre (Figure 2).

The subject site is within a designated bushfire prone area as per the *Western Australia State Map of Bush Fire Prone Areas* (DFES 2021; Figure 3), which triggers bushfire planning requirements *under State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7; Western Australian Planning Commission (WAPC) 2015) and reporting to accompany submission of the development application in accordance with the associated *Guidelines for Planning in Bushfire Prone Areas v 1.4* (the Guidelines; WAPC 2021).

The subject site is located in Hammond Park, in the City of Cockburn. The site is surrounded by residential development. To the east of the site is the Baler Reserve which contains classifiable vegetation, in an urban setting.

This assessment has been prepared by ELA Bushfire Consultant Maitland Ely with quality assurance undertaken by Principal Bushfire Consultant Daniel Panickar (FPAA BPAD Level 3 Certified Practitioner No. BPAD37802).

1.2 Purpose and application of the plan

The primary purpose of this BMP is to act as a technical supporting document to inform planning assessment. This BMP is also designed to provide guidance on how to plan for and manage the bushfire risk to the subject site through implementation of a range of bushfire management measures in accordance with the Guidelines.

The subject site associated with this BMP is categorised as a vulnerable land use due to the activities planned on site and the definitions within the Guidelines. A Bushfire Emergency Evacuation Plan (BEEP) is required to be submitted with the development application and will be required to be updated and maintained prior to the occupancy of the childcare centre. This BMP and BEEP are to be used in conjunction with one another to ensure that the intent of SPP 3.7 is achieved.

1.3 Environmental considerations

SPP 3.7 policy objective 5.4 recognises the need to consider bushfire risk management measures alongside environmental, biodiversity and conservation values.

The subject site has been previously cleared; however, it has been unmanaged, and regrowth of classifiable vegetation has occurred on site. This regrowth will be removed prior to development.

No revegetation is proposed within the development and landscaping will be maintained in a low-threat state in accordance with Clause 2.2.3.2 of AS 3959: 2018.

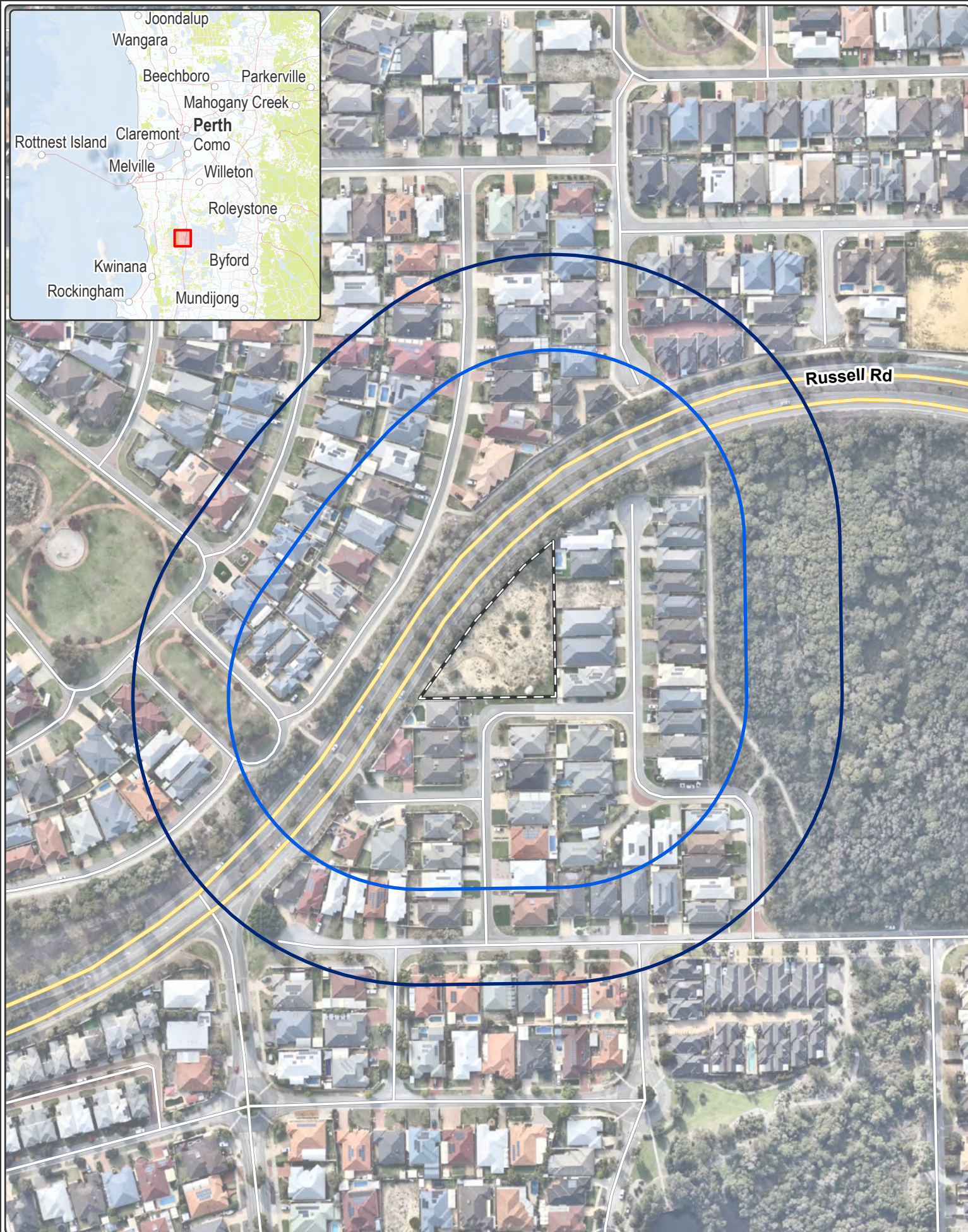
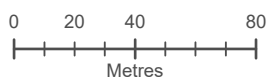


Figure 1: Site Overview

-  Subject site
-  100m site assessment
-  150m site assessment



Datum/Projection:
GDA 1994 MGA Zone 50
22PER3084-GM Date: 14/09/2022

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DA ISSUE

Rev: A
Approved: PRELIMINARY
Date: 06/09/22

FENCE TYPES

- 1.8m HIGH TIMBER FENCE
- 1.8m HIGH VERTICAL BLADE SLAT FENCING WITH CLEAR ACRYLIC BACKING
- 1.8m HIGH COLORBOND FENCE: MONUMENT
- 2m HIGH DOUBLE COLORBOND FENCE



DEVELOPMENT SUMMARY

SITE AREA:	3187 m ²
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TOTAL	119					20

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Checked: SJ
Date: 28/09/22
Job No: 2022073
Draw No: 3540 03 Rev: B A3 SHEET

SITE PLAN

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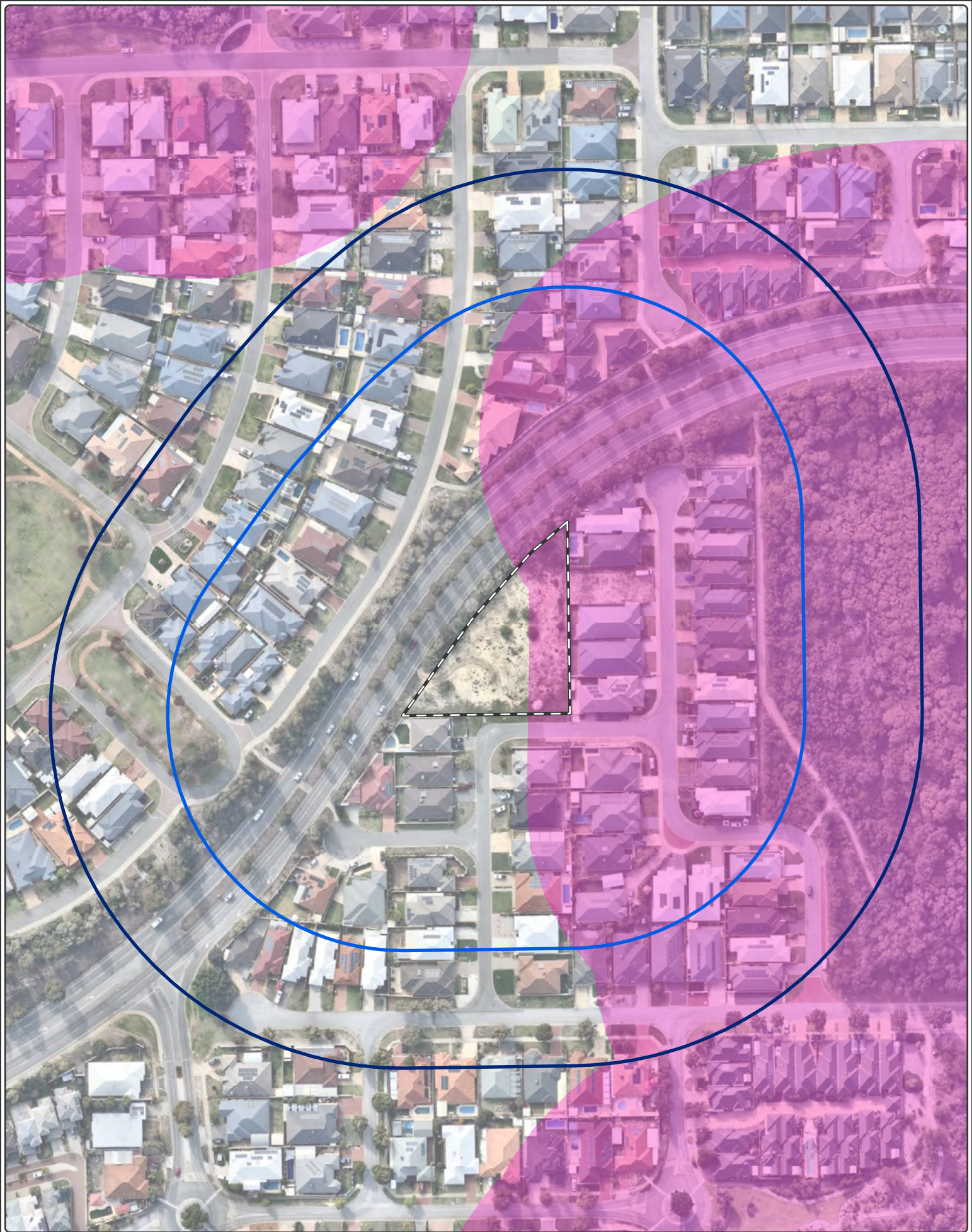
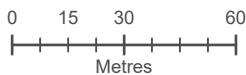


Figure 3: Bushfire Prone Areas

-  Subject site
-  100m site assessment
-  150m site assessment



Datum/Projection:
GDA 1994 MGA Zone 50
22PER3084-GM Date: 14/09/2022



2. Bushfire assessment results

2.1 Bushfire assessment inputs

The following section is a consideration of spatial bushfire risk and has been used to inform the bushfire assessment in this report.

2.1.1 Fire Danger Index

A blanket Fire Danger Index (FDI) 80 is adopted for Western Australia, as outlined in Australian Standard AS 3959: 2018 *Construction of Buildings in Bushfire Prone Areas* (SA 2018) and endorsed by Australasian Fire and Emergency Service Authorities Council (AFAC).

2.1.2 Vegetation classification and slope under vegetation

Vegetation and effective slope (i.e. slope under vegetation) within the subject site and surrounding 150 m (the assessment area) were assessed in accordance with the Guidelines and AS 3959: 2018 with regard given to the *Visual guide for bushfire risk assessment in Western Australia* (DoP 2016). Site assessment was undertaken on 20 August 2022.

The classified vegetation and effective slope for the proposed development from each of the identified vegetation plots are identified below in Table 1 and Figure 4.

Table 1: Classified vegetation as per AS 3959: 2018

Plot	Vegetation Classification	Effective Slope
1	Class D Scrub	All upslopes and flat land (0 degrees)
2	Class A Forest	All upslopes and flat land (0 degrees)
3	Excluded AS 3959-2009 2.2.3.2 (e) & (f)	-
4	Excluded AS 3959-2009 2.2.3.2 (b)	-

Photographs relating to each area and vegetation type are included in Appendix A.

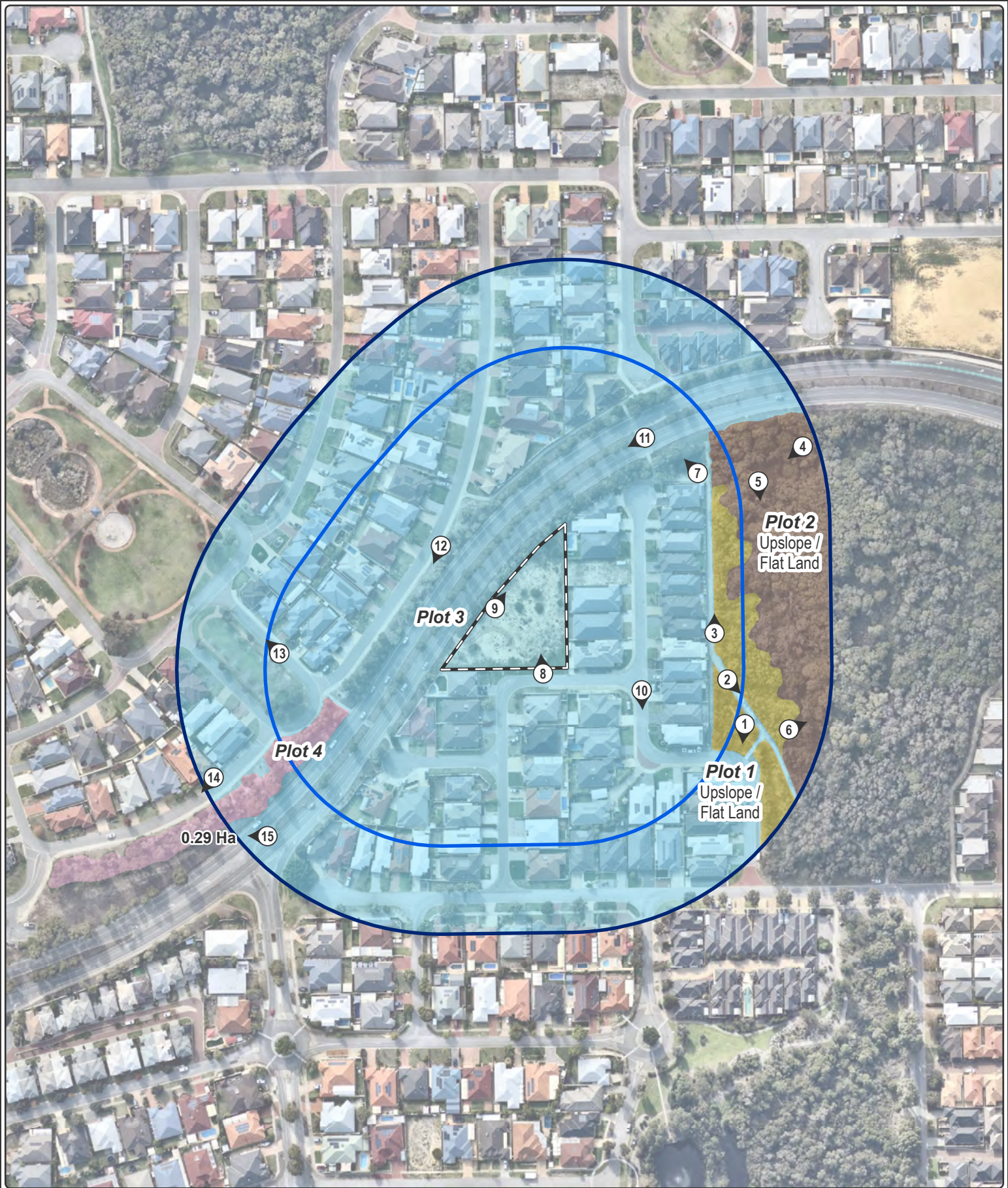


Figure 4: Vegetation Classification

Subject site 100m site assessment 150m site assessment Photo location	Vegetation classification Class A forest Class D scrub Excluded as per clause 2.2.3.2 (b) Excluded as per clause 2.2.3.2 (e) and (f)	0 25 50 100 Metres Datum/Projection: GDA 1994 MGA Zone 50 22PER3084-GM Date: 15/09/2022 N A TETRA TECH COMPANY
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2.2 Bushfire assessment outputs

A Bushfire Attack Level (BAL) assessment has been undertaken in accordance with SPP 3.7, the Guidelines, AS 3959: 2018 and the bushfire assessment inputs in Section 2.1.

2.2.1 BAL assessment

All land located within 100 m of the classified vegetation depicted in Figure 4 is considered bushfire prone and is subject to a BAL assessment in accordance with AS 3959: 2018.

A Method 1 BAL assessment (as outlined in AS 3959: 2018) has been completed for the proposed development and incorporates the following factors:

- Fire Danger Index (FDI) rating;
- Vegetation class;
- Slope under classified vegetation; and
- Distance between proposed development area and the classified vegetation.

Based on the identified BAL, construction requirements for proposed building can then be assigned. The BAL rating gives an indication of the expected level of bushfire attack (i.e. radiant heat flux, flame contact and ember penetration) that may be received by proposed buildings and subsequently informs the standard of construction required to increase building survivability.

2.2.2 Method 1 BAL assessment

Table 2 and Figure 5 display the Method 1 BAL assessment (in the form of BAL contours) that has been completed for the proposed development in accordance with AS 3959: 2018 methodology.

Table 2: Method 1 BAL calculation (BAL contours)

Plot	Vegetation Classification	Effective Slope	Separation distances required				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Class D Scrub	All upslopes and flat land (0 degrees)	<10	10-<13	13-<19	19-<27	27-<100
2	Class A Forest	All upslopes and flat land (0 degrees)	<16	16-<21	21-<31	31-<42	42-<100
3	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)	-	No separation distances required – BAL-LOW				
4	Excluded AS 3959: 2018 2.2.3.2 (b)	-	No separation distances required – BAL-LOW				

Based on the site assessment inputs and BAL assessment, the subject site and the proposed childcare centre within the subject site have a BAL rating of BAL-12.5.

The Guidelines state:

The bushfire construction requirements of the Building Code of Australia only apply to certain types of residential buildings (being Class 1, 2 or 3 buildings and/or Class 10a buildings or decks associated with a Class 1, 2 or 3 building) in designated bushfire prone areas. As such, AS 3959 does not apply to all buildings. Only vulnerable or high-risk land uses that fall within the relevant classes of buildings as set out in the Building Code of Australia will be required to comply with the bushfire construction requirements of the Building Code of Australia. As such, the planning process focuses on the location and siting of vulnerable and high-risk land uses rather than the application of bushfire construction requirements.

As the proposed building is not a Class 1, 2 or 3 building and/or Class 10a building or deck associated with a Class 1, 2 or 3 building, construction to AS 3959: 2018 is not required. However, given the vulnerable land use of the proposed development, ELA recommends that the childcare centre building is constructed to **BAL-19** (i.e. one level higher than the actual BAL rating for the building).

Table 3: BAL rating for proposed building within the subject site

Proposed building	Plot most affecting BAL rating	Separation Distance (m)	BAL Rating
Childcare Centre	Plot 1	86.8 m	BAL-12.5

2.3 Identification of issues arising from the BAL assessment

Should there be any changes in development design or vegetation/hazard extent that requires a modified bushfire management response, then the above BAL ratings will need to be reassessed for the affected areas and documented in a brief addendum to this BMP.

The Asset Protection Zone (APZ) area depicted in Figure 6 will be maintained in accordance with Standards for Asset Protection Zones (Appendix B). All other landscaping within the subject site will continue to be maintained to low threat state as per Clause 2.2.3.2 (f) AS 3959: 2018.

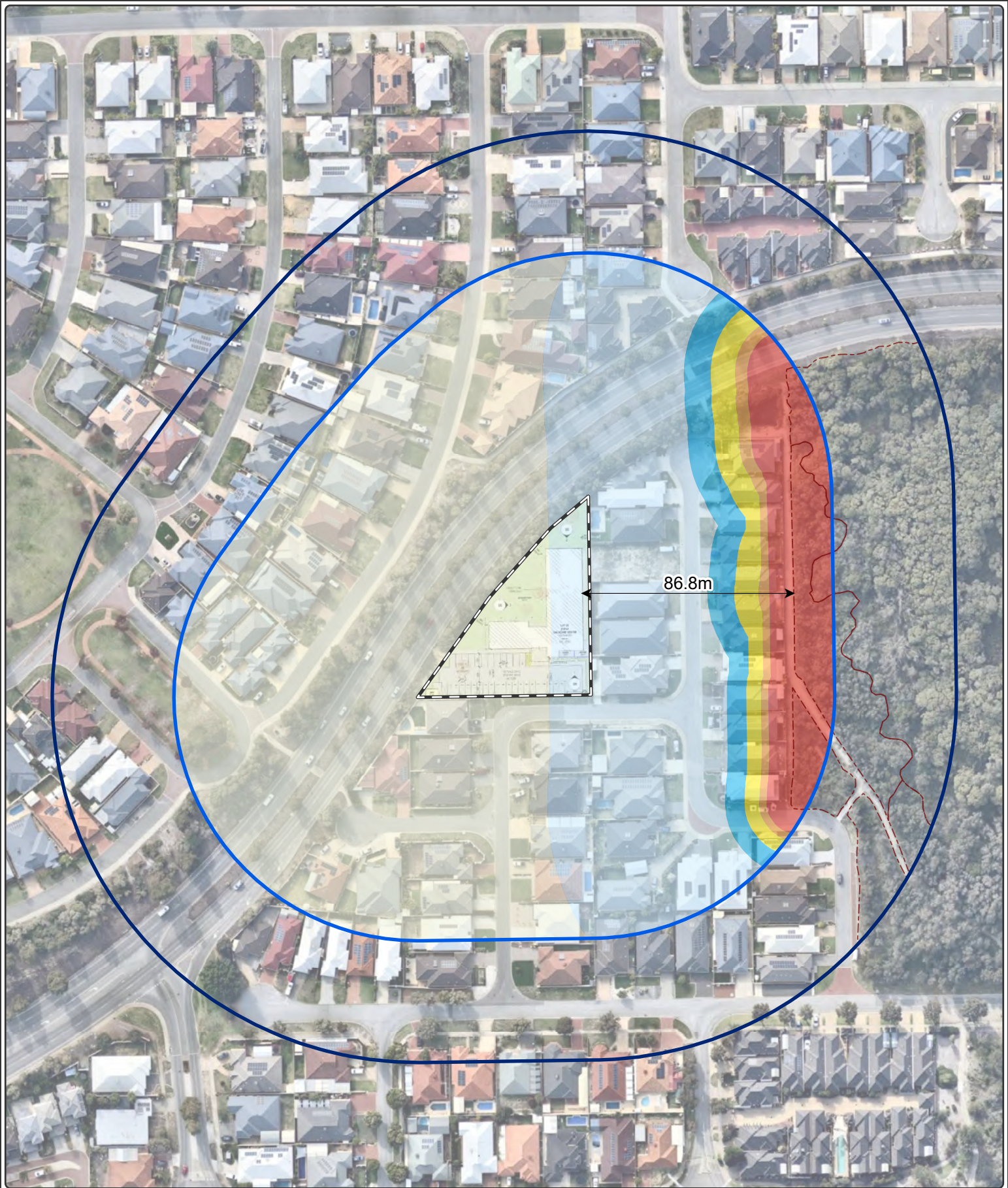


Figure 5: Bushfire Attack Level (BAL) Contours

 Subject site  100m site assessment  150m site assessment  Bushfire hazard interface	Bushfire Attack Level (BAL)  BAL - FZ  BAL - 40  BAL - 29  BAL - 19  BAL - 12.5  BAL - LOW	0 15 30 60 Metres Datum/Projection: GDA 1994 MGA Zone 50 22PER3084-GM Date: 4/10/2022  
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3. Assessment against the Bushfire Protection Criteria

3.1 Compliance

The proposed development is required to comply with policy measures 6.2, 6.5 and 6.6 of SPP 3.7 and the Guidelines. Implementation of this BMP is expected to meet objectives 5.1-5.4 of SPP 3.7.

In response to the above requirements of SPP 3.7 and the Guidelines, bushfire risk management measures, as outlined, have been devised for the proposed development in accordance with Guideline acceptable solutions to meet compliance with bushfire protection criteria.

Table 4 outlines the Acceptable Solutions (AS) that are relevant to the proposal and summarises how the intent of each Bushfire Protection Criteria has been achieved. No Performance Solutions (PS) have been proposed for this proposal. These management measures are depicted in Figure 6 where relevant.

Table 4: Summary of solutions used to achieve bushfire protection criteria

Bushfire Protection Criteria	AS	PS	N/A	Comment
Element 1: Location				
A1.1 Development location	☒	☐	☐	The proposed childcare centre building within the subject site will be located in an area subject to BAL rating of $\leq$BAL-12.5 (Figure 6). The proposed development is considered to be compliant with A1.1.
Element 2: Siting and design of development				
A2.1 Asset Protection Zone (APZ)	☒	☐	☐	The proposed development has an APZ sufficient for the potential radiant heat flux to not exceed 29K/m^2 and will be managed in accordance with the requirements of 'Standards for Asset Protection Zones' (WAPC 2021; Appendix B). The APZ can be contained within the boundaries of the lot or managed in perpetuity in a low fuel state. The proposed development is considered to be compliant with A2.1.
Element 3: Vehicular access				
A3.1 Public Roads	☒	☐	☐	The subject site is accessed via existing public roads, with entrance into subject site coming off Dorsal Bend. The Guidelines do not prescribe values for the trafficable (carriageway/pavement) width of public roads as they should be in accordance with the class of road as specified in the IPWEA Subdivision Guidelines, Liveable Neighbourhoods, Austroad Standards and/or any applicable standard in the local government area. ELA's assessment identified that all of the surrounding roads are bitumen with estimated width of the sealed surface achieving a minimum width of $\geq 6\text{ m}$ and therefore consider the existing road network would provide suitable access and egress for the community and emergency services personnel in the event of a bushfire. Vehicular access technical requirements in accordance with the Guidelines are detailed in (Appendix C).

Bushfire Protection Criteria	AS	PS	N/A	Comment
				No public roads are proposed as a part of this Development Application. The proposed development is considered to be compliant with A3.1.
A3.2a Multiple access routes	☒	☐	☐	Three access routes from the subject site to three suitable destinations are available via the existing public road network (Figure 6). Dorsal Bend extends south away from the subject site, before connecting up with Baler Court which continues east and west. Extending off to the east, it connects up with Barfield Road which continues south. Extending west, Baler Court connects with Jurien Way and Ashendon Boulevard which connect to Russell Road which extends off east and west. Please refer to A3.1 above for details regarding vehicular access technical requirements for public roads. The proposed development is considered to be compliant with A3.2a.
A3.2b Emergency Access way	☐	☐	☒	No emergency access ways are required or proposed.
A3.3 Through-roads	☐	☐	☒	This acceptable solution does not apply to Development Applications.
A3.4a Perimeter roads	☐	☐	☒	This acceptable solution does not apply to Development Applications.
A3.4b Fire service access route	☐	☐	☒	This acceptable solution does not apply to Development Applications.
A3.5 Battle-axe access legs	☐	☐	☒	No battle-axe properties are proposed as a part of this development.
A3.6 Private driveways	☐	☐	☒	The subject site is serviced by reticulated water and the site is accessed by a public road where speed limit is not greater than 70 km/hr. The internal road (treated as a private driveway) is less than 70 m in length. Given the above, this acceptable solution does not apply to the Development Application.
Element 4: Water				
A4.1 Identification of future water supply	☐	☐	☒	This acceptable solution does not apply to Development Applications.
A4.2 Provision of water for firefighting purposes	☒	☐	☐	Existing reticulated water is present within the area. ELA assume the hydrants and the existing reticulated water supply present in the area likely complies with Water Corporations Design Standard DS 63 Water Reticulation Standard, however, recommend this is confirmed with the Water Corporation, where possible. Hydrants within the surrounding residential development are generally spaced approximately 150 m apart) as depicted in Figure 6.

Bushfire Protection Criteria	AS	PS	N/A	Comment
				The proposed development is considered to be compliant with A4.2.
Element 5: Vulnerable tourism land uses	☐	☐	☒	This development application is not considered vulnerable tourism land use. Element 5 is not applicable to this proposed development.
NOTE – AS- ACCEPTABLE SOLUTION, PS- PERFORMANCE SOLUTION, N/A- NOT APPLICABLE				

3.2 Additional Bushfire Requirements

A BEEP has been prepared for the proposed childcare centre in accordance with SPP 3.7 and 'A Guide to developing a Bushfire Emergency Evacuation Plan' (WAPC 2019). This BEEP (ELA 2022) details evacuation procedures in the event of a bushfire.

All landscaping areas within the subject site will be maintained in accordance with Standards for Asset Protection Zones (Appendix B).

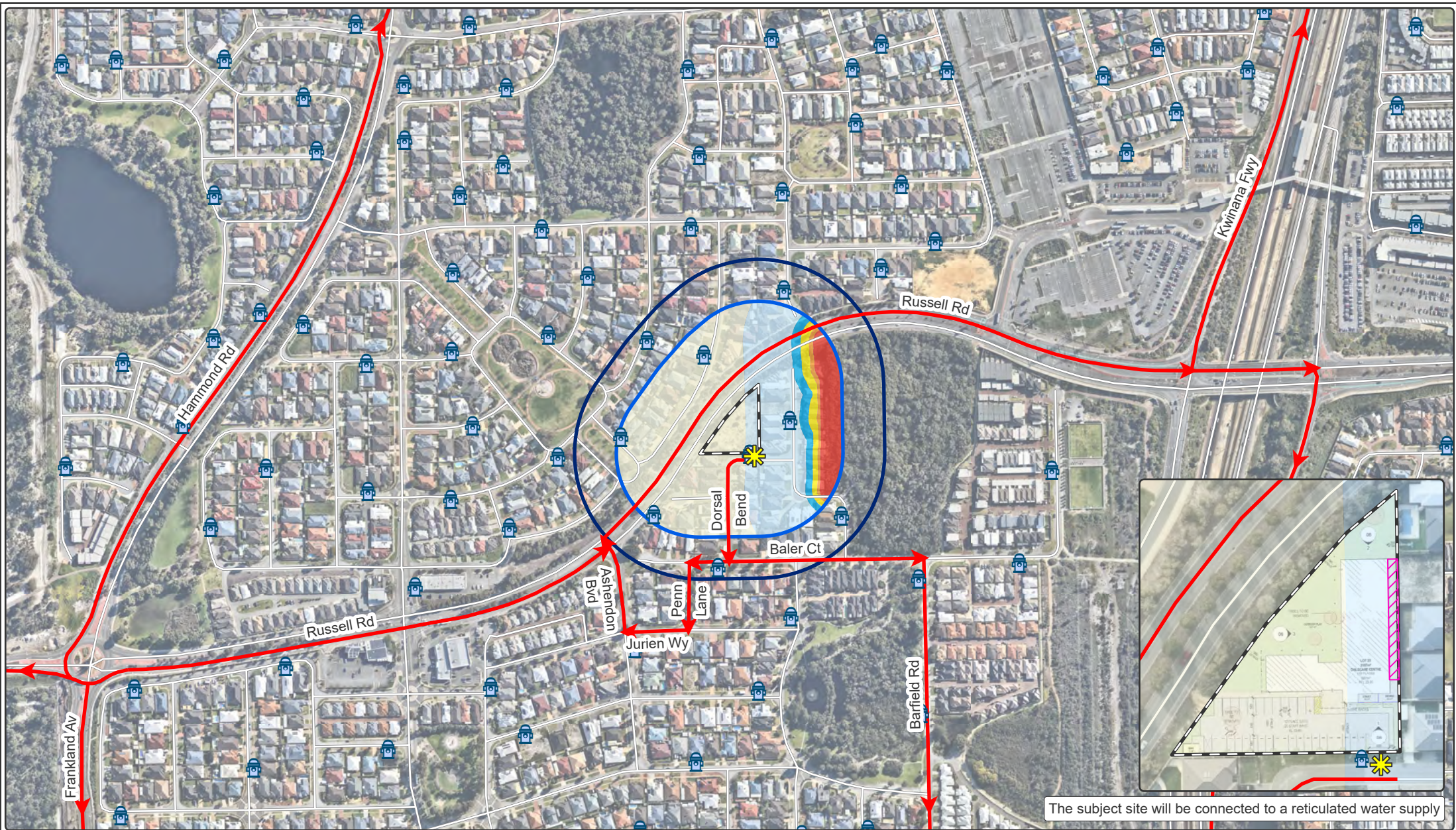
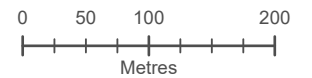
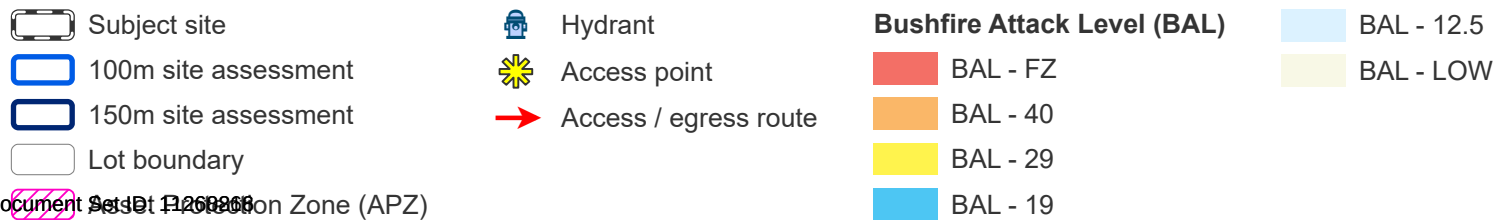


Figure 6: Spatial representation of the bushfire management strategies



Datum/Projection:
GDA 1994 MGA Zone 50
22PER3084-GM Date: 4/10/2022



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A TETRA TECH COMPANY

4. Implementation and enforcement

Implementation of the BMP applies to the developer, future owners within the subject site and the local government to ensure bushfire management measures are adopted and implemented on an ongoing basis. A summary of the bushfire management measures described in Section 3, as well as a works program, is provided in Table 5. These measures will be implemented to ensure the ongoing protection of life and property assets is achieved. Timing and responsibilities are also defined to assist with implementation of each measure.

Table 5: Proposed work program

No	Bushfire management measure	Responsibility
Prior to sale/occupancy		
1	Ensure proposed building is located outside of areas subject to BAL-FZ and BAL-40 as per the design in Figure 6.	Developer
2	Implement and maintain APZ as depicted in Figure 6.	Developer
3	Extend reticulated water supply to appropriate areas.	Developer
4	Ensure landscaping within the subject site is maintained to a low threat state as per exclusion clause 2.2.3.2 of AS 3959: 2018 (Figure 6).	Developer
5	Construct internal road network as per plan in Figure 6.	Developer
6	Construct childcare centre building to BAL-19.	Developer
7	Implement the Bushfire Emergency Evacuation Plan (BEEP) prior to occupancy.	Owners
Ongoing management		
8	Maintain APZs to the standard in the Guidelines.	Owners
9	Maintain landscaping within the subject site to a low threat state.	Owners
10	Review the BEEP prepared for the development on an annual basis and updated details/procedures as required.	Owners

5. Conclusion

In the author's professional opinion, the bushfire protection requirements listed in this assessment provide an adequate standard of bushfire protection for the proposed development. As such, the proposed development is consistent with the aim and objectives of SPP 3.7 and associated guidelines and is recommended for approval.

6. References

City of Cockburn (CoB), 2018, Fire Control Order, [Online], available from [Fire Control Order - City of Cockburn](#)

Department of Fire and Emergency Services (DFES), 2021, *Map of Bush Fire Prone Areas*, [Online], Government of Western Australia, available from: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/Pages/default.aspx>

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

Eco Logical Australia (ELA), 2022, *Bushfire Emergency Evacuation Plan: Development Application: Lot 23 Russell Road, Hammond Park*. Prepared for Brallgra Pty Ltd ATF G. Allan Family Trust.

Standards Australia (SA), 2018, *Construction of buildings in bushfire-prone areas*, AS 3959-2018. SAI Global, Sydney.

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

Western Australian Planning Commission (WAPC), 2021, *Guidelines for Planning in Bushfire Prone Areas Version 1.4 (including appendices)*, WAPC, Perth.

Western Australian Planning Commission (WAPC), 2019, *A guide to developing a Bushfire Emergency Evacuation Plan*, October 2019.

Appendix A – Classified Vegetation Photos

Plot	1	Classification or Exclusion Clause	Class D Scrub
Photo Point 1			
		Vegetation is unmanaged closed scrub predominantly comprised of shrubs with isolated juvenile Melaleuca trees. Some 6 m tall Eucalypts on border acting as a windbreak, however vegetation behind is predominantly small trees (>2 m tall) of mixed composition.	
		Slope within this plot was assessed as upslope/flat land.	
Plot	1	Classification or Exclusion Clause	Class D Scrub
Photo Point 2			
		Vegetation is unmanaged closed scrub predominantly comprised of shrubs with isolated juvenile Melaleuca trees. Some 6 m tall Eucalypts on border acting as a windbreak, however vegetation behind is predominantly small trees (>2 m tall) of mixed composition.	
		Slope within this plot was assessed as upslope/flat land.	
Plot	1	Classification or Exclusion Clause	Class D Scrub
Photo Point 3			
		Vegetation is unmanaged closed scrub predominantly comprised of shrubs with isolated juvenile Melaleuca trees. Some 6 m tall Eucalypts on border acting as a windbreak, however vegetation behind is predominantly small trees (>2 m tall) of mixed composition.	
		Slope within this plot was assessed as upslope/flat land.	

Plot	2	Classification or Exclusion Clause	Class A Forest
		Photo Point 4	
		Photo Point 5	
		Photo Point 6	

Plot	3	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)
Photo Point 7		Vegetation is the terminal end of a wetland and the beginning of a nature strip. It is located in between a major road and residential lots, is managed on both sides and constitutes a non-vegetated waterway surrounded by some small riparian shrubs. Vegetation present is regarded as low threat due to factors such as flammability, moisture content and managed fuel load. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.	 South East Elevation ☀ 316°NW (T) 📍 32°9'25"S, 115°51'6"E ±49ft ▲ 84ft 20 Jul 2022, 09:11:12
Photo Point 8		Grassland vegetation within the subject site managed in a minimal fuel condition which will be cleared for development. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.	 W 270 NW 300 N 0 NE 30 60 ☀ 354°N (T) 📍 32°9'29"S, 115°51'2"E ±19ft ▲ 85ft 20 Jul 2022, 08:44:01
Photo Point 9		Grassland vegetation within the subject site managed in a minimal fuel condition which will be cleared for development. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.	 South West Elevation ☀ 34°NE (T) 📍 32°9'28"S, 115°51'1"E ±19ft ▲ 83ft 20 Jul 2022, 09:24:07

Plot	3	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)
Photo Point 10		Non vegetated area including road foot paths and building. Vegetation present is low threat landscaped garden. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.	
Photo Point 11		Non vegetated area comprised of road and footpath. Vegetation present is managed and constitutes a nature strip in the middle of major road. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.	
Photo Point 12		Non vegetated area comprised of road and footpath. Vegetation present is managed and constitutes a nature strip on the side of a major road. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.	

Plot	3	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)
Photo Point 13		Vegetation in parkland is managed in a minimal fuel condition and considered low threat vegetation. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.	South East Elevation 316°NW (T) 32°9'29"S, 115°50'57"E ±16ft ▲ 82ft 20 Jul 2022, 09:16:29
Plot	4	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (b)
Photo Point 14		Vegetation is the terminal end of a nature strip increasing in size to a larger nature reserve bordering a subdivision. The plot is less than 1 ha in size (0.29 ha) and is >100 m away from other areas of classified vegetation. This plot has been excluded under Clause 2.2.3.2(b) of AS 3959:2018.	North East Elevation 219°SW (T) 32°9'31"S, 115°50'55"E ±36ft ▲ 87ft 20 Jul 2022, 09:17:36
Plot	4	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (b)
Photo Point 15		Vegetation is the terminal end of a nature strip increasing in size to a larger nature reserve bordering a subdivision. The plot is less than 1 ha in size (0.29 ha) and is >100 m away from other areas of classified vegetation. This plot has been excluded under Clause 2.2.3.2(b) of AS 3959:2018.	East Elevation 271°W (T) 32°9'32"S, 115°50'56"E ±42ft ▲ 89ft 20 Jul 2022, 09:18:27

Appendix B – Standards for Asset Protection Zones

The following standards have been extracted from the *Guidelines for Planning in Bushfire Prone Areas v 1.4* (WAPC 2021).

Every habitable building is to be surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:

a. Width: Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m^2 (BAL-29) in all circumstances.

b. Location: the APZ should be contained solely within the boundaries of the lot on which a building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity (see explanatory notes).

c. Management: the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones' (below):

- Fences within the APZ:
 - o Should be constructed from non-combustible materials or bushfire-resisting timber referenced in Appendix F of AS 3959.
- Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness):
 - o Should be managed and removed on a regular basis to maintain a low threat state;
 - o Should be maintained at <2 tonnes per hectare (on average); and
 - o Mulches should be non-combustible (e.g. stone, gravel or crushed mineral earth) or wood mulch >6 millimetres in thickness.
- Trees (>6 metres in height):
 - o Trunks at maturity should be a minimum distance of six metres from all elevations of the building;
 - o Branches at maturity should not touch or overhand a building or powerline;
 - o Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation;
 - o Canopy cover within the APZ should be <15 per cent of the total APZ area; and
 - o Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ.

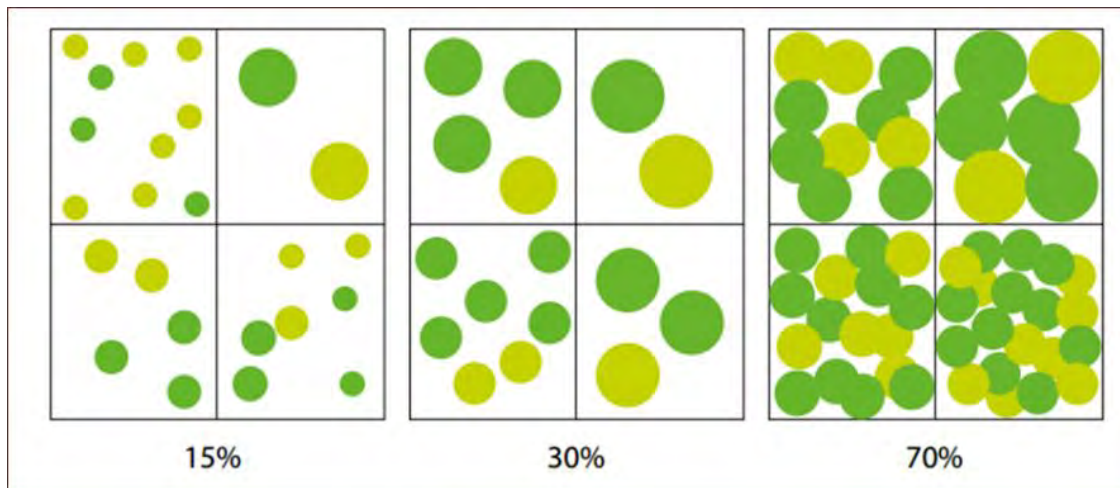


Figure 7: Illustrated tree canopy cover projection (WAPC 2021)

- Shrub and scrub 0.5 metres to six metres in height (shrub or scrub >6 metres in height are to be treated as trees):
 - o Should not be located under trees or within three metres of buildings;
 - o Should not be planted in clumps >5 square metres in area; and
 - o Clumps should be separated from each other and any exposed window or door by at least 10 metres.
- Ground covers <0.5 metres in height (ground covers >0.5 metres in height are to be treated as shrubs):
 - o Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above; and
 - o Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
- Grass:
 - o Grass should be maintained at a height of 100 millimetres or less, at all times; and
 - o Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
- Defendable space:
 - o Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
- LP Gas Cylinders:
 - o Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building;
 - o The pressure relief valve should point away from the house;
 - o No flammable material within six metres from the front of the valve; and
 - o Must site on a firm, level and non-combustible base and be secured to a solid structure.

Additional notes

The Asset Protection Zone (APZ) is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level. Hazard separation in the form of using subdivision design elements or excluded and low threat vegetation adjacent to the lot may be used to reduce the dimensions of the APZ within the lot.

The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity. The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

Plant flammability, landscaping design and maintenance should also be considered for trees, shrub, scrub and ground covers within the APZ. Please refer to explanatory notes 'E2 Managing an Asset Protection Zone (APZ) to a low threat state,' 'E2 Landscaping and design of an asset protection zone,' and 'E2 Plant flammability' in the Guidelines for further information relating to APZ standards.

Appendix C - Vehicular access technical requirements (WAPC 2021)

Technical requirements	Public road	Emergency access way ¹	Fire service access route ¹	Battle-axe and private driveways ²
Minimum trafficable surface (m)	In accordance with A3.1	6	6	4
Minimum horizontal clearance (m)	N/A	6	6	6
Minimum vertical clearance (m)		4.5		
Minimum weight capacity (t)		15		
Maximum grade unsealed road ³	As outlined in the IPWEA Subdivision Guidelines		1:10 (10%)	
Maximum grade sealed road ³	As outlined in the IPWEA Subdivision Guidelines		1:7 (14.3%)	
Maximum average grade sealed road	As outlined in the IPWEA Subdivision Guidelines		1:10 (10%)	
Minimum inner radius of road curves (m)	As outlined in the IPWEA Subdivision Guidelines		8.5	

¹ To have crossfalls between 3 and 6 %.

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

³ Dips must have no more than a 1 in 8 (12.5% -7.1 degree) entry and exit angle



Bushfire Emergency Evacuation Plan:
Development Application: Lot 23 Russell Road,
Hammond Park

Brallgra Pty Ltd ATF G.Allan Family Trust

IN CASE OF A BUSHFIRE EMERGENCY, FOLLOW THE EVACUATION PLAN LOCATED IN APPENDIX A
WHICH SHOULD ALSO BE PLACED IN PROMINENT STAFF LOCATIONS.

THIS REPORT IS TO SUPPORT THE PLANNING APPROVAL PROCESS AND SUPPORTING DETAIL TO THE
EVACUATION PLAN

DOCUMENT TRACKING

Project Name	Bushfire Emergency Evacuation Plan Development Application: Lot 23 Russell Road, Hammond Park
Project Number	22PER3084
Project Manager	Stephen Moore
Prepared by	Maitland Ely and Eva Cronin (BPAD Level 2- 45482)
Reviewed by	Daniel Panickar (BPAD Level 3- 37802)
Approved by	Daniel Panickar (BPAD Level 3- 37802)
Status	Draft
Version Number	v2
Last saved on	11 October 2022

This report should be cited as 'Eco Logical Australia 2022. *Bushfire Emergency Evacuation Plan: Development Application: Lot 23 Russell Road, Hammond Park.* Prepared for Brallgra Pty Ltd ATF G.Allan Family Trust.'

ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from Brallgra Pty Ltd ATF G.Allan Family Trust.

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Template 2.8.1

Version control

Version	Purpose
v1	Draft – Submission to client
v2	Draft

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1. Facility Details

This Bushfire Emergency Evacuation Plan (BEEP) is for the proposed childcare centre at Lot 23 Russell Road, Hammond Park within the City of Cockburn and has been designed to assist management to protect life and property in the event of a bushfire.

This plan was developed in line with 'A Guide to developing a Bushfire Emergency Evacuation Plan' (WAPC 2019) to support the Development Application to construct a new childcare centre on the site. Some items are listed as To Be Confirmed (TBC) as the required information was not available during the time this plan was developed. It is critical that this plan be updated with all required information prior to the occupation of this proposed facility.

This plan assumes that the Bushfire Management Plan prepared for the development will be implemented, including recommendations to construct the building to a Bushfire Attack Level (BAL) of BAL-19 (one level higher than the actual BAL rating for the building).

This plan outlines procedures for both evacuation and shelter-in-place to enhance the protection of occupants from the threat of a bushfire.

The primary bushfire management action is:

EARLY CLOSURE OF THE FACILITY UNDER EXTREME AND CATASTROPHIC FIRE DANGER RATINGS

The primary action to follow in a bushfire emergency is to:

EVACUATE OFF-SITE (ONLY IF TIME TO BUSHFIRE ARRIVAL IS GREATER THAN 147 MINUTES OR AS OTHERWISE ADVISED BY EMERGENCY SERVICES).

The secondary action to follow in a bushfire emergency is to:

SHELTER-IN-PLACE

Table 1: Facility Details

Name of on-site contact person:	TBC
Phone number:	TBC
Type of facility:	Childcare facility
Number of buildings:	1
Number of employees:	20 + (additional staff on site for staff changeover, training, etc.)
Number of occupants:	up to 150 (119 children, 20 + staff and some visitors)
Number of vulnerable occupants/with support needs:	119 children
Estimated maximum number of visitors:	TBC

Description of support needs: The childcare centre will be caring for young children that require on going supervision. Staff onsite are trained and are familiar with the requirements to care for these children.

1.1 Site risks, assumptions and recommendations

In consideration of the risk to the site and occupants' characteristics the following points were considered in determining the evacuation requirements of the Childcare Centre:

- Site risk:
 - o Vegetation that poses the greatest bushfire threat to this site is located to the east of the site within Baler Reserve;
 - o Baler Reserve is a wetland, however, may be subject to seasonal drying. The extent of vegetation within Baler Reserve that poses a bushfire threat to the site is approximately 4 ha in size. Baler Reserve is predominantly surrounded by urban developed areas, however, Christmas Tree Park and Barfield Reserve are located nearby to the south and south east of Baler Reserve, noting each of these reserves are separated from each other by non-vegetated roads. Thompsons Lake Nature Reserve is located approximately 1km to the west of the site and contains a significant amount of bushfire prone vegetation.
 - o Bushfire hazards are separated from the development site by an Asset Protection Zone (APZ) and low threat landscaped areas within and surrounding the site;
 - o Potential ignition sources are from nearby vehicles using major roads or people accessing the nearby bushland;
 - o It is possible that impacts could be expected before occupants have had the opportunity to undertake safe evacuation off-site (i.e. bushfire scenarios which occur with limited warning and result in insufficient time to evacuate before bushfire attack is experienced);
- Occupant characteristics:
 - o 119 children and 20 staff;
- Evacuation timing:
 - o Time for notification of an approaching bushfire and that evacuation is required – 10 minutes;
 - o Time for bus contractor to arrive to site following pick-up request (assembly and mobilisation of all children and staff to occur while waiting for buses) – 30 minutes;
 - o Time to load children and necessary staff onto two buses – 30 minutes
 - o Off-site evacuation location is Cockburn Aquatic and Recreation Centre (ARC) approximately 5.7 km drive north;
 - o Time to travel to off-site evacuation location – 8 minutes
 - o Time to unload occupants on two buses – 20 minutes
 - o Adding a safety factor of 1.5 results in total evacuation time of 147 minutes;
 - o In a rapid onset bushfire scenario or fire within primary bushfire hazard (Baler Reserve) the safest option is to remain on site.
 - o The accuracy of evacuation timing is estimated only and is **TBC** with the Childcare Centre operator. The BEEP and timing must be updated prior to occupancy and then updated further (where required) following evacuation drills.
- Limitations

- o In times of stressful situations such as evacuation and fire, children's behaviour can be erratic;
- o Traffic conditions in a bushfire emergency may impact on the time required (and safety) of evacuation to the Cockburn ARC;
- o There is a possibility that logistical challenges associated with evacuation of 100 + young children via a third party bus operator is likely to result in insufficient time to evacuate safely to the off-site evacuation location (particularly in a rapid-onset bushfire scenario).
- Given the possibility for multiple bushfire scenarios to affect the proposed Childcare Centre, multiple bushfire risk management measures are proposed, which include:
 - o BAL-19 construction with BAL-12.5 exposure (higher level construction);
 - o APZ that limits building exposure to BAL-12.5;
 - o Closure on site based on the highest FDR ratings; and
 - o An evacuation plan that identifies clear triggers and actions.

Based on the above analysis, the following actions are recommended

1. The primary bushfire management action is **EARLY CLOSURE OF THE FACILITY UNDER EXTREME AND CATASTROPHIC FIRE DANGER RATINGS.**
2. The primary action to follow in a bushfire emergency is **EVACUATE OFF-SITE (ONLY IF TIME TO BUSHFIRE ARRIVAL IS GREATER THAN 147 MINUTES OR AS OTHERWISE ADVISED BY EMERGENCY SERVICES).**
3. The secondary action of follow in a bushfire emergency is **SHELTER-IN-PLACE.**

If shelter-in-place is required, the proposed Childcare Centre building has been determined to be a suitable on-site safer location based on the following inputs:

- The proposed Childcare Centre building is large enough to provide floor space for the maximum 150 users on site. Minimum recommended floor space is 1 person per m² which equals 150 m². The total overall floor space of the proposed Childcare Centre is 887m²;
- The proposed Childcare Centre building will have an APZ sufficient to ensure the maximum radiant heat flux exposure of the building will be ≤12.5 kW/m²;
- The proposed Childcare Centre building will be built to a higher bushfire construction standard (BAL-19 construction standard in line with AS 3959: 2018); and
- The proposed Childcare Centre building is easily accessible by emergency services through use of the proposed carpark and driveway and direct access via Dorsal Bend.

Any direct and specific evacuation messages regarding this site from DFES or other emergency personnel will override the above actions.

2. Responsibilities

The following outlines who has responsibility for implementing the emergency procedures in the event of a bushfire.

Table 2: Staff requirements in event of bushfire emergency

Position	Name of Person	Building/area of Responsibility	Responsibility	Phone Number
Chief Fire Warden	TBC	Whole of facility	Contact with DFES; Shelter-in-place plan enacted if required: Account for location of all patrons, staff and visitors	TBC
Secondary Fire Warden	TBC	Whole of facility	All doors and windows closed; Account for all patrons	TBC
Gardener/ landscape contractor	TBC	Outside Grounds	Irrigation system enabled if impact of fire imminent; Maintenance of landscaping as per Section 4 of this BEEP	TBC

3. Emergency Contacts

3.1 Emergency External Contacts

Name Organisation	Office/Contact	Contact Details
Fire, Police, Ambulance	Fire or Emergency	000
Department of Fire & Emergency Services	Emergency information	13 33 37 (13 DFES)
Emergency WA	Warnings and Incidents	www.emergency.wa.gov.au
SES	Emergency Assistance	132 500 / 1300 130 039
Police Station	Cockburn	(08) 6174 9666 / 131 444
Fiona Stanley Hospital	Local Hospital	(08) 6152 2222
Bureau of Meteorology (BoM)	Recorded Information	1300 659 213

Details for additional contact organisations for fire and emergency advice are available on the City of Cockburn website¹

3.2 Emergency Internal Contacts

Name or Organisation	Office/Contact	Contact Details
TBC	Facility Manager	TBC
TBC	Chief Fire Warden	TBC
TBC	Secondary Fire Warden	TBC

¹ <https://www.cockburn.wa.gov.au/Contacts-for-Fire-and-Emergency-Advice>

4. Bushfire Preparedness, Awareness and Pre-Emptive Procedures

The following actions are to be undertaken by proposed childcare centre at the specified times.

4.1 Ongoing actions (year-round)

Ensure the landscaped grounds are maintained to the requirements of *Standards for Asset Protection Zones (WAPC, 2021)* with the following items checked prior to November of each year:

- **Fences within the APZ:**
 - Should be constructed from non-combustible materials or bushfire-resisting timber referenced in Appendix F of AS 3959.
- **Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness):**
 - Should be managed and removed on a regular basis to maintain a low threat state;
 - Should be maintained at <2 tonnes per hectare (on average); and
 - Mulches should be non-combustible (e.g. stone, gravel or crushed mineral earth) or wood mulch >6 millimetres in thickness.
- **Trees (>6 metres in height):**
 - Trunks at maturity should be a minimum distance of six metres from all elevations of the building;
 - Branches at maturity should not touch or overhand a building or powerline;
 - Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation;
 - Canopy cover within the APZ should be <15 per cent of the total APZ area; and
 - Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ.
- **Shrub and scrub 0.5 metres to six metres in height (shrub or scrub >6 metres in height are to be treated as trees):**
 - Should not be located under trees or within three metres of buildings;
 - Should not be planted in clumps >5 square metres in area; and
 - Clumps should be separated from each other and any exposed window or door by at least 10 metres.
- **Ground covers <0.5 metres in height (ground covers >0.5 metres in height are to be treated as shrubs):**
 - Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above; and
 - Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
- **Grass:**
 - Grass should be maintained at a height of 100 millimetres or less, at all times; and
 - Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.

- **Defendable space:**

- Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.

- **LP Gas Cylinders:**

- Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building;
- The pressure relief valve should point away from the house;
- No flammable material within six metres from the front of the valve; and
- Must site on a firm, level and non-combustible base and be secured to a solid structure.

Detailed information and checklists are available on the DFES website including the *'The Homeowner's Bushfire Survival Manual'*² and the *'Fire Chat Bushfire Preparedness Toolkit'*³ published by DFES:

² https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/BushfireManualsandGuides/DFES_Bushfire-Homeowners_Survival_Manual.pdf

³ <https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/BushfireManualsandGuides/DFES-Fire-Chat-Bushfire-Preparedness-Toolkit.pdf>

4.2 Actions immediately prior to the bushfire season

- Review Emergency Evacuation Plan to ensure details, procedures and contact phone numbers are correct and up to date;
- Ensure employees and other occupants are informed and familiar with the procedures laid out in the Emergency Evacuation Plan;
- Place current version of Bushfire emergency evacuation poster plan (Appendix A) in facility in visible location(s);
- Ensure adequate levels of drinking water are available in the facility in case of emergency;
- Ensure any firefighting equipment (hoses etc.) is serviceable and available;
- Ensure no hazards are present (for example, rubbish piles) that could contribute to increased fire intensity;
- Ensure property access is kept clear and easily trafficable;
- Ensure first aid kits, fire extinguishers, emergency lighting and other emergency resources are current, serviceable and accessible;
- Ensure roof and gutters are free from leaf litter and debris;
- Ensure an emergency evacuation kit has been prepared and is easily accessible by staff;
- Contact with school bus contractors to be made prior to November annually with commitment to provide bus transport in the event of emergency evacuation for up to 150 occupants. School bus contractor to be placed on standby for possible evacuation (estimated a minimum of two buses will be required to cater for minimum 150 seat capacity) when FDR is High (facility will be closed on days with an FDR of Extreme or higher); and
- Brief all staff on the bushfire evacuation procedures with updated advice provided when fire warnings are issued by Emergency Services (currently DFES) for the locality.

4.3 Ongoing actions during the bushfire season

- Maintain the landscaped grounds and APZs to the requirements of *Standards for Asset Protection Zones*;
- Maintain compliance with the local government's annual firebreak and fuel load notice issued under section 33 of the *Bush Fires Act 1954*;
- Ensure defensible spaces around buildings and assembly points are maintained; and
- Update contact details of the emergency management team and employees.

4.4 Fire Danger Rating System

Additional critical preparedness actions are to be undertaken under certain Fire Danger Ratings (FDRs) and/or Total Fire Bans as detailed below.

The FDR indicates the potential level of danger should a bushfire start, providing information so that action can be taken to protect lives from the potentially dangerous impacts of bushfires. During the Bushfire Danger Period the forecast FDR for the following day is typically released around 4pm but can be changed as weather conditions unfold. The current and predicted FDR, for the following day, are available via the DFES and BoM websites⁴.

On **Extreme or Catastrophic FDRs**, the proposed childcare centre will be closed with all staff and parents/guardians notified in advance.

The Bushfire Preparedness Matrix in Table 3 provides a guide of monitoring actions to be completed during the Bushfire Danger Period to allow situational awareness of potential bushfires and triggers for shelter in place or evacuation. This preparedness matrix and other supporting information is also contained within the Bushfire emergency evacuation poster plan in Appendix A.

Table 3: Bushfire Preparedness Matrix

ACTION	NO RATING	MODERATE	HIGH	EXTREME	CATASTROPHIC
Facility Manager or delegate to monitor Emergency WA / or DFES website or ABC Radio for fire incidents		Min. 1 pm	Min. 9 am, 11 am, 1 pm, 3 pm (or more frequently if fire event in locality)	Facility closed	
Complete building preparedness checks			By 8 am		
Additional controls – Total Fire Ban	In the event of a Total Fire Ban being declared for the area in which the facility is located the Facility Manager or delegate should check the DFES Emergency WA website (https://www.emergency.wa.gov.au/) at 9 am, 11 am, 1 pm, 3 pm (or more frequently if fire event in locality).				

The City of Cockburn and DFES have the ability to put in place Total Fire Bans (TFB) based on the predicted extreme fire weather for any part of a day. The TFB is announced by DFES and with information to be found on their website⁵ or call the TFB hotline on 1800 709 355.

⁴ <http://www.bom.gov.au/wa/forecasts/fire-danger.shtml> or <https://www.emergency.wa.gov.au/#firedangerratings>

⁵ <https://www.emergency.wa.gov.au/>

5. Emergency Procedures

The primary bushfire management action is **EARLY CLOSURE OF THE CHILDCARE CENTRE UNDER EXTREME OR CATASTROPHIC FIRE DANGER RATINGS.**

Procedures for evacuation and shelter-in-place are below. Any direct and specific evacuation messages regarding this site from DFES or other emergency personnel will override these procedures.

5.1 Evacuation

The primary action in the event of a bushfire impacting the Childcare Centre is to **EVACUATE OFF-SITE (ONLY IF TIME TO BUSHFIRE ARRIVAL IS GREATER THAN 147 MINUTES OR AS OTHERWISE ADVISED BY EMERGENCY SERVICES).**

If off-site evacuation becomes a viable option, the recommended evacuation point is the Cockburn Aquatic and Recreation Centre (ARC) approximately 5.7 km drive north (refer to Appendix A for preferred route).

5.1.1 Evacuation trigger

In the event of a bushfire occurring within the area, the trigger to enact **EVACUATION PROCEDURES OCCURS WHEN DFES ISSUE:**

- **A WATCH & ACT ALERT FOR THE AREA IN WHICH THE CHILDCARE CENTRE IS LOCATED AND THE FIRE IS NOT WITHIN BALER RESERVE; OR**
- **AN EMERGENCY WARNING ALERT FOR THE AREA IN WHICH THE CHILDCARE CENTRE IS LOCATED AND THE FIRE IS NOT WITHIN BALER RESERVE.**

On the issue of these alerts, the relevant actions in Table 4 are to be undertaken.

5.2 Shelter-in-place

In the event of bushfire impacting the Childcare Centre and there has been insufficient time to safely evacuate the children and staff, all occupants will be required to **SHELTER-IN-PLACE** due to the vulnerable nature of the patrons of the facility and the potential time to evacuate.

The Childcare Centre is located in an area subject to a Bushfire Attack Level (BAL) rating of BAL-12.5. The building will be constructed to a BAL-19 standard to provide additional protection (to BAL-12.5) from bushfire attack given the vulnerable nature of occupants and potential logistical off-site evacuation challenges.

5.2.1 Shelter-in-place triggers

In the event of a bushfire occurring within the area, the trigger to enact **SHELTER-IN-PLACE PROCEDURES OCCURS WHEN DFES ISSUE:**

- **A WATCH & ACT ALERT FOR THE AREA IN WHICH THE CHILDCARE CENTRE IS LOCATED AND THE FIRE IS WITHIN BALER RESERVE; OR**
- **AN EMERGENCY WARNING ALERT FOR THE AREA IN WHICH THE CHILDCARE CENTRE IS LOCATED AND THE FIRE IS WITHIN BALER RESERVE.**

On the issue of these alerts, the relevant actions in Table 4 are to be undertaken.

5.3 Bushfire warning system and alerts

The following actions in Table 4 are to be undertaken in addition to the Bushfire Warning instructions issued by DFES.

Off-site evacuation is always safer, provided adequate time is available to complete it safely. Confirm with Lead Agency (DFES or other Emergency Service) prior to evacuating and follow all directions. Sheltering on site is a last resort option, where there is inadequate time to evacuate the site safely.

Update prior to occupancy

Table 4: Evacuation process

ALERT	DESCRIPTION	ACTION
Advice	A fire has started but there is no known danger, this is general information to keep you informed and up to date with developments.	- If a fire is spotted, report immediately to 000 and then Facility Manager; - Establish regular communication between the Facility Manager or delegate for the facility and all staff, children, contractors and visitors to provide awareness of potential bushfire threat; - Facility Manager or delegate to inform parents/guardians of the bushfire threat and advise them not to attend the Childcare Centre and to keep updated with the DFES advice via Emergency WA website; - Continually monitor DFES alerts for change in conditions and advice and prepare for evacuation; and - Check school bus contractor on standby for possible evacuation.
Watch and Act	There is a possible threat to lives and homes. Conditions are changing, you need to leave the area or prepare to actively defend.	WATCH AND ACT WITH NO FIRE IN BALER RESERVE - If a fire is spotted, report immediately to 000 and then Facility Manager; - Request information from DFES regarding bushfire time to arrival and if off-site evacuation to the Cockburn ARC should be undertaken; - Facility Manager or delegate to nominate a sole liaison officer to contact DFES immediately to determine appropriate course of action and inform all staff, children, contractors and visitors; - All occupants to stay indoors and prepare for evacuation; - Facility Manager or delegate to advise on evacuation to offsite location; and - All visitors and non-essential contractors to be asked to leave the facility if safe to do so. WATCH AND ACT WITH FIRE IN BALER RESERVE - Facility Manager or delegate to contact 000 to inform shelter in place has been enacted and request further instructions; - Facility Manager to ensure all occupants are located indoors, onsite within the Shelter In Place building; - Ensure all windows/doors are closed; - All flammable material and equipment are removed away from windows, doors and air-conditioner units; and - Instruct all staff to prepare the facility and occupants for potential bushfire impacts.
Emergency Warning	You are in danger as your area will be impacted by fire. You need to take immediate action to survive. Listen carefully as you will be advised whether you can leave the area or if you must shelter where you are as the fire burns through your area. An emergency warning may be supported with a siren sound called the Standard	EMERGENCY WITH NO FIRE IN BALER RESERVE - If a fire is spotted, report immediately to 000 and then Facility Manager; - Request information from DFES regarding bushfire time to arrival and if off-site evacuation to the Cockburn ARC should be undertaken; - Facility Manager or delegate to nominate a sole liaison officer to contact DFES immediately to determine appropriate course of action and inform all staff, children, contractors and visitors;

ALERT	DESCRIPTION	ACTION
	Emergency Warning Signal (SEWS). These factors should be reviewed on a regular basis as they may change at any time and without notice.	- All occupants to stay indoors and prepare for evacuation; - Facility Manager or delegate to advise on evacuation to offsite location; and - All visitors and non-essential contractors to be asked to leave the facility if safe to do so. EMERGENCY WITH FIRE IN BALER RESERVE - Facility Manager or delegate to contact 000 to inform shelter in place has been enacted and request further instructions; - Facility Manager to ensure all occupants are located indoors, onsite within the Shelter In Place building; - Ensure all windows/doors are closed; - All flammable material and equipment are removed away from windows, doors and air-conditioner units; and - Instruct all staff to prepare the facility and occupants for potential bushfire impacts.
All clear	The danger has passed, and the fire is under control, but you need to remain vigilant in case the situation changes. It may still not be safe to return.	- If a fire is spotted, report immediately to 000 and then Facility Manager; and - Remain vigilant and ensure regular communication is established between the Facility Manager or delegate and all occupants to confirm personnel locations and consider evacuation strategies in the event of a change in warning level. - Facility Manager to contact parents/guardians and advise them not to attend the Childcare Centre unless DFES advice indicates otherwise.

Where there is sufficient time to evacuate safely off-site evacuation is to occur as follows (or otherwise if advised by emergency services):

- All occupants are to assemble ready for transport with youngest children to leave first;
- All occupants are to relocate via the buses to the Off-site Evacuation Location, currently nominated as the Cockburn Aquatic and Recreation Centre; or
- Leaving the site via buses in the direction advised by emergency services.

Allow for 147 minutes to assemble all occupants (including children, staff and visitors) and travel to the Cockburn Aquatic and Recreation Centre. This is a conservative estimate that allows for fire detection, pre-movement, movement and evacuation as per the Australian Fire Engineering Guidelines (ABCB, 2021). Refer to section 1.1 of this BEEP for details of timings this estimate has been based on.

Obtain further advice from DFES or the local emergency services once at the Cockburn Aquatic and Recreation Centre.

5.4 Off-site Evacuation Location and transportation requirements

A decision to evacuate off-site is to be determined by instructions from Police, DFES or other Emergency Services.

Evacuation is reliant on having suitable vehicles available for evacuation which include buses operated by a third party bus contractor. Buses are to be on standby on days with an FDR rating of High, however, will not be parked onsite. This will result in increased time associated with evacuation and thus may impact on the ability to evacuate the site safely.

Transport and directions to be utilised in the event of an offsite evacuation being instigated are to utilise the information in Table 5 and in Appendix A.

Table 5: Primary offsite evacuation location details

ALERT	DESCRIPTION
Name and address of venue	Cockburn Aquatic and Recreation Centre
Nearest cross street	Poletti Road, Legacy Way and Remembrance Ave
Venue phone number	(08) 9411 3344
Primary route to location	Travel west then south along Dorsal Bend, right onto Baler Ct, left onto Penn Ln, right onto Jurien Way, take third exit at the roundabout onto Ashendon Blvd, right onto Russell Rd, turn left onto Kwinana Fwy, take Beelie Dr exit, turn left onto Beelie Dr, use the 2 nd from the right lane to turn right onto Midgegooroo Ave, turn left onto Veterans Parade.
Type of vehicle	Buses- No. 2
Estimated travelling time to destination	~8 mins, ~5.8 km

6. Recovery

Following a bushfire emergency event impacting on the Childcare Centre, the following actions should be undertaken:

- Ensure the safety of all people and seek medical assistance for those requiring it;
- If off-site evacuation occurred, no person should re-enter building until it is deemed safe to do so (this may be advised by emergency services and power/gas supply technicians);
- Follow the directions of emergency services personnel at all times;
- The fire warden (or person responsible) to arrange the movement of occupants back to the facility;
- All occupants are to be accounted for on their return;
- Inform the police/emergency service of the return of persons to the Childcare Centre;
- Review the Emergency Evacuation Plan for effectiveness, make note of weaknesses and amend as necessary; and
- In the event of the Childcare Centre being impacted by a bushfire, critical incident stress support should be provided to all staff, children and parents/guardians.

Update prior to occupancy

7. References

ABCB, 2014, Design and Construction of Community Bushfire Refuges: Information Handbook

Australian Building Codes Board (ABCB). 2021. Australian Fire Engineering Guidelines

Eco Logical Australia 2022. *Bushfire Management Plan: Development Application: Lot 23 Russell Road, Hammond Park*. Prepared for Brallgra Pty Ltd ATF G. Allan Family Trust.

Western Australian Planning Commission (WAPC). 2021. Guidelines for Planning in Bushfire Prone Areas Version 1.4 (including appendices), WAPC, Perth.

Western Australian Planning Commission (WAPC). 2019. A guide to developing a Bushfire Emergency Evacuation Plan, October 2019

Update prior to occupancy

Appendix A : Bushfire Emergency Evacuation Poster Plan

Update prior to occupancy

1. Location details

Facility type:

- Childcare Centre

Location:

- Lot 23 Russell Road, Hammond Park , Western Australia

Infrastructure:

- A Childcare Centre and associated outdoor facilities.

Occupation / Visitation (number of people):

- Maximum staff, students and visitors: 150 people (20+ staff, 119 Children and some visitors)

Access:

- Dorsal Bend

Fire Weather Forecast Area:

- South West Land Division Fire District
- Swan Coastal South

2. Communications

Mobile:

- Mobile reception is available – however, mobile communications can become unreliable during bushfire/emergency events due to the volume of usage

Landline / NBN:

- Landline number: TBC

Radio:

- ABC: 720 AM

Internet Sites:

- Preparing your Property – https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/BushfireFactsheets/DFES_Bushfire_Factsheet-Calendar_for_Preparation.pdf
- Emergency WA – www.emergency.wa.gov.au
- DFES on Facebook - www.facebook.com/dfeswa
- DFES on Twitter - www.twitter.com/dfes_wa

3. Contacts

Fire reporting	000	
Facility Manager	TBC	TBC
DFES (Emergency Information)	13 33 37	
SES (Emergency Assistance)	132 500	
WA Police	000	
WA Ambulance	000	
Bureau of Meteorology (BoM) Recorded Information	1300 659 213	

4. Evacuation preparedness

The Bushfire Preparedness Matrix provides a guide of monitoring actions to be completed during the Bushfire Danger Period to allow situational awareness of potential bushfires and triggers for shelter in place or evacuation. Additional preparedness procedures to be enacted at certain period of the year are provided in the BEEP report.

The FDR gives an indication of the potential level of danger should a bushfire start, providing information so that action can be taken to protect lives from potentially dangerous impacts of bushfires. During the Bushfire Danger Period the forecast FDR for the following day is typically released around 4pm but can be changed as weather conditions unfold. The current and predicted FDR, for the following day, are available via the DFES and BoM websites.

On Extreme or Catastrophic FDRs, the Childcare Centre will be closed.

ACTION	NO RATING	MODERATE	HIGH	EXTREME	CATASTROPHIC
Facility Manager or delegate to monitor Emergency WA / or DFES website or ABC Radio for fire incidents		Min. 1 pm	Min. 9 am, 11 am, 1 pm, 3 pm (or more frequently if fire event in locality)	Facility closed	
Complete building preparedness checks			By 8 am		
Additional controls – Total Fire Ban	In the event of a Total Fire Ban being declared for the area in which the facility is located the Facility Manager or delegate should check the DFES Emergency WA website (https://www.emergency.wa.gov.au/) at 9 am, 11 am, 1 pm, 3 pm (or more frequently if fire event in locality).				

5. Evacuation triggers

The primary evacuation option is to Evacuate Off-Site.

If off-site evacuation is a viable option, the recommended evacuation point is the Cockburn Aquatic and Recreation Centre, approximately a 5.8 km drive north.

The secondary option is to shelter-in-place if there is insufficient time to safely evacuate the children and staff.

SEE EVACUATION DECISION MATRIX (OVERLEAF) FOR TRIGGERS AND PROCEDURES.

6. Evacuation Procedures

Actions for offsite evacuation and shelter-in-place have been aligned to triggers associated with bushfire warnings and are detailed in the evacuation decision matrix (overleaf).

Any direct and specific evacuation messages regarding this site from DFES or other emergency personnel will override these procedures.

7.Children and staff welfare during shelter in place

- Staff will be in charge of onsite children welfare. Serious medical needs will require emergency response via 000.

8. Building Preparedness Checks

- Include such tasks as ensuring reduced fuel loads around buildings, routine maintenance is up to date including cleaning of gutters, fire breaks are in place, and water supply is available.
- Detailed information and checklists are available on the DFES website including the 'The Homeowner's Bushfire Survival Manual' and the 'Fire Chat Bushfire Preparedness Toolkit' published by DFES https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/BushfireManualsandGuides/DFES_Bushfire-Homeowners_Survival_Manual.pdf <https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/BushfireManualsandGuides/DFES-Fire-Chat-Bushfire-Preparedness-Toolkit.pdf>; and
- Additional preparedness procedures to be enacted at certain period of the year are provided in the BEEP report.

9. What to do if caught in a bushfire

The following provide current guidelines* on what to do if caught in a bushfire in a building or on foot. Each requires a different response involving critical decisions for your survival.

What to do if caught in a bushfire IN A BUILDING

Outside your building

- Ensure you drink plenty of water so you do not dehydrate
- Block your downpipes, (a sock full of sand/soil will help) and fill your gutters with water
- Move flammable items such as outdoor furniture, doormats,
- Gas cylinders should have the valve facing away from the building
- Do not stand on the roof with a hose. In bush fires, often more people are injured by falling from roofs than suffering burns
- Patrol the outside of the building, putting out any embers and spot fires that may start. An ember or spark can reach your home hours before the fire front arrives
- Just before the fire arrives, wet down timber decks and gardens close to the building
- Move any firefighting equipment to a place where it will not get burnt.

Inside your building

- Continue to drink water so you do not dehydrate
- Close doors, windows, vents, blinds and curtains to prevent flames, smoke and embers from entering
- Put tape across the inside of the windows so they stay in place if they break
- Shut off gas at the meter or bottle
- Move furniture away from the windows to prevent any embers that enter the building from igniting
- Fill sinks, bath and buckets with water for putting out any fires that may start inside
- Place wet towels around window and door edges to stop smoke and embers from entering
- Put a ladder next to the access hole to the roof space so you can check for spot fires.

During the fire

- When the fire arrives, go inside to protect you from the radiant heat
- Ensure you have torches ready as it is likely to become completely dark and you will not be able to see
- Patrol the inside of the building, including the roof space for sparks and embers
- Remember – if your life is at risk, call Triple Zero (000) immediately.

After the fire

- Once the fire has passed, you may need to patrol the property for hours. Go outside and put out any part of the building which is alight.
- An ember or spark from a fire can impact on a building many hours after the main fire front has passed and small spot fires can quickly get out of control.

What to do if caught in a bushfire ON FOOT/ IN VEHICLE

- Try to move on to bare or burnt ground at least 100 m from where fire is likely to burn, if this is not feasible find the largest bare or burnt ground possible
- Do not run uphill or away from the fire unless you know a safe refuge is able to be reached before the fire arrives. Try and position yourself downhill of the on-coming fire.
- Move across the slope out of the path of the fire front and work your way downslope towards the back of the fire or onto burnt ground.
- Do not attempt to run through flames unless you can see clearly behind them. This generally means that the flames are less than 1 metre high and less than 1 to 2 metres deep at the back or on the flanks of the fire.
- Lulls in the fire often result in the flames in these parts being low enough to step or run through to the burnt ground beyond.
- When conditions become severe use every possible means to protect yourself from radiation. On bare ground cover yourself, use wheel ruts, depressions, large rocks or logs to give protection.
- Take refuge in ponds, running streams or culverts, but behind solid objects such a rock
- Remain calm and do not run blindly from the fire. If you become exhausted, you are much more prone to heat stroke and you may easily overlook a safe refuge. Consider an alternative course of action.

* adapted from NSW RFS bushfire training modules.

From 1 September 2022, Australia's Fire Danger Rating System will be improved and simplified to make it easier for you to make decisions to stay safe on days of fire danger risk.

The move to a simpler system is backed by improvements in science, which will mean we can better predict areas of greater risk on days of fire danger.

Across the country fire and emergency services are applying nationally consistent colours, signs and terminology. This means that wherever you go in Australia, and whatever the season or fuels you're surrounded with, you can understand the level of threat and what you need to do to stay safe.

The new ratings are:

Moderate

Plan and prepare

High

Be ready to act

Extreme

Take action now to protect life and property

Catastrophic

For your survival, leave bushfire risk areas

DURING A BUSHFIRE

EMERGENCY WARNING

Amount of control fire is approaching fast and you need to take immediate action to survive. If you haven't prepared your home it is too late. You must seek shelter or leave now if it is safe to do so.

WATCH AND ACT

A fire is approaching and there is a possible threat to lives or homes. Put your plan into action. If your plan is to leave, make sure you leave early. If your plan is to stay, check all your equipment is ready. Only stay and defend if you are mentally and physically prepared.

ADVICE

A fire has started but there is no immediate danger. Stay alert and watch for signs of a fire. Be aware and keep up to date.

Stay up to date at www.emergency.wa.gov.au or listen to your local ABC radio

DFES warning and Fire Danger Rating information

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Appendix B : DFES Fire Danger Rating and Warning Systems

Refer to DFES Fire Chat Bushfire Preparedness Tool kit and DFES website for further details⁶

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The new ratings are:



Moderate
Plan and prepare



High
Be ready to act



Extreme
Take action now to protect life and property



Catastrophic
For your survival, leave bushfire risk areas

⁶<https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/BushfireManualsandGuides/DFES-Fire-Chat-Bushfire-Preparedness-Toolkit.pdf>

BUSHFIRE WARNING SYSTEMS:

Similar to a cyclone categorisation tool. The alerts provide information on the severity of bushfires once it has started. The alert level reflects the risk to life and property.

DURING A BUSHFIRE



EMERGENCY WARNING



WATCH AND ACT



ADVICE

EMERGENCY WARNING

An out of control fire is approaching very fast. You need to act immediately to survive. If you haven't prepared your home it is too late. You must leave now if it is safe to do so.

WATCH AND ACT

A fire is approaching and is out of control. Put your plan into action. If your plan is to leave, make sure you leave early. Only stay if you are mentally, physically and emotionally prepared to defend your property and you have all the right equipment.

ADVICE

A fire has started but there is no immediate danger. Stay alert and watch for signs of a fire.

When you understand these warning systems, continue to Step 1.

Update prior to occupancy